

**South Dakota  
State University**

**General Catalog  
2013-2014**



# Frequently Called Numbers

## General Numbers

Undergraduate Admissions Office	605-688-4121 or 1-800-952-3541	Research Office	605-688-6696
Administrative and Research Computing	605-688-6134	Residential Life	605-688-5148
Advising, First Year Advising Center	605-688-4155	SDSU Foundation	605-697-7475
Agricultural Experiment Station	605-688-4149	Student Activities	605-688-6129
Agricultural Heritage Museum	605-688-6226	Student Affairs Vice President	605-688-4493
Alumni Association Office	605-697-5198	Tickets	
American Indian Education and Cultural Center	605-688-6416	Jackrabbit Athletics	605-688-5422 or 1-866-GO-JACKS
Art Museum	605-688-5423	State University Theatre Box Office	605-688-6045
Board of Regents	605-773-3455	University Parking and Traffic Office	605-688-7275
Bookstore	605-688-4163	University Police Department	605-688-5117
Capital University Center-Pierre	605-773-2160	University Marketing and Communications	605-688-6161
Career Center Office	605-688-4425	University Center-Sioux Falls	605-367-5640
Counseling Services	605-688-6146	University Center-Rapid City	605-394-6823
Dining Services	605-697-2550	Veterans Advising	605-688-4700
Disability Services Office	605-688-4504	<b>Administrative Numbers</b>	
Diversity, Equity, & Community Office	605-688-6556	President's Office	605-688-4111
Extension Service	605-688-4792	Provost and Vice President for Academic Affairs	605-688-4173
Environmental Health & Safety	605-688-4264	Vice President for Research	605-688-5642
Facilities & Services	605-688-4136	Vice President for Student Affairs	605-688-4493
Financial Aid Office	605-688-4695	Vice President for Information Technology	605-688-4988
Graduate School	605-688-4181	College of Agriculture and Biological Sciences	605-688-4148
Health Services	605-688-4157	College of Arts and Sciences	605-688-4723
Human Resources	605-688-4128	College of Education and Human Sciences	605-688-6181
Information Exchange	605-688-6127	College of Engineering	605-688-4161
International Affairs	605-688-4913	College of Nursing	605-688-5178
Library	605-688-5107	College of Pharmacy	605-688-6197
Multicultural Affairs Office	605-688-6129	Continuing and Extended Education	605-688-4154
Registrar (on-campus)	605-688-6195	Graduate School	605-688-4181
Transcripts (ordering)	605-688-6637	Honors College	605-688-5268
		University College	605-688-4153

## South Dakota State University Non-Discrimination Policy

It is the policy of South Dakota State University (SDSU) not to discriminate on the basis of race, color, creed, religion, national origin, ancestry, gender, marital status, pregnancy, sexual orientation, age, disability, veteran's status or any other protected class in the offering of all benefits, services, and educational and employment opportunities.

As part of this policy, SDSU has designated a Title IX Coordinator to assist individuals with any concerns about sexual discrimination in education programs or activities. This includes discrimination on the basis of gender in admission to or employment in SDSU's education programs or activities. The grievance process to address these complaints as well as any complaints of discrimination will follow the Board of Regents Human Rights Complaints Procedures.

Discrimination complaints including complaints of harassment or sexual discrimination in educational programs should be directed to: Equal Opportunity Officer/Title IX Coordinator, Human Resources, Administration Building Room 318, South Dakota State University, Brookings SD 57007, Phone (605)688-4128.

<b>FREQUENTLY CALLED NUMBERS</b>	<b>2</b>	System General Education Requirements (SGRs)	42
		Institutional Graduation Requirements (IGRs)	45
<b>SDSU NON-DISCRIMINATION POLICY</b>	<b>2</b>	Globalization Requirement	47
		Advanced Writing Requirement	48
<b>PURPOSES AND OBJECTIVES</b>	<b>5</b>	General Education Requirements for Associate Degree	49
History and Mission: The Land-Grant Heritage	6	Policies Applicable to SGRs	49
Purposes	7	Transfer Students	50
Educational Objectives	7	College and Major Field Requirements	50
Research, Scholarship and Creative Activities	8		
<b>ADMISSION POLICIES AND PROCEDURES</b>	<b>9</b>	<b>DEGREES AND ASSOCIATED MAJORS</b>	<b>51</b>
Application Procedures	10	Degree Definitions	52
Undergraduate Admission Requirements	10	Degrees and Associated Majors	53
Residency Requirements	15	All Authorized Majors, Minors, Certificates and Specializations	55
		Pre-professional Interest Areas	57
		Organizational Structure of SDSU	57
<b>ACADEMIC EVALUATION</b>	<b>17</b>	<b>COLLEGES</b>	<b>59</b>
Introduction	18	Agriculture and Biological Sciences	60
Academic Amnesty	18	Arts and Sciences	62
Assessment Program	18	Education and Human Sciences	66
Proficiency Examinations	19	Engineering	68
Credits	19	Graduate School	70
Examination for University Credit	19	Honors College	71
Dean's List and Honors Designation	20	Nursing	72
Modern Language Credit	20	Pharmacy	73
Grading	21	University College	76
		<b>DEPARTMENTS</b>	<b>75</b>
<b>ACADEMIC EXPECTATIONS</b>	<b>23</b>	Aerospace Studies	76
Academic Performance	24	Agricultural and Biosystems Engineering	76
Academic Honesty	24	Animal Science	77
Attendance	25	Architecture	77
Class Definition	26	Biology and Microbiology	77
Electives	26	Chemistry and Biochemistry	78
Rate of Progress	26	Civil and Environmental Engineering	79
		Communication Studies and Theatre	79
<b>ACADEMIC CHANGES</b>	<b>27</b>	Construction and Operations Management	80
Auditing a Course	28	Consumer Sciences	80
Drop-Add Procedure	28	Counseling and Human Development	81
Repeated Courses	28	Dairy Science	81
Petitions and Appeals	29	Economics	82
Withdrawal	29	Electrical Engineering and Computer Science	82
		English	83
<b>ACADEMIC GENERAL INFORMATION</b>	<b>31</b>	Geography	83
Academic Advising Role Statements	32	Health and Nutritional Sciences	84
Affirmative Action/EEO/Title IX	33	History, Political Science, Philosophy, and Religion	84
Disability Policy Statement	33	Journalism and Mass Communication	85
E-Mail Policy Statement	33	Mathematics and Statistics	85
Family Educational Rights and Privacy Act (FERPA)	34	Mechanical Engineering	86
Graduation Policies and Procedures	34	Military Science	86
Non-Degree Course	34	Modern Languages & Global Studies	87
Policy on Sexual Harassment, Other Forms of Harassment	35	Music	87
Policy on Institutional Record of Student Complaints	36	Natural Resource Management	88
Student Code of Freedom and Responsibility	37	Nursing	89
Trip Regulations	37	Pharmaceutical Sciences	90
University-Sponsored Student Athletic Trip Regulations	37	Pharmacy Practice	90
		Physics	91
<b>GRADUATION REQUIREMENTS</b>	<b>39</b>	Plant Science	91
General Degree Requirements	40	Psychology	92
General Education	40	Sociology and Rural Studies	92
General Education Requirements for Bachelor's Degree	41	Teaching, Learning and Leadership	93
		Veterinary and Biomedical Sciences	93
		Visual Arts	94

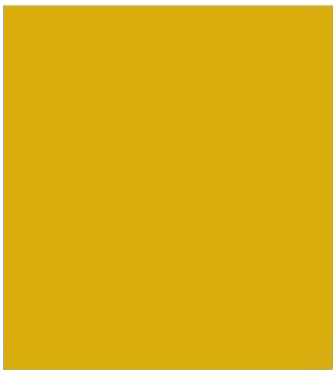
<b>EXTENDED PROGRAMS</b>	<b>95</b>	Information Technology Office	358
Summer Term	96	Intercollegiate Athletics	358
University Center - Sioux Falls	97	International Affairs Office	359
Capital University Center	97	Library, Hilton M. Briggs	359
University Center-Rapid City	97	Logos, Seals, Caricatures, Wordmarks (Official Symbols)	359
Distance Education	98	McCrary Gardens	329
Outreach Programs	98	Museums/Collections	360
		Print Lab	360
		Student Affairs Division	360
<b>ACADEMIC PROGRAMS AND REQUIREMENTS</b>	<b>99</b>	Admissions	360
Certificates	100	Dean of Students	361
Certification Preparation Programs	104	Dining Services	361
Endorsements	106	Enrollment Services	361
Majors and Specializations	107	Residential Life	361
Minors	209	The Union	362
Pre-Professional Interest Area Programs	233	Wellness Center	362
		Teaching and Learning Center	364
		University Marketing and Communications	364
		Water and Environmental Engineering Research Center	365
		Water Resources Institute	365
<b>COURSE DESCRIPTION</b>	<b>239</b>	<b>ORGANIZATION AND ADMINISTRATION</b>	<b>367</b>
Curriculum Entries (how to read)	240	University Organization	368
Abbreviations	242	Board of Regents	368
Course Types	242	General Administration	368
Other Important Definitions	243	Deans/Associate and Assistant Deans	368
x9x Common Course Descriptions	243	Directors	369
Course Descriptions (alpha-numeric by prefix)	244	Department Heads	369
		Affiliations and Accreditations	370
<b>SERVICES AND FACILITIES</b>	<b>351</b>	<b>UNIVERSITY STAFF</b>	<b>371</b>
Agricultural Experiment Station	352	General Administration	371
Alumni Association	352	Academic Deans	371
Animal Disease Research and Diagnostic Laboratory	352	Regental Distinguished Professors	372
Extension	352	Distinguished Professors	372
Crime Reports	353	Faculty, Staff	372
Diversity, Equity, and Community	353	Emeriti Faculty, Staff	397
American Indian Education and Cultural Center	353		
Endowed Chairs	353	<b>INDEX</b>	<b>404</b>
Environmental Health and Safety Office	354	<b>UNIVERSITY CALENDARS</b>	<b>410</b>
Facilities and Services	354	<b>CAMPUS MAP</b>	<b>Back Cover</b>
Fees	354		
Tuition, Living, and Other Expenses	355		
Refunds	356		
Financial Assistance	356		
Foundation, SDSU	357		
Geographic Information Sciences Center of Excellence	358		





# Purposes & Objectives

- *History and Mission: The Land-Grant Heritage 6*
- *Purposes 7*
- *Educational Objectives 7*
- *Research, Scholarship, and Creative Activities 8*



# History and Mission: The Land-Grant Heritage

**Establishment.** An act of the Territorial Legislature, approved February 21, 1881, provided that "an Agriculture College for the Territory of Dakota be established in Brookings." The Legislature of 1883 provided for the first building.

The Enabling Act Admitting the State of South Dakota, approved February 22, 1889, provided that 120,000 acres of land be granted for the use and support of the Agricultural College. By the Enabling Act of 1889 congress granted South Dakota 40,000 additional acres for the Agriculture College in lieu of a grant that had been made to new states in 1841.

State Agriculture Experiment Stations were formed in 1887 under the Hatch Act of Congress, which provided for establishment of agricultural experiment stations in connection with Land-Grant universities and colleges. The stations were established to conduct research to address relevant agricultural and rural issues for their home states and regions.

The Cooperative Extension Service was established in 1914 to provide useful, current, research based agricultural, home, family, and youth related information to the people of the State. Federal funds are appropriated through the U.S. Department of Agriculture, which cooperates with state colleges of agriculture and counties in conducting planned programs of extension work.

Historically, the Land-Grant institutions have had the responsibility of training individuals to be U.S. Military officers in the event of war or military emergency, thus, alleviating the need to have a large standing army. During WWII, SDSU as a Land-Grant University served a central role in preparation of students and graduates for military service through ROTC. SDSU continues to have an exemplary ROTC program. Following the war, SDSU and other Land-Grant institutions accepted an international responsibility contributing to economic and agricultural revitalization in war devastated countries. International responsibility has continued to evolve as a part of the Land-Grant mission.

**Developments.** In 1923 SDSU's instructional program was organized under five divisions: Agriculture, Engineering, General Science, Home Economics and Pharmacy. In 1956, the sixth undergraduate division, Nursing, was created and in 1957 all graduate work was organized into a Graduate Division. The University organization was formally recognized when the Legislature changed the name to South Dakota State University on July 1, 1964. At that time the following colleges were created: Agriculture and Biological Sciences, Arts and Sciences, Engineering, Home Economics, Nursing, and Pharmacy as well as the Graduate School. Today SDSU has seven colleges: Agriculture and Biological Sciences, Arts and Science, Education and Human Sciences, Engineering, Honors, Nursing, Pharmacy, and University College, as well as the Graduate School.

In 1974 the College of General Registration (renamed College of General Studies and Outreach Programs in 2001) was established to provide assistance to students who were undecided as to major, were pre-professional, or who wanted a one, two, or four year general studies program. On July 1, 2006, the Office of Continuing and Extended Education was created, thus separating Outreach and Distance Education from the College of General Studies due to the growing college enrollment and an expected increase in the presence of outreach and distance education programs. In 2011 the College of General Studies became University College and the Office of Outreach and Distance Education became the Office of International Affairs and Academic Outreach.

In 1975 the Division of Education was created to provide greater recognition of the part the University plays in preparation of teachers, counselors, and administrators for primary and secondary school systems and higher education. In 1989 this unit officially became the College of Education and Counseling. In 1996, the College of Home Economics became the College of Family and Consumer Sciences to

align with the national professional organization (AAFCS) and to reflect a newer, more up-to-date image. The proposal to transform the Honors Program into a new and more vital Honors College was approved in May, 1999 and the Honors College was formally inaugurated in the fall of 1999. In 2009, the College of Education and Human Sciences was established. This new college resulted from the combination of the former College of Family and Consumer Sciences and the former College of Education and Counseling. The Health, Physical Education and Recreation department also joined the new college.

In 1994, Land-Grant status was expanded to include tribal colleges and universities. SDSU has developed working relationships with tribal colleges within and beyond the state. Additionally, South Dakota State University is a member of the Sun Grant Initiative that was authorized in the 2002 farm bill. Today SDSU is a national leader in Sun Grant research.

**Mission.** The legislature established South Dakota State University as the Comprehensive Land-Grant University to meet the needs of the State and region by providing undergraduate and graduate programs of instruction in the liberal arts and sciences and professional education in agriculture, aviation, education, engineering, human sciences, nursing, pharmacy, and other courses or programs as the Board of Regents may determine. (SDCL 13-58-1)

The Board implemented SDCL 13-58-1 by authorizing South Dakota State University to serve students and clients through teaching, research, and extension activities. The University's primary goal is to provide undergraduate and graduate programs at the freshman through the doctoral levels. The University complements this goal by conducting nationally competitive strategic research and scholarly and creative activities. Furthermore, South Dakota State University facilitates the transference of knowledge through the Cooperative Extension Service with a presence in every county and through other entities, especially to serve the citizens of South Dakota.

South Dakota State University is unique within the South Dakota System of Higher Education because of its comprehensive land grant mission. The mission is implemented through integrated programs of instruction, the Cooperative Extension Service, the Agricultural Experiment Station, and numerous auxiliary and laboratory services.

Degrees are authorized at the Associate, Baccalaureate, Master, Professional Doctorate, and Doctoral levels.

The following curriculum is approved for South Dakota State University:

A. Undergraduate Programs

Associate degree programs in General Studies and General Agriculture.

Baccalaureate programs in the agricultural sciences, aviation, education, engineering and technology, human sciences, humanities and liberal arts, nursing, performing and visual arts, pharmaceutical sciences, physical and biological sciences, and social sciences.

B. Graduate Programs

Master's degrees in arts and sciences, agricultural and biological sciences, human sciences, education and counseling, engineering and technology, and nursing.

Doctorate of Philosophy degrees in agriculture and engineering, and the physical, biological, and social sciences.

Professional programs - the Master of Mass Communication (MMC), the Master of Architecture (MArch), Doctor of Pharmacy (Pharm D), Doctor of Nursing Practice (DNP).

(Mission statement is quoted from Board of Regents Policy 1:10:2, dated May 2011.)



In accepting the provisions of the "Morrill Act" of Congress (1862), the State of South Dakota pledged itself to carry out the purposes of the Land-Grant College Act: to endow, support, and maintain one university where a major emphasis is teaching "agricultural and mechanic arts," including "scientific and classical studies," in order to promote a liberal and practical education in the "several pursuits and professions in life."

Within the spirit of the "Morrill Act" and the early legislative acts of South Dakota, the purposes of SDSU are to develop, maintain, and encourage:

1. A strong foundation of general education for all graduates in all majors.
2. Learning in the fields of agriculture; engineering and engineering technology; human sciences; liberal arts; pharmacy; nursing; teacher and counselor education; basic physical, biological, and social sciences; humanities and arts at the undergraduate and graduate levels.
3. Research and scholarship in agriculture; engineering and engineering technology; human sciences; liberal arts; nursing; pharmacy; teacher and counselor education; basic physical, biological and social sciences; humanities and arts at the undergraduate and graduate levels.
4. Extension/outreach programs in agriculture; engineering and engineering technology; human sciences; liberal arts;

nursing; pharmacy; teacher and counselor education; basic physical, biological and social sciences; humanities and arts for adults and youth in South Dakota.

5. Citizenship training and general learning essential for understanding and appreciating and contributing to the American way of life and its relationship to the global community as global citizens.
6. Student self-development in leadership, social, intellectual, recreational, interpersonal, ethical, changeable, socially responsible, and spiritual attributes.
7. Student self-development in international and intercultural understanding consistent with the continually increasing cultural, economic and political interdependence of the modern world.
8. Vocational learning and training in selected areas.
9. Collection, preservation, display and study of artistic, artifactual and documentary materials which are the cultural base for all future programs.
10. Service and social responsibility for the welfare of South Dakota, the region, the nation, and the world.

## Educational Objectives

The educational objective of SDSU is primarily to guide each student in attainment of intellectual and professional competence, growth of personal development, cultivation of a sense of social and civic responsibility, and achievement of satisfactory human relationships. Ideally, upon graduation, SDSU students will have attained intellectual autonomy with capabilities to think, read, speak, and write effectively, both within their practiced disciplines and beyond. As individuals on their jobs and as people collectively charged with the responsibility of nurturing a humane, rational, and free republic, our graduates should demonstrate an abiding belief in the value of learning. Graduates should possess both historic and aesthetic perspectives and act in accordance with high ethical and spiritual codes of behavior, even in the face of adversity. Above all, graduates should seek to foster understanding and harmony among their fellow citizens of this diverse nation and world.

Specific objectives that flow from this broad educational objective are:

### **Intellectual and professional competence is attained when a graduate:**

1. Has developed knowledge and skills - including those of clear oral and written expression, evaluative listening and information literacy - required for beginning competence in a vocation or profession.
2. Has acquired those self-reliant character elements that demonstrate a high personal code of ethics and willingness to pursue vocational or professional objectives within a framework of humanitarian and social goals.
3. Has developed the ability to think clearly and speculate imaginatively about both immediate and long-range problems.
4. Is competitive in academic preparation nationally and internationally.

### **Adequate personal development has been achieved when a graduate:**

1. Attempts to reach sound, objective decisions after considering the values and practical and theoretical issues involved, and after exploring reliable sources of information, and then accepts responsibility for these decisions.
2. Has begun to evolve a meaningful personal philosophy of life based upon a growing knowledge of self, a perceptive awareness of the world, and a critical appraisal of relationship to this code.
3. Is change-able, that is, able to embrace change in positive and constructive ways.

### **A satisfactory sense of social and civic responsibilities has been acquired when a graduate:**

1. Has critically examined the ideas of democratic society and their underlying assumptions, which embrace a belief in the worth of the individual, the preservation of free inquiry, free discussion, equality of opportunity, and respect for law.
2. From this examination has applied conclusions to a citizen's role for which he/she keeps informed and attempts to play a constructive role in the dynamics of social change, and the evolving of social and civic values in which she/he believes.
3. Demonstrates social responsibility.

### **A satisfactory adjustment in human relationships has been achieved when a graduate:**

1. Is globally informed and prepared for a diverse world.
2. Supports the dignity of human beings in his/her own and other cultures by respecting their social amenities, rights, abilities, and racial, religious and cultural attributes.
3. Respects the fellowship of many by following the principle of doing to others as he/she would have them do to him/her.

# Research, Scholarship and Creative Activities

---

The University is committed to excellence in basic and applied research, scholarship and creative activities associated with the University's mission. The generation of new knowledge, ideas, processes, and developments is basic to the mission of a Land-Grant University and contributes to the state's economic development and quality of life. Research and scholarly activities are integral, essential, and traditional parts of university life involving faculty, graduate and undergraduate students.

The University encourages and supports research, scholarship and creative activity programs in all disciplines. To support these activities, the University and its faculty actively pursue external funds through competitive grant and contract proposals and through cooperative agreements with other institutions of higher education, state and federal agencies. In addition to department based research efforts, South Dakota State University pursues scholarly activity

through the South Dakota Agricultural Experiment Station, Governor's Research Centers, E. A. Martin Program in Human Nutrition, South Dakota EPSCoR, the Geographic Information Science Center of Excellence, and the North Central Regional Sun Grant Center.

Primarily as a result of its doctoral education and research programs, South Dakota State University is classified by the Carnegie Foundation for the Advancement of Teaching as a RU/H Research University (high research activity) and as a national university by most rating organizations.

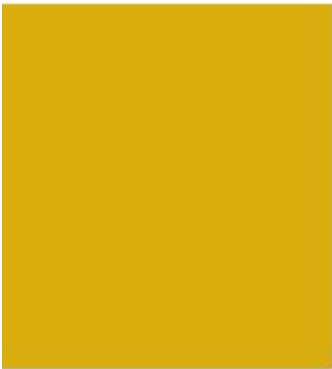
For information, contact Kevin D. Kephart, Vice President for Research, South Dakota State University, Box 2201, Brookings, South Dakota 57007-1998, phone: 605-688-5642, e-mail: [kevin.kephart@sdstate.edu](mailto:kevin.kephart@sdstate.edu).





# Admission Policies & Procedures

- *Application Procedures 10*
- *Undergraduate Admission Requirements 10*
- *Residency Requirements 15*



# Application Procedures

---

The SDSU Admissions Office processes applications on a rolling basis. Students are encouraged to apply well in advance (six to ten months) of the semester they wish to attend in order to arrange housing, apply for financial assistance, and to attend new student orientation/early registration programs.

All applicants must submit the following to be considered for admission:

- **Admission Application**

- **\$20 Application Fee**

If you have previously attended SDSU or another South Dakota public university as a degree-seeking student within one year prior to the term of application or have been called into active duty with the military, you are not required to pay the application fee to SDSU.

- **Official High School Transcript**

- **Official Report of ACT Scores**

In addition, all transfer applicants must provide:

**Official College Transcript(s)**

You must request official transcripts from all non-regental schools you have previously attended. You do not need to have transcripts sent from other SD Regental universities. All transcripts should be sent from the issuing institution directly to the SDSU Admissions Office. If you are currently enrolled at another institution, you may send partial transcripts and be considered for provisional admission until the final transcript arrives.

Upon admission to the University and prior to enrolling for classes, all new applicants are required to provide proof of the Board of Regents required immunizations. This form will be given to students prior to their enrolling at SDSU.

Questions regarding admission can be sent to:

South Dakota State University Admissions Office

Box 2201 Brookings, SD 57007

605-688-4121 or 1-800-952-3541

e-mail: [sdsu.admissions@sdstate.edu](mailto:sdsu.admissions@sdstate.edu) or [www.sdstate.edu](http://www.sdstate.edu)

## Undergraduate Admission Requirements

---

SDSU offers all educational programs, material, and service to all people without discrimination based on race, color, creed, religion, national origin, ancestry, citizenship, gender, marital status, pregnancy, sexual orientation, age, disability, or veteran status.

### Freshman Admission

For admission to a **baccalaureate degree program**, students must meet requirements A and B:

A. Graduate in the top 60% of their high school graduating class,

**OR**

Achieve an ACT composite score of 18 (SAT-I score of 870) or above,

**OR**

Earn a cumulative GPA of at least a 2.6 on a 4.0 scale.

**AND**

B. Complete the following required courses with a cumulative grade point average of a "C" or higher (2.0 on a 4.0 scale):

**4 years of English**

*or* ACT English sub-test score of 18 *or* above

*or* AP English score of 3 or above

**3 years of Advanced Mathematics**<sup>1</sup>

*or* ACT Math sub-test score of 20 *or* above

*or* AP Calculus score of 3 or above

**3 years of Laboratory Science**<sup>2</sup>

*or* ACT Science Reasoning sub-test score of 17 or above

*or* AP Science score of 3 or above

**3 years of Social Science**

*or* ACT Social Studies/Reading sub-test score of 17 or above

*or* AP Social Studies score of 3 or above

**1 year of Fine Arts** for students graduating from South Dakota high schools

*or* AP Fine Arts score of 3 or above

For students graduating from high schools in states that do not require completion of courses in fine arts for graduation, high school level non-credit fine arts activity will be accepted.

At the time of admission, students are expected to have these computer technology literacy skills and competencies: basic keyboarding skills and experience in using computer word processing, spreadsheet, presentation graphics, and the Internet. These expectations may be met by high school coursework. Effective Fall 2006, entering students who have not taken such high school coursework must complete a specified computer course addressing these skills and competencies within the first 42 credit hours attempted.

<sup>1</sup> Advanced math includes algebra or any higher level math.

<sup>2</sup> Laboratory science includes biology, chemistry, physics, or other approved science courses in which there is a weekly lab period scheduled.

Applications from students with deficiencies are reviewed on an individual basis.

Admission to **associate degree (two-year)** programs is granted if you meet one of the following criteria:

Rank in the top 60% of your high school graduating class,

**OR**

Achieve an ACT composite score of 18 or above,

**OR**

Earn a cumulative GPA of at least 2.6 on a 4.0 scale.

Students enrolled in the two-year programs who have not met the minimum high school course requirements may enter a bachelor's program only after they have satisfactorily completed:

At least 15 credit hours of the system general education requirements with a 2.0 GPA

**AND**

Met university minimum progression standards.

## Transfer Students

Students are considered transfer students if they have college credits from an accredited institution and are six or more months beyond high school graduation. Individuals currently enrolled at other institutions can send partial transcripts and be considered for provisional admission until the final, official transcript arrives.

Students transferring from a degree seeking program at one Regental university to a degree-seeking program at another Regental university will be required to apply for admission.

Students who have been admitted to a degree-seeking or special program at one Regental university may register for courses at any Regental university without submitting another application.

### Students who Transfer to Baccalaureate Programs

- A. Transfer students who have completed 24 or more semester credits are eligible for admission if they meet the following requirements:
  - Have a 2.0 ("C") or higher cumulative grade point average. Students entering the professional program in Education must have a 2.5 GPA. Admission to the professional programs in Nursing or Pharmacy is on a competitive basis.
  - Are in good standing with their most recently attended school.
- B. Students with less than a cumulative 2.0 grade point average may be admitted on probation, but each applicant is considered on an individual basis.
- C. Transfer students under age 24 who have earned fewer than 24 semester college credits must also meet the Freshman admission requirements as outlined above.

### Students who Transfer to Associate Programs

Students under 24 years of age transferring into associate degree programs with fewer than 12 transfer credit hours must meet the associate degree admission requirements. Students with 12 or more transfer credit hours with a cumulative GPA of at least 2.0 may transfer into associate degree programs at the discretion of the University.

## Former Students

Former SDSU students who want to reapply for admission must submit official transcripts from all colleges attended since leaving SDSU. In addition, former students must submit another admission application if he or she has interrupted attendance by one or more semesters. Approval of admission is required by the dean of the appropriate college and the director of admissions.

## Non-High School Graduates, including Home Schooled Students

Applicants who did not graduate from high school must:

Obtain an ACT composite score of 18, ACT English sub-test score of 18 or above, Math sub-test score of 20 or above, Social Studies/ Reading and Science Reasoning sub-test scores of 17 or above. Students must be at least 18 years of age, or the high school class of which the student was a member must have graduated from high school.

**OR**

Complete the General Equivalency Diploma (GED) with the total cumulative standard test scores for all five tests must total 2250 with no standard score below 410.

## Nontraditional Students

Applicants who are at least 24 years of age or older and who have not previously attended college will be admitted in good standing if they have graduated from high school or have successfully completed the GED with scores as indicated above.

## Special Students

Students who are over 24 years of age and who wish to enroll with a partial load or who do not plan to work toward a degree may be classified as Special Students. Special Students are not eligible to receive federal financial aid.

## Concurrent High School Students

High school juniors and seniors may be admitted to SDSU as a concurrent high school student once you submit a concurrent admissions application complete with documentation of high school and parent approval.

## U.S. Army Concurrent Admission Program

SDSU is a participant in the U.S. Army Concurrent Admissions Program (ConAP). This program allows qualified applicants to be admitted to SDSU at the time they enlist in the U.S. Army. For more information contact the local U.S. Army recruiter or the SDSU Admissions Office.

## Regental Policy for Transfer of Credit

1. Academic courses will be transferred as meeting graduation requirements if the courses parallel the scope and depth requirements for the degree or if the courses meet electives required for the degree. Credit will not be given for duplication of courses.
2. United States Regional Accrediting Associations  
North Central Association of Colleges and Schools, Western Association of Schools and Colleges, New England Association of Schools and Colleges, Northwest Association of Schools and Colleges, Middle States Association of Colleges and Schools, Southern Association of Colleges and Schools.
3. Undergraduate transfer academic courses received from United States colleges and universities accredited by United States regional accrediting associations.
  - A. All undergraduate transfer courses and all transfer grades (whether the grades are passing or not passing) must be recorded and an equivalency specified by the Regental university, calculated into grade point averages according to the Regental grade scheme, and recorded on the student's academic transcript.
  - B. Remedial courses (as identified on the sending institution's transcript) received in transfer are recorded, transcribed, and assigned an equivalency at the receiving university but do not calculate into grade point averages.
  - C. Transfer grades not existing in the Regental grading scheme will be equated to the Regental grading system. (Refer to BOR 2:10, Use of Grade Point Averages).
  - D. In any subsequent evaluation, equivalencies for system common courses and system general education courses will not be changed. Equivalencies for unique courses may be changed. In subsequent evaluations, grades previously recorded cannot be changed.
  - E. The university-specific degree requirements determine if the courses transferred are applicable to the student's degree program at that university and if they meet the minimum grade criteria.

- F. Orientation, Life Experience, General Educational Development Tests, and high school level courses are not recorded in Colleague as transfer credit nor are they granted equivalent credit.
  - 1. High school courses for which students received college credit will not be entered as transfer credit, or given equivalent credit, unless validated by an Advanced Placement or CLEP score that meets BORs guidelines for acceptance of credit or the college credit is granted by an institution accredited by the National Alliance of Concurrent Enrollment Partnerships (NACEP).
- 4. Undergraduate transfer technical courses received from United States colleges and universities accredited by United States regional accrediting associations.
  - A. University discretion is permitted in acceptance of courses. Courses considered for transfer are subject to all BOR policies and any conditions for validation that may be prescribed by the accepting institution.
  - B. When the courses are accepted for transfer, equivalent courses are recorded on the transcript but the grade earned at the technical institute is not recorded or calculated into the grade point averages.
  - C. In any subsequent evaluation, equivalencies for system common courses and system general education courses will not be changed. Equivalencies for unique courses may be changed, reevaluated, or inactivated. Additional equivalencies may be added and evaluated.
  - D. The university-specific degree requirements determine if the courses transferred are applicable to the student's degree program at that university and if they meet the minimum grade criteria
- 5. Graduate transfer courses received from US colleges and universities accredited by a US regional accrediting association.
  - A. All graduate transfer courses and transfer grades judged to be acceptable by the evaluating university, are recorded and evaluated by the Regental university, calculated into grade point averages according to the Regental grade scheme, and recorded on the student's academic transcript.
  - B. If transfer credits are judged acceptable; these courses will be recorded, and equivalencies granted, using the following guidelines:
    - 1. If there are specific equivalent graduate courses at the university evaluating the credit, these specific courses should be used when granting equivalencies.
    - 2. If there are no equivalent graduate courses at the university evaluating the credit, these courses will be recorded, and equivalencies granted, using the following guidelines:
      - a. If the academic discipline is available at the university evaluating the credit, but there is no discipline equivalent course, use the discipline prefix and the appropriate course level.
      - b. If the academic discipline is not available at the university evaluating the credit, use the GEN prefix and the appropriate course level.
  - C. Transfer grades not existing in the Regental grading scheme will be equated to the Regental grading system.
  - D. In subsequent evaluation, all equivalencies may be re-evaluated, inactivated, or changed. Additional equivalencies may be added and evaluated. In subsequent evaluations, grades previously recorded cannot be changed.
  - E. The university-specific plan of study requirements determine if the courses transferred are applicable to the student's degree program at that university and if they meet the minimum grade criteria.
- 6. Transfer Courses Received from Accredited Postsecondary Technical Institutes
  - A. An academic course is defined as a course that is equivalent to a Regental general education requirement at the 100 or 200 level.
  - B. A technical course is defined as a non-academic course that meets the technical program requirements for a diploma, certificate, or Associate of Applied Science degree.
  - C. South Dakota Technical Institutes
    - 1. Transfer of academic courses from South Dakota postsecondary technical institutes is governed by BOR policies 2:25, 2:26, 2:27, 2:28, and 2:31.
      - a. Transfer grades not existing in the Regental grading scheme will be equated to the Regental grading system.
      - b. In any subsequent evaluation, equivalencies for system common courses and system general education courses will not be changed. Equivalencies for unique courses may be changed.
    - 2. Academic courses taken under articulation agreements in effect between July 1, 1999 and June 30, 2005 will be transferred according to those agreements.
    - 3. Effective Fall 2005, transfer of technical course credit hours from South Dakota postsecondary technical institutes only occurs as part of a program to program articulation agreement approved by the Board of Regents and South Dakota Board of Education.
      - a. The transfer of technical course credit hours occurs as a block of credit hours upon completion of requirements for the university articulated program.
      - b. The CR grade is used for the block of technical course credit hours.
  - D. Other Technical Institutes
    - 1. University discretion is permitted in acceptance of academic courses. Academic courses considered for transfer are subject to all BOR policies and any conditions for validation that may be prescribed by the accepting institution.
      - a. When the academic courses are accepted for transfer, equivalent courses are recorded on the transcript.
      - b. In any subsequent evaluation, equivalencies for system common courses and system general education courses will not be changed. Equivalencies for unique courses may be changed, re-evaluated, or inactivated. Additional equivalencies may be added and evaluated.
      - c. The university-specific degree requirements determine if the academic courses transferred are applicable to the student's degree program at that university and if they meet the minimum grade criteria.
    - 2. Transfer of technical course credit hours from non-South Dakota postsecondary technical institutes only occurs as part of a program to program articulation agreement approved by the Board of Regents.
      - a. The transfer of technical course credit hours occurs as a block of credit hours upon completion of requirements for the university articulated program.
      - b. The CR grade is used for the block of technical course credit hours.
- 7. Undergraduate and graduate credits received from United States colleges or universities which are not accredited by a United States regional accrediting association, and undergraduate and

graduate credits received from United States colleges or universities which are not accredited by a United States regional accrediting association but are accredited by a national specialized accrediting agency recognized by the US Department of Education.

- A. University discretion is permitted in acceptance of courses. Courses considered for transfer are subject to all BOR policies and any conditions for validation that may be prescribed by the accepting institution.
  - B. When the courses are accepted for transfer, equivalent courses are recorded on the transcript but the grade earned at the non-accredited institution is not recorded or calculated into the grade point averages using the following guidelines:
    1. If there are specific equivalent graduate courses at the university evaluating the credit, these specific courses should be used when granting equivalencies.
    2. If there are no equivalent graduate courses at the university evaluating the credit, these courses will be recorded, and equivalencies granted, using the following guidelines:
      - a. If the academic discipline is available at the university evaluating the credit, but there is no discipline equivalent course, use the discipline prefix and the appropriate course level.
      - b. If the academic discipline is not available at the university evaluating the credit, use the GEN prefix and the appropriate course level.
  - C. In any subsequent evaluation, equivalencies for system common courses and system general education courses will not be changed. Equivalencies for unique courses may be changed, re-evaluated, or inactivated. Additional equivalencies may be added and evaluated.
  - D. The university-specific degree requirements determine if the courses transferred are applicable to the student's degree program at that university and if they meet the minimum grade criteria.
8. Courses submitted in transfer from postsecondary technical institutes that are not accredited by a United States regional accrediting agency will not be accepted.
9. Undergraduate and Graduate Courses from Postsecondary Institutions outside the United States.
- A. Courses considered for transfer are subject to all BOR policies and any conditions for validation that may be prescribed by the accepting institution.
  - B. When the courses are accepted for transfer, equivalent courses are recorded on the transcript but the grade earned at the sending institution is not recorded or calculated into the grade point averages using the following guidelines:
    1. If there are specific equivalent graduate courses at the university evaluating the credit, these specific courses should be used when granting equivalencies.
    2. If there are no equivalent graduate courses at the university evaluating the credit, these courses will be recorded, and equivalencies granted, using the following guidelines:
      - a. If the academic discipline is available at the university evaluating the credit, but there is no discipline equivalent course, use the discipline prefix and the appropriate course level.
      - b. If the academic discipline is not available at the university evaluating the credit, use the GEN prefix and the appropriate course level.
  - C. In any subsequent evaluation, equivalencies for system common courses and system general education courses will not be changed. Equivalencies for unique courses may be
- changed, re-evaluated, or inactivated. Additional equivalencies may be added and evaluated.
- D. The university-specific degree requirements determine if the courses transferred are applicable to the student's degree program at that university and if they meet the minimum grade criteria.
10. Credit Received Through Validation Methods
- A. Credit earned through validation methods other than nationally recognized examinations is limited to a maximum of 30 hours of credit for baccalaureate degrees and 15 hours of credit for associate degrees.
    1. Validation of Military credit is limited to an additional 30 hours of credit for baccalaureate degrees and an additional 15 hours of credit for associate degrees.
  - B. Credit for college level courses granted through nationally recognized examinations such as CLEP, AP, DANTES, etc., will be evaluated and accepted for transfer if equivalent to Regental courses and the scores are consistent with Regental policies.
    1. If credit received through validation is applied as elective credit, it may only be applied at the 100 or 200 level.
    2. Credit received through validation may apply to System General Education Requirements and Institutional Graduation Requirements.
    3. Credit received through validation may not apply to writing intensive requirements.
  - C. When validation credits are accepted, equivalent courses are recorded on the transcript but are not calculated into the grade point averages.
  - D. In any subsequent evaluation, equivalencies for system common courses and system general education courses will not be changed. Equivalencies for unique courses may be changed, reevaluated, or inactivated. Additional equivalencies may be added and evaluated.
  - E. The university-specific degree requirements determine if the validation credits accepted also are applicable to the student's degree program at that university.
11. When a course has been repeated for credit, all attempts will be entered on the transcript but the last grade earned will be used in the calculation of the grade point averages.
12. Total transfer credit for work at a junior, community college (2 year), and/or two-year technical college may not exceed one-half of the hours required for completion of the baccalaureate degree at the accepting institution. Students who have completed more than the acceptable semester hours of junior, community or technical college work may apply completed, transferable courses to specific course requirements and thereby may not be required to repeat the courses. The semester hours of credit for those additional courses may not be applied toward the minimum credit hours required for the degree.
13. System general education requirements successfully completed at a Regental institution will be accepted towards meeting these requirements at the accepting Regental institution. In any subsequent evaluation of any transfer or non-course work, equivalencies for system common courses and system general education courses will not be changed.
14. Evaluations of courses will be made by the appropriate institutional officials at the time of admission by comparing descriptions, content, and level of courses completed with those at the accepting institution.

15. Each institution will develop and maintain a procedure for the appeal of transfer credit decisions.
16. A Regental internal transfer process occurs when an undergraduate course is used on a converted credit basis to meet graduate plan of study requirements at Regental universities or when graduate credit is used on a converted or actual credit basis to meet undergraduate degree requirements for a Regental accelerated program. Refer to BOR policy 2:8.3.A and 2:8.3.

## Transfer between Regental Universities

Transfer between any of the six South Dakota Board of Regents universities has been further facilitated by the recent revision of the common course numbering system and the STUDENT Project. Most general education courses at all six universities now have the same prefix, course number, and title. This will help transferring students understand how their courses will most likely transfer. Please be aware that majors and colleges have specific program requirements that must be met. These can include a minimum grade for transfer, a course sequence, or a more advanced course.

## Articulation Agreements

Technical Institute courses are designed to prepare students to enter the workforce for careers requiring less than a baccalaureate degree. Acceptance of these courses for credit at the South Dakota public universities is strictly the function of the receiving institution. Students who wish to transfer credits to a South Dakota public university for programs should contact the Admissions Office of that desired university for an evaluation of their program objectives and technical institute transcript. An individual evaluation of course credits will be made by the receiving public university in accordance with institutional and Board of Regents policy.

South Dakota State University has established articulation plans with a number of technical institute programs. Articulation agreements also have been established with tribal colleges, regional community colleges, other colleges and universities, and selected international educational institutions. College deans assist students in determining the status of articulated courses.

## Correspondence Credit

South Dakota State University will grant credit for correspondence courses from other colleges under the following circumstances: Limited credit for correspondence work may be applied toward a degree. Such credit will not be approved if the work is done while the student is enrolled in the University, unless arrangements have been made in advance with the dean of your college. Maximum acceptable credit by correspondence may be limited by the dean of the college you are entering. No credit will be given for correspondence courses in ENGL 101, 201, or 379 unless such courses are taken from a South Dakota Board of Regents institution.

A person not enrolled at SDSU who wants to earn credits by correspondence and apply them toward a degree at SDSU should consult with the appropriate college dean.

## Servicemembers Opportunity College

South Dakota State University has been designated as an institutional member of Servicemembers Opportunity Colleges (SOC), a group of more than 400 colleges and universities providing voluntary postsecondary education to members of the military throughout the world. As a SOC member, SDSU recognizes the

unique nature of the military lifestyle and has committed itself to easing the transfer of relevant course credits, providing flexible academic residency requirements, and crediting learning from appropriate military training and experiences. Servicemembers Opportunity College has been developed jointly by educational representatives of each of the Armed Services, the Office of the Secretary of Defense, and a consortium of thirteen leading national higher education associations. It is sponsored by the American Association of State Colleges and Universities (AASCU) and the American Association of Community and Junior Colleges (AACJC).

## Admission with Advanced Standing

Students may be qualified to enter college at a level above the average freshman. Students may receive this advanced standing and/or credit through a variety of testing programs (see "Examination for University Credit"). The final decision in granting advanced standing and/or credit rests with the head of the department in which the credit is sought.

## Admission of International Students on Nonimmigrant Visas

SDSU is dedicated to providing educational opportunities for students from abroad and has traditionally enrolled students from over 40 different countries each semester.

**To be considered for admission, an international student must submit:**

1. International Student Application
2. Official academic transcripts for all secondary and postsecondary education
3. Official score report for Test of English as a Foreign Language (TOEFL)
4. Financial certification form/supporting financial documentation
5. Application fee of US \$20.00

International students generally need to have a secondary or college transfer grade point average of 2.5 for engineering or a 2.25 for other majors. Transfer students from academic programs at other U.S. institutions must have completed at least 25 consecutive semester credits (37.5 quarter credits) at a single institution. A minimum score of 500 on the TOEFL is required for non-native speakers of English (minimum is subject to change). Applicants whose native language is English or those who are from a country where English is the only language are not required to submit results from a TOEFL.

**International students are required to purchase and maintain university approved health insurance for themselves and their dependents for the duration of their enrollment at SDSU.**

SDSU regrets that it is unable to offer financial aid such as scholarships or tuition waivers to international students. **Applicants must, therefore, show clear evidence of adequate resources for financing their program of study.**

SDSU reserves the right to require advance deposits of estimated tuition, fees, and living expenses when warranted by prevailing foreign exchange difficulties.

International Students have a separate application packet. Complete applications must arrive by: June 1 to be considered for fall admission; October 1 for spring admission, for applicants outside the United States. Applications not meeting the deadline requirement for one semester will remain active and when complete will be considered for the next semester. Contact the International Student Affairs Office for the application packet and further information: International Student Affairs, Briggs Library #119, SDSU, Brookings, SD 57007. Phone: 605-688-4122; e-mail [dsu.intlstud@sdstate.edu](mailto:dsu.intlstud@sdstate.edu) or fax 605-688-6540.



## Policy for Transfer of International Undergraduate Credit

College level and advanced secondary level courses taken at international institutions will be evaluated for transfer consideration by an independent credential evaluation service and/or the appropriate institutional officials. Credit will be considered for transfer only when content is determined to be equivalent to SDSU courses. A syllabus from the international institution is required to determine equivalency. **No** elective credit will be allowed for courses not equivalent to SDSU courses. **No** English course will be accepted for credit from an international institution. For those international institutions that have an articulation agreement with SDSU, the agreement determines the courses that transfer full credit.

Transfer credit grades from international institutions will **not** be entered in the cumulative or semester grade point averages, but will be entered on the SDSU transcript as "P" (passing) grades. There will be a limit of 32 credits which may be transferred from international institutions determined to be vocational/technical level programs. The only exception to the above-stated policy will be if the student earns credit through participation in programs sponsored by universities and member organizations with which SDSU has a South Dakota Board of Regents-approved agreement. Students earning such credit through an approved program will have the option of electing either the satisfactory/unsatisfactory (S/U) or letter grade option,

provided the transcript, or its equivalent, as supplied by the partner university or membership organization, has letter grades recorded on it. The student and the student's advisor, or department head or the International Affairs Director, depending upon the course/courses in question, will determine before the exchange takes place whether the S/U or letter grade option will be used. Such an agreement must be made in writing, with a copy sent to the SDSU Office of International Affairs for the student's file.

## Non-Native Speakers of English

The Michigan Test of English Proficiency will be administered to undergraduate non-native speakers of English. Testing may be waived with a score of a 600 or higher on the TOEFL.

Testing will be conducted prior to enrollment. Results will be used to determine whether a student needs to complete one or more support courses in English as a Second Language in addition to regular academic classes. The courses are designed to better prepare students for their academic program in general as well as for the English core curricula required of all entering students.

Further information regarding admission and English proficiency requirements may be obtained from the International Student Affairs, Briggs Library #119, SDSU, Brookings, SD 57007. Phone: 605-688-4122; e-mail [sdsu.intlstud@sdstate.edu](mailto:sdsu.intlstud@sdstate.edu) or fax 605-688-6540.

## Residency Requirements

In order to establish residency for tuition purposes you must live in South Dakota for twelve consecutive months immediately preceding the first scheduled day of classes of the semester. Attendance at a college or university controlled by the Board of Regents does not count in determining the twelve month period of residence.

Qualifications for residency for tuition purposes may be obtained by writing the Director of Admissions, SDSU, Box 2201, Brookings, SD 57007

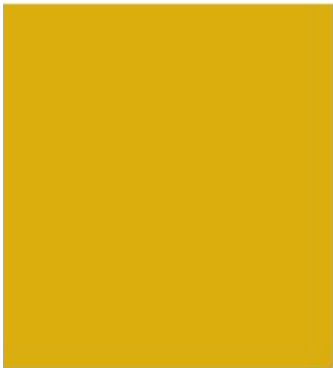






# Academic Evaluation

- *Introduction 18*
- *Academic Amnesty 18*
- *Assessment Program 18*
- *Proficiency Examinations 19*
- *Credits 19*
- *Examination for University Credit 19*
- *Dean's List & Honors Designation 20*
- *Modern Language Credit 20*
- *Grading 21*





# Introduction

---

Each student is responsible for satisfying requirements for graduation as listed under overall university, college, and major field requirements. If a student has questions concerning the proper satisfaction of specific requirements, he/she should consult with the dean, major advisor, or the Registrar. To the extent possible, the following sections are arranged alphabetically.

## Academic Amnesty

---

### Philosophy

Some students attempted college work previously and were not successful in their efforts. They now wish to resume their college careers but are held back by poor academic records. The goal of academic amnesty is to respond to the academic needs of matured individuals as they develop newly identified potential. Through the application of academic amnesty, the student's prior academic record can be excluded from current work under certain conditions.

### Eligibility

The student must:

1. Be an undergraduate, full-time or part-time, degree-seeking student at one of the universities in the South Dakota Regental system.
2. Not have been enrolled in any post-secondary institution for a minimum of three calendar years (9 consecutive terms including Fall, Spring, and Summer) prior to the most recent admission to the home institution. Exceptions may be granted in rare cases only by the Board of Regents Senior Administrator upon recommendation of the Vice President for Academic Affairs.
3. Have completed a minimum of 24 graded credit hours taken at any Regental university with a minimum grade point average of 2.0 for the 24 credit hours after the most recent admission to the home institution.
4. Not have earned a baccalaureate degree from any university.
5. Not have been granted any prior academic amnesty at any Regental university.
6. Submit a formal Academic Amnesty Petition to his/her home university following the procedures established by that university.

### Conditions/Procedure

1. Academic amnesty does not apply to individual courses. Academic amnesty may be requested for:
  - a. all previous postsecondary education courses, or
  - b. all previous postsecondary education courses at a specific postsecondary institution, or
  - c. a specified time period not to exceed one academic year (Fall/Spring) completed at any postsecondary institution(s).
2. Academic amnesty, if granted, shall not be rescinded.
3. Courses for which academic amnesty is granted will:
  - a. remain on the student's permanent record;
  - b. be recorded on the student's undergraduate transcript with the original grade followed by an asterisk(\*);
  - c. not be included in the calculation of the student's grade point average because no credit is given;
  - d. not be used to satisfy any of the graduation requirements of the current degree program.
4. Academic amnesty decisions will be made by the student's home institution, will be honored by all programs within the home institution, and will be honored by all other institutions within the South Dakota Regental system.
5. Universities outside of the South Dakota Regental system are not bound by the academic amnesty decisions made by the South Dakota Regental system.
6. Regental graduate programs and graduate professional schools may consider when making admission decisions.



## Assessment Program

---

SDSU has a comprehensive Assessment Program to evaluate its educational programs and services. This program is designed to measure the effectiveness of the general education curriculum, the cognitive knowledge and skills acquired in the major program of study, and students' perceptions of their education.

To effectively evaluate programs the University must assess students at various stages of their educational program. Therefore,

students are required to participate in assessment activities when requested. Assessment information is collected upon entrance into SDSU and additional assessments occur throughout the academic career. Students participate in an assessment for each major as part of their graduation requirements. For further information contact the Office of Academic Evaluation and Assessment..

# Proficiency Examinations

The South Dakota Board of Regents has selected the Collegiate Assessment of Academic Proficiency (CAAP) examination to be administered at all Regental universities. The CAAP assesses knowledge, skills, and abilities in four areas: writing, mathematics, reading, and science reasoning. The proficiency examination will be offered each spring and fall. All degree-seeking students are required to take the proficiency examination during the first semester in which they become eligible. Baccalaureate degree-seeking students will sit for the exam on completion of 48 passed credits at the 100 level or above, and associate degree-seeking students will sit for the exam on completion of 32 passed credits at the 100 level or above. Enrolled students who have already earned a baccalaureate degree are exempt from this requirement if the following conditions are met: 1) the institution awarding the degree is accredited by a United States

Department of Education recognized accrediting organization; and 2) the degree required the completion of a minimum of 18 credit hours of general education requirements including the requirements specified in Board Policy 2:7.3 (Lower Division Credit Hour and Course Requirements/Student Proficiencies). A student who chooses not to take the examination will not be allowed to register for two academic terms (fall, spring, or summer) at any Regental institution.

Students failing to achieve the minimum scores established by the South Dakota Board of Regents in one or more areas will be required to develop a remedial plan in conjunction with their advisers and when enrolled, will be allowed two opportunities to retest the failed part(s) during the spring and fall testing periods. For further information contact the Director of Academic Evaluation and Assessment.

## Credits

Semester credit hours ("credits") are the numerical values assigned to hours of academic work, according to the amount of time required for lecture or laboratory. One credit is equivalent to 50 minutes of class (lecture, discussion) and two hours of outside preparation per week for one semester.

Typically, two to four hours of laboratory work is assigned one credit hour, depending on the amount of outside work.

Independent courses vary in credit according to the nature of the work involved.

## Examination for University Credit

For students who have studied a subject independently or have done college level coursework for which they are unable to get a transcript acceptable to this institution, they may receive credit through a variety of evaluation programs.

Credits obtained through validation methods other than nationally recognized examinations are limited to 30 hours of credit for baccalaureate degrees and 15 hours of credit for associate degrees. There is no limit on the number of credits earned through nationally recognized examinations.

If credit by examination is accepted, the permanent record will show the course name and a grade of EX for the specified number of credits. If credit is accepted by another form of validation, the grade will be CR for the specified number of credits. No entry will be made on the record if the examination is failed. The examination results will not be included in calculation of either the semester or the cumulative grade point averages.

**NOTE: A grade given at, or transferred to, this university may not be raised by examination for university credit.**

Students and former students who were previously in good standing may acquire credit by examination providing they meet the conditions outlined below.

### Nationally Recognized Examinations

Credit may be received in certain subjects through the College Level Examination Program (CLEP), the Excelsior College Examinations, the International Baccalaureate (IB) program, Defense Activity for Non-Traditional Education Support (DANTES), DANTES Standardized Subject Tests (DSST), and the Advanced Placement Program (AP). Participants may be charged a testing fee for each of the testing programs.

In order to have credit earned by examination recorded on the academic transcript, students must complete an "Application for Placement Credit" form at the Academic Evaluation and Assessment Office and pay a recording fee.

### University CLEP Policies

Not all courses (credits) earned through CLEP and Advanced Placement (AP) exams may meet the System General Education Requirement and Institutional Graduation Requirements. CLEP and AP exams do not meet the writing intensive requirements.

### Local Challenge Exams

If a nationally recognized examination is not available to award credit for a course, a special examination may be established. This process is initiated by obtaining a "Challenge By Examination" form at the Academic Evaluation and Assessment Office and completing the prescribed steps:

1. Consult the head of the department in which the course is offered. This person will conduct a preliminary evaluation of the student's background in the subject area to determine if an examination is warranted.
2. Consult the appropriate dean to determine whether credits earned by examination in the proposed subject will be accepted toward the degree.
3. Pay the examination fee **before** taking the examination. Specific details are enumerated on the application form which is available at the Academic Evaluation and Assessment Office, 688-4217.



## Policy for Repeating Local Challenge Examinations

If a student does not pass the local challenge examination, he or she may use the SDSU petition procedure to request one more opportunity to take a challenge examination for the **same course**. The guidelines for the retesting process are as follows:

1. Only one retest is allowed.
2. There will be a waiting period of one academic term before retesting may be done.
3. The department will administer a test that is completely different from the examination used in the original challenge attempt.
4. The petition must be approved by the department head, dean, and Office of Academic Evaluation and Assessment.
5. If the petition is approved, the student must complete a new "Challenge by Examination" form and pay the examination fee before retesting may be done.

### Challenge By Portfolio

A "portfolio" may be used to document competencies learned through non-transferable courses at Technical Institutes or other institutions if a grade of C or better was earned. A portfolio may also

be used to verify skills learned through prior work experiences. A portfolio is a detailed, written document prepared by a student to demonstrate knowledge and skills. A portfolio may contain both prior coursework and employment experiences relevant to the course being challenged. A Challenge by Portfolio application can be obtained through the Academic Evaluation and Assessment Office. Students will need to receive departmental approval and pay a fee prior to portfolio review.

For information about credit through any of these programs contact the Academic Evaluation and Assessment Office. South Dakota State University cannot guarantee that credit earned via exam at SDSU will transfer to other institutions. Even though SDSU has made an effort to set cut off scores at appropriate levels, each institution develops its own procedures for accepting credit by exam. In some cases, a certain test or score level acceptable at SDSU **may not** qualify a student for credit at another institution.

### Course Exemption

Students may be awarded an exemption from taking a course but not receive college credit. This may result from the SDSU policy related to a specific test or credit received by examination from another institution.

## Dean's List and Honors Designation

### Dean's List Designation

Undergraduate, full-time students may be designated for the Dean's List at the end of the fall and spring terms. The Dean's List designation is determined by the home university and is based on a student's total course registrations for academic credit for the term from any Regental university. The Dean's List designation does not appear on the transcript.

To be awarded Dean's List designation, students must meet the following guidelines.

- a. Students must have earned a minimum of 12 credit hours in courses numbered 100-699 during the term.
- b. Students must achieve a System Term GPA of at least 3.50.
- c. Students with F, I, U, RI, or RU grades are not eligible regardless of System Term GPA attained.

### Honors Designation at Graduation

**Baccalaureate Degree.** The institution granting the degree determines the Honors Designation for its graduates. To earn an Honors Designation at graduation, the undergraduate student must meet both the following cumulative and institutional grade point averages:

- Summa Cum Laude (equal to or greater than 3.9)
- Magna Cum Laude (equal to or greater than 3.7 and less than 3.9)
- Cum Laude (equal to or greater than 3.5 and less than 3.7)

The undergraduate student must have completed a minimum of 60 credit hours at the institution granting the degree. Courses that are part of a formal collaborative agreement among Regental universities are considered to be earned from the institution granting the degree. (Also refer to Board of Regents policy 2:29.)

**Associate Degree.** The institution granting the degree determines the Honors Designation for its associate-level graduates. To earn an Honors Designation at graduation, an associate-level graduate must meet both the following cumulative and institutional grade point averages: With highest honor equal to or greater than 3.9; With high honor equal to or greater than 3.7 and less than 3.9; With honor equal to or greater than 3.5 and less than 3.7 An associate-level graduate must have completed a minimum of 30 credit hours at the institution granting the degree. Courses that are part of a formal collaborative agreement among Regental universities are considered to be earned from the institution granting the degree. (Also refer to BOR Policy 2:29.)

### Academic Recognition for Undergraduate, Part-Time Students

Undergraduate, part-time students taking fewer than 12 credits per term may be designated for Academic Recognition for Part-Time Students at the end of the fall and spring terms. The Academic Recognition for Part-Time Students designation is determined by the home university. The Academic Recognition for Part-Time Students designation does not appear on the transcript.

To be awarded the Academic Recognition for Part-Time Students designation, students must meet the following guidelines:

- a. Students must have completed at least 12 credit hours prior to the current semester at one or more Regental institutions.
- b. The student must have earned at least 3 and up to 11 credit hours of 100-699 level courses during the term.
- c. Students must achieve a System Term GPA of at least 3.50. Students with F, I, U, RI, or RU grades are not eligible regardless of System Term GPA attained.

## Modern Language Credit

Students with prior knowledge of a modern language **shall take** courses commensurate with their abilities. To determine this, the Department of Modern Languages and Global Studies administers a **free placement test** in French, German and Spanish. Upon completion of any modern language course except Spanish 211 and 212, students with a grade of "C" or higher may receive credit for 20

lower level courses up to 202. Only 14 credits (16 credits in French) may be received in this fashion. Students must apply for this credit at the Academic Evaluation and Assessment Office. A recording fee is charged for each lower level credit hour.

Students who have studied a modern language other than those offered by the Department of Modern Languages and Global Studies



may petition to have that study satisfy the modern language requirement for the B. A. degree.

Students who plan to study abroad with the intent of transferring the credits earned to SDSU must receive written permission to do so from the Department of Modern Languages and Global Studies and/or the Office of International Affairs **before** undertaking such study. Language courses transferred from foreign institutions will be accepted as credits without a grade, unless it is otherwise agreed with the student prior to departure. The University does not accept credit from all foreign institutes. Students who take courses abroad **without prior permission** from the Department of Modern Languages and Global Studies and/or the Office of International Programs may not receive SDSU credit for these courses.

**Credits for modern language for international and non-international native speakers of languages other than English.**

1. Enrollment/Credits not allowed:
  - a. For native language courses at the 100 and 200 levels (at SDSU or from other institution as transfer credits)
  - b. For Challenge by Exam\* in the native language
  - c. For CLEP in the native language
2. Enrollment/Credits allowed:
  - a. Enrollment/credit may be allowed at the 300 level and above.

**Determination of native language skills** is typically based on the language used in a student's secondary school instruction. The Department of Modern Languages and Global Studies will determine the appropriate faculty member/s who will have the sole discretion to determine whether or not a student is considered to be a native speaker based on the student's background, experience and level of linguistic competency. Ultimately, the Department has the responsibility to place the student at the appropriate level.

**Arts and Sciences Majors** - International students whose native language is not English may substitute 14 credits of "American Culture" courses for the modern language requirement. The courses in the social sciences (SGR #3) and humanities (SGR #4) are in addition to the standard B.A. requirements. Students must visit with the Assistant Dean of the College of Arts and Sciences for permission to pursue this option.

**\*Challenge by Exam in a language not offered by SDSU** - If a student wants to Challenge by Exam in a language not offered by SDSU, the challenge cannot be in the student's native language.

**Advanced Placement (AP) Credit** - An official College Board AP score at the approved South Dakota Board of Regents level is accepted as verification of advanced education in the native language. Please contact the Department of Modern Languages and Global Studies (SWG 121, 605-688-5101) for additional information.

## Grading

The grading system is based on achievement of expectations in a class. Undergraduate grades will be assigned to the undergraduate academic level and to all courses and sections with course numbers ranging from 001 to 499. Plus and minus grades are not used. A grade report is available for each registered student on WebAdvisor at <https://wa-sdsu.prod.sdbor.edu/webadvisor> or by requesting an unofficial transcript from the Registrar's Office.

**Undergraduate Grading Rubric**

The rubric below is designed to help faculty clearly articulate the standards by which they will assess student work. The rubric reflects broad consensus regarding the chief components of such work—its content, form, and style—and regarding the qualities that mark each grade level. No single rubric, however, applies to every assignment. What follows, then, is a guideline to help foster discussion—and understanding—between faculty and students about performance expectations and about assessment. Faculty may use the rubric as is or adapt it as they see fit.

- mostly correct grammar, punctuation, documentation, and format

**The grade of “C” (“average”) designates:** 2.00

- fulfillment of the major requirements and objectives of the assignment, though minor ones are only partially fulfilled or unfulfilled Grade Points
- an adequate command of subject matter
- adequate explanation, development, and application of ideas, though lack of depth is evident
- lack of independent thought or sustained analysis
- inconsistent substantiation of claims
- adequate organization, though lapses are evident
- adequate expression—written or oral—though lapses in precision, fluency, and clarity are evident
- adequate grammar, punctuation, documentation, and format, though errors are evident

**The grade of “D” (“lowest passing grade”) designates:** 1.00

- insufficient fulfillment of the requirements and objectives of the assignment Grade Points
- an inadequate command of content
- insufficient explanation, development, and application of ideas
- unexamined, clichéd thinking and little analysis
- inadequate substantiation of claims
- inadequate organization, making the text hard to follow
- inadequate expression—written or oral—with significant lapses in precision, fluency, and clarity
- numerous and significant errors in grammar, punctuation, documentation, and format

**The grade of “F” (“failure”) designates:** 0.00

- a failure to follow or complete the assignment Grade Points
- a failure to control or comprehend the content
- a failure to sufficiently explain, develop, or apply ideas
- a failure to analyze
- a failure to sufficiently substantiate claims
- a failure to organize the content, making the text or oral presentation largely incoherent
- a failure to write or speak with any degree of precision, fluency or clarity
- a failure to abide by the conventions of grammar, punctuation, documentation or format

Grade Descriptor	Grade Point Value
<p><b>The grade of “A” (“exceptional”) designates:</b></p> <ul style="list-style-type: none"> <li>• fulfillment of the requirements and objectives of the assignment</li> <li>• an excellent, impressive command of content</li> <li>• a clear explanation, development, and application of ideas</li> <li>• independent thought and analysis</li> <li>• thorough and persuasive substantiation of claims</li> <li>• clear and effective organization</li> <li>• precise, fluent, and distinctive expression—written or oral</li> <li>• correct grammar, punctuation, documentation, and format</li> </ul>	<p>4.00</p> <p>Grade Points</p>
<p><b>The grade of “B” (“above average”) designates:</b></p> <ul style="list-style-type: none"> <li>• fulfillment of most of the requirements and objectives of the assignment</li> <li>• a competent command of content</li> <li>• mostly clear explanation, development, and application of ideas</li> <li>• a capacity for independent thought and analysis, though it is not fully realized</li> <li>• sufficient and mostly persuasive substantiation of claims</li> <li>• mostly clear and effective organization</li> <li>• mostly precise, fluent, and clear expression—written or oral</li> </ul>	<p>3.00</p> <p>Grade Points</p>

## Additional Grades

Grade Descriptor	Grade Point Value
S Satisfactory	Does not calculate into any GPA
U Unsatisfactory	Does not calculate into any GPA
RI Incomplete (Remedial)	Does not calculate into any GPA
RS Satisfactory (Remedial)	Does not calculate into any GPA
RU Unsatisfactory (Remedial)	Does not calculate into any GPA
W Withdrawal	Does not calculate into any GPA, no credit granted
AU Audit	Does not calculate into any GPA, no credit granted
I Incomplete	Does not calculate into any GPA
IP In Progress	Does not calculate into any GPA
EX Credit by Exam	Does not calculate into any GPA
CR Credit	Does not calculate into any GPA
TR Note for NSE/MEDT	Does not calculate into any GPA, no credit granted
LR Lab grade linked to Recitation Grade	0 credit course
NG No Grade	0 credit tracking course
NP Grade not Reported by Instructor	Does not calculate into any GPA
Grade* Academic Amnesty	Does not calculate into any GPA, no credit given

An **Incomplete (I) grade** may be granted only when all of the following conditions apply:

1. A student has encountered extenuating circumstances that do not permit him/her to complete the course.
2. The student must be earning a passing grade at the time the Incomplete is necessitated. Anticipated course failure is not a justification for an Incomplete.
3. The student does not have to repeat the course to meet the requirements.
4. The instructor must agree to grant an Incomplete grade.
5. The instructor and student must agree on a plan to complete the coursework.
6. The coursework must be completed within one semester; extensions may be granted by the Vice President for Academic Affairs.
7. If the student completes the course within the specified time, the grades that may be assigned are A, B, C, D, F, S, RS, RU, or U.
8. If the student does not complete the course within the specified time, the grade assigned will be F (Failure) or U (Unsatisfactory) or RU (Remedial Unsatisfactory) if the student had requested S/U within the time specified in BOR policies 2:6.5 and 2:6.9.

An **In Progress (IP) grade** may be granted only when all of the following conditions apply:

1. The requirements for the course (for every student enrolled in the course) extend beyond the current term.
2. The extension beyond the current term must be defined before the class begins.
3. The instructor must request permission to award IP grades for a course from his/her Department Head and Dean, and then approval must be obtained from the Vice President for Academic Affairs.
4. A definite date for completion of the course must be established in the course syllabus.

With the exception of an "I" that has not been completed within the specified time, any grade reported to the Registrar may be changed by recommendation of the instructor and college dean with approval of the Vice President for Academic Affairs.

Any graduating senior or graduating graduate student who receives an Incomplete or In Progress grade in the final semester in a course required for graduation, or who has not removed an outstanding incomplete or in progress from a previous semester in a course required for graduation by the date grades are due for the semester, will not be permitted to graduate that semester. He or she will be required to apply for graduation for a subsequent semester. Emergency situations require the filing of a petition by the student to his/her Academic Dean for approval prior to the final grading deadline for the final semester.

**When the student has graduated and the degree has been recorded, the record is considered officially closed, and an instructor can no longer change a grade, including the "I" and "IP" grades.**

**Grade Points and GPA.** Grade points are related to grades as illustrated in this example:

Course	Credits	Grade	Grade Points
MIL 101	1	A (4)	4
MATH 115	5	B (3)	15
CHEM 112	4	C (2)	8
FREN 101	4	C (2)	8
ENGL 101	3	D (1)	3
Total	17		38
GPA - 38 divided by 17 = 2.23			

The cumulative grade point average (CGPA) is obtained by dividing grade points by the number of all hours attempted. **In computing grade point averages all hours attempted (graded A, B, C, D, F) are included.**

**Repeating a Course to Raise the Grade.** All courses taken appear on the student's academic record, but when a course is repeated, only the most recent grade is calculated into the cumulative GPA. **Students should notify the Registrar's Office, SAD 100, when a course, whether failed or passed, is repeated.**

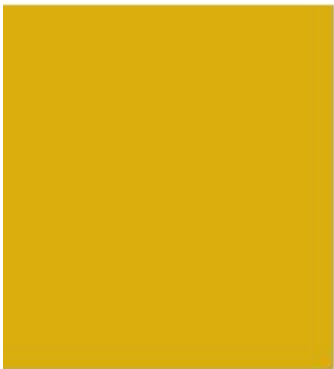
**Satisfactory/Unsatisfactory System.** The primary objective of the Satisfactory/Unsatisfactory System is to encourage students to attempt courses in areas they would normally avoid because of lack of background. Some courses are taught only on a Satisfactory/Unsatisfactory basis. Consult the specific department for more information.

1. A student may enroll in up to 20 credits using the Satisfactory/Unsatisfactory System.
2. These credits must be outside the student's major and may not serve to satisfy university, college, or departmental specific requirements, unless program exceptions exist.
3. Colleges may further restrict the Satisfactory/Unsatisfactory credit option.
4. A "D" letter grade or better is considered to be a passing grade in a Satisfactory/Unsatisfactory elective.
5. Registration for Satisfactory/Unsatisfactory electives will be accomplished only after registration day by Audit/Satisfactory/Unsatisfactory Form to the Registrar's Office.
6. The Satisfactory/Unsatisfactory option should be known only to the academic advisor, instructor, the student and the registrar.
7. Students may request to change from satisfactory/unsatisfactory elective to graded credit or vice versa only during the add period.
8. The grade (S or U) will be recorded on a student's permanent record. A grade of S or U will not count in the computation of the semester or the cumulative grade point average. If the course is passed (grade of "D" or better), the credits will be counted towards graduation.



# Academic Expectations

- *Academic Performance 24*
- *Academic Honesty 24*
- *Attendance 25*
- *Class Definition 26*
- *Electives 26*
- *Rates of Progress 26*



# Academic Performance

The normal progress rate toward graduation requires 12-15 semester credits and 24-30 grade points each semester. To be in good scholastic standing you must meet the following Minimum Grade Point Average Standard: Freshman - 2.00; Sophomore - 2.00; Junior - 2.00; Senior - 2.00. To graduate, a student must have a CGPA (Cumulative Grade Point Average) of 2.00 or above. (See General Degree Requirements).

The following grade point averages are calculated each academic term (Fall, Spring, Summer):

- **Institutional GPA** - based on credits earned at a specific Regental university. Utilized to determine if degree requirements have been met and to determine Honors Designation at Graduation.
- **System Term GPA** - based on credits earned at any of the six Regental universities within a given academic term (Fall, Spring, Summer). Utilized to determine minimum progression status.
- **Transfer GPA** - based on credits earned and officially transferred from an accredited college or university outside the Regental system. When a letter grade that normally calculates into the grade point average exists for a non-academic course (e.g., credit earned via examination), it will be included in the transfer GPA.
- **Cumulative GPA** - based on all credits earned by the student (transfer credit plus system credit). Utilized to determine minimum progression status and to determine if degree requirements have been met.

## Minimum Progression Standards

Class	Credit Hour Range	GPA Standard
Freshman	0-29.99	2.0
Sophomore	30-59.99	2.0
Junior	60-89.99	2.0
Senior	90+	2.0

# Academic Honesty

South Dakota State University has taken a strong and clear stand regarding academic dishonesty. The consequence of academic dishonesty ranges from disciplinary probation to expulsion. The full policies are found in Chapter 1 of the Student Code (01:10:27) within the Student Policy Manual. A student charged with academic

Minimum progression standards and related actions are based on the student's cumulative grade point average and system term grade point average.

1. A student with a cumulative grade point average of 2.0 or better is considered to be in **good academic standing**.
2. If a student's cumulative grade point average falls below 2.0 in any academic term (i.e. fall, spring, summer), the student is placed on **academic probation** the following term.
3. While on academic probation, the student must earn a system term grade point average of 2.0 or better.
4. When a student on academic probation achieves a cumulative grade point average of 2.0 or better, the student is **returned to good academic standing**.
5. A student on academic probation who fails to maintain a system term grade point average of 2.0 or better is placed on **academic suspension** for a minimum period of two academic terms.
6. Students on academic suspension will not be allowed to register for any coursework at any Regental university except when an appeal has been approved by the Regental university from which the student is pursuing a degree. An approved appeal granted by one Regental university will be honored by all Regental universities. (Also refer to policy 2:3.3.G Probation/Suspension of Students.)
7. Only Academic Suspension will be entered on the student's transcript. Academic probation will be noted in the internal academic record only.

**Progression and graduation are contingent upon satisfactory performance on the Proficiency Examination.**



dishonesty who wishes to appeal that charge may follow the Appeals Procedure outlined in Chapter 2 of the Student Policy Manual (Academic Appeals and Classroom Standards) or contact the Vice President for Academic Affairs Office, SAD 230, 605-688-4173.



SDSU is obligated to encourage its primary constituents, the students, to meet their responsibilities to themselves, their families, classmates, instructors and the taxpayers and donors who support higher education in South Dakota. For these reasons, the following policy as related to attendance is outlined.

## Policy

Teaching and learning is a reciprocal process involving faculty and students. Faculty members have an obligation of holding classes on a regular basis and students have an expectation to attend and participate in classes on a regular basis. Faculty members determine the specific attendance policy for courses under their direct supervision and instruction. Attendance procedures must be stated in written form and distributed or posted electronically to students at the beginning of each course. If attendance is required and will impact grading, this expectation shall be included in the syllabus.

## Absence due to personal reasons

Any exceptions to the faculty member's written attendance policy due to **verified** medical reasons, death of a family member or significant other, or verified extenuating circumstances judged acceptable by the instructor or the Office of Academic Affairs, will be honored. If a student has an accident, falls ill, or suffers some other emergency over which he/she has no control, the student needs to gather whatever documentation is available (e.g., copies of repair or towing bills, accident reports or statements from health care provider) to show the instructor. Such exceptions must be communicated and negotiated between the student and faculty member prior to the absence whenever possible. Absences for vacations or breaks, personal interviews do not constitute a valid reason for absence.

## Absence due to approved university-sponsored trips

Faculty and administration will honor officially approved absences where individuals are absent in the interest of officially representing the University. Appropriate sanctioned activities include:

- Collegiate club sports and competitions;
- Conferences and workshops recognized by the University not related to academics;
- Commitments on behalf of the University (Students' Association, Band, Choir, etc.);
- Intercollegiate athletics; and
- Professional activities recognized by the University related to academics (professional conference attendance, etc.)

Requests for excused absences must be submitted one week prior to the trip or event. Students must present the completed approved trip absence card to the faculty member prior to the trip or event to have an official excused absence. Faculty members are not required to honor incomplete or late cards.

## Students with official "excused absences"

Students with excused absences will be given appropriate make up work or instructor-determined equivalent opportunities for obtaining grades as students who were in attendance. Students with official excused absences are not to be penalized in course progress or evaluation. However, should excused absences be excessive, the faculty member may recommend withdrawal from the course(s) or a grade of incomplete to the student.

## Online Course attendance policy

Attendance policies do apply in the online classroom. Faculty members determine the specific attendance policy for courses under their direct supervision and instruction. Attendance procedures must be stated in written form and made available to students on the first day of the course. Common strategies for demonstrating "attendance" in an online course include login requirements per week, an identified number of discussion postings per week, consistent contact with peers and instructor, and/or other assignments as determined by the instructor. Also, students are expected to login to their class on the first day of the semester.

## Mediation on absence

Arrangements should be negotiated with faculty members. If this is not possible, the students should go first to the department head, and if necessary, next to the dean. The student may contact the Office of Academic Affairs if conflict cannot be resolved at these levels.

## Student-Athlete Class Attendance Policy

### Policy:

1. No student-athlete may be absent from more than 10 class sessions (including required laboratory sessions) of a given course in a semester.
2. No away athletic events are allowed during final examination periods.

### Exceptions:

1. Required conference or NCAA events are exempt from the above policies.
2. In the interest of safety for student-athletes and staff, missed class-time resulting from travel delays associated with inclement weather will be exempt from the above policies.

### Waivers:

1. Waivers to the above policies require the approval of the intercollegiate Athletics Board or its designee at the time of scheduling or as soon thereafter as is reasonably possible. If exceptional circumstances dictate the need for finalizing a contract or schedule prior to getting intercollegiate Athletics Board approval.



## Class Definition

---

1. Sophomore status requires 30 semester credit hours.
2. Junior status requires 60 semester credit hours.
3. Senior status requires 90 semester credit hours.

## Electives

---

Electives are offered so students may develop special talents or interests. The choice of subjects is left to the student, provided the selections made are consistent with the academic standards of the University. Electives used to meet the general education core degree requirements must be chosen from the approved list.

The dean of the college (or designee) in which the degree is sought must approve registration in an elective if the course is to be counted toward the degree.

## Rate of Progress

---

Each student is advised by a member of the faculty or staff. Classes consistent with your plan of study and properly adjusted as to the amount of work are arranged by the adviser and subject to approval by the dean.

The normal rate of progress for a student classified as an undergraduate is 15 credits each semester. To be a full-time student, undergraduates must carry 12 semester credits. Undergraduates are not permitted to register in 19 or more semester credits the first term.

Registration in 19 or more semester credits in subsequent terms is permitted only when the previous semester's work shows high achievement.

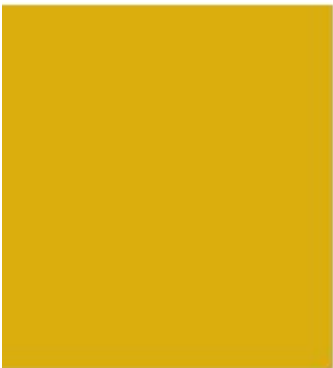
All overloads of 19 or more credit hours must be approved by the dean or designee of the student's college. Factors to consider when requesting a credit overload include: grade point average, total credits attempted and completed, specific courses, and time to graduation.





# Academic Changes

- *Auditing a Course 28*
- *Drop-Add Procedure 28*
- *Repeated Course 28*
- *Petitions & Appeals 29*
- *Withdrawl 29*



# Auditing a Course

Registration as an auditor in a course may be permitted. No credit is given. The audit fee is the established tuition and fee rate. **Registration for audit may be accomplished only after registration day by presenting an Audit/Satisfactory/Unsatisfactory form to the Registrar's Office, SAD 100.**

Auditing courses by graduate and undergraduate students will be a matter of record (recorded on their academic transcript). An AU grade is given for Audit. This grade does not calculate into the semester or cumulative grade point average. Audit courses are counted as part of the 19 hour rule for overloads. **Audit courses are not counted in calculating undergraduate or graduate full-time student status.**

# Drop-Add Procedure

1. Dropping or adding courses should be discussed with one's academic advisor. Refer to the semester course schedule and the registrar's office for drop-add procedures.
2. The drop/add period is the time period during which students may adjust their academic schedule for the term without financial or academic consequences. The last day of the drop/add period for a course is designated as the census date for that course and is the official date for enrollment reporting. The end of the drop and add period for standard and non-standard courses offered in a semester shall be the date the first 10 percent of the term ends or the day following the first class meeting, whichever is later. When calculating 10% of the term, breaks of five or more days are not included when counting the total number of days but Saturdays, Sundays, and holidays are. Student registrations can only be added to courses after the end of the drop and add period by approval of the chief academic officer (or designee) of the university.
3. **Do not discontinue enrollment in a class without processing discontinuance via the official drop procedure. An "F" will be recorded for an unofficial drop.**

## Grades for dropped courses

Undergraduate and graduate students who drop a course, or withdraw from the System, shall receive a grade of "W" if that action occurs anytime between the day after the census day for that course and the day that corresponds with the completion of 70 percent of the class

days for that course. Likewise, a student who withdraws from the system during that time period also shall receive grades of "W" for all the courses in which he/she is registered. (Exception: a student who completely withdraws from the Regental system from the first day of a class(es) until the census date of the class(es) will also have a pseudo course of WD 101 (Undergraduate) or WD 801 (graduate) with a "W" grade entered on their Transcript.) For standard classes, the last day to receive a grade of "W" is determined by calculating 70 percent of the class meeting days in the term, counting from the first day of classes in the term and rounding up if the calculation produces a fractional value greater than or equal to 0.5.

For any non-standard course, the last day to receive a grade of "W" is based on the number of class meeting days for the course, using the method described above.

A notation of the date of withdrawal will be included on the student's transcript if he/she withdraws from the system. (Refer to Board of Regents policy 5:7.2)

Students may not drop a course or withdraw from the System after the time period specified above. (Refer to Board of Regents policy 5:7.2)

Similar proportional dates would be established by the Registrar's Office for summer, interim and other courses taught outside of the normal nine-month academic year.

If extenuating circumstances (i.e., illness) have prevented class participation, a petition for an individual drop may be filed.

# Repeated Courses

All courses taken appear on the student's academic record, but when a course is repeated, only the most recent grade is calculated into the cumulative GPA. This policy applies to both undergraduate and graduate coursework. Relative to number of repeats allowed:

1. A student may enroll in an undergraduate course (for which credit is granted only once) no more than three times without permission of the Vice President for Academic Affairs.
2. A student may enroll in a graduate course (for which credit is granted only once) no more than two times without permission of the Dean of the Graduate School.

3. A student will be allowed unlimited enrollments in an undergraduate or graduate course for which credit toward graduation may be received more than once. An institution may limit the number of credit hours for courses that may be taken more than once that apply toward the requirements for a major. (BOR Policy 2:8:3D)

**Please notify the Registrar's Office, SAD 100, when a course, whether failed or passed, is repeated.**





# Petitions and Appeals

South Dakota State University has an established University Petition Process for students to follow in seeking exceptions to established academic and administrative policies. There are four areas of appeal: Drop/Add Appeals, Academic Appeals, Graduation Appeals, and Financial Appeals.

The petition process begins with the student obtaining a University Petition form from the Registrar's Office and then processing it through the appropriate steps as indicated on the petition form.

## Withdrawal

Those finding it necessary to withdraw from the University are urged to consult with a faculty advisor to work out the best plan possible and then contact the Registrar's Office, SAD 100 to process a withdrawal. **Those who leave the University without processing an official withdrawal will be reported as having failed the semester's work.** Grades transcribed are based on the date of application for withdrawal. A student may withdraw from the University until 70% of instruction has been completed (Contact the Registrar's office for date information). After that date, if extenuating circumstances (i.e., illness) have prevented class participation, a petition for withdrawal may be filed through the Office of Academic Affairs.

A student is considered withdrawn during a term if classes have begun and:

1. The student has registered for at least one course and the student has initiated withdrawal from all state-support and self-support courses at all Regental universities in which the student was actively enrolled at the time of withdrawal, including courses in progress as well as those that have not yet begun, or;

2. The Regental home university has completed withdrawal procedures for administrative reasons including, without limitation, non-payment of tuition and fees or disciplinary sanctions.
3. Students enrolled in two or more Regental universities pursuant to financial aid consortia will be eligible for refunds as set forth herein only if they withdraw, drop out or are expelled from all classes at all Regental universities for which they have enrolled.

Students who withdraw or are expelled from the Regental system within the drop/add period receive a 100 percent refund of tuition and per credit hour fees. Students who withdraw or are expelled from the Regental system after the date the first 10 percent of the term ends for the period of enrollment for which they are assessed may be entitled to a prorated refund.

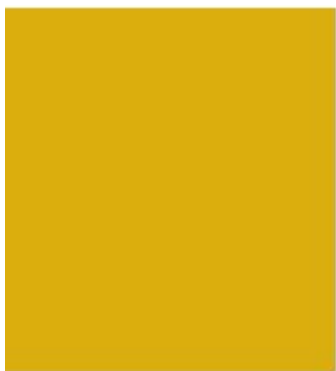






# Academic General Information

- *Academic Advising Role Statements 32*
- *Affirmative Action/Equal Employment Opportunity Policy/ Title IX 33*
- *Disability Policy Statement 33*
- *Email Policy Statement 33*
- *Family Educational Rights and Privacy Act of 1974 (FERPA) 34*
- *Graduation Policies & Procedures 34*
- *Non-Degree Courses 34*
- *Policy on Sexual Harassment and Other Forms of Harassment 35*
- *Policy on Institutional Record of Student Complaints 36*
- *Student Code of Freedom and Responsibility 37*
- *Trip Regulations 37*
- *University-Sponsored Student Athletic Trip Regulations 37*



# Academic Advising Role Statements

The overall educational objective of South Dakota State University is to guide each student in the attainment of intellectual and professional competence, growth of personal development, a sense of social and civic responsibility, and satisfactory adjustments in human relationships. Individualized attention to this objective is delivered through academic advising. Each student is assigned an academic adviser and is encouraged to meet with that adviser at least twice each semester to review plans/progress and to schedule classes. Academic advising, formal or informal, is provided by teaching, research, administrative, or service appointed faculty and staff. Academic advising is included in faculty workload assignments.

## Purpose of Academic Advising

Academic advising is formal and informal guidance intended to help students investigate, identify, and accomplish individual academic and career plans.

## Goals of Academic Advising

1. Assist students in the exploration and definition of immediate and lifelong goals.
2. Encourage students to explore and become involved in beneficial experiences that contribute to a complete university experience.
3. Inspire students to understand their freedom of choice and accept their responsibility for academic progress and planning.

## Role of the Advisee

The advisee role in academic planning is to be involved, responsible, and committed to developing and implementing a future career, academic, and employment plan.

## Rights of the Advisee

1. The right to an advisor who fulfills the SDSU advising goals, role, and responsibilities.
2. The right to know and have timely access to an assigned advisor.
3. The right to protection and review of academic advising-related files and materials in accordance with the Family Educational Rights and Privacy Act (FERPA).
4. The right to receive pertinent and accurate information as needed for career, academic, and employment planning.
5. The right to request a change of academic advisor assignment and the right to clear procedures for conveying concerns relative to quality of advising help.

## Responsibilities of the Advisee

1. Initiate and advance timely career and academic related plans and discussions with advisor.
2. Initiate regular progress appointments and seek advisor assistance when problems arise.
3. Fulfill additional requirements as agreed upon during discussions with advisor.
4. Recognize that the ultimate responsibility for timely completion of academic requirements rests with the advisee.

## Role of the Academic Advisor

The academic advisor role is to be a sensitive, knowledgeable, and skilled link that enhances the advisee's relationship with the University. The academic advisor assists the student in achieving educational goals.

## Responsibilities of the Academic Advisor

1. **Furnish Accurate Academic Information.** Provide advisees with correct and relevant information about university, college, and departmental graduation requirements.
2. **Know Advisees.** Know assigned advisees and their individual educational and career goals.
3. **Guide Major Program Planning.** Recommend courses which correspond with advisees' academic background and educational goals.
4. **Maintain Advisee Records.** Keep current advisee records and personal information in accordance with confidentiality requirements.
5. **Monitor Academic Decision-Making.** Inform advisees about relevant alternatives, limitations, and possible consequences of academic decisions, including information on academic standards, appeals, and charges of academic dishonesty.
6. **Refer to Campus and Community Resources.** Encourage and guide advisees to utilize available campus and community student help and student development resources.
7. **Encourage Timely Progress Toward Degree.** Advocate timely planning and progress toward educational goals with prompt attention to problems.
8. **Advocate Professional Responsibilities.** Help advisees recognize relevant institutional and / or professional responsibilities. Make recommendations to appropriate university officials when advisee behavior compromises professional and/or institutional standards to such an extent that professional disclosure is necessary.
9. **Retention.** Support student through advising to increase probability of degree completion.
10. **Develop Advising Knowledge and Skill.** Participate in professional development activities that will enhance advising knowledge and skills





# Affirmative Action/Equal Employment Opportunity Policy/Title IX

---

In recognition of its legal and moral responsibilities, South Dakota State University reaffirms its commitment to provide equal opportunity for the education and employment of all persons, without regard for age, race, color, creed, ancestry, religion, gender, marital status, pregnancy, sexual orientation, national origin, disability or veteran's status through a continuing policy of Affirmative Action and non-discrimination. Positive efforts to further equality of opportunity in education and employment will be: 1) vigorously pursued; 2) conform to current legal requirements; and 3) be consistent with university standards of excellence and quality.

The "affirmative action" required to meet our responsibilities will include the statement and continual review of university policies relating to equal opportunity and non-discrimination, the collection and analysis of data, the formulation and implementation of procedure to ensure compliance with stated policy, and the continual monitoring of all administrative practices relating to these procedures.

It is recognized that the real success of an affirmative action program is measured more by good faith efforts in achieving compliance, and not solely in the accumulation of data, analysis, and

reports. Analysis, planning, and programming help bring about desired results, identify problem areas, and permit rational scheduling of corrective action. Moreover, these activities give new insights into the dynamics of the university community and help sensitize all of us to the goal of equal opportunity.

In specific terms, this commitment to provide equal opportunity for all persons requires: the eradication of the effects of any past discrimination; and, the prevention of any present or future discrimination, including any potential discrimination which may arise as a result of the improper implementation of affirmative action practices.

In the final analysis, "affirmative action" is focusing of the University's creative energies on the task of developing processes that enhance human development and institutional effectiveness.

Equal Opportunity questions and concerns regarding discrimination/ harassment prevention information, reporting discrimination, discrimination in education programs or activities, or complaint procedures can be directed to the Equal Opportunity Officer/Title IX Coordinator in Human Resources (SAD 318; telephone 605-688-4128; Fax 605-688-5822).

## Disability Policy Statement

---

South Dakota State University (SDSU) reaffirms that it is committed to a policy of non-discrimination on the basis of physical or mental disability/impairment in the offering of all benefits, services, educational and employment opportunities. The Coordinator for Disability Services has been designated the SDSU "Responsible Employee" to coordinate institutional compliance with the non-discrimination requirements of the **Americans with Disabilities Act (ADA) of 1990**. In that capacity, the Coordinator is committed to ensuring that SDSU provides an inclusive learning environment.

The Coordinator will also be responsible for the effective integration of ADA procedures, and Section 504 of the Rehabilitation Act of 1973. The Coordinator serves as the personal contact for students seeking information concerning the provisions of the ADA and their respective duties and rights provided therein. The phone number for the Office of Disability Services is 605-688- 4504; E-mail: [sdsu.disability@sdstate.edu](mailto:sdsu.disability@sdstate.edu)

## Email Policy Statement

---

Email messages sent by SDSU to students through university-assigned, jacks email addresses will constitute an official means of communication. It is the student's responsibility and obligation to access official university email messages in a timely manner. As

other email accounts may be blocked by the SDSU firewall, SDSU is only able to monitor student emails coming from university-assigned email accounts.



# Family Education Rights and Privacy Act of 1974

---

The Family Educational Rights and Privacy Act of 1974 (FERPA) (also known as the Buckley Amendment) is a Federal law designed to protect the privacy of a student's personal education records kept at the University. The law provides that the institution will maintain the confidentiality of each student's education records

and covers matters relating to access to student records and the disclosure of such records. For complete information about these policies, please refer to the SDSU Student Policies Manual and the Records and Registration website.

## Graduation Policies and Procedures

---

- A. **Graduation Application - Date Due in Dean's Office.** Check the University Calendar in the Catalog or the Fall, Spring, and Summer Course Schedules for dates.
- B. **Incomplete grades in courses required for graduation.** Graduating Seniors and Graduating Graduate Students
- Any graduating senior or graduating graduate student
    - who receives an Incomplete or IP grade in the final semester in a course required for graduation **will not be permitted to graduate that semester but will be required to apply for graduation for a subsequent semester,** or
    - who has not removed an outstanding Incomplete from a previous semester, in a course required for graduation, by the date grades are due for the semester **will not be permitted to graduate that semester but will be required to apply for graduation for a subsequent semester.**
  - Emergency situations require the filing of a petition by the student to the Dean for approval prior to the final grading deadline for the final semester.
- C. **Incomplete grades in courses not required for graduation.**
- The student's record, up to the date of graduation, for that degree, is considered closed when the Registrar records the verified degree on the student's record (3 weeks after grades are due for the final semester prior to graduation).
  - After that date, removals of Incompletes for courses not required for the degree are no longer permitted. **This policy also applies to grade changes or any other academic change to the student's record.**
3. This policy has always been in effect but is reinforced in this policy statement.
- D. **Graduation List.** Submission by the Deans of the final verified graduation list to the Registrar's Office.
- Deadline for verification of degrees to the Registrar by the Deans will be 3 weeks after grades are due for the semester.
  - Prior to verification of the degree - all undergraduate transfer work in progress, or completed by the student, up to the date of graduation (whether required for graduation or not) must be evaluated by the Dean and recorded on the student's academic transcript.
  - It is the Dean's responsibility to ensure all requirements are met prior to entering the student's name on the final verified list.
- E. **Notification to the student of above policies and procedures.**
- Every student will receive an information letter and will sign off on these policies and procedures at the time the graduation application is filed with the Dean.
  - The Registrar will include this policy and procedures statement with the graduation information sent to all graduating students each semester.

## Non-Degree Courses

---

In addition to courses leading to degrees, the University offers special and outreach courses in several areas of interest. Some of these may be given for academic credit; others may be offered for Continuing Education Units. Consult the department head involved

or International Affairs and Outreach - Continuing and Extended Education, Briggs Library Room 119, Box: 2115 Brookings, SD 57007; 605-688-4154. E-mail: [distance@sdstate.edu](mailto:distance@sdstate.edu).



# Policy on Sexual Harassment and Other Forms of Harassment

## Introduction

Harassment is a particularly harmful and illegal form of discrimination that breaks down trust within the SDSU community and impedes the ability of students, employees, and others to participate in an environment that allows them to achieve their fullest potential. Furthermore, harassment is a violation of the expectation that every individual at SDSU deserves to be treated fairly, with respect for his/her dignity as a person.

For these reasons, it is this institution's policy that no form of harassment of employees, students, and others associated with SDSU is permitted under any circumstances. All reported incidents will be investigated promptly and acts of prohibited behavior will result in corrective action, including disciplinary action pursuant to the South Dakota Board of Regents Human Rights Complaint Procedures. Sanctions for employees include formal reprimands, suspensions without pay, reductions in responsibilities, and termination. Sanctions for students include disciplinary probation, suspension, and expulsion.

## Policy Statement: Harassment on any grounds, directed against individuals, is proscribed.

- I. Sexual harassment in either of its recognized forms is proscribed:
  - A. Sexual harassment may be established by showing that an individual has been subjected to unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature where:
    1. Submission to such conduct is made either explicitly or implicitly a term or a condition of an individual's participation or use of an institutionally sponsored or approved activity, employment, or resource; **or**
    2. Submission to or rejection of such conduct by an individual is used as the basis for educational, employment, or similar decisions affecting an individual's ability to participate in or use an institutionally sponsored or approved activity, employment, or resource.
  - B. Sexual harassment may also be established by showing participation in the creation of an intimidating, hostile, or demeaning environment established under Section II below.
- II. Harassment on the basis of race, color, creed, religion, national origin, ancestry, citizenship, gender, sexual orientation, age, or disability, or harassment on any grounds, directed against individuals, may be established by showing:
  - A. Conduct toward another person that has the purpose of creating an intimidating, hostile, or demeaning environment and that interferes with his/her ability to participate in or to realize the intended benefits of an institutional activity, employment, or resource.
  - B. Conduct toward another person that has the effect of creating an intimidating, hostile, or demeaning environment that adversely interferes with his/her ability to participate in or to realize the intended benefits of an institutional activity, employment, or resource.
    1. Harassment consists, in most cases, of more than casual or isolated incidents.

2. Consideration should be given to the context, nature, scope, frequency, duration, and location of the incidents, whether they are physically threatening or humiliating as opposed to merely offensive utterances, as well as to the identity, number, and relationships of the persons involved.
3. Harassment shall be found where, in aggregate, the incidents are sufficiently pervasive or persistent or severe that a reasonable person with the same characteristics of the victim of the harassing conduct would be adversely affected to a degree that interferes with his/her ability to participate in or to realize the intended benefits of an institutional activity, employment, or resource.
  - a. The reasonable person standard includes consideration of the perspective of persons of the alleged victim's race, gender, or other circumstances that relate to the purpose for which he/she has become the object of allegedly harassing conduct.
  - b. If the victim does not subjectively perceive the environment to be hostile, the conduct has not actually altered the conditions of participation and there will be no violation of this policy.
    1. It is not necessary to show psychological harm to the victim to establish that the conduct would interfere with the person's ability to participate in or to realize the intended benefits of an institutional activity, employment, or resource.
- C. Other conduct that is extreme and outrageous exceeding all bounds usually tolerated by polite society and that has the purpose or the substantial likelihood of interfering with another person's ability to participate in or to realize the intended benefits of an institutional activity, employment, or resource.

## Reporting Complaints/Grievance Procedure

University employees are required to refer all harassment complaints they receive (formal or informal, resolved or not) to SDSU's Equal Opportunity Officer (Phone: 605-688-4128, SAD 324). Confidentiality will be maintained to the maximum extent possible in resolving the problem. If a complainant chooses to exercise his/her right to file a formal complaint, the South Dakota Board of Regents Human Rights Complaint Procedure will be used in the investigation and resolution.

## Non-Retaliation/Non-Coercion

Complainants, witnesses, and other persons who have assisted, testified, or participated in any manner in any phase of an investigation will be protected. This policy and applicable Board of Regents, State, and Federal regulations prohibit retaliation, coercion, interference and/or intimidation, or any other adverse act. Persons committing such adverse actions will be subject to disciplinary actions.

# Policy on Institutional Record of Student Complaints

## North Central Association (NCA) Policy

To comply with federal regulations, the Higher Learning Commission of NCA expects an affiliated institution to maintain records of formal, written student complaints filed with the offices of the Chief Executive Officer, Chief Academic Officer, or Chief Student Affairs Officer. The records should include information about the disposition of the complaints, including those referred to external agencies for final resolution. These records will be available to the next NCA comprehensive evaluation team for review.

## Purpose of These Guidelines

To comply with NCA policy IV. B.4 Institutional Records of Student Complaints adopted by the NCA, February 1998. The NCA has established this policy to comply with federal regulations for the maintenance of records of formal, written student complaints. SDSU, in turn, needs to be in compliance with the NCA policy.

## Definition of a Complaint

This policy applies to complaints that are made formally, in writing, signed by the student and addressed to and submitted to an institutional officer with the responsibility to handle the complaint. Formal written complaints shall mean hand-delivered, mailed, or faxed written complaint. At SDSU, email complaints do not meet the definition of a formally submitted written complaint. (This process will not duplicate efforts of Human Resources on human rights complaints, Student Affairs on judiciary issues, or Academic Affairs or academic appeals.)

## Responsible Institutional Officers or Their Representatives

For the purposes of this policy, these are the President or his/her Administrative Assistant, Vice President for Academic Affairs or Associate Vice President for Academic Affairs, Vice President for Student Affairs or Assistant Vice President of Student Affairs. Also key in recording these complaints are the Program Assistant in the

Office of Academic Affairs and the Senior Secretary in the Office of Student Affairs.

## Record of Student Complaints

The format established is a spreadsheet maintained in each of the three major offices to which a complaint can be submitted. It includes: the date the complaint was first formally submitted to an appropriate officer, the nature of the complaint (e.g., dispute about a grade, complaint about unfair class schedule, etc.), the steps taken by the institution to resolve the complaint, the institution's final decision regarding the complaint including referrals to outside agencies, any other external actions initiated by the student to resolve the complaint if known to the institution (e.g., lawsuit, EEOC investigation, etc.).

## Dates

The policy is effective beginning with September 1, 1998. Data will be merged from the three offices on an annual basis. The institution will provide evidence of tracking for a two-year period, at which time, the records will be kept, but will be placed in dormant status. (Office of Student Affairs will merge data annually and file it.)

## Method of Notification to Students

This policy will be included in the student policy manual, which is a responsibility of the Vice President for Student Affairs. It will be addressed in the University catalog, which is a responsibility of the Vice President for Academic Affairs. It shall be regularly posted in residence halls, (responsibility of Office of Student Affairs). It will be distributed to the Students' Association, (responsibility of Office of Student Affairs). It will be published in the Collegian, (responsibility of Office of Student Affairs).

Developed by Vice President Carol J. Peterson, Dean Robert Tomlinson, Ms. Linda Schumacher 10/98, Finalized 12/98. Updated 9/01 by Vice President Peterson and Dean Marysz Rames.





# Student Code of Freedom and Responsibility

---

Academic institutions exist for the transmission of knowledge, the pursuit of truth, the development of students, and the general support for the well-being of society. Free inquiry and expression are indispensable to the attainment of these goals. Freedom to teach and freedom to learn are inseparable facets of academic freedom. The freedom to learn depends upon appropriate opportunities and conditions in the classroom, on campus and in the community. Students are expected to exercise this freedom with responsibility.

The Student Code, which appears in the Student Policies Manual, is the basic guideline reflecting university-student relations.

The Code defines student behavior, expectations and related university conduct and judicial procedures.

Complete details concerning disciplinary procedures and regulations pertaining to residence halls, parking and traffic, student organizations and activities will be found in the Student Policies Manual.

Copies of the manual are available on the SDSU web site by searching Student Code.

## Trip Regulations

---

- A. Students involved in trips related to university-sponsored activities as defined in the catalog under Purposes of the University or university-affiliated activities as scheduled by the Director of Student Activities or the Director of Residential Life must receive clearance for the trip. The authorized request form is available via the Academics site on Inside State. The Authorization Request form must be signed by the faculty sponsor and approved by the department head or his/her designate. This must be forwarded and must be approved by the Office of the Vice President for Academic Affairs one week prior to the trip.
- B. Students on university-approved trips (excluding a ski trip, a rodeo club trip, or interscholastic athletics) may be covered by a secondary accident-medical insurance policy if the situation meets all of the requirements as outlined in that policy document.
- C. State-owned vehicles may be utilized if criteria established in the policy regulating use of state owned vehicles are met.
- D. Students are eligible for trips if 1) activities of the student have not been curtailed by action of an authorized university judicial body; 2) no single trip shall keep students away from classes more than 5 consecutive class days.
- E. Faculty will honor trip absences approved by university officials where individuals or groups are absent in the interest of the University. Differences encountered between student and instructor will be arbitrated by the department head, dean, or Provost and Vice President for Academic Affairs, in that order.
- F. Each student participating in an approved trip will work with their faculty sponsor and complete a Release and Waiver of Liability; Assumption of Risk Agreement; Indemnity Agreement; and Consent to Medical Treatment and Emergency Contact Form. This is a single page form that will be maintained with the trip sponsor.
- G. Trip Absence Card for each student involved in the trip will be issued by the Office of Academic Affairs and given to the faculty sponsor. The faculty sponsor will provide these to each student. Other faculty members are not required to honor incomplete cards. The student should show the card to his/her instructors in making arrangements to make up any work missed because of a trip, previous to going on the trip. The student should retain the Trip Absence Card until after final grades are received by the student.
- H. All intradepartmental trips (i.e., laboratory field trips, clinical experiences, etc.) that do not involve students missing classes shall also be submitted to the Vice President for Academic Affairs office for approval via the authorized request form by the date of the trip.

## University-Sponsored Student Athletic Trip Regulations

---

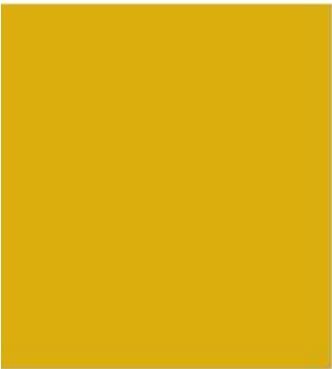
- A. A written notification of all athletes participating in any off-campus event must be submitted to the Compliance Office prior to leaving for the off-campus athletic event. This notification must include the names of all students, mode of transportation, date and time of departure and return, and number of class days that will be missed due to the event.
- B. Athletes on university-approved athletic trips should have their own primary insurance coverage. The University provides secondary coverage for costs over primary limits or for athletes who do not have primary insurance. State-owned vehicles may be utilized if criteria established in the policy regulating use of state-owned vehicles are met. Drivers of personal vehicles must have liability insurance.
- C. Students are eligible for trips if 1) activities of the student have not been curtailed by actions of an authorized University judicial body; 2) no single trip shall keep students away from classes more than five (5) consecutive class days.
- D. If there are any changes in personnel going on a trip or changes in trip dates, these changes must be registered with the Compliance Office before the trip.





# Graduation Requirements

- *General Degree Requirements 40*
- *General Education 40*
- *General Education Requirements for Baccalaureate Degree 41*
- *System General Education Requirements (SGRs) 42*
- *SDSU Institutional Graduation Requirements (IGRs) Credits 45*
- *Globalization Requirement 47*
- *Advanced Writing Requirement 48*
- *General Education Requirements for Associate Degree 49*
- *Policies Applicable to System General Education Requirements (SGRs) 49*
- *Transfer Students 50*
- *College and Major Field Requirements 50*





# General Degree Requirements

---

Academic advisors assist with proper course selection to meet curricular requirements and help to avoid errors in scheduling. However, students have the final responsibility for satisfying the degree requirements for the curriculum chosen and for the university general education requirements.

## The General Degree Requirements

- A. Completion of at least 120 semester credit hours for the baccalaureate degree (see individual professional college requirements) and 60 semester credit hours for the associate degree. Remedial course credits are not counted as meeting degree requirements.
- B. A Cumulative Grade Point Average (CGPA) of 2.00. The CGPA is based on all courses attempted within the Regental system, transfer or at SDSU. If a course is repeated, F95 or later, only the last grade received will be included in the calculation of the CGPA.
- C. Institutional requirement. An institutional credit is a course offered by SDSU at any of its approved sites using any approved method of delivery. Courses that are a part of a formal collaborative agreement among Regental institutions are considered to be institutional. The minimum number of credit hours that must be earned from the institution granting the degree are 30 credits for the baccalaureate degree and 15 credits for the associate degree. The number of the last credit hours earned preceding completion of the degree that must be earned from the institution granting the degree are 15 of the last 30 credits for the baccalaureate degree and 8 of the last 15 credits for the associate degree. The minimum number of credit hours specified in the major or minor requirements that must be completed from the institution granting the degree is 50 percent. Credits earned by examination are not counted as resident credit unless an exception has been made because of special program features. A student must have 20 upper division level credits, 14 of which need to be at SDSU.
- D. Completion of University general education requirements as described below.
- E. Completion of all college and major field requirements.
- F. Demonstration of satisfactory performance in writing, mathematics, reading, and science reasoning as evidenced by receiving a passing score on all sections of the Collegiate Assessment of Academic Proficiency (CAAP) exam or alternative assessment. This requirement must be met by both associate and baccalaureate degree-seeking students.
- G. Demonstration of proficiency in Information Literacy (IL) by receiving a satisfactory on the system IL examination.
- H. Degree seeking students may complete requirements for a minor at any Regental university that has been approved to grant that minor. This minor will be recorded on the transcript in conjunction with a degree/major at that university or a degree/ major at any other Regental university. A minor will only be recorded on the transcript in conjunction with a degree and major.

# General Education

---

The required General Education Curriculum for all undergraduate students is further explained in the Graduation Requirements section of the Catalog. The System General Education Requirements (SGRs) are designed to achieve these seven goals.

### System Goal #1: *Written Communication*

Students will write effectively and responsibly and will understand and interpret the written expression of others.

### System Goal #2: *Oral Communication*

Students will communicate effectively and responsibly through listening and speaking.

### System Goal #3: *Social Sciences/Diversity*

Students will understand the organization, potential, and diversity of the human community through study of the social sciences.

### System Goal #4: *Humanities and Arts/Diversity*

Students will understand the diversity and complexity of the human experience through study of the arts and humanities.

### System Goal #5: *Mathematics*

Students will understand and apply fundamental mathematical processes and reasoning.

### System Goal #6: *Natural Sciences*

Students will understand the fundamental principles of the natural sciences and apply scientific methods of inquiry to investigate the natural world.

### System Goal #7: *Information Literacy*

Students will recognize when information is needed and have the ability to locate, organize, critically evaluate, and effectively use information from a variety of sources with intellectual integrity.

In addition to the System General Education Requirements, SDSU has Institutional Graduation Requirements (IGRs) designed to achieve two major goals.

### IGR Goal #1: *First Year Experience*

Students will understand their emerging role and responsibilities as educated persons through a common intellectual experience.

### IGR Goal #2: *Cultural Awareness and Social and Environmental Responsibility*

Students will acquire knowledge about the world's peoples – their cultures, arts, and environments – that prepares them for further study, deepens their understanding of the human condition, and strengthens their commitment to social and environmental responsibility.

### NOTES:

**The course used to meet IGR Goal #2 must have a different prefix than the courses used to meet System Goals #3, 4, and 6.**

**Other than for System General Education Goal #7, no given course may satisfy more than one of these requirements, unless the minimum number of credits is exceeded. Credits in excess of the minimum credits needed may be applied in another area.**

**Globalization:** Globalization is defined as a process of interaction and integration among people, organizations, governments and cultures. This process affects:

- environmental resources
- culture(s), including people's well-being
- political systems, national sovereignty
- national security
- agriculture
- public health/health care
- economic systems/international trade
- transportation
- information technology/communication
- education
- global governance

Students will understand globalization and how it affects the human community.

**Advanced Writing:** Advanced writing courses are discipline based and require students to build upon concepts learned in courses addressing System General Education Goal #1. Students will refine their writing skills appropriate to the discipline. These courses will have a scholarly focus.

Students will build upon concepts learned in courses covering System General Education Goal #1 and refine their skills through research and writing in a discipline specific context.

## General Education Requirements for Baccalaureate Degree

(Effective for new degree-seeking students Fall 2005 and later)

### I. System General Education Requirements: 30 credits

Goal #1: Written Communication	Credits: 6
Goal #2: Oral Communication	Credits: 3
Goal #3: Social Sciences/Diversity	Credits: 6
Goal #4: Humanities and Arts/Diversity	Credits: 6
Goal #5: Mathematics	Credits: 3
Goal #6: Natural Sciences	Credits: 6
Goal #7: Information Literacy	Credits: 0

### II. Institutional Graduation Requirements: 5 credits

Goal #1: First Year Experience	Credits: 2
Goal #2: Cultural Awareness and Social and Environmental Responsibility	Credits: 3

### III. Globalization Requirement

Each program area/major specifies how to meet the globalization goal and student learning outcomes.

### IV. Advanced Writing Requirement

Each program area/major specifies how to meet the additional writing requirement goal and student learning outcomes.

### V. Computer Technology Literacy

At the time of admission, students are expected to have these computer technology literacy skills and competencies: basic keyboarding and experience using computer word processing, spreadsheet, presentation graphics, and the Internet. These expectations may be met by high school course work or demonstrated by some other means. Incoming students assessed and found deficient in this area will be required to complete specific computer skills courses.

### VI. Information Literacy

Students fulfill this requirement by demonstrating competency through an assessment designated by the University. The IL goal and student learning outcomes are addressed in courses providing the basic foundational knowledge and skills. In addition, the opportunity to learn IL concepts and skills is provided through other required coursework in the major.



# I. System General Education Requirements (SGRs)

(These Requirements are common across the entire South Dakota Regental System.)

## System Goal #1

### *Written Communication*

Students will write effectively and responsibly and will understand and interpret the written expression of others.

**Student Learning Outcomes:** As a result of taking courses meeting this goal, students will:

1. Write using standard American English, including correct punctuation, grammar, and sentence structure;
2. Write logically;
3. Write persuasively, with a variety of rhetorical strategies (e.g., expository, argumentative, descriptive);
4. Incorporate formal research and documentation into their writing, including research obtained through modern, technology-based research tools.

Each course meeting this goal includes the following student learning outcomes: #1, #2, #3, and #4

**Credit Hours:** 6

### **Courses**

ENGL 101 - Composition I	Credits: 3
ENGL 201 - Composition II	Credits: 3
ENGL 277 - Technical Writing in Engineering	Credits: 3
ENGL 283 - Creative Writing I	Credits: 3

## System Goal #2

### *Oral Communication*

Students will communicate effectively and responsibly through listening and speaking.

**Student Learning Outcomes:** As a result of taking courses meeting this goal, students will:

1. Prepare and deliver speeches for a variety of audiences and settings;
2. Demonstrate speaking competencies including choice and use of topic, supporting materials, organizational pattern, language usage, presentational aids, and delivery;
3. Demonstrate listening competencies by summarizing, analyzing, and paraphrasing ideas, perspectives and emotional content.

Each course meeting this goal includes the following student learning outcomes: #1, #2, and #3

**Credit Hours:** 3

### **Courses**

SPCM 101 - Fundamentals of Speech	Credits: 3
SPCM 215 - Public Speaking	Credits: 3
SPCM 222 - Argumentation and Debate	Credits: 3

## System Goal #3

### *Social Sciences/Diversity*

Students will understand the organization, potential, and diversity of the human community through study of the social sciences.

**Student Learning Outcomes:** As a result of taking courses meeting this goal, students will:

1. Identify and explain basic concepts, terminology and theories of the selected social science disciplines from different spatial, temporal, cultural and/or institutional contexts;
2. Apply selected social science concepts and theories to contemporary issues;
3. Identify and explain the social or aesthetic values of different cultures.

In addition, as a result of taking courses meeting this goal, students will be able to demonstrate a basic understanding of at least one of the following:

4. The origin and evolution of human institutions;
5. The allocation of human or natural resources within societies;
6. The impact of diverse philosophical, ethical or religious views.

Each course meeting this goal includes the following student learning outcomes:

Required: #1, #2 and #3;

At least one of the following: #4, #5, or #6

**Credit Hours:** 6 (in 2 disciplines)

### **Courses**

ANTH 210 - Cultural Anthropology	Credits: 3
ANTH 220 - Physical Anthropology	Credits: 3
CJUS 201 - Introduction to Criminal Justice	Credits: 3
ECON 101 - Global Economy	Credits: 3
ECON 201 - Principles of Microeconomics	Credits: 3
ECON 202 - Principles of Macroeconomics	Credits: 3
GEOG 101 - Introduction to Geography	Credits: 3
GEOG 200 - Introduction to Human Geography	Credits: 3
GEOG 210 - World Regional Geography	Credits: 3
GEOG 212 - Geography of North America	Credits: 3
GEOG 219 - Geography of South Dakota	Credits: 3
GLST 201 - Global Studies I	Credits: 3
HDFS 141 - Individual and the Family	Credits: 3
HDFS 210 - Lifespan Development	Credits: 3
HIST 151 - United States History I	Credits: 3
HIST 152 - United States History II	Credits: 3
INFO 102 - Social and Ethical Aspects of Informatics	Credits: 3
POLS 100 - American Government	Credits: 3
POLS 102 - American Political Issues	Credits: 3
POLS 165 - Political Ideologies	Credits: 3
POLS 210 - State and Local Government	Credits: 3
POLS 253 - Current World Problems	Credits: 3
PSYC 101 - General Psychology	Credits: 3
REL 237 - Religion in American Culture	Credits: 3
SOC 100 - Introduction to Sociology	Credits: 3
SOC 150 - Social Problems	Credits: 3
SOC 240 - The Sociology of Rural America	Credits: 3
SOC 250 - Courtship and Marriage	Credits: 3
WMST 101 - Introduction to Women's Studies	Credits: 3

## System Goal #4

### *Humanities and Arts/Diversity*

Students will understand the diversity and complexity of the human experience through study of the arts and humanities.

**Student Learning Outcomes:** As a result of taking courses meeting this goal, students will:

1. Demonstrate knowledge of the diversity of values, beliefs, and ideas embodied in the human experience;
2. Identify and explain basic concepts of the selected disciplines within the arts and humanities. In addition, as a result of taking courses meeting this goal, students will be able to do at least one of the following:
3. Identify and explain the contributions of other cultures from the perspective of the selected disciplines within the arts and humanities;
4. Demonstrate creative and aesthetic understanding;
5. Explain and interpret formal and stylistic elements of the literary or fine arts;
6. Demonstrate foundational competency in reading, writing, and speaking a non-English language.

Each course meeting this goal includes the following student learning outcomes: Required: #1, #2, At least one of the following: #3, #4, #5, or #6

**Credit Hours: 6 hours (in 2 disciplines or a sequence of modern language courses)**

### Courses

AIS 101 - Introductory Lakota I	Credits: 4	GER 202 - Intermediate German II	Credits: 3
AIS 102 - Introductory Lakota II	Credits: 4	HIST 111 - World Civilizations I	Credits: 3
ARAB 101 - Introductory Arabic I	Credits: 4	HIST 112 - World Civilizations II	Credits: 3
ARAB 102 - Introductory Arabic II	Credits: 4	HIST 121 - Western Civilization I	Credits: 3
ART 111 - Drawing I	Credits: 3	HIST 122 - Western Civilization II	Credits: 3
ART 112 - Drawing II	Credits: 3	LAKL 101 - Introductory Lakota I	Credits: 4
ART 121 - Design I 2D	Credits: 3	LAKL 102 - Introductory Lakota II	Credits: 4
ART 123 - Three Dimensional Design	Credits: 3	MCOM 151 - Introduction to Mass Communication	Credits: 3
ARTH 100 - Art Appreciation	Credits: 3	MCOM 160 - Introduction to Film	Credits: 3
ARTH 211 - History of World Art I	Credits: 3	MUS 100 - Music Appreciation	Credits: 3
ARTH 212 - History of World Art II	Credits: 3	MUS 130 - Music Literature and History	Credits: 2
ENGL 210 - Introduction to Literature	Credits: 3	MUS 131 - Music Literature and History II	Credits: 3
ENGL 211 - World Literature I	Credits: 3	MUS 201 - History of Country Music	Credits: 3
ENGL 212 - World Literature II	Credits: 3	MUS 203 - Blues, Jazz, and Rock	Credits: 3
ENGL 221 - British Literature I	Credits: 3	PHIL 100 - Introduction to Philosophy	Credits: 3
ENGL 222 - British Literature II	Credits: 3	PHIL 200 - Introduction to Logic	Credits: 3
ENGL 240 - Juvenile Literature	Credits: 3	PHIL 215 - Introduction to Social-Political Philosophy	Credits: 3
ENGL 241 - American Literature I	Credits: 3	PHIL 220 - Introduction to Ethics	Credits: 3
ENGL 242 - American Literature II	Credits: 3	REL 213 - Introduction to Religion	Credits: 3
ENGL 248 - Women in Literature	Credits: 3	REL 224 - Old Testament	Credits: 3
ENGL 249 - Literature of Diverse Cultures	Credits: 3	REL 225 - New Testament	Credits: 3
ENGL 250 - Science Fiction	Credits: 3	REL 238 - Native American Religions	Credits: 3
ENGL 256 - Literature of the American West	Credits: 3	REL 250 - World Religions	Credits: 3
ENGL 268 - Literature	Credits: 3	RUSS 101 - Introductory Russian I	Credits: 4
FREN 101 - Introductory French I	Credits: 4	RUSS 102 - Introductory Russian II	Credits: 4
FREN 102 - Introductory French II	Credits: 4	SPAN 101 - Introductory Spanish I	Credits: 4
FREN 201 - Intermediate French I	Credits: 4	SPAN 102 - Introductory Spanish II	Credits: 4
FREN 202 - Intermediate French II	Credits: 4	SPAN 201 - Intermediate Spanish I	Credits: 3
GER 101 - Introductory German I	Credits: 4	SPAN 202 - Intermediate Spanish II	Credits: 3
GER 102 - Introductory German II	Credits: 4	THEA 100 - Introduction to Theatre	Credits: 3
GER 201 - Intermediate German I	Credits: 3	THEA 131 - Introduction to Acting	Credits: 3



## System Goal #5

### Mathematics

Students will understand and apply fundamental mathematical processes and reasoning.

**Student Learning Outcomes:** As a result of taking courses meeting this goal, students will:

1. Use mathematical symbols and mathematical structure to model and solve real world problems;
2. Demonstrate appropriate communication skills related to mathematical terms and concepts;
3. Demonstrate the correct use of quantifiable measurements of real world situations.

Each course meeting this goal includes the following student learning outcomes: Required: #1, #2 and #3

### Credit Hours: 3

#### Courses

MATH 102 - College Algebra	Credits: 3
MATH 103 - Quantitative Literacy and Lab	Credits: 3
MATH 115 - Pre-calculus	Credits: 5
MATH 120 - Trigonometry	Credits: 3
MATH 121-121L - Survey of Calculus and Lab	Credits: 5
MATH 123 - Calculus I	Credits: 4
MATH 125 - Calculus II	Credits: 4
MATH 202 - Applied Informatics	Credits: 3
MATH 225 - Calculus III	Credits: 4
STAT 281 - Introduction to Statistics	Credits: 3

**NOTE:** Student enrollment in the initial Mathematics course is determined by the Board of Regents placement policy (2:7.6).



## System Goal #6

### Natural Sciences

Students will understand the fundamental principles of the natural sciences and apply scientific methods of inquiry to investigate the natural world.

**Student Learning Outcomes:** As a result of taking courses meeting this goal, students will:

1. Demonstrate the scientific method in a laboratory experience;
2. Gather and critically evaluate data using the scientific method;
3. Identify and explain the basic concepts, terminology and theories of the selected natural sciences;
4. Apply selected natural science concepts and theories to contemporary issues.

Each course meeting this goal includes the following student learning outcomes: Required: #1, #2, #3 and #4

### Credit Hours: 6

#### Courses

BIOL 101-101L - Biology Survey I and Lab	Credits: 3
BIOL 103-103L - Biology Survey II and Lab	Credits: 3
BIOL 151-151L - General Biology I and Lab	Credits: 4
BIOL 153-153L - General Biology II and Lab	Credits: 4
BIOL 200-200L - Animal Diversity and Lab	Credits: 4
BOT 201-201L - General Botany and Lab	Credits: 3
CHEM 106-106L - Chemistry Survey and Lab	Credits: 3, 1
CHEM 108-108L - Organic and Biochemistry and Lab	Credits: 4, 1
CHEM 112-112L - General Chemistry I and Lab	Credits: 3, 1
CHEM 114-114L - General Chemistry II and Lab	Credits: 3, 1
CHEM 115-115L - Atomic and Molecular Structure and Lab	Credits: 3, 1
CHEM 120-120L - Elementary Organic Chemistry and Lab	Credits: 3, 1
CHEM 127-127L - Structure & Function of Org Molecules & Lab	Credits: 3, 1
GEOG 131-131L - Physical Geography: Weather and Climate & Lab	Credits: 4
GEOG 132-132L - Physical Geography: Natural Landscapes & Lab	Credits: 4
INFO 101 - Introduction to Informatics	Credits: 3
PHYS 101-101L - Survey of Physics and Lab	Credits: 4
PHYS 111-111L - Introduction to Physics I and Lab	Credits: 4
PHYS 113-113L - Introduction to Physics II and Lab	Credits: 4
PHYS 185-185L - Introduction to Astronomy I and Lab	Credits: 3
PHYS 187-187L - Introduction to Astronomy II and Lab	Credits: 3
PHYS 211-211L - University Physics I and Lab	Credits: 4
PHYS 213-213L - University Physics II and Lab	Credits: 4
PS 213-213L - Soils and Lab	Credits: 2, 1
PS 243 - Principles of Geology	Credits: 3
PS 244 - Geological Resources of South Dakota Lab	Credits: 1

## System Goal #7

### Information Literacy

Students will recognize when information is needed and have the ability to locate, organize, critically evaluate, and effectively use information from a variety of sources with intellectual integrity.

**Student Learning Outcomes:** Students will:

1. Determine the extent of information needed;
2. Access the needed information effectively and efficiently;
3. Evaluate information and its sources critically;
4. Use information effectively to accomplish a specific purpose;
5. Use information in an ethical and legal manner.

**Assessment:** Students fulfill this requirement by demonstrating competency through an assessment designated by the Regental universities.

**Credit hours: 0**

#### Courses

SPCM 101- Fundamentals of Speech	Credits: 3
ENGL 101 - Composition I	Credits: 3
ENGL 201 - Composition II	Credits: 3
ENGL 277 - Technical Writing in Engineering	Credits: 3
ENGL 283 - Creative Writing I	Credits: 3



## II. SDSU's Institutional Graduation Requirements (IGRs)

(These requirements are unique to SDSU.)

### IGR Goal #1

#### *First Year Seminar*

Students will understand their emerging role and responsibilities as educated persons through a common intellectual experience.

#### Student Learning Outcomes

As a result of taking courses meeting this goal, students will:

1. Identify areas of self-responsibility that contribute to personal and professional goals and success.
2. Design a plan and identify appropriate strategies that will guide engagement in their education, community, and world.
3. Explain how to achieve and maintain personal and professional wellness.
4. Articulate how knowledge of contemporary issues and exposure to diversity impacts personal and professional life.
5. Explain how South Dakota State University is defined by the Land Grant Mission (Morrill Act).

Each course meeting this goal includes the following student learning outcomes: Required: #1, #2, #3, #4, and #5

#### Credit Hours: 2

ABS 109 - First Year Seminar	Credits: 2
AGED 109 - First Year Seminar - Agricultural Education	Credits: 2
ARCH 109 - First Year Seminar	Credits: 2
AS 109 - First Year Seminar	Credits: 2
AST 109 - First Year Seminar	Credits: 2
BIOL 109-109L - First Year Seminar and Lab	Credits: 2, 0
CHEM 109 - First Year Seminar	Credits: 2
DS 109 - First Year Seminar	Credits: 2
EHS 109 - First Year Seminar	Credits: 2
GE 109-109L - First Year Seminar and Lab	Credits: 1, 1
HON 109 - First Year Seminar – Honors	Credits: 2
MCOM 109 - First Year Seminar	Credits: 2
MUS 109 - First Year Seminar	Credits: 2
NRM 109-109L - First Year Seminar and Lab	Credits: 1, 1
NURS 109 - First Year Seminar	Credits: 2
PHA 109 - First Year Seminar – Pharmacy	Credits: 2
PHYS 109 - First Year Seminar	Credits: 2
PS 109 - First Year Seminar	Credits: 2
SPCM 109 - First Year Seminar - Communication Studies & Theatre	Credits: 2
UC 109 - First Year Seminar	Credits: 2



**Clarification of "Educational Experiences" Alternative**  
 Educational Experiences (EdEx) are an option to meet SDSU's IGRs. The Educational Experiences will parallel the guidelines for credit, requiring 45 hours of experiential learning per credit hour earned. Departments will present proposals describing Educational Experiences for approval to the SDSU Academic Affairs subcommittee who will forward a recommendation to the full Academic Affairs Committee for approval to assure that the student learning outcomes of the specific IGR has been achieved. This Educational Experiences Alternative is not to be designed to meet the needs of an individual student, but rather to meet the needs of groups of students within a department/major, throughout the University.



## II. SDSU's Institutional Graduation Requirements (IGRs)

(These requirements are unique to SDSU.)

### IGR Goal #2

#### *Cultural Awareness and Social and Environmental Responsibility*

Students will acquire knowledge about the world's peoples - their cultures, arts, and environments - that prepares them for further study, deepens their understanding of the human condition, and strengthens their commitment to social and environmental responsibility.

#### **Student Learning Outcomes:**

As a result of taking courses meeting this goal, students will:

1. Articulate the ways in which different peoples express an understanding of the human condition and respond to environmental opportunities and constraints.
2. Describe how personal choices derive from and affect social, cultural, and environmental contexts.
3. Engage in aesthetic experience in order to understand artistic expression and to learn how meaning emerges from the cultural contexts of both artist and audience.
4. Explain the ethical consequences of decisions and actions concerning the environment to strengthen commitment to local, national, and global citizenship.

Each course meeting this goal includes the following student learning outcomes

Required: #1, #2, and #3, or #1, #2, and #4

#### **Credit Hours: 3**

ABS 203 - Global Food Systems	Credits: 3
AIS 256 - Literature of American West	Credits: 3
AIS 368 - History and Culture of the American Indian	Credits: 3
AIS 421 - Indians of North America	Credits: 3
ANTH 421 - Indians of North America	Credits: 3
ART 111 - Drawing I	Credits: 3
ART 112 - Drawing II	Credits: 3
ART 121 - Design I 2D	Credits: 3
ART 123 - Three Dimensional Design	Credits: 3
ART 211 - Drawing III-Figurative	Credits: 3
ART 231 - Painting I	Credits: 3
ART 241 - Sculpture I	Credits: 3
ART 251 - Ceramics I	Credits: 3
ART 281 - Printmaking I	Credits: 3
ARTH 100 - Art Appreciation	Credits: 3
ARTH 120 - Film as Art	Credits: 3
ARTH 211 - History of World Art I	Credits: 3
ARTH 212 - History of World Art II	Credits: 3
BIOL 105 - Human Biology	Credits: 3
BIOL 383 - Bioethics	Credits: 4
CEE 225 - Principles of Environmental Science & Engineering	Credits: 3
ECON 201 - Principles of Microeconomics	Credits: 3
ECON 460 - Economic Development	Credits: 3
ENGL 125 - Introduction to Peace and Conflict Studies	Credits: 3
ENGL 210 - Introduction to Literature	Credits: 3
ENGL 211 - World Literature I	Credits: 3
ENGL 221 - British Literature I	Credits: 3
ENGL 222 - British Literature II	Credits: 3
ENGL 240 - Juvenile Literature	Credits: 3
ENGL 241 - American Literature I	Credits: 3
ENGL 242 - American Literature II	Credits: 3
ENGL 248 - Women in Literature	Credits: 3
ENGL 249 - Literature of Diverse Cultures	Credits: 3
ENGL 256 - Literature of the American West	Credits: 3
ENGL 283 - Creative Writing I	Credits: 3
EES 275 - Introduction to Environmental Science	Credits: 3
FREN 201 - Intermediate French I	Credits: 4

FREN 202 - Intermediate French II	Credits: 4
GE 231 - Technology, Society, and Ethics	Credits: 3
GEOG 200 - Introduction to Human Geography	Credits: 3
GEOG 210 - World Regional Geography	Credits: 3
GEOG 310-310L - Soil Geog & Land Use Interpret &Lab	Credits: 3
GEOG 415 - Environmental Geography	Credits: 3
GEOG 459-559 - Political Geography	Credits: 3
GER 201 - Intermediate German I	Credits: 3
GER 202 - Intermediate German II	Credits: 3
GLST 125 - Introduction to Peace and Conflict Studies	Credits: 3
GLST 201 - Global Studies I	Credits: 3
GLST 401 - Global Studies II	Credits: 3
GLST 480 - Ethics of Globalization	Credits: 3
HIST 111 - World Civilizations I	Credits: 3
HIST 112 - World Civilizations II	Credits: 3
HIST 121 - Western Civilization I	Credits: 3
HIST 122 - Western Civilization II	Credits: 3
HIST 151 - United States History I	Credits: 3
HIST 152 - United States History II	Credits: 3
HIST 368 - History and Culture of the American Indian	Credits: 3
HLTH 443 - Public Health Science	Credits: 3
HON 303 - Honors Colloquium	Credits: 1-4
HSC 443 - Public Health Science	Credits: 3
IDL 100 - Concepts in Sustainability	Credits: 3
LEAD 210 - Foundations of Leadership	Credits: 3
MCOM 160 - Introduction to Film	Credits: 3
MUEN 100-300 - Concert Choir	Credits: 1-2
MUEN 102-302 - Men's Choir	Credits: 1
MUEN 103-303 - Women's Choir	Credits: 1
MUEN 107-307 - Opera Workshop	Credits: 1-2
MUEN 120-320 - Marching Band	Credits: 1
MUEN 121-321 - Symphonic Band	Credits: 1
MUEN 122-322 - Concert Band	Credits: 1
MUEN 170-370 - Percussion Ensemble	Credits: 1
MUEN 180-380 - Jazz Ensemble	Credits: 1
NFS 111 - Food, People and the Environment	Credits: 3
NRM 110 - Environmental Conservation	Credits: 3
PHIL 383 - Bioethics	Credits: 4
PHIL 454 - Environmental Ethics	Credits: 3
PHIL 470 - Philosophy of Religion	Credits: 3
PHIL 480 - Ethics of Globalization	Credits: 3
POLS 210 - State and Local Government	Credits: 3
POLS 253 - Current World Problems	Credits: 3
PS 213-213L - Soils and Lab	Credits: 2, 1
PS 310-310L - Soil Geog & Land Use Interpret &Lab	Credits: 3
PS 362-362L - Environmental Soil Management and Lab	Credits: 3
PSYC 101 - General Psychology	Credits: 3
PSYC 244 - Environmental Psychology	Credits: 3
PSYC 327 - Child Psychology	Credits: 3
PSYC 364 - Cross Cultural Psychology	Credits: 3
PSYC 367 - Psychological Gender Issues	Credits: 3
PSYC 417 - Health Psychology	Credits: 3
PSYC 441 - Social Psychology	Credits: 3
PSYC 451 - Psychology of Abnormal Behavior	Credits: 3
REL 370 - Philosophy of Religion	Credits: 3
REL 454 - Environmental Ethics	Credits: 3
SOC 462 - Population Studies	Credits: 3
SPAN 201 - Intermediate Spanish I	Credits: 3
SPAN 202 - Intermediate Spanish II	Credits: 3
WMST 101 - Introduction to Women's Studies	Credits: 3
WMST 248 - Women in Literature	Credits: 3
WMST 367 - Psychological Gender Issues	Credits: 3

### III. Globalization Requirement

Globalization is defined as a process of interaction and integration among people, organizations, governments and cultures.

This process affects:

- environmental resources
- culture(s), including people's well-being
- political systems, national sovereignty
- national security
- agriculture
- public health/health care
- economic systems/international trade
- transportation
- information technology/communication
- education
- global governance

Students will understand globalization and how it affects the human community.

**Student Learning Outcomes:**

Students will:

1. Demonstrate a basic understanding of globalization.
2. Identify the benefits and cost implications of globalization.
3. Identify and analyze global issues including how multiple perspectives impact such issues.
4. Interpret global issues and data utilizing discipline specific analytical and/or philosophical tools.

Each course meeting this goal includes the following student learning outcomes: #1, #2, #3, #4

**Credit Hours: varied\***

\*Students can select a course to meet the globalization requirement which also meets one of the SGR/IGR requirements or meets a major requirement with the following exceptions: ABS 482 - International Experience, FREN 385 - Travel & Study Abroad Francophone, and MFL 396-496 - Field Experience.

If a student selects one of these three courses, required credits would increase from 1-4 credits. Otherwise, selected courses do not add to the total number of credits required for the major. In no instance are the 120 credits required for graduation increased.

The courses listed above are approved to meet this goal. Each program area/major determines how to best address the globalization goal and student learning outcomes; therefore, students should consult the major department regarding how this goal and its expectations are accomplished within the specific program of study.

ABS 203 - Global Food Systems	Credits: 3
ABS 482 - International Experience	Credits: 2-4
AGEC 479 - Agricultural Policy	Credits: 3
ARAB 101 - Introductory Arabic I	Credits: 4

ARAB 102 - Introductory Arabic II	Credits: 4
ARTH 100 - Art Appreciation	Credits: 3
ARTH 211 - History of World Art I	Credits: 3
ARTH 212 - History of World Art II	Credits: 3
BIOL 383 - Bioethics	Credits: 4
BOT 419-419L - Plant Ecology and Lab	Credits: 4
CSC 303 - Ethical and Security Issues in Computing	Credits: 2
ECON 101 - Global Economy	Credits: 3
ECON 202 - Principles of Macroeconomics	Credits: 3
ECON 460 - Economic Development	Credits: 3
EES 275 - Introduction to Environmental Science	Credits: 3
ENGL 211 - World Literature I	Credits: 3
ENGL 212 - World Literature II	Credits: 3
ENGL 221 - British Literature I	Credits: 3
ENGL 222 - British Literature II	Credits: 3
FREN 101 - Introductory French I	Credits: 4
FREN 102 - Introductory French II	Credits: 4
FREN 385 - Travel Study Abroad Francophone	Credits: 1-6
GEOG 200 - Introduction to Human Geography	Credits: 3
GEOG 210 - World Regional Geography	Credits: 3
GEOG 219 - Geography of South Dakota	Credits: 3
GEOG 310-310L - Soil Geog and Land Use Interprt & Lab	Credits: 3
GER 101 - Introductory German I	Credits: 4
GER 102 - Introductory German II	Credits: 4
GLST 201 - Global Studies I	Credits: 3
GLST 401 - Global Studies II	Credits: 3
HIST 112 - World Civilizations II	Credits: 3
HIST 122 - Western Civilization II	Credits: 3
HLTH 443 - Public Health Science	Credits: 3
HSC 443 - Public Health Science	Credits: 3
MCOM 416 - Mass Media in Society	Credits: 3
MCOM 417 - History of Journalism	Credits: 3
MFL 396 - Field Experience	Credits: 1-12
MFL 496 - Field Experience	Credits: 1-12
NRM 110 - Environmental Conservation	Credits: 3
NURS 480-480L - Advncd Popltn based Nurs Pract & Lab	Credits: 4
PHIL 383 - Bioethics	Credits: 4
POLS 253 - Current World Problems	Credits: 3
PS 310-310L - Soil Geog & Land Use Interpretation & Lab	Credits: 3
PS 446-546 - Agroecology	Credits: 3
PSYC 409 - History and Systems of Psychology	Credits: 3
PSYC 482 - Travel Studies	Credits: 1-4
REL 250 - World Religions	Credits: 3
SE 330 - Human Factors and User Interface	Credits: 3
SOC 100 - Introduction to Sociology	Credits: 3
SOC 150 - Social Problems	Credits: 3
SOC 240 - The Sociology of Rural America	Credits: 3
SOC 350 - Race and Ethnic Relations	Credits: 3
SOC 440 - Urban Sociology	Credits: 3
SOC 483 - Sociology of Gender Roles	Credits: 3
SPAN 101 - Introductory Spanish I	Credits: 4
SPAN 102 - Introductory Spanish II	Credits: 4
SPCM 470 - Intercultural Communication	Credits: 3
WL 430-430L Human Dimensions in Wildlife & Fisheries & Lab	Credits:4

## IV. Advanced Writing Requirement

Advanced writing courses are discipline based and require students to build upon concepts learned in courses addressing System General Education Goal #1. Students will refine their writing skills appropriate to the discipline. These courses will have a scholarly focus. Students will build upon concepts learned in courses covering System General Education Goal #1 and refine their skills through research and writing in a discipline specific context.

### Student Learning Outcomes:

Students will:

1. Read extensively and respond critically in the written discourse of a discipline; formulate research questions, refine topics, develop a plan for research and organize what is known about the topic; articulate a position through a thesis statement and advance it using evidence from primary and secondary sources, examples, and counterarguments that are relevant to the audience or issues at hand.
2. Use a style manual and other writing conventions specific to a discipline; avoid plagiarism by adhering to the rules for paraphrasing, summarizing, and the use of quotations, as well as the conventions for incorporating information from Internet-based resources.
3. Evaluate sources critically, both print and electronic, discern the strength of evidence and arguments, determine credibility, and identify potential bias and overall quality.
4. Present the results of research or project, either collaboratively or individually, to the class, department, faculty, community members, or at a student research or professional conference.

Each course meeting this goal includes the following student learning outcomes.

Required: #1, #2, #3, #4

### Credit Hours: varied\*

Integrated in the major or may select a specific advanced course (i.e., ENGL 379, Technical Communication) which addresses the advanced writing goal and student learning outcomes. **Selected course(s) do not add to the total number of credits required for the major.**

Each program area/major determines how to best address the advanced writing goal and student learning outcomes; therefore, **students should consult the department regarding how this goal and its expectations are accomplished within the specific program of study.** Courses used across the various programs at SDSU include the following:

ABE 422 - Design Project IV	Credits: 2
ABE 490 - Seminar	Credits: 1
ABS 475-475L - Integrated Natrl Resource Mgmt. & Lab	Credits: 3
ADV 371-371L - Advertising Copy and Layout and Studio	Credits: 3
AGEC 479 - Agricultural Policy	Credits: 3
AGED 404 - Program Plan in Agricultural Education	Credits: 3
AM 473-473L - Global Sourcing and Lab	Credits: 3
ARCH 341 - Building History III	Credits: 2
ARTH 310 - History of United States Art and Architecture	Credits: 3
ARTH 320 - Modern Art and Architecture Survey	Credits: 3
ARTH 490 - Seminar	Credits: 1-3
AS 489 - Current Issues in Animal Science	Credits: 2

AST 463 - Agricultural Waste Management	Credits: 3
AT 474 - Interventions III	Credits: 2
AVIA 440 - Curriculum Design in Aviation	Credits: 3
BIOL 490 - Seminar	Credits: 1
CA 340 - Work Family Interface	Credits: 3
CEE 465 - Civil Engineering Capstone Design II	Credits: 2
CHEM 494 - Internship	Credits: 1-4
CHEM 498 - Undergraduate Research/Scholarship	Credits: 1-12
CM 473 - Construction Law and Accounting	Credits: 3
CSC 485 - Software Engineering II	Credits: 3
DS 490 - Seminar	Credits: 1
ECE 361-361L - Methods and Materials/ECE and Lab	Credits: 2, 1
ECON 433 - Public Finance	Credits: 3
EE 465-465L - Senior Design II and Lab	Credits: 2
ENGL 379 - Technical Communication	Credits: 3
ENGL 410 - Mythology and Literature	Credits: 3
ENGL 424 - 7-12 Language Arts Methods	Credits: 3
ENGL 479 - Capstone Course & Writing in the Discipline	Credits: 3
ET 471-471L - Capstone Experience and Lab	Credits: 1
FCSE 411 - Philosophy and Methods FCSE	Credits: 4
FREN 433 - French Culture and Civilization	Credits: 3
GEOG 382 - Geographic Research Methods	Credits: 3
GER 433 - German Civilization I	Credits: 3
GER 434 - German Civilization II	Credits: 3
GLST 401 - Global Studies II	Credits: 3
HIST 480 - Historical Methods and Historiography	Credits: 3
HO 464 - Senior Project I	Credits: 1
HO 465 - Senior Project II	Credits: 2
HSC 490 - Seminar	Credits: 1-4
ID 322 - Interior Design Studio III	Credits: 4
IDL 479 - Interdisciplinary Studies Capstone	Credits: 2
MATH 401 - Senior Capstone and Advanced Writing	Credits: 1
MCOM 371-371L - Advertising Copy and Layout & Studio	Credits: 3
MCOM 433-433L - Advanced TV News Reporting & Lab	Credits: 3
MCOM 438-438L - Public Affairs Reporting and Studio	Credits: 3
ME 479-479L - Mechanical Systems Design II and Lab	Credits: 2
MICR 490 - Seminar	Credits: 1
MLS 461 - Introduction to Management and Education	Credits: 2
MNET 471-471L - Capstone Experience and Lab	Credits: 1
MUS 433 - Music Literature and History III	Credits: 3
NFS 490 - Seminar	Credits: 1-2
NURS 416 - Community Health Nursing	Credits: 5
NURS 495-495L - Practicum and Clinical Lab	Credits: 6
OM 469- Project Management	Credits: 2
OM 471-471L - Capstone Experience and Lab	Credits: 1
PE 490 - Seminar	Credits: 1-3
PHA 467-467L - Pharmacy Practice III and Lab	Credits: 3
PHA 468-468L - Pharmacy Practice IV and Lab	Credits: 3
PHIL 423 - Early Political Philosophy	Credits: 3
PHIL 462 - Modern Political Philosophy	Credits: 3
PHYS 316-316L - Msrmt Theory & Exprnt Design & Lab	Credits: 2
POLS 461 - Early Political Philosophy	Credits: 3
POLS 462 - Modern Political Philosophy	Credits: 3
PS 383-383L - Principles of Crop Improvement and Lab	Credits: 3
PS 390 - Seminar	Credits: 1
PSYC 376-376L - Research Methods II and Lab	Credits: 4
PSYC 409 - History and Systems of Psychology	Credits: 3
RECR 410 - Current Issues in Recreation	Credits: 3
SE 320 - Software Requirements & Formal Specifications	Credits: 3
SPAN 433 - Spanish Civilization and Culture	Credits: 3
SPAN 435 - Latin American Civilization and Culture	Credits: 3
SPCM 305 - Communication Research	Credits: 3

# General Education Requirements for Associate Degree

## System General Education Requirements for Associate Degree Programs

### 1. Associate of Arts Degree

This program requires the same 30 credits of System General Education as required in the Baccalaureate Degree.

### 2. Associate of Science Degree

The general education component of all Associate of Science programs shall consist of a minimum of 18 credit hours as specified in Board of Regents policy 2:7(3).

### Required Courses from the System General Education List for

#### Associate of Science degrees:

Written Communication (Goal #1)	Credits: 3
Oral Communication (Goal #2)	Credits: 3
Social Sciences/Diversity (Goal #3)	Credits: 3
Humanities and Arts/Diversity (Goal #4)	Credits: 3
Mathematics (Goal #5)	Credits: 3
Natural Sciences (Goal #6) (6 suggested)	Credits: 3
<b>Total:</b>	<b>18</b>

## Institutional Graduation Requirements NOT Required for Associate Degree Programs

The SDSU Institutional Graduation Requirements do not apply to either the Associate of Arts degree or the Associate of Science degree programs.

## Policies Applicable to System General Education Requirements

### Guidelines for Baccalaureate and Associate Degrees

1. The System General Education Requirements will be effective for students entering in Fall 2005.
2. Only 100/200 level courses will be included. Exceptions based on student background may be made utilizing the established university academic appeal process
3. Honors courses equivalent to identified System General Education courses will meet the System requirements.
4. System General Education Requirements successfully completed at the sending South Dakota Regental institution will be accepted towards meeting these requirements at the receiving South Dakota Regental institution.
5. Under common course practices, a course that counts toward a General Education System Requirement at one of the Regental campuses will count toward the same General Education requirement at another campus regardless of whether or not the campus offered the course.

### Additional Guidelines for Baccalaureate Degrees

1. The 18 hours of System General Education Requirements specified below must be completed within the first 48 hours as preparation for the Proficiency Examination:  

Course Requirements	Credit Hours
Written Communication (Goal #1)	Credits: 3
Oral Communications (Goal #2)	Credits: 3
Social Sciences/Diversity (Goal #3)	Credits: 3
Humanities and Arts/Diversity (Goal #4)	Credits: 3
Mathematics (Goal #5)	Credits: 3
Natural Sciences (Goal #6)	Credits: 3
<b>Total:</b>	<b>18</b>
2. Transfer students with more than 18 credit hours entering from outside the Regental System must complete the above specified 18 credit hours of general education within the first 30 credit hours taken at a Regental institution.
3. All System General Education Requirements (30 credits) must be completed within the first 64 hours. A list of program exceptions at SDSU are:  
Agricultural and Biosystems Engineering  
Biology - Pre-professional Specialization  
Civil Engineering      Mechanical Engineering  
Computer Science      Music  
Electrical Engineering      Music Education  
Interior Design      Nursing  
Mathematics Education
4. Students transferring from non-Regental institutions must enroll in pre-general education courses during the first 30 attempted Regental credit hours. These students may enroll in other courses concurrently with the pre-general education courses. If the student does not complete the pre-general education courses during the first 30 Regental credit hours attempted, during the next 12 credit hours attempted, the student must enroll in and complete the pre-general education course(s). If the student does not successfully complete the pre-general education course(s) within 42 attempted Regental credit hours, the only course(s) in which a student may enroll is the pre-general education course(s); and the student's status is changed from degree seeking to non-degree seeking. The Vice President for Academic Affairs may grant an exception.
5. Student who are placed into pre-general education MATH are expected to successfully complete MATH 095 or both MATH 021 and MATH 101 before enrolling in MATH 102. However, a student who performs exceptionally well in MATH 021 may petition the Vice President for Academic Affairs to bypass MATH 101 and enroll in MATH 102 as their next mathematics course. These students must sit for the Math placement exam and earn scores that meet or exceeds the placement score necessary for enrolling in MATH 102.

### Additional Guidelines for Associate Degrees

1. The 18 hours of System General Education Requirements specified below must be completed within the first 32 hours as preparation for the Proficiency Examination:  

Course Requirements	Credit Hours
Written Communication (Goal #1)	Credits: 3
Oral Communications (Goal #2)	Credits: 3
Social Sciences/Diversity (Goal #3)	Credits: 3
Humanities and Arts/Diversity (Goal #4)	Credits: 3
Mathematics (Goal #5)	Credits: 3
Natural Sciences (Goal #6)	Credits: 3
<b>Total:</b>	<b>18</b>
1. Each student enrolled in an Associate of Science degree program must take the Proficiency Examination after the completion of 32 passed credit hours or prior to graduation. The student must have completed, or be enrolled in courses required to complete, the 18 credit hours specified above. Students who do not complete the proficiency exam requirements cannot continue registration at the university

# Transfer Students

---

## Fraction of Credits

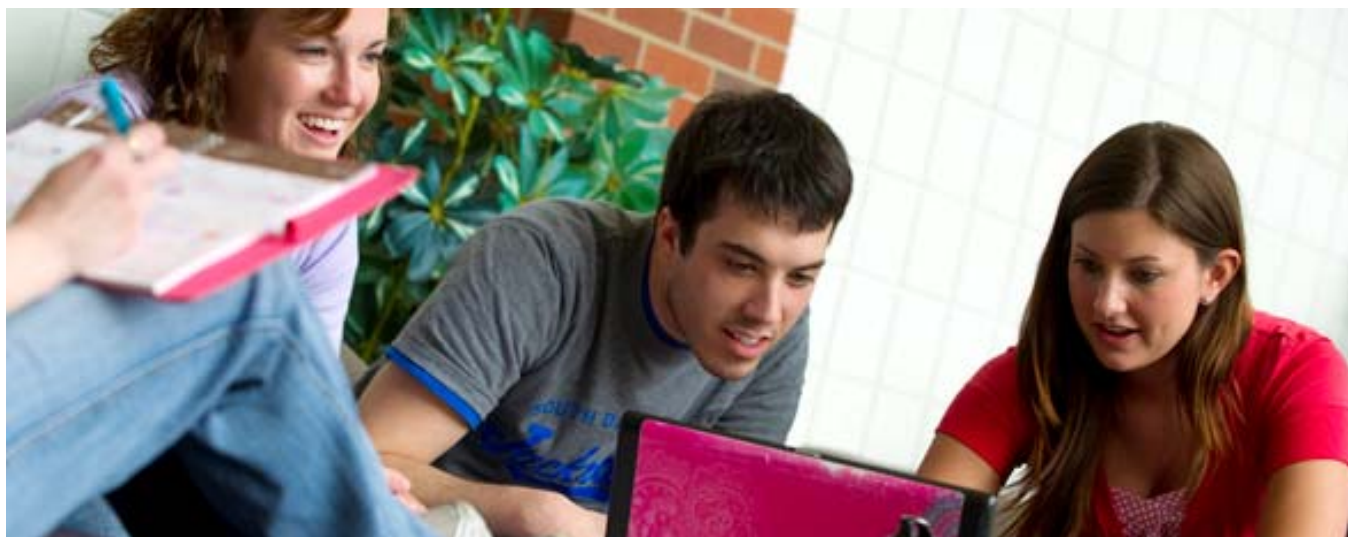
Transfer credits applied to a general education goal meet the credit requirement if .33 credits (or fewer) remain for that goal. If .34 credits or greater remain to meet the minimum required credits for the goal, the student must take additional credits from the approved

list of courses in the University Catalog. For example, a student who transferred in 5.67 credits towards the SGR #3 Social Science 6 credit requirement has met the goal.

## College and Major Field Requirements

---

1. The catalog of graduation begins with the summer term and ends with the subsequent spring term.
2. Every student is required to have a catalog of graduation. New and transfer students are assigned the catalog in effect at the time of their initial enrollment at the university from which they are seeking a degree. Students may elect a catalog of graduation that is later than their initial catalog but may not elect a catalog of graduation that is earlier than their initial catalog.
3. In order to receive a degree, a student must meet the program requirements listed in his/her catalog of graduation.
4. Students who discontinue enrollment at any Regental university for more than two consecutive semesters are assigned the catalog in effect at the time of their reenrollment as their catalog of graduation.
5. Students are considered to be in continuous enrollment for purposes of the catalog of graduation so long as any break in enrollment at any Regental university is for two or fewer consecutive semesters (excluding summer) and students maintain their degree seeking status at the same Regental university.
6. Student who change their degree seeking status from one Regental university to another Regental university are assigned the catalog of graduation that corresponds to the term they are admitted to their new degree granting university.

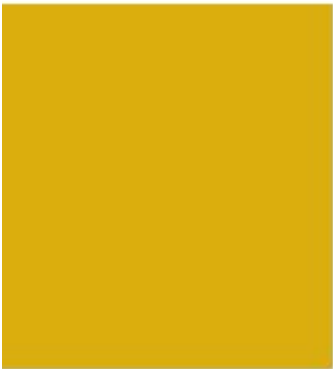






# Degrees & Associated Majors

- *Degree Definitions 52*
- *Degrees and Associated Majors 53*
- *Majors Sorted by General Degree Type 54*
- *Majors, Specializations, Minors, and Certificates 55*
- *Pre-professional Interest Areas 57*
- *SDSU Organizational Structure 57*



# Degree Definitions

## Associate Degree

An Associate of Arts (AA) degree is typically a two-year transfer degree, which indicates the completion of a student's lower division general education requirements and forms the foundation for baccalaureate degree programs. Up to 16 credit hours at the 300 and 400 level may be required. More than 16 credit hours at the 300 and 400 level may be required if specified by an accrediting agency.

An Associate of Science (AS) degree is a terminal degree. However, it is transferable when a specific degree articulation agreement exists between a given AS degree and a specific baccalaureate degree. (BOR Policy 2:27.B.) Up to 16 credit hours at the 300 and 400 level may be required. More than 16 credit hours at the 300 and 400 level may be required if specified by an accrediting agency.

### At South Dakota State University, the associate's degree programs are:

- Associate of Science (A.S.) in General Agriculture
- Associate of Arts (A.A.) in General Studies

## Bachelor's Degree

The bachelor's degree is awarded to a student by a university for satisfactory completion of a prescribed course of study ranging from 120-138 credits. It is verified by a diploma and transcript signifying a measure of achievement. The bachelor's degree enables a student to acquire a certain amount of general learning and to also become proficient in a particular field of study or a profession. The curricular structure of a bachelor's degree program includes a system general education core curriculum, institutional graduation requirements, support courses, major courses, and electives.

### At South Dakota State University, the bachelor's degrees offered are:

- Bachelor of Arts (B.A.)
- Bachelor of General Studies (B.G.S.)
- Bachelor of Science (B.S.)
- Bachelor of Music Education (B.M.E.)

## Master's Degree<sup>1</sup>

In broad terms, the master's degree indicates that the recipient has mastered a program of advanced, specialized study in a particular field. Normally, degree titles indicate one of two major categories. The Master of Arts and Master of Science are academic degrees designed to provide an introduction to scholarship activities and research. These degrees often serve the needs of individuals teaching in public schools or community colleges and/or preparation for further graduate study. The second category leads to professional master's degrees, such as the M.Ed. or MBA. While similar to the M.A. and M.S., these programs tend to emphasize professional practice.

<sup>1</sup> Council of Graduate Schools. *Master's Education: A Guide for Faculty and Administrators. A Policy Statement*, 1994, pp. 1-5.

### At South Dakota State University, the master's degrees offered are:

- Master of Architecture (M.Arch.)
- Master of Education (M.Ed.)
- Master of Arts (M.A.)
- Master of Mass Communication (M.M.C.)
- Master of Science (M.S.)

## Doctoral Degree<sup>2</sup>

The Doctor of Philosophy program (Ph.D.) is designed to prepare a student to become a scholar, that is, to discover, integrate, and apply knowledge, as well as communicate and disseminate it. A well-prepared doctoral graduate will have developed the ability to understand and evaluate critically the literature of the field and to apply appropriate principles and procedures to the recognition, evaluation, interpretation, and understanding of issues and problems

at the frontiers of knowledge. The graduate will also have an appropriate awareness of and commitment to the ethical practices appropriate to the field.

The professional doctoral degree is earned by two or more years of professional study past the baccalaureate degree. This degree prepares an individual for entry into the practice of a recognized profession. Examples of professional doctorates are the M.D., Pharm.D., JD, DVM, and Ed.D. degrees.

<sup>2</sup> Council of Graduate Schools. *The Doctor of Philosophy Degree*, 1990, p.1.

### At South Dakota State University, the doctoral degrees offered are:

- Doctor of Philosophy (Ph.D.)
- Doctor of Pharmacy (Pharm.D.)
- Doctor of Nursing Practice (D.N.P.)

## Major

An academic major or primary area of study within a degree program enables students to make an in-depth inquiry into a discipline or a professional field of study. It is organized around a specific set of goals and objectives that are accomplished through an ordered series of courses, whose connections define an internal structure and whose sequence advances levels of knowledge and understanding. A major introduces students to a discipline or field of study and related area through a foundation of theory and method. A major that focuses on a specific discipline draws its courses predominantly from one department. A major that encompasses a professional field of study or is interdisciplinary usually obtains its courses from more than one department.

The number of credit hours required for a major and its organizational structure will vary, depending on whether it aims at disciplinary or professional preparation. Variations are due to the demands of accrediting agencies, certification requirements, professional competence and expectations. Undergraduate majors require both discipline specific and support courses. In the Regental system majors typically consist of 47-89 semester credit hours with the mean at 68.5 hours. Credits required for the major are supported by the general education core and electives and together meet the total degree requirement.

## Minor

An academic minor within a degree program enables a student to make an inquiry into a discipline or field of study beyond the major or to investigate a particular content theme. It too should be organized around a specific set of objectives that are achieved through a series of courses. Minors are intended to provide limited competency in the subject. Course offerings in a minor may be centered in a specific department or drawn from several departments as in the case of a topical or thematic focus. Some specific requirements are included. Regental undergraduate minors typically consist of 18-24 semester credit hours. Flexibility typically is achieved by offering the student a choice from among a group of courses to complete the credits.

## Specialization

A specialization is a designated plan of study, within an existing degree program. It provides a student an alternative to the primary format of the major or it may be one of several tracks within a broad major. It contains courses within the discipline(s) of the existing program. It is specified in the institutional catalog and is designated on the transcript.

## Emphasis

An emphasis is a concentration within a major and is accomplished by individual student choices within a plan of study. For example, within a major on adult health the student may focus on the older adult. An emphasis is not regarded as a separate program. It may be described in the catalog, but not detailed as a specific plan of study. It is not specified on a transcript.

# Degrees and Associated Majors by College

SDSU offers **degrees** from the following colleges. Listed below are the **major** areas of study organized by college.

**Agriculture and Biological Sciences**  
**Arts and Sciences**  
**Education and Human Sciences**  
**Jerome J. Lohr College of Engineering**  
**Nursing**  
**Pharmacy**  
**Graduate School**

## **Agriculture and Biological Sciences**

### **Associate of Science in Agriculture**

Agricultural Science

### **Bachelor of Science in Agriculture**

Agricultural and Resource Economics  
Agricultural Business  
Agricultural Education, Communication, and Leadership  
Agricultural Science  
Agricultural Systems Technology  
Agronomy  
Animal Science  
Dairy Manufacturing  
Dairy Production  
Horticulture  
Landscape Architecture  
Range Science

### **Bachelor of Science in Biological Science**

Biology  
Biotechnology  
Ecology and Environmental Science  
Microbiology  
Wildlife and Fisheries Sciences

## **Arts and Sciences**

### **Associate of Arts in Arts and Sciences**

General Studies

### **Bachelor of Arts in Arts and Sciences**

Advertising  
Architectural Studies  
Art Education  
Economics  
English  
French Studies  
German  
Global Studies  
Graphic Design  
History  
Journalism  
Music  
Political Science  
Sociology  
Spanish  
Studio Art

### **Bachelor of Music Education**

Music Education

### **Bachelor of General Studies**

General Studies

### **Bachelor of Science in Arts and Sciences**

Advertising  
Architectural Studies  
Art Education  
Biochemistry  
Chemistry  
Economics  
Entrepreneurial Studies  
Geographic Information Sciences  
Geography

Graphic Design  
History  
Interdisciplinary Studies  
Journalism  
Medical Laboratory Science  
Physics  
Political Science  
Psychology  
Sociology  
Speech Communication  
Studio Arts  
Theatre

## **Education and Human Sciences**

### **Bachelor of Science**

Apparel Merchandising  
Athletic Training  
Aviation  
Consumer Affairs  
Dietetics  
Early Childhood Education  
Exercise Science  
Family and Consumer Sciences Education  
Health Education  
Hospitality Management  
Human Development and Family Studies  
Interior Design  
Nutrition and Food Science  
Physical Education Teacher Education  
Sport, Recreation and Park Management

## **Jerome J. Lohr College of Engineering**

### **Bachelor of Science**

Agricultural and Biosystems Engineering  
Civil Engineering  
Computer Science  
Construction Management  
Electrical Engineering  
Electronics Technology  
Mathematics  
Mechanical Engineering  
Operations Management

## **Nursing**

### **Bachelor of Science**

Accelerated Nursing  
Nursing  
RN Upward Mobility

## **Pharmacy**

### **Bachelor of Science**

Pharmaceutical Sciences

## **Graduate School\***

### **Master of Architecture**

### **Master of Arts**

### **Master of Education**

### **Master of Science**

### **Doctor of Nursing Practice**

### **Doctor of Pharmacy**

### **Doctor of Philosophy**

\* See Graduate School Catalog for information.

# Majors Sorted by General Degree Type

---

## **Associate of Arts (A.A.)**

General Studies

## **Associate of Science in Agriculture (A.S.)**

Agricultural Science

## **Bachelor of Arts (B.A.)**

Advertising

Architectural Studies

Art Education

Economics

English

French Studies

German

Global Studies

Graphic Design

History

Journalism

Music

Political Science

Spanish

Studio Art

## **Bachelor of General Studies (B.G.S.)**

General Studies

## **Bachelor of Music Education (B.M.E.)**

Music Education

## **Bachelor of Science (B.S.)**

Accelerated Nursing

Advertising

Agricultural and Biosystems Engineering

Agricultural and Resource Economics

Agricultural Business

Agricultural Education, Communication and Leadership

Agricultural Science

Agricultural Systems Technology

Agronomy

Animal Science

Apparel Merchandising

Architectural Studies

Art Education

Athletic Training

Aviation

Biochemistry

Biology (Biol Sci)

Biotechnology (Biol Sci)

Chemistry

Civil Engineering

Computer Science

Construction Management

Consumer Affairs

Dairy Manufacturing

Dairy Production

Dietetics

Early Childhood Education

Ecology and Environmental Science

Economics

Electrical Engineering

Electronics Technology

Exercise Science

Family and Consumer Sciences Education

Geographic Information Sciences

Geography

Graphic Design

Health Education

History

Horticulture

Hospitality Management

Human Development and Family Studies

Interdisciplinary Studies

Interior Design

Journalism

Landscape Architecture

Mathematics (ENGR)

Mechanical Engineering

Medical Laboratory Science

Microbiology (Biol Sci)

Nursing

Nutrition and Food Science

Operations Management

Pharmaceutical Sciences

Physics

Physical Education Teacher Education

Political Science

Psychology

Range Science

RN Upward Mobility

Sociology

Speech Communication

Studio Art

Sport, Recreation and Park Management

Theatre

Wildlife and Fisheries Sciences

## **Master of Architecture (M.Arch.)\***

## **Master of Arts (M.A.)\***

## **Master of Education (M.Ed.)\***

## **Master of Science (M.S.)\***

## **Doctor of Nursing Practice\***

## **Doctor of Pharmacy (Pharm.D.)\***

## **Doctor of Philosophy (Ph.D.)\***

\* See Graduate School Catalog for further detail about certificate programs, major specializations, emphasis, minors



# Majors, Minors, Certificates, and Specializations by Department

## Aerospace Studies

- Aerospace Studies Minor (Air Force ROTC)

## Agricultural and Biosystems Engineering

- Agricultural and Biosystems Engineering Major
- Agricultural Systems Technology Major

## Animal Science

- Animal Science Major - Business and Production Specialization
- Animal Science Major - Science Specialization
- Animal Science Minor
- Equine Studies Minor
- Swine Science Certificate

## Architecture

- Architectural Studies Major

## Biology and Microbiology

- Biology Major
- Biology Major - Pre-professional Specialization
- Biology Major - Secondary Education Specialization
- Biology Minor
- Biotechnology Major
- Biotechnology Minor
- Microbiology Major
- Microbiology Minor
- (Pre-) Chiropractic Interest Area
- (Pre-) Dental Interest Area
- (Pre-) Medicine Interest Area
- (Pre-) Mortuary Interest Area
- (Pre-) Optometry Interest Area
- (Pre-) Physician Assistant Interest Area

## Chemistry and Biochemistry

- Biochemistry Major
- Chemistry Minor
- Chemistry Major
- Medical Laboratory Science Major

## Civil and Environmental Engineering

- Civil Engineering Major

## College of Agriculture and Biological Sciences

- Agricultural Science Major (AS & BS)
- Agricultural Education, Communication and Leadership Major - Communication Specialization

- Agricultural Education, Communication and Leadership Major - Leadership Specialization
- Agricultural Education, Communication and Leadership Major - Agricultural Education Specialization

## College of Arts and Sciences

- American Indian Studies Major
- American Indian Studies Minor
- General Studies AA & BGS (Administered by University College and Continuing and Extended Education)
- Interdisciplinary Studies Major
- Women's Studies Minor

## Communication Studies and Theatre

- Communication Studies and Theatre Minor
- Dance Minor
- Speech Communication Major
- Speech Communication Major - Speech Education specialization
- Theatre Major
- Theatre Minor

## Construction and Operations Management

- Construction Management Major
- Operations Management Major
- Electronics Technology Major

## Consumer Sciences

- Apparel Merchandising Major
- Aviation Major - Aviation Education Specialization
- Aviation Major - Aviation Maintenance Management Specialization
- Aviation Minor
- Consumer Affairs Major - Consumer Services Management Specialization
- Consumer Affairs Major - Family Financial Management Specialization
- Hospitality Management Major
- Interior Design Major
- Interior Design Minor
- Leadership & Management of Nonprofit Organizations Minor
- Leadership Minor

## Counseling and Human Development

- Human Development and Family Studies Major
- Human Development and Family Studies Minor
- Gerontology Minor
- Rehabilitation Services Minor

## Dairy Science

- Dairy Manufacturing Major
- Dairy Manufacturing Major - Microbiology Specialization
- Dairy Production Major

## Economics

- Accounting Minor
- Agricultural and Environmental Law Certificate
- Agricultural and Resource Economics Major
- Agricultural Business Major
- Agricultural Business Minor
- Agricultural Marketing Minor
- Economics Major
- Economics Major - Business Specialization
- Economics Minor
- Entrepreneurial Studies Major
- Entrepreneurial Studies Minor
- Entrepreneurship Certificate
- Management Minor
- Marketing Minor

## Electrical Engineering and Computer Science

- Computer Science Major
- Computer Science Minor
- Electrical Engineering Major
- Software Engineering Minor

## English

- English Major
- English Major - English Education Specialization
- English Major - Writing Specialization
- English Minor
- Peace and Conflict Studies Minor
- Professional Writing Minor

## Geography

- Geographic Information Sciences Major
- Geographic Information Sciences Minor
- Geographic Information Sciences Certificate
- Geography Major
- Geography Minor

## Health and Nutritional Sciences

- Athletic Coaching Certification
- Athletic Training Major
- Dietetics Major
- Exercise Science Major
- Food Safety Minor
- Health Education Major
- Health Education Minor
- Nutrition Minor

# Majors, Minors, Certificates, and Specializations by Department

## Health and Nutritional Sciences

- Nutrition and Food Science Major
- Physical Education Teacher Education Major
- Recreation Administration Minor
- Sport, Recreation and Park Management Major
- *(Pre-) Occupational Therapy Interest Area*
- *(Pre-) Physical Therapy Interest Area*

## History, Political Science, Philosophy, and Religion

- History Major
- History Major - Teaching Specialization
- History Minor
- Political Science Major
- Political Science Minor
- Philosophy Minor
- Religion Minor
- *(Pre-) Law Interest Area*
- *(Pre-) Ministerial Interest Area*

## Jerome J. Lohr College of Engineering

- Biomedical Engineering Minor

## Journalism and Mass Communication

- Advertising Major
- Advertising Minor
- Journalism Major
- Journalism Minor

## Mathematics and Statistics

- Informatics Minor
- Mathematics Major
- Mathematics Major - Teaching Specialization
- Mathematics Minor
- Statistics Minor

## Mechanical Engineering

- Mechanical Engineering Major
- Sustainable Energy Systems Minor

## Military Science

- Military Science Minor  
(Army ROTC)

## Modern Languages and Global Studies

- French Studies Major
- French Studies Major - Teaching Specialization
- French Studies Minor
- German Major
- German Major - Teaching Specialization
- German Minor
- Global Studies Major
- Global Studies Minor
- Spanish Major
- Spanish Major - Teaching Specialization
- Spanish Minor

## Music

- Music Education Major
- Music Major - Music Entrepreneurship Specialization
- Music Major - Music Studies Specialization
- Music Minor

## Natural Resource Management

- Botany Minor
- Ecology and Environmental Science Major
- Range Science Major
- Range Science Minor
- Wildlife and Fisheries Sciences Major

## Nursing

- Nursing Major
- Health Science Minor

## Pharmacy

- Pharmaceutical Sciences Major

## Physics

- Nuclear Engineering Minor
- Physics Major
- Physics Major - Science Teaching Specialization
- Physics Minor

## Plant Science

- Agronomy Major
- Agronomy Minor
- Horticulture Major
- Horticulture Minor
- Landscape Architecture Major
- Pest Management Minor
- Soil Science Certification
- Soil Science Minor

## Psychology

- Psychology Major
- Psychology Major - Teaching Specialization
- Psychology Minor

## Sociology and Rural Studies

- Criminal Justice Minor
- Sociology Major
- Sociology Major - Human Resources Specialization
- Sociology Major - Human Services Specialization
- Sociology Major - Teaching Specialization
- Sociology Minor

## Teaching, Learning and Leadership

- Early Childhood Education Major- Birth to 5 Specialization
- Early Childhood Education Major- Birth to 8 Specialization
- Early Childhood Education Kindergarten Education Endorsement
- Early Childhood Education Major – Elementary Education Certification Cooperative Program with DSU or NSU
- Early Childhood Special Education Endorsement
- Family and Consumer Sciences Education Major
- Teacher Education-Certification

## Van D. & Barbara B. Fishback Honors College

- *Honor's Designation*

## Veterinary and Biomedical Sciences

- *(Pre-) Veterinary Medicine Interest Area*

## Visual Arts

- Animation Certificate
- Art Education Major
- Art History Certificate
- Ceramics Certificate
- Graphic Design Certificate
- Graphic Design Major
- Painting Certificate
- Printmaking Certificate
- Sculpture Certificate
- Studio Arts Major
- Studio Arts Minor

# Pre-Professional Interest Areas

---

## Pre-Professional Areas Of Study

Pre- Chiropractic  
Pre- Dental  
Pre- Law  
Pre- Medicine  
Pre- Ministerial  
Pre- Mortuary  
Pre- Occupational Therapy  
Pre- Optometry  
Pre- Physical Therapy  
Pre- Physician Assistant  
Pre- Veterinary Medicine

## Administered By

ABS/Biology and Microbiology  
ABS/Biology and Microbiology  
A&S/History and Political Science  
ABS/Biology and Microbiology  
A&S/History and Political Science  
ABS/Biology and Microbiology  
EHS/Health and Nutritional Sciences  
ABS/Biology and Microbiology  
EHS/Health and Nutritional Sciences  
ABS/Biology and Microbiology  
ABS/Veterinary and Biomedical Sciences

# Academic Organizational Structure

---

## College of Agriculture and Biological Sciences

- Agricultural and Biosystems Engineering
- Animal Science
- Biology and Microbiology
- Dairy Science
- Economics
- Natural Resource Management
- Plant Science
- Veterinary and Biomedical Sciences
- Wildlife and Fisheries Sciences

## College of Arts and Sciences

- Air Force ROTC
- Architecture
- Army ROTC
- Chemistry and Biochemistry
- Communication Studies and Theatre
- English
- Geography
- History, Political Science, Philosophy, and Religion
- Journalism and Mass Communication
- Modern Languages and Global Studies
- Music
- Physics
- Psychology
- Sociology and Rural Studies
- Visual Arts

## College of Education and Human Sciences

- Consumer Sciences
- Counseling and Human Development
- Health and Nutritional Sciences
- Teaching, Learning and Leadership

## Jerome J. Lohr College of Engineering

- Agricultural and Biosystems Engineering
- Civil and Environmental Engineering
- Construction and Operations Management
- Electrical Engineering and Computer Science
- Mathematics and Statistics
- Mechanical Engineering

## College of Nursing

- Graduate Nursing
- Nursing Student Services
- Undergraduate Nursing

## College of Pharmacy

- Pharmacy Practice
- Pharmaceutical Sciences

## Graduate School

## Van D. & Barbara B. Fishback Honors College

## Continuing & Extended Education

- Outreach Programs
- General Studies (B.G.S)

## University College

- Deciding/undeclared Students
- General Studies (A.A.)
- First Year Advising Center

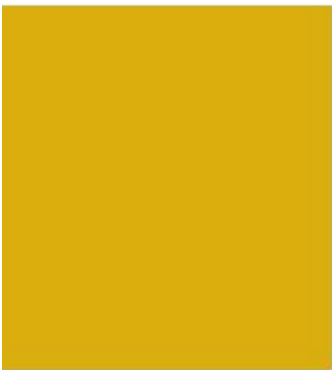






# Colleges

- *Agriculture & Biological Sciences 60*
- *Arts and Sciences 62*
- *Education and Human Sciences 66*
- *Engineering, Jerome J. Lohr College of Engineering 68*
- *Graduate School 70*
- *Honors College, Van D. and Barbara B. Fishback Honors College 71*
- *Nursing 72*
- *Pharmacy 73*
- *University College 76*



# Agriculture and Biological Sciences

Barry Dunn, Dean and Director of Cooperative Extension Service  
SAG 131, 605-688-4148  
Donald M. Marshall, Associate Dean and Director, Academic Programs  
SAG 156, 605-688-5133  
Daniel Scholl, Associate Dean and Director, South Dakota Agricultural Experiment Station and Associate Dean, Research  
SAG 135, 605-688-4149  
Box 2207, Brookings SD 57007-0191  
E-mail: donald.marshall@sdstate.edu  
<http://www.sdstate.edu/abs/index.cfm>

## Introduction

Undergraduate academic programs in the College of Agriculture and Biological Sciences lead to a Bachelor of Science Degree in Agriculture or Biological Science with a variety of majors and minors. An Associate of Science Degree in Agriculture is also available. Graduate degrees are offered in several disciplines. Students in agriculture enter into a wide array of technical, professional, and business careers, many of which deal with producing, processing, and marketing agricultural products. Biological sciences students also enter into a variety of career areas, such as wildlife biology, medical lab technologist, criminal investigation technologist, food safety, and environmental management. Many graduates in agriculture and biological sciences are recruited by public agencies for employment in such services as

forestry, parks, fish and wildlife, public health, conservation of natural resources, research laboratories, and many others. Many graduates pursue advanced degrees in graduate schools or professional schools such as medicine, dentistry, optometry, veterinary medicine, or law. In addition to academic programs, the College has extensive involvement in research and outreach/extension. Research for the benefit of South Dakota, the region, and the world is done in such areas as agricultural production, biostress, natural resources, biotechnology, and biomass-based energy and products. The results of research often form the basis for classroom instruction and extension work. The Cooperative Extension Service provides educational services statewide to promote the beneficial use and development of human, economic,.

## Departments/Units

Agricultural and Biosystems Engineering  
Animal Science  
Biology and Microbiology  
Dairy Science  
Economics  
Natural Resources Management  
Plant Science  
Veterinary and Biomedical Sciences  
Agricultural Experiment Station  
Animal Disease Research & Diagnostic Lab  
SDSU Extension Service  
Water Resources Institute

## Degrees Offered

Associate of Science  
Bachelor of Science in Agriculture  
Associate of Science  
Bachelor of Science in Agriculture  
Bachelor of Science in Biological Science  
Master of Science\*  
Doctor of Philosophy\*

\* Graduate degrees are offered in collaboration with the Graduate School. For details, see the Graduate Catalog.

## Accreditations/Reviews

American Association of Veterinary Laboratory Diagnosticians  
American Society of Agricultural Engineering  
National Institute of Food and Agriculture  
Society for Range Management

## Programs

One of the hallmarks of the College of Agriculture and Biological Sciences is its diversity with multiple departments, numerous majors and specializations, and hundreds of different



courses from which to choose. The college offers premier agricultural curriculum dispensed by faculty who are committed to student success

# Agriculture and Biological Sciences Curricula

## Majors

Agricultural and Resource Economics  
 Agricultural Business  
 Agricultural Education, Communications and Leadership  
 Agricultural Science  
 Agricultural Systems Technology  
 Agronomy  
 Animal Science  
 Biology  
 Biotechnology  
 Dairy Manufacturing  
 Dairy Production  
 Ecology and Environmental Science  
 Horticulture  
 Landscape Architecture  
 Microbiology  
 Range Science  
 Wildlife and Fisheries Sciences  
*Pre- Chiropractic*  
*Pre- Dental*  
*Pre- Medicine*  
*Pre- Mortuary*  
*Pre- Occupational Therapy*  
*Pre- Optometry*  
*Pre- Physician Assistant*  
*Pre- Veterinary Medicine*

## Degree Certification

Agriculture  
 Agriculture  
 Agriculture  
 Agriculture  
 Agriculture  
 Agriculture  
 Agriculture  
 Biological Sciences  
 Biological Sciences  
 Agriculture  
 Agriculture  
 Biological Science  
 Agriculture  
 Agriculture  
 Biological Science  
 Agriculture  
 Biological Sciences  
 Non-degree pre-professional interest area  
 Non-degree pre-professional interest area  
 Non-degree pre-professional interest area  
 Non-degree pre-professional interest area  
 Non-degree pre-professional interest area  
 Non-degree pre-professional interest area  
 Non-degree pre-professional interest area  
 Non-degree pre-professional interest area  
 Non-degree pre-professional interest area

## Department

Economics  
 Economics  
 Varies by specialization  
 College of Agriculture and Biological Sciences  
 Agricultural and Biosystems Engineering  
 Plant Science  
 Animal Sciences  
 Biology and Microbiology  
 Biology and Microbiology  
 Dairy Science  
 Dairy Science  
 Natural Resource Management  
 Plant Science  
 Plant Science  
 Biology and Microbiology  
 Biology and Microbiology  
 Natural Resource Management  
 Natural Resource Management  
 Natural Resource Management  
 Biology and Microbiology  
 Biology and Microbiology  
 Biology and Microbiology  
 Biology and Microbiology  
 Biology and Microbiology  
 Biology and Microbiology  
 Biology and Microbiology  
 Biology and Microbiology  
 Veterinary and Biomedical Sciences

## Degree Requirements

Students seeking the Bachelor of Science degree must complete the System General Education Requirements and SDSU Institutional Graduation Requirements. The requirements of one of the College's majors must be met. Specific requirements are listed under each program of study. In some majors, the student must select a "specialization." Students must also complete 25 semester credits of Jupper division (300 and above) coursework, with the exception that MATH 125 and 225, Calculus II and III, may be counted as five credits toward the total. Additional requirements for both Bachelor of Science degrees follow.

### Bachelor of Science in Agriculture

Students who wish to complete a Bachelor of Science in Agriculture must complete a minimum of 11 credits from at least four courses on the approved list of **Group 1 courses in Agriculture**. Some departments require specific courses from the list, whereas others leave the selection entirely to the student and the advisor.

### Bachelor of Science in Biological Sciences

Students who wish to complete a Bachelor of Science in Biological Sciences must complete a minimum of 33 credits from the natural sciences. Refer to departments offering the degree for specific courses.

### Teacher Education

Students planning to teach at the secondary level should start taking professional education courses during their sophomore year. Students must apply for admission to the Supervisor of Student Teaching before being admitted to the education sequence. (See College of Education and Human Sciences for details.)

### Student Engagement

Most departments in the College of Agriculture and Biological Sciences have one or more student organizations. Most of these organizations sponsor educational, social, and service activities, and provide students opportunities to develop leadership skills and other important abilities. Nationally known agricultural fraternities for men (Alpha Gamma Rho and Farmhouse) and women (Ceres) are

organized and provide living accommodations near campus. During the first semester of the sophomore year, students with outstanding scholarship, leadership, and character may be initiated into Alpha Zeta, Sigma Alpha, and Beta Beta Beta honor societies. Gamma Sigma Delta, an agricultural honor society for seniors with high academic ability, also has an SDSU chapter.

### Group 1 Courses in Agriculture

A minimum of 11 credits from at least four courses listed below must be completed. Some departments require specific courses from the list, whereas others leave the selection entirely to the student and the advisor.

ABS 203 - Global Food Systems	Credits: 3
ABS 381 - Multicultural Ag/Bio Science Experience	Credits: 2-4
ABS 482-582 - International Experience	Credits: 2-4
ABS 475-475L - Integrated Natural Resource Mgmt & Lab	Credits: 3
AGEC 271-271L - Farm and Ranch Management and Lab	Credits: 4
AGEC 354 - Agricultural Marketing and Prices	Credits: 3
AS 101-101L - Introduction to Animal Science and Lab	Credits: 3
AS 233-233L - Applied Animal Nutrition and Lab	Credits: 4
AS 241-241L - Introduction to Meat Science and Lab	Credits: 3
AST 202-202L - Construction Tech and Materials and Lab	Credits: 2
AST 213-213L - Ag, Industrial and Outdoor Power & Lab	Credits: 3
AST 333-333L - Soil and Water Mechanics and Lab	Credits: 3
AST 342-342L - Applied Electricity and Lab	Credits: 3
DS 130-130L - Introduction to Dairy Science and Lab	Credits: 3
DS 231 - Dairy Foods	Credits: 3
HO 111-111L - Introduction to Horticulture and Lab	Credits: 2, 1
LA 201 - Introduction to Landscape Design	Credits: 3
MICR 311-311L - Food Microbiology and Lab	Credits: 4
NRM 110 - Environmental Conservation	Credits: 3
PRM 101 - Parks and Society	Credits: 3
PS 103-103L - Crop Production and Lab	Credits: 3
PS 213-213L - Soils and Lab	Credits: 2, 1
PS 223-223L - Principles of Plant Pathology and Lab	Credits: 3
PS 305-305L - Insect Biology and Lab	Credits: 3
PS 307-307L - Insect Pest Management and Lab	Credits: 3
RANG 105-105L - Introduction to Range Mgmt & Lab	Credits: 3

# Arts and Sciences

Dennis Papini, Dean  
Kathleen M. Donovan, Associate Dean  
SWG 251, 605-688-4723  
Box 2275A, Brookings, SD 57007-0094  
Email: dennis.papini@sdstate.edu  
kathleen.donovan@sdstate.edu  
Website: www.sdstate.edu/as/index.cfm

## Introduction

The College of Arts and Sciences serves two significant functions within the University. It provides instruction in the University's core requirement for a liberal education as well as education in specific disciplines. A liberal education gives students the means to test ideas, beliefs, and facts. It exposes them to a variety of academic disciplines that will broaden and deepen their perspectives and enable them to continue the learning process as educated citizens. Students study the ways of thinking and expression that are intrinsic to the arts, humanities, social sciences, and natural

sciences. Students receive education on the scientific method, critical thinking, analysis, synthesis, and cogent expression. They develop intellectual skills, humanistic understanding, and aesthetic appreciation. Such an education increases the usefulness of career planning and specialization by laying a foundation for lifelong values. The departments and programs in the College of Arts and Sciences offer major and/or minor programs leading to associate, bachelor, master's, and doctoral degrees.

## Departments

Aerospace Studies  
Architecture  
Chemistry and Biochemistry  
Communication Studies and Theatre  
Economics  
English  
Geography  
History, Political Science, Philosophy, and Religion

Journalism and Mass Communication  
Military Science  
Modern Languages and Global Studies  
Music  
Physics  
Psychology  
Sociology and Rural Studies  
Visual Arts

## Degrees Offered

Associate of Arts  
Bachelor of Arts  
Bachelor of General Studies  
Bachelor of Music Education  
Bachelor of Science  
Master of Arts\*  
Master of Science\*  
Doctor of Philosophy\*  
\* Graduate degrees are offered in collaboration with the Graduate School. For details, see the Graduate Catalog

## Accreditations

Accrediting Council on Education in Journalism and Mass Communication.  
American Chemical Society.  
National accrediting Agency for Clinical Laboratory Sciences.  
National Association of Schools of Music.  
National Council for Accreditation of Teacher Education.

## Arts and Sciences Curricula

<b>Majors</b>	<b>Degree Offered</b>	<b>Department</b>
Advertising	Bachelor of Arts; Bachelor of Science	Journalism and Mass Communication
American Indian Studies	Bachelor of Arts	College of Arts and Sciences
Architectural Studies	Bachelor of Arts; Bachelor of Science	Architecture
Art Education	Bachelor of Arts; Bachelor of Science	Visual Arts
Chemistry	Bachelor of Science	Chemistry and Biochemistry
Economics	Bachelor of Arts; Bachelor of Science	Economics
English	Bachelor of Arts	English
Entrepreneurial Studies	Bachelor of Arts; Bachelor of Science	Economics
French Studies	Bachelor of Arts	Modern Languages and Global Studies
General Studies	Bachelor of General Studies	College of Arts and Sciences
Geographic Information Sciences	Bachelor of Science	Geography
Geography	Bachelor of Science	Geography
German	Bachelor of Arts	Modern Languages and Global Studies
Global Studies	Bachelor of Arts	Modern Languages and Global Studies
Graphic Design	Bachelor of Arts; Bachelor of Science	Visual Arts
History	Bachelor of Arts; Bachelor of Science	History, Political Science, Philosophy, and Religion
Interdisciplinary Studies	Bachelor of Science	College of Arts and Sciences
Journalism	Bachelor of Arts; Bachelor of Science	Journalism and Mass Communication
Medical Laboratory Science	Bachelor of Science	Chemistry and Biochemistry
Music	Bachelor of Arts	Music
Music Education	Bachelor of Music Education	Music
Physics	Bachelor of Science	Physics



Political Science	Bachelor of Science
Psychology	Bachelor of Science
Sociology	Bachelor of Arts; Bachelor of Science
Spanish	Bachelor of Arts
Speech Communication	Bachelor of Science
Studio Arts	Bachelor of Arts; Bachelor of Science
Theatre	Bachelor of Science
(Pre) - Law	<i>Pre-Professional Areas of Study</i>
(Pre) - Ministerial	<i>Pre-Professional Areas of Study</i>

History, Political Science, Philosophy, and Religion
Psychology
Sociology and Rural Studies
Modern Languages and Global Studies
Communication Studies and Theatre
Visual Arts
Communication Studies and Theatre
History, Political Science, Philosophy, and Religion
History, Political Science, Philosophy, and Religion

## Degree Requirements

All general university requirements must be met to qualify for the bachelor's degrees in the College of Arts and Sciences. In addition, the following special requirements and rules have been established for all graduates of the College of Arts and Sciences: The requirements of one of the College of Arts and Sciences departmental majors must be met. Specific requirements are listed under each department. Courses taken in the major may be used to fulfill university core requirements if the department does not state otherwise. Bachelor's degrees in the College of Arts and Sciences must include 33 semester credits from upper division courses (300 and above).

Students seeking B.S., B.A., and B.M.E. degrees in the College of Arts and Sciences must complete the System General Education Requirements (SGRs), the SDSU Institutional Graduation Requirements (IGRs), and the College of Arts and Sciences requirements. Specific requirements for each degree also include:

### Bachelor of Arts

Modern Languages* (completion and competency in one language at the 202 level or a department-approved advanced upper division language course)	3-14
Social Sciences	8
Humanities	6

\* International students whose native language is not English may substitute 14 credits in "American Culture" courses for the modern language requirement. These courses in the humanities and social sciences are in addition to the normal B.A. requirements. Students must visit with the Assistant Dean of the College of Arts and Sciences for permission to follow this option.

### Bachelor of Science

Natural Science*	14
With 6 credits of Biological Sciences	
With 8 credits of Physical Sciences**	
Social Sciences	12
Humanities	8*

Bachelor of Science students in the Arts and Sciences College must complete 6 credits from the System General Education (SGR) Natural Science list and an additional 8 credits (from the approved list) to meet the College of Arts and Sciences requirements for the Bachelor of Science degree. In order to meet the College B.S. requirements, students must complete a minimum of 8 Physical Science credits and a minimum of 6 Biological Science credits for the required total of 14 credits.

\*\*Students may count 5 credits of Math courses (Math prefix that are in addition to the System General Education (SGR #5) requirement of 3 credits toward the Physical Science requirement.

### Bachelor of Music Education

HIST/AIS 368 - History and Culture of the American Indian or ANTH/AIS 421 Indians of North America	3
SOC 100 - Introduction to Sociology or PSYC 101 - General Psychology	3

*Refer to the following pages for approved lists of courses of courses that satisfy the Natural Sciences, Social Sciences, and Humanities Requirements*

## Teacher Education

Students planning to teach at the high school level should start taking professional education courses during their sophomore year. Students must apply for admission to the Supervisor of Student

Teaching before being admitted to the education sequence. Contact the Department of Teaching, Learning, and Leadership for further details.

## Student Engagement

A variety of activities, including many extracurricular activities, are administered within the College of Arts and Sciences.

### Dramatics and Forensics.

The Communication Studies and Theatre Department supervises a forensics program in debate, public address, and oral interpretation of literature. State University Theatre presents a program of major and experimental productions each year. During the summer a season of plays in repertory are given by the Prairie Repertory Theatre in Brookings and Brandon.

### Music Groups.

The Music Department sponsors a variety of vocal and instrumental groups. Membership may be by audition, arranged with

the appropriate director, and is open to all University students regardless of major. Credit can be awarded for participation.

**Choral.** Concert Choir, Statesmen (Men's Chorus), University Women's Choir, and Opera Workshop.

**Instrumental.** Civic/University Symphony Orchestra, Marching Band (The "Pride of the Dakotas"), Pep Bands, Symphonic Band, Concert Band, Jazz Ensembles and various Percussion, Woodwind and Brass small ensembles.

### The Ritz Art Gallery.

The Ritz Gallery sponsors an annual program of professional and student exhibitions, including the Juried Student Exhibition which is open to all SDSU students.

# Approved Courses for the College of Arts and Sciences Requirements

## Biological Sciences

ANTH 220 - Physical Anthropology	Credits: 3	BIOL 325-325L - Physiology and Lab	Credits: 4
BIOL 101-101L - Biology Survey I and Lab	Credits: 3	BOT 201-201L - General Botany and Lab	Credits: 3
BIOL 103-103L - Biology Survey II and Lab	Credits: 3	MICR 231-231L - General Microbiology and Lab	Credits: 4
BIOL 105 - Human Biology	Credits: 3	NFS 221 - Survey of Nutrition	Credits: 3
BIOL 151-151L - General Biology I and Lab	Credits: 4	NRM 110 - Environmental Conservation	Credits: 3
BIOL 153-153L - General Biology II and Lab	Credits: 4	PE 252-252L - Fndmts of Mtr Lrning & Devlpmnt & Lab	Credits: 2
BIOL 200-200L - Animal Diversity and Lab	Credits: 4	PS 103-103L - Crop Production and Lab	Credits: 3
BIOL 221-221L - Human Anatomy and Lab	Credits: 4	WL 220 - Intro to Wildlife and Fisheries Management	Credits: 3

## Physical Sciences

CHEM 106-106L - Chemistry Survey and Lab	Credits: 3, 1	PHYS 111-111L - Introduction to Physics I and Lab	Credits: 4
CHEM 108-108L - Organic and Biochemistry and Lab	Credits: 4, 1	PHYS 113-113L - Introduction to Physics II and Lab	Credits: 4
CHEM 112-112L - General Chemistry I and Lab	Credits: 3, 1	PHYS 185-185L - Introduction to Astronomy I and Lab	Credits: 3
CHEM 114-114L - General Chemistry II and Lab	Credits: 3, 1	PHYS 187-187L - Introduction to Astronomy II and Lab	Credits: 3
CHEM 115-115L - Atomic & Molecular Structure & Lab	Credits: 3, 1	PHYS 211-211L - University Physics I and Lab	Credits: 4
CHEM 120-120L - Elemtry Organic Chemistry and Lab	Credits: 3, 1	PHYS 213-213L - University Physics II and Lab	Credits: 4
CHEM 127-127L - Structr & Fcnct of Org Molecules & Lab	Credits: 3, 1	PS 213-213L - Soils and Lab	Credits: 2, 1
GEOG 131-131L - Physical Geog: Weather & Climate & Lab	Credits: 4	PS 243 - Principles of Geology	Credits: 3
GEOG 132-132L - Physical Geog: Natural Landscapes & Lab	Credits: 4	PS 244 - Geological Resources of South Dakota Lab	Credits: 1
PHYS 101-101L - Survey of Physics and Lab	Credits: 4	STAT - 281 Introduction to Statistics	Credits: 3

## Humanities

AIS 101 - Introductory Lakota I	Credits: 4	HIST 112 - World Civilizations II	Credits: 3
AIS 102 - Introductory Lakota II	Credits: 4	HIST 121 - Western Civilization I	Credits: 3
AIS 201 - Intermediate Lakota I	Credits: 3	HIST 122 - Western Civilization II	Credits: 3
AIS 202 - Intermediate Lakota II	Credits: 3	HIST 368 - History and Culture of the American Indian	Credits: 3
AIS 238 - Native American Religions	Credits: 3	LAKL 101 - Introductory Lakota I	Credits: 4
AIS 256 - Literature of American West	Credits: 3	LAKL 102 - Introductory Lakota II	Credits: 4
AIS 368 - History and Culture of the American Indian	Credits: 3	LAKL 201 - Intermediate Lakota I	Credits: 3
ARAB 101 - Introductory Arabic I	Credits: 4	LAKL 202 - Intermediate Lakota II	Credits: 3
ARAB 102 - Introductory Arabic II	Credits: 4	LAS 301 - Latin American Cultures	Credits: 2-3
ARCH 241 - Building History I	Credits: 3	MCOM 151 - Introduction to Mass Communication	Credits: 3
ART 111 - Drawing I	Credits: 3	MCOM 160 - Introduction to Film	Credits: 3
ART 112 - Drawing II	Credits: 3	MUS 100 - Music Appreciation	Credits: 3
ART 121 - Design I 2D	Credits: 3	MUS 130 - Music Literature and History I	Credits: 2
ART 122 - Design II Color	Credits: 3	MUS 131 - Music Literature and History II	Credits: 3
ART 123 - Three Dimensional Design	Credits: 3	MUS 201 - History of Country Music	Credits: 3
ARTH 100 - Art Appreciation	Credits: 3	MUS 203 - Blues, Jazz, and Rock	Credits: 3
ARTH 120 - Film as Art	Credits: 3	MCOM 145 - Media Literacy and Ethics	Credits: 3
ARTH 211 - History of World Art I	Credits: 3	PHIL 100 - Introduction to Philosophy	Credits: 3
ARTH 212 - History of World Art II	Credits: 3	PHIL 200 - Introduction to Logic	Credits: 3
DANC 130 - Dance Fundamentals	Credits: 1	PHIL 215 - Introduction to Social-Political Philosophy	Credits: 3
DANC 240 - Multicultural Dance Activities	Credits: 1	PHIL 220 - Introduction to Ethics	Credits: 3
ENGL 125 - Introduction to Peace and Conflict Studies	Credits: 3	PHIL 313 - Great Philosophers	Credits: 2-3
ENGL 210 - Introduction to Literature	Credits: 3	PHIL 331 - Philosophy of Science	Credits: 3
ENGL 211 - World Literature I	Credits: 3	PHIL 470 - Philosophy of Religion	Credits: 3
ENGL 212 - World Literature II	Credits: 3	REL 213 - Introduction to Religion	Credits: 3
ENGL 221 - British Literature I	Credits: 3	REL 224 - Old Testament	Credits: 3
ENGL 222 - British Literature II	Credits: 3	REL 225 - New Testament	Credits: 3
ENGL 240 - Juvenile Literature	Credits: 3	REL 237 - Religion in American Culture	Credits: 3
ENGL 241 - American Literature I	Credits: 3	REL 238 - Native American Religions	Credits: 3
ENGL 242 - American Literature II	Credits: 3	REL 250 - World Religions	Credits: 3
ENGL 248 - Women in Literature	Credits: 3	REL 370 - Philosophy of Religion	Credits: 3
ENGL 249 - Literature of Diverse Cultures	Credits: 3	REL 401 - History of Western Religious Thought I	Credits: 3
ENGL 250 - Science Fiction	Credits: 3	REL 402 - History of Western Religious Thought II	Credits: 3
ENGL 256 - Literature of the American West	Credits: 3	RUSS 101 - Introductory Russian I	Credits: 4
ENGL 268 - Literature	Credits: 3	RUSS 102 - Introductory Russian II	Credits: 4
FREN 101 - Introductory French I	Credits: 4	RUSS 201 - Intermediate Russian I	Credits: 3
FREN 102 - Introductory French II	Credits: 4	RUSS 202 - Intermediate Russian II	Credits: 3
FREN 201 - Intermediate French I	Credits: 4	SPAN 101 - Introductory Spanish I	Credits: 4
FREN 202 - Intermediate French II	Credits: 4	SPAN 102 - Introductory Spanish II	Credits: 4
GER 101 - Introductory German I	Credits: 4	SPAN 201 - Intermediate Spanish I	Credits: 3
GER 102 - Introductory German II	Credits: 4	SPAN 202 - Intermediate Spanish II	Credits: 3
GER 201 - Intermediate German I	Credits: 3	THEA 100 - Introduction to Theatre	Credits: 3
GER 202 - Intermediate German II	Credits: 3	THEA 131 - Introduction to Acting	Credits: 3
HIST 111 - World Civilizations I	Credits: 3	WMST 248 - Women in Literature	Credits: 3

# Approved Courses for the College of Arts and Sciences Requirements

## Social Sciences

ABS 482-582 - International Experience	Credits: 2-4	MSL 201 - Innovative Team Leadership	Credits: 2
AIR 101-101L - Foundations of the US Air Force and Lab	Credits: 1	MSL 202 - Foundation of Tactical Leadership	Credits: 2
AIR 102-102L - Foundations of the US Air Force and Lab	Credits: 1	POLS 100 - American Government	Credits: 3
AIR 201-201L - Evolution of USAF Air & Space Power & Lab	Credits: 1	POLS 102 - American Political Issues	Credits: 3
AIR 202-202L - Evolution of USAF Air &Space Power &Lab	Credits: 1	POLS 165 - Political Ideologies	Credits: 3
AIS 421 - Indians of North America	Credits: 3	POLS 210 - State and Local Government	Credits: 3
ANTH 210 - Cultural Anthropology	Credits: 3	POLS 253 - Current World Problems	Credits: 3
ANTH 220 - Physical Anthropology	Credits: 3	PSYC 101 - General Psychology	Credits: 3
ANTH 421- Indians of North America	Credits: 3	PSYC 327 - Child Psychology	Credits: 3
CJUS 201 - Introduction to Criminal Justice	Credits: 3	PSYC 367 - Psychological Gender Issues	Credits: 3
ECON 101 - Global Economy	Credits: 3	PSYC 367L - Psychological Gender Issues Laboratory	Credits: 1
ECON 201 - Principles of Microeconomics	Credits: 3	PSYC 406 - Cognitive Psychology	Credits: 3
ECON 202 - Principles of Macroeconomics	Credits: 3	PSYC 406L - Cognitive Psychology Laboratory	Credits: 1
ECON 460 - Economic Development	Credits: 3	PSYC 441 - Social Psychology	Credits: 3
EPSY 302 - Educational Psychology	Credits: 3	PSYC 441L - Social Psychology Laboratory	Credits: 1
GEOG 200 - Introduction to Human Geography	Credits: 3	PSYC 451 - Psychology of Abnormal Behavior	Credits: 3
GEOG 210 - World Regional Geography	Credits: 3	PSYC 461 - Theories of Personality	Credits: 3
GEOG 212 - Geography of North America	Credits: 3	REL 237 - Religion in American Culture	Credits: 3
GEOG 219 - Geography of South Dakota	Credits: 3	SOC 100 - Introduction to Sociology	Credits: 3
GLST 201 - Global Studies I	Credits: 3	SOC 150 - Social Problems	Credits: 3
HDFS 141 - Individual and the Family	Credits: 3	SOC 240 - The Sociology of Rural America	Credits: 3
HDFS 210 - Lifespan Development	Credits: 3	SOC 250 - Courtship and Marriage	Credits: 3
HIST 151 - United States History I	Credits: 3	SOC 350 - Race and Ethnic Relations	Credits: 3
HIST 152 - United States History II	Credits: 3	SOC 440 - Urban Sociology	Credits: 3
LAS 302 - Latin American Societies	Credits: 3	WMST 101 - Introduction to Women's Studies	Credits: 3
MSL 101 - Leadership and Personal Development	Credits: 1	WMST 367 - Psychological Gender Issues	Credits: 3
MSL 102 - Introduction to Tactical Leadership	Credits: 1		



# Education and Human Sciences

Jill Thorngren, Dean  
Jane Hegland, Associate Dean  
CY Wang, Associate Dean  
SWG 249, 605-688-6181  
Box 2275A, Brookings, SD 57007-0097  
Email: [jill.thorngren@sdstate.edu](mailto:jill.thorngren@sdstate.edu)  
<http://www.sdstate.edu/ehs/index.cfm>

## Introduction

The College of Education and Human Sciences (EHS) develops human potential by enhancing individual, family, school, and community well-being. Graduates from the College work in diverse work settings which span business, education, government and non-profit or community agencies. Examples of careers in EHS include an educator who provides leadership and instruction in our schools, a dietitian who counsels others to establish a healthy or specialized diet, an interior designer who designs residential or commercial spaces, a wellness professional who works with adults to promote good health practices for people of all ages, a pilot serving our country or a professional counselor supporting the development of others.

The College of Education and Human Sciences works to advance teaching, learning, and scholarship through:

- Exemplary student-centered undergraduate and graduate education that prepares tomorrow's professionals.
- Basic, applied, and translational scholarship that addresses vital issues of health, development, learning, leadership, sustainability, and quality of life across the lifespan.
- Engagement with individuals, families, schools, organization and communities which transform knowledge and discovery into practice and provides meaningful impacts.
- To be a recognized leader in teacher education and the human sciences and innovative in advancing new science, pedagogy and design.

## Departments

Counseling and Human Development  
Consumer Sciences  
Health and Nutritional Sciences  
Teaching, Learning and Leadership

## Degrees Offered

Bachelor of Science  
Master of Education\*  
Master of Science\*  
Doctor of Philosophy\*

\* Graduate degrees are offered in collaboration with the Graduate School. For details, see the Graduate Catalog.

## Accreditations

Accreditation Council for Education of Nutrition and Dietetics  
Academy of Nutrition and Dietetics  
Commission on Accreditation of Allied Health Education Programs  
Commission on Accreditation of Athletic Training Education  
Council for Accreditation of Counseling and Related Educational Programs  
Council for Interior Design Accreditation

Council on Rehabilitation Education  
National Association for Education of Young Children  
National Council for the Accreditation of Teacher Education Programs  
National Institute of Food and Agriculture recognition  
South Dakota Department of Education





# Education and Human Science Curricula

## Major

Agricultural Education, Communication and Leadership  
Major - Agricultural Education specialization  
Apparel Merchandising  
Athletic Training  
Aviation Major - Aviation Education Specialization  
Consumer Affairs  
Dietetics  
Early Childhood Education  
Family and Consumer Sciences Education  
Exercise Science  
Health Education  
Hospitality Management  
Human Development and Family Studies  
Interior Design  
Nutrition and Food Science  
Physical Education Teacher Education  
  
Sport, Recreation and Park Management

## Minors

Aviation  
Food Safety  
Gerontology  
Health Education  
Human Development and Family Studies  
Interior Design  
Leadership  
Leadership and Management of Nonprofit Organizations  
Nutrition  
Recreation Administration  
Rehabilitation Services

## Department

Teaching, Learning and Leadership and the College of Agriculture and Biological Sciences  
Consumer Sciences  
Health and Nutritional Sciences  
Consumer Sciences  
Consumer Sciences  
Health and Nutritional Sciences  
Teaching, Learning and Leadership  
Teaching, Learning and Leadership  
Health and Nutritional Sciences  
Health and Nutritional Sciences  
Consumer Sciences  
Counseling and Human Development  
Consumer Sciences  
Health and Nutritional Sciences  
Health and Nutritional Sciences and Teaching, Learning and Leadership  
Health and Nutritional Sciences  
  
Consumer Sciences  
Health and Nutritional Sciences  
Counseling and Human Development  
Health and Nutritional Sciences  
Counseling and Human Development  
Consumer Sciences  
Consumer Sciences  
Consumer Sciences  
Consumer Sciences  
Health and Nutritional Sciences  
Consumer Sciences  
Counseling and Human Development

## Degree Requirements

Students selecting majors in the College of Education and Human Sciences must meet the General Education, College, and specific major requirements pertinent to the field and profession in

order to earn a Bachelor of Science degree. For a complete listing of graduation requirements, refer to the description of specific majors in this catalog.

## Teaching Certificates and Endorsements



Teaching certificates are issued by state Departments of Education. The secondary certificate qualifies the holder to teach particular subjects in secondary and middle school/junior high grades. The K-12 certificate qualifies the holder to teach in kindergarten through high school. The certificate states the subjects or subject groups in which the individual may teach. Curriculum to prepare students for endorsements are available in English as a Second Language, coaching, reading, and over 20 discipline-specific content areas.

## Student Engagement

Many majors in the College of Education and Human Sciences provide opportunities to become familiar with the world of work as related to the major. Field experiences, practicums, and internships are available and often required. EHS also offers its students opportunities for personal, academic, and career growth through involvement in clubs and organization.

# Jerome J. Lohr College of Engineering

Lewis F. Brown, Dean  
Richard A. Reid, Associate Dean  
SCEH 201, 605-688-4161  
Box 2219, Brookings, SD 57007-0096  
E-mail: lewis.brown@sdstate.edu  
richard.reid@sdstate.edu  
<http://www.sdstate.edu/engr>

## Introduction

---

Engineering programs have been a vital part of SDSU since 1881, and graduates of the Jerome J. Lohr College of Engineering programs have extended the bounds of science and improved our way of life in many ways. The College has a rich history and long tradition of providing outstanding graduates who are well prepared for exciting careers in engineering, science, and technology. The seven academic departments of the College of Engineering offer a

broad range of major and minor programs, each with its unique features that ensure the student of both depth and breadth in their field of study. The mission of the College of Engineering is to provide a rigorous, practical education for our students oriented toward problem solving; to conduct world-class research with a regional emphasis; and to provide technical assistance to existing and emerging business, industry, and government.

## Departments/Units

---

Agricultural and Biosystems Engineering  
Civil and Environmental Engineering  
Electrical Engineering and Computer Science  
Engineering Technology and Management  
Mathematics and Statistics  
Mechanical Engineering

Engineering Extension  
Office of Engineering Research  
Mountain Plains Consortium  
Product Development Center  
SD Local Transportation Assistance Program  
Water and Environmental Engineering Research Center

## Degrees Offered

---

Bachelor of Science  
Master of Science\*  
Doctor of Philosophy\*  
\* Graduate degrees are offered in collaboration with the Graduate School. For details, see the Graduate Catalog.

## Accreditations

---

American Council for Construction Education  
Computing Accreditation Commission of ABET, the Accreditation Board for Engineering and Technology  
Engineering Accreditation Commission of ABET, the Accreditation Board for Engineering and Technology

## Engineering Curricula

---

The Jerome J. Lohr College of Engineering offers the Bachelor of Science degree in numerous high-demand fields, as well as a variety of minor to supplement a student's major program of study.

### Majors

Agricultural and Biosystems Engineering  
Civil Engineering  
Computer Science  
Construction Management  
Electrical Engineering  
Mathematics  
Mechanical Engineering  
Operations Management

### Minors

Biomedical Engineering  
Computer Science  
Informatics  
Mathematics  
Software Engineering  
Statistics  
Sustainable Energy Systems

### Departments

Agriculture and Biosystems Engineering  
Civil and Environmental Engineering  
Electrical Engineering and Computer Science  
Construction and Operations Management  
Electrical Engineering and Computer Science  
Mathematics and Statistics  
Mechanical Engineering  
Construction and Operations Management

### Departments

College of Engineering  
Electrical Engineering and Computer Science  
Mathematics and Statistics  
Mathematics and Statistics  
Electrical Engineering and Computer Science  
Mathematics and Statistics  
Mechanical Engineering

# Degree Requirements

---

Students selecting majors in the Jerome J. Lohr College of Engineering must meet the General Education, College, and specific major requirements pertinent to the field and profession in order to earn a Bachelor of Science degree. The College recognizes the importance of the general education component of undergraduate education, and the need for this component to complement the technical content of an education in engineering, mathematics, science and technology. This connection is important for producing

well-rounded graduates who will continue to meet the present and future needs of society. By choosing their electives to meet the requirements of the goals of the System General Education Requirements, and the goals of the Institutional General Education Requirements, students connect their general education component to their technical curriculum and thus strengthen their professional competence. For a complete listing of graduation requirements, refer to the description of specific majors in this catalog.

# Facilities and Services

---

The facilities of the Jerome J. Lohr College of Engineering are excellent and include numerous hands-on instructional laboratories that are equipped with state-of-the-art equipment. The extensive laboratory learning experience reinforces the underlying theory taught in the lecture courses. The College of Engineering also

provides computer laboratory facilities and areas for students. In the spirit of the land-grant mission, the College also supports numerous professional outreach services in the region through the Engineering Extension program, SD Local Transportation Assistance Program, and the Economic Development Administration University Center.

# Student Engagement

---

## Scholarships

The College of Engineering supports many of its students with academic scholarships. Students apply for these scholarships in the winter and awards are made for the following academic year. Individual departments within the College of Engineering also offer their own department-specific scholarships, which have their own application and review process. Information on the extensive scholarship opportunities for students can be found on the web sites for both the College of Engineering and the specific academic program of interest.

## Academic Advising

Each student is assigned an academic adviser who provides valuable assistance with professional career and personal advice, course planning and scheduling. The advisor is familiar with the student's field, as well as all curricular requirements for graduation. Students should meet with their advisor at least twice per semester for assistance with their progress and course planning. Students may

request a change in their academic adviser by contacting their department office.

## Internships & Career Opportunities

SDSU's College of Engineering is one of the region's leading producers of computer scientists, engineers, mathematicians, statisticians and technologists. The college enjoys a close partnership with many local and regional employers. Of course, this offers students exceptional opportunities for employment both *before* and *after* graduation.

## Licensure

Many students choose an engineering career requiring professional licensure, and SDSU students score very well in the required examinations. Engineering majors typically score above the national average on the Fundamentals in Engineering examination required for becoming a registered Professional Engineer.



# Graduate School

Kinchel Doerner, Dean of the Graduate School  
SAD 130, Box 2201  
605-688-4181  
Fax: 605-688-6171  
Brookings, SD 57007-1998  
E-mail: [sdsu\\_gradschool@sdsu.edu](mailto:sdsu_gradschool@sdsu.edu)

## Introduction

---

SDSU granted its first Master's degree in 1891. In 1957 the Graduate School was established. The Graduate Faculty is composed of the President, Provost and Vice President for Academic Affairs, Vice President for Administration, Vice President for Student Affairs, Vice President for Research, academic deans, heads of departments in which graduate courses are given, and other faculty members chosen on the basis of their background and experience. These faculty members teach graduate level courses and serve as advisers to graduate students or on advisory examining committees.

The Graduate School is committed to providing an atmosphere for qualified students to obtain rigorous advanced education in a variety of fields in preparation for service and leadership in their professions and society. It also promotes scholarly pursuits and scientific research for the advancement of knowledge.

### Graduate Credit for Seniors

A senior within 15 credits of completing the undergraduate curriculum with a grade point average of 2.5 or a junior-senior grade

point average of 3.0 may receive credit for graduate courses numbered 500-699 in addition to the courses necessary to complete undergraduate work. Courses in the 700 and 800 series are not open to undergraduate students. Course load may not exceed 18 credits. Courses must be designated for graduate credit at the time of registration. Forms requesting permission to register for these courses are available at the Graduate School office and must be filed prior to taking the course. Permission to take courses for graduate credit while a senior does not constitute admission to the Graduate School. Such courses may be used toward a graduate degree but are not useable toward an undergraduate degree without special permission.

### Admission to the Graduate School

For information regarding admission to the Graduate School, departments offering graduate instruction, graduate courses available, as well as information on graduate fellowships and assistantships, call the Graduate School Office 605-688-4181 or visit <http://www.sdsu.edu/graduate/>

## Departments

---

The Graduate School operates as a single unit that serves the academic colleges.

## Degrees Offered

---

### Master's Degrees

Master's of Art (M.A.)  
Master's of Architecture (M.Arch.)  
Master's of Education (M.Ed.)  
Master's of Mass Communication (M.M.C.)  
Master's of Science (M.S.)

### Doctoral Ph.D. & Professional Programs

Doctor of Nursing Practice (D.N.P.)  
Doctor of Pharmacy (Pharm.D.)  
Doctor of Philosophy (Ph.D.)

## Programs

---

See the separate Graduate Catalog available online at <http://catalog.sdsu.edu/>

## Student Engagement

---

Funding resources, such as graduate assistantships, are available through each program's academic department or college and offer immeasurable research and teaching opportunities.



# Van D. & Barbara B. Fishback Honors College

Timothy Nichols, Dean  
Honors Hall Room 119  
SHON Box 2705A, Brookings, SD 57007  
E-mail: [timothy.nichols@sdstate.edu](mailto:timothy.nichols@sdstate.edu)  
Website: <http://www.sdstate.edu/honors/>

## Introduction

---

The Van D. and Barbara B. Fishback Honors College at South Dakota State University provides talented motivated students in any major with an enriched, personalized curricular pathway and experiential learning opportunities which allow them to maximize their learning at South Dakota State University.

The mission of the Honors College is to provide talented, motivated students with a personalized, engaging, distinctive

academic and enrichment educational experience that positions them for success as lifelong learners and leaders.

Through the quality and diversity of its students, faculty, curricula and programs, the Honors College is a positive, dynamic, innovative, 'value added' presence in the South Dakota State University community. The College seeks to attract, retain, and provide extraordinary educational experiences for the best and brightest students of the region.

## Departments

---

The Van D. and Barbara B. Fishback Honors College is a single administrative unit, which collaborates with other college Deans, department heads, and Student Affairs offices across campus to serve its students and fulfill its mission. The College is guided through the

collaborative leadership of the Dean and shared governance structures including the Honors College committee, Honors faculty, Dean's Student Advisory Council and Dean's Development Advisory Council.

## Facilities

---

The Van D. and Barbara B. Fishback Honors College is headquartered in Honors Hall, opening in Fall, 2013. Facilities include Dean's Office/Administrative suite, conference room, and student library. The Hall is also home to the Honors College classroom, a basement community building space, outdoor courtyard, and kitchens, group study rooms and lounges on each wing of the

hall. Honors Hall is the hub of academic and enrichment programming for Honors College students and faculty. classroom, a basement community building space, outdoor courtyard, and kitchens, group study rooms and lounges on each wing of the hall. Honors Hall is the hub of academic and enrichment programming for Honors College students and faculty.

## Student Engagement

---

The Van D. and Barbara B. Fishback Honors College encourages its students to engage as leaders in all aspects of campus and community life. Indeed, they can be found on athletic teams, in musical ensembles, student government, research laboratories, and faith-based organizations, among others.

**Honors College Student Organization** is a club for Honors College students from every major, and is a great way to build community with other Honors students and faculty. Activities include social and service programs and providing student leadership to important Honors College activities.

**Upper Midwest Honors Council** is comprised of Honors Colleges and programs throughout the region. The Council holds an annual meeting each spring at a member-host university. South Dakota State University attends each year and engages students and faculty in sharing their classroom, research and program ideas and accomplishments with the Honors community across the region.

**National Collegiate Honors Council** is the national organization for Honors programs and colleges across the country; it even included international members. The annual NCHC conference is attended by SDSU representatives for personal, professional and programmatic development.

**Leadership Development programming.** Honors College helps to coordinate the LEADSTATE program, a leadership development program for college sophomores focused on strengths-based leadership, service and the social change model for leadership development. In addition, Honors sponsors colloquia on leadership, leadership development and systems dynamics workshops.

**Undergraduate Research, Scholarship and Creative Activity.** Honors College helps to coordinate undergraduate research, scholarship and creative activity across campus. This includes

organizing the annual Undergraduate Research, Scholarship and Creative Activity Day each spring, and coordinating selection for campus-wide undergraduate research fellowships and the Schultz-Werth paper competition, both of which award students thousands of dollars each year.

**Common Read and Griffith Honors Forum Lecture.** Honors College coordinates SDSU's campus common reading program. Recent selections include *The Heart and the Fist* (Greitens); *The Absolutely True Diary of a Part Time*. Honors also organizes the university's largest lectureship, the Griffith Honors Forum Lecture, which in recent years has featured the central character of the common read.

**Honors College Convocation.** A celebration of all things Honors held during the spring of each academic year. The program includes a reception, speaker and awards program honoring excellence in student and faculty service and achievement across a variety of categories. Dean's List, 4.0 honor roll are recognized. Students who have completed their Honors College general education requirements in the preceding academic year are presented with the Honors College pin.

**Hike and Read Retreat.** A kickoff to the school year and welcome event for first-year Honors College students, the hike and read involves faculty and students reading a common book or article, and traveling to the Oak Lake Field Station for a day of hiking, reading, canoeing and fun.

**First Lady's Literary Circle.** Sponsored by First Lady Marcia Chicoine, 'Lit Circle' engages students and faculty in an Honors book club each semester. The Circle gathers at the home of the President and the Dean for food, fellowship and discussions of the powerful texts



# Nursing

Nancy Fahrenwald, Dean  
Linda Herrick, Associate Dean for Undergraduate Nursing  
SWG 255, 605-688-5178 or 1-888-216-9806, Ext. 2  
Box 2275, Brookings, SD 57007-0098  
E-mail: Nancy.Fahrenwald@sdstate.edu  
<http://www.sdstate.edu/nurs/>

## Introduction

The Mission of the College of Nursing at South Dakota State University is to advance the nursing profession and improve human health through excellence in education, research, practice and service to society. Faculty, students and graduates of the College value scholarly activities which will expand nursing science, nursing knowledge and nursing practice while providing leadership in the delivery of nursing and health care for individuals across the life span, communities and populations. The curriculum is rooted in the meta-paradigm of nursing, which includes the concepts of client, health, environment, and nursing. The College engages in strategic

and inter-professional partnerships to improve human health and foster diversity in the people and perspectives shaping the discipline. The mission serves to:

- Recruit and retain students who reflect a qualified, diverse student body.
- Prepare graduates who are internationally competitive, globally informed, ethically grounded and socially responsible.
- Provide an environment rich in research to improve nursing practice and health care outcomes.
- Provide expertise to consumers, health care professionals and health systems.

## Departments

Graduate Nursing  
Nursing Student Services  
Undergraduate Nursing  
West River Nursing

## Degrees

Bachelor of Science  
Master of Science\*Doctor of Nursing Practice\*  
Doctor of Philosophy\*  
\* Graduate degrees are offered in collaboration with the Graduate School. For details, see the Graduate Catalog.

## Nursing Curricula

Nursing Major with Standard, Accelerated, & RN Upward Mobility options  
Health Science Minor

## Accreditations

South Dakota Board of Nursing (approval)  
Commission on Collegiate Nursing Education (CCNE)

## Diversity Statement

Recognizing the growing diversity of the nation's population, and in support of a key goal from many national organizations to eliminate health disparities, the College of Nursing faculty and staff

seek to admit and graduate students who value, respect and reflect the diversity of the society in which they will learn and practice.



# Pharmacy

Dennis D. Hedge, Dean  
SAV 133, 605-688-6197  
Jane Mort, Associate Dean for Academic Programs  
SAV 133, 605-688-4237  
Dan Hansen, Assistant Dean for Student Services  
SAV 133, 605-688-6909  
Box 2202C, Brookings, SD 57007-0099  
E-mail: college.pharmacy@sdstate.edu  
www.sdstate.edu/pha/index.cfm

## Introduction

The South Dakota State University College of Pharmacy is nationally recognized for excellence in preparing students to provide high quality, patient-centered, and population-based pharmacist care. In the area of problem-solving research, the College has great momentum. Research teams led by faculty are making progress on

projects that can enhance the health and wellbeing of people around the world. The College's growing research portfolio includes oncology, unique drug delivery systems, addiction to drugs and alcohol, cardiovascular health, dementia, ophthalmic medicine, and new models of pharmacy care.

## Departments

Pharmaceutical Sciences  
Pharmacy Practice

## Accreditations

Accreditation Council for Pharmacy Education (ACPE)

## Degrees Offered/Programs

Bachelor of Science Degree in Pharmaceutical Sciences  
Doctor of Pharmacy (Pharm.D.)\*  
Doctor of Philosophy (Ph.D.)\*

\*Graduate degrees are offered in collaboration with the Graduate School. For details, see the Graduate Catalog.

## Degree Requirements/Regulations

Students in the College of Pharmacy are governed by the regulations which apply to all students at SDSU but are also governed by requirements established by the College. These requirements are presented in detail in the Pharmacy Student Handbook and include:

1. Pharmacy GPA Calculation – Pharmacy GPA is calculated using all pharmacy PHA prefix courses, excluding 201 & 321.
  - D. For pharmacy courses repeated at SDSU, only the repeated grade will be used to calculate the pharmacy GPA.
  - E. For pharmacy courses repeated at another college of pharmacy, a grade of “C” will be used to calculate the pharmacy GPA in place of the grade received for the corresponding course at SDSU (grades of “D” or “F” for pharmacy courses from other pharmacy programs do not satisfy the course requirement).
2. Probation - A student will be placed on “pharmacy probation” when the student’s pharmacy GPA for a semester falls below 2.0. Each subsequent semester while on “pharmacy probation” the student must earn a pharmacy GPA of 2.0 or better or the student will be placed on “refused status”. The student will be on probation for a minimum of one semester while taking pharmacy courses (PHA prefix, excluding 201, & 321) and will remain on “pharmacy probation” until the student’s cumulative Pharmacy GPA is 2.0 or greater.
3. Graduation - A student must earn a minimum 2.0 grade point average for all pharmacy courses (excluding PHA 201, & 321) to qualify for graduation with a B.S. in Pharmaceutical Sciences or to progress to the P3 year.

### Progression

- A. To progress to the P3 year a student cannot have more than 9 credits of “D” and/or “F” grades in PHA prefix courses.
- B. The Exit Exam is a capstone activity that each student must take for completion of the P2 year and progression into the P3 year; it is administered during the spring semester of the P2 year. The exam is intended to determine competency in the general and professional curricular outcomes that are pertinent through the P2 year (see Outcome Statements for Pharmacy Curriculum in this

Student Handbook). If a student does not pass the P2 exam (passing determined by Assessment Committee based on College and National results), the student will carry out remediation according to instructions provided to the student. The student will also be required to take the exam in the spring of the P3 year, pay for the exam, and achieve a passing score. If a passing score is not achieved in the P3 year, the student will be required to take the exam in the spring of the P4 year, pay for the exam, and achieve a passing score (see Outcome Statements for Pharmacy Curriculum in this Student Handbook).

- C. Standing - Some pharmacy courses have prerequisites such as “P1 Year Standing”, etc. These are defined as follows (note: “completion” means a passing grade in each pharmacy course and maintaining semester and cumulative PHA GPA requirements):
  - P1 Year Standing* - The student must have been admitted into the professional program.
  - P2 Year Standing* - Completion of all PHA 300 level required courses and PHA 109.
  - P3 Year Standing* - Completion of all PHA 400 level required courses and PHA 610, a bachelor’s degree, and all capstone activities are required to begin the fall semester. Completion of all required PHA 700, non-advanced practice experience courses are required to progress to the subsequent semester.
  - P4 Year Standing* - completion of all PHA600-700 level required, non-advanced practice courses.
- D. Students must have a C or better (or “S” where applicable) for completion of each 700 level course taken in the Doctor of Pharmacy program.
- E. If completion of an Advanced Pharmacy Practice Experience (APPE) is not achieved by a student, the student may repeat that APPE the following summer according to availability after the next class has selected their APPEs. If completion of an elective APPE is not achieved, the student may select another elective APPE rather than repeating the same elective APPE. If a student fails completion of more than one APPE, the student will not be allowed to progress to another semester of the program.

# University College

Keith Corbett, Dean  
SWH 227, 605-688-4153  
Box 510, Brookings, SD 57007-0298  
E-mail: keith.corbett@sdstate.edu  
www.sdstate.edu/gs/index.cfm

## Introduction

Many students enrolling in the University College have elected to explore their abilities, interests and educational alternatives before declaring a major. Most First Year Students are advised by a group of Professional First Year Advisors to help them determine areas of interest. Through University College, a student will receive assistance

that helps them make wise major/career choices. Most undeclared major students who enroll in University College will transfer to one of the degree granting colleges at SDSU before they reach sophomore status. The College also provides advising and general support to students enrolled in distance education programs.

## Departments/Units

The University College is organized through the following programmatic delivery structure: Academic Programs and Academic Support such as Academic Advising, Mentoring, and Tutoring.

## Degrees Offered

The University College does not offer a degree; rather staff assist students in finding the right fit for a degree. The University College serves students in the following categories: undeclared pre-majors, special non-degree seeking students, first and second year students, and students admitted in the academic success program.

## Accreditations and Certifications

The University College activities are covered by the institutional accreditation through the Higher Learning Commission of the North Central Association.

The Tutor Training program is certified through the College Reading and Learning Association's International Tutor Training.

Program, with certification at the highest level (Level 3 – Master Tutor Certification).

The Academic Success Peer Mentoring program is certified by the College Reading and Learning Association, with level 2 certification.

## Programs

### Associate of Arts

University College supervises the Associate of Arts degree in General Studies. This degree provides a foundation of general education courses at the university level supporting bachelor's degree programs, lifelong learning, leadership, service, and careers requiring general education coursework.

### Undeclared Majors

University College allows students without declared majors to begin college work through its program for undeclared/deciding students. Deciding students are assisted in planning their college program and encouraged to explore various fields of study. Deciding student enrollment is normally for the freshman year as they are encouraged to choose a major within two semesters. Students are expected to be in good Academic Standing as they explore academic options and declare majors.

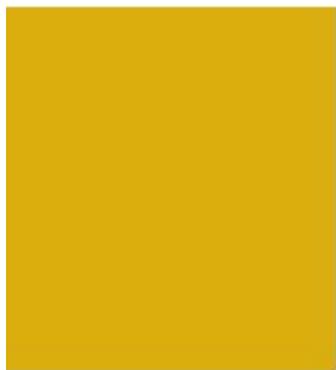
Academic advisors assist First Year Students in the process of identifying their interests, aptitudes and abilities. Students work with advisors to plan out a program that will meet their interests and needs. The University College offers a two-credit course entitled "UC 101 Exploratory Studies" which assists with career decision making strategies. First Year Students at SDSU also enroll in a two-credit First Year Experience course entitled "UC 109 First Year Seminar," which helps them acclimate to college life and learn about SDSU resources. A suggested first year schedule follows.

### Suggested Coursework for deciding students

Freshman Year	F	S
UC 109, First Year Seminar	2	
UC 102-102L, Exploratory Studies	2	or 2
ENGL 101, Composition I	3	or 3
MATH 102, College Algebra (or prescribed math course)	3	or 3
SPCM 101, Fundamentals of Speech	3	or 3
UC 143, Mastering Lifetime Learning Skills	2	or 2
Humanities Core Courses	3	or 3
Social Sciences Core Courses	3	3
Biological or Physical Science Core Courses	3-4	3-4
Interest Area Courses	3	or 3







# Departments

- *Aerospace Studies 76*
- *Agricultural & Biosystems Engineering 76*
- *Animal Science 77*
- *Architecture 77*
- *Biology and Microbiology 77*
- *Chemistry and Biochemistry 78*
- *Civil & Environmental Engineering 79*
- *Communication Studies & Theatre 79*
- *Construction and Operations Management 80*
- *Consumer Sciences 80*
- *Counseling & Human Development 81*
- *Dairy Science 81*
- *Economics 82*
- *Electrical Engineering and Computer Science 82*
- *English 83*
- *Geography 83*
- *Health and Nutritional Sciences 84*
- *History, Political Science, Philosophy, and Religion 84*
- *Journalism & Mass Communication 85*
- *Mathematics and Statistics 85*
- *Mechanical Engineering 86*
- *Military Science 86*
- *Modern Languages & Global Studies 87*
- *Music 87*
- *Natural Resource Management 88*
- *Nursing 89*
- *Pharmaceutical Sciences 90*
- *Pharmacy Practice 90*
- *Physics 91*
- *Plant Science 91*
- *Psychology 92*
- *Sociology and Rural Studies 92*
- *Teaching, Learning & Leadership 93*
- *Veterinary and Biomedical Sciences 93*
- *Visual Arts 94*

## Aerospace Studies

Lieutenant Colonel William C. Pleasants  
AFROTC / Aerospace Studies  
Box: 2236 DePuy Military Hall  
South Dakota State University  
Brookings, SD 57007  
605-688-6106  
bonnie.luecke@sdstate.edu  
Det780@maxwell.af.mil

### **Faculty**

Lieutenant Colonel Pleasants, Professor of Aerospace Studies, Head;  
Assistant Professor Beaudoin.

### **Department Overview**

The Department of Aerospace Studies is dedicated to training college students for successful careers as officers in the United States Air Force. The department is home of the Flying Jacks--Air Force ROTC Detachment 780 at South Dakota State University. The detachment has had a long history of providing leaders for the nation's Air Force. The AFROTC leadership development program is open to student in any major and is of long range value whether one pursues a military or civilian career.

### **Programs**

Aerospace Studies Minor

### **Facilities and Services**

The detachment is headquartered in the basement level, Room 3 of DePuy Military Hall at SDSU's main campus in Brookings, South Dakota.

### **Student Support Opportunities**

Air Force ROTC scholarships are available for qualified undergraduate students. These scholarships pay full tuition and fees at SDSU, \$900 per year for textbooks, and a monthly stipend of \$250 per month for freshmen rising to \$400 per month for seniors. All non-scholarship students in the Professional Officer Course who are on contract with Air Force ROTC qualify for the monthly stipend of \$350 to \$400.

### **Student Engagement Opportunities**

In addition to military and academic training, students have opportunities to travel, connect with vets, and serve the local community.

- Flying Irish AFROTC Basketball Tournament - Annually the cadets will take a trip to Notre Dame and compete in a basketball tournament with the other detachments from around the country.
- Royal Blue Drill Team - Cadets have an opportunity to work with the color guard. Upon proving proficiency they perform at various ceremonies in the local community.
- Vets and Cadets - A program that encourages local veterans to spend some time mentoring, counseling, and motivating cadets. This program gives cadets the opportunity to give back to some of the men and women that have paved the way for them.

## Agricultural and Biosystems Engineering

Van Kelley, Head  
Department of Agricultural and Biosystems Engineering  
Agricultural Engineering 107  
605-688-5141  
e-mail: van.kelley@sdstate.edu  
http://www.sdstate.edu/abe/

### **Faculty**

Associate Professor Kelley, Head; Professors Anderson, Humburg, Julson, Pohl, Trooien; Distinguished Professor Muthukumaran; Professors Emeriti Chu, DeBoer; Hellickson, Werner; Associate Professor Todey; Assistant Professors Cortus, Gu, Hay; Assistant Professors Emeriti Pahl, Schipull.

### **Department Overview**

The mission of the Department of Agricultural and Biosystems Engineering is to provide professional education at the undergraduate and graduate levels for engineers and technologists who will serve agricultural, biological, and environmental industries and to conduct research and provide technological leadership in engineering design and management for the agricultural community and its affiliated industries.

The educational objectives for the Agricultural and Biosystems Engineering program are fulfilled as graduates develop successful careers in which they continue to grow in their professional skills, assume increasing professional responsibility, and show leadership in their careers, professional organizations, and communities.

### **Student Learning Outcomes**

Graduates will do the following:

- Advance within the agricultural and biosystems engineering profession as practicing engineers and consultants to positions of management, supervision, or leadership in a diversity of organizations or companies within the areas of agricultural and off-road machines; processing of food, fiber, and energy products; management of natural resources; structural systems; information and control systems; or other related areas.
- Obtain graduate degrees at recognized research universities in agricultural and biosystems engineering or related fields.
- Obtain professional registration or other professional certification where appropriate.

### **Programs**

#### **Majors**

- Agricultural and Biosystems Engineering, BS (College of Engineering)
- Agricultural Systems Technology, BS (College of Agriculture and Biological Sciences)

#### **Graduate Programs**

- Agricultural and Biosystems Engineering, MS
- Biological Sciences, PhD  
Agricultural and Biosystems Engineering specialization
- Bioenergy and Sustainable Technology, Certificate

### **Facilities and Services**

The department conducts research aimed at improving performance and reducing cost at all levels of production with minimal environment impact. Research is conducted in University labs and in the field, either at four Research and Extension Centers or on producer farms. Additionally, the Water Resources Institute is co-located with the Department of Agricultural and Biosystems Engineering in the Agricultural Engineering building, office 211 on the South Dakota State University campus in Brookings, SD.

### **Student Engagement Opportunities**

The department provides opportunities for students engagement and support through student clubs, scholarships, and internship coordination.



## **Animal Science**

Joseph Cassady, Head  
Department of Animal Science  
Animal Science Complex 103A  
605-688-5166  
e-mail: cheryl.best@sdstate.edu  
<http://www.sdstate.edu/ars/index.cfm>

### **Faculty**

Professor and Department Head Cassady; Distinguished Professor Pritchard; Distinguished Professors Emeriti Costello, McFarland, Wahlstrom; Professors Bruns, Clapper, Held, Marshall, Perry, Thaler, Wright; Professors Emeriti Bailey, Dearborn, Gartner, Gee, J. Johnson, Kohler, Libal, Plumart, Slyter; Associate Professors Clair, Olson, Perry, Walker, Associate Professors Emeriti Bonzer; Assistant Professors Bott, Brake, Gonda, Grings, Levesque, Scramlin, Underwood, Instructor Cribbs.

### **Department Overview**

Tomorrow's animal and natural resources industries leaders gain the educational foundation they need in the Department of Animal Science. These future leaders study under a dynamic faculty who not only teach but also set the pace with important research and aggressive outreach via Extension. Throughout the curriculum, a student-centered focus allows ample room for growth and success. With the multi-disciplinary approaches towards production efficiency, product enhancement, and natural resources management, both undergraduate and graduate students gain strong skill sets. Graduates from the department find career options unfold in a diverse and growing range of employment areas, from animal-related industries to natural resources management.

### **Programs**

#### **Majors**

- Animal Science Major-Business & Production Specialization, BS
- Animal Science Major - Science Specialization, BS

#### **Minors**

- Animal Science
- Equine Studies

#### **Certificates**

- Swine Science

#### **Graduate Programs**

- Animal Science, MS
- Animal Science, PhD

### **Facilities**

Students gain hands-on experiences at several departmental facilities including the in-house Meat Science Lab, purebred beef, sheep, and swine teaching units, as well as at the Oak Lake Field Station.

### **Student Engagement Opportunities**

Several student clubs and organizations are affiliated with the Department of Animal Science, and department faculty serve as club advisors and are supportive of all club functions and events. By being involved in these organizations, students have the opportunity to develop their leadership and communications skills with other students who have similar interests and concerns.

- Block and Bridle
- Little International
- Horse Club
- Meat Science Club
- Swine Club
- Judging Teams

## **Architecture**

Brian Rex, Head  
Department of Architecture  
SIM 108  
605-688-4841  
email: brian.rex@sdstate.edu  
<http://www.sdstate.edu/arch/>

### **Faculty**

Associate Professor Rex, Head; Assistant Professor MacBride; Instructors Garcia Fritz, Graff, Lum.

### **Department Overview**

The whole department is focused on an interactive, haptic, and performance based curriculum rooted in fundamental issues of professional architecture and design practice. The undergraduate degree program begins with a unique design based liberal arts education. The program's professional graduates will know how to make buildings well; how to make good drawings and models of architecture; and how to make places by building. The core mission is to bolster: the profession; local building practices; design culture; and urban fabric in South Dakota through good teaching, service, and scholarly work.

### **Programs**

#### **Majors**

- Architectural Studies, BS
- Architecture, MArch

### **Facilities**

The department is located in the historic Intramural Building. Architecture students gain hands-on experiences in several facilities including classrooms, studios, and off campus locations.

## **Biology and Microbiology**

Volker Brözel, Department Head  
Department of Biology and Microbiology  
Alfred Dairy Science Hall 228  
605-688-6141  
e-mail: biomicro@abs.sdstate.edu  
<http://www.sdstate.edu/biomicro/>

### **Faculty**

Professor Brözel, Head; Professors Bleakley, Erickson, Gibbons, Gibson, Hildreth, Kayongo-Male, Reese, Wake, West, Yen; Professors Emeriti Chen, Evenson, Granholm, Haertel, McMullen, Myers, Peterson, Pengra, Whalen; Associate Professors Auger, Bücking, Kaushik, F. Li, W. Li, Pedersen, Wang, Wu, Zhou; Associate Professor Emeritus Morrill; Assistant Professors Fang, Hill, W. Li, Nepal, Rohila, Wu; Instructors Ellis, Kennedy, Ladonski, Lenertz, McCutcheon, Mediger, Murphy, Smith, Warren; Adjunct faculty Chase, Cooper, Dwivedi, Epperson, Fennell, Francis, Henry, Hughes, Johnson, Kightlinger, Lundgren, McFarland, Nelson, Reidel, Rietz, Sergeev, Steece, Specker, Todd, Wixon.

### **Department Overview**

The Biology and Microbiology department provides a vibrant environment in which students learn, discover and grow. Faculty are dedicated to offering learning environments that prepare students for productive successful careers, contributing to industry, healthcare and research. The department is equally dedicated to probing the fascinating intricacies of living systems in order to contribute to regional and national needs. Research teams collaborate in multi-disciplinary and multi-national teams to seek solutions for pressing problems in agriculture, health and energy.

## Programs

### Majors

- Biology, BS
- Biology Major - Pre-professional Specialization, BS
- Biology Major - Secondary Education Specialization, BS
- Biotechnology, BS
- Microbiology, BS

### Minors

- Biology
- Biotechnology
- Microbiology

### Pre-Professional Interest Areas

- (Pre-) Chiropractic
- (Pre-) Dental
- (Pre-) Medicine
- (Pre-) Mortuary
- (Pre-) Optometry
- (Pre-) Physician Assistant

### Graduate Programs

- Biological Sciences, MS  
Biology Specialization  
Dairy Science Specialization  
Microbiology Specialization
- Biological Sciences, PhD  
Agricultural and Biosystems Engineering Specialization  
Biology Specialization  
Microbiology Specialization  
Molecular Biology Specialization  
Plant Molecular Biology Specialization

## Facilities

The Department of Biology and Microbiology and its faculty members are located in three buildings, Northern Plains Biostress (SNP), Alfred Dairy Science Hall (SDS) and Berg Agricultural Hall (SAG) on the SDSU campus. The Functional Genomics Core Facility and the Animal Resource Wing facilities and equipment are available to support research activities in the areas of abiotic and biotic stresses to plants, infectious diseases, microbiology, and bioproducts.

## Student Engagement Opportunities

The department provides a rich selection of experiences for students, from the undergraduate research in over 20 laboratories, to international travel experiences, and internships in healthcare and industry. Students may also participate in numerous clubs and organizations related to their academic programs.

- Microbiology Club
- National Science Teachers Association
- Pre-Medical Chapter of the American Medical Student Association
- Pre-Professional Science Club
- Student National Education Association



## Chemistry and Biochemistry

James A. Rice, Head

David Cartrette, Assistant Department Head for Undergraduate Programs

Department of Chemistry and Biochemistry

Avera Health Sciences Center 131

605-688-5151

e-mail: james.rice@sdsu.edu

chembiochem.sdsu.edu

## Faculty

Professor Rice, Head; Professors Cole-Dai, Halaweish; Professors Emeriti Emerick, Gehrke, Grove, Hecht, Hilderbrand, Jensen, Palmer, Rue, Spinar, Wadsworth; Associate Professors Cartrette, Logue, Miller, Shore; Research Associate Professor Raynie; Assistant Professors Chakravarty, Hoppe, Robinson, Tille; Research Assistant Professor Jing; Lecturers Hirko, Madsen, Jewell, Williams.

## Department Overview

The mission of the Department of Chemistry and Biochemistry is to provide high-quality, technologically relevant educational opportunities for students desiring to pursue careers in chemistry, biochemistry, medical laboratory science, and related scientific areas through degree programs at the baccalaureate, masters, and doctoral levels. In addition, the Department provides support to other academic majors and programs on campus through the coursework it offers. In both its major's and service curricula, the Department provides a robust and challenging program of instruction that addresses the needs of students by broadening their perspectives and enabling them to continue the learning process as educated citizens. Through the courses offered by the Department, students will be communication-able in oral and written communication; they will be technologically literate; they will be globally informed and prepared to function in a diverse world. The Department seeks to assist the university in its goal of attracting and retaining quality students by providing courses of high academic quality. The Department also maintains strong research efforts in areas appropriate to the broad goals and objectives of a land-grant institution. The department will continue to meet the service and formal educational needs of its various constituencies through selected service programs that are continually being refined to meet changing needs, both on-campus and throughout the state of South Dakota.

## Department Objectives

- To address the needs of a scientifically literate citizenry in South Dakota, the Upper Midwest, nationally, and globally
- To facilitate students' communication skills in both oral and written formats
- To encourage the technological literacy of students such that they become global workforce competitors
- To provide opportunities for professional development of students at the baccalaureate, masters, and doctoral levels
- To provide premier leadership in the chemical sciences dedicated to excellence in learning, discovery, and outreach.

## Programs

### Majors

- Biochemistry
- Chemistry
- Medical Laboratory Science

### Minors

- Chemistry

### Graduate Programs

- Chemistry, MS  
Chemical Education Specialization, MS
- Chemistry, PhD

## Student Engagement Opportunities

The department offers opportunities for student engagement through research and student organizations. For additional information refer to the Research Opportunities page and the Student Organization page on the University's webpage.

## **Civil and Environmental Engineering**

Nadim Wehbe, Interim Head  
Department of Civil and Environmental Engineering  
Crothers Engineering Hall 120  
605-688-5427  
e-mail: Civil and Environmental Engineering  
<http://www.sdstate.edu/cvlee/index.cfm>

### **Faculty**

Professor Wehbe, Interim Head; Professors Burckhard, Jones, Reid, Schmit, Ting; Professors Emeriti De Boer, Hassoun, Rollag, Selim, Sigl; Associate Professors Mahgoub, Qin; Associate Professor Emeritus Tiltrum; Assistant Professors Hua; Instructor Gutzmer

### **Department Overview**

Civil Engineering includes the location, design, construction, and the operation and maintenance of highways, airports, buildings, bridges, dams, water supply and distribution systems, waste water collection systems and treatment plants, irrigation and drainage systems, river and harbor improvements and many other infrastructure facilities essential in modern life. Civil Engineers are responsible for all aspects of the world's infrastructure.

The Civil and Environmental Engineering Department's mission is to provide a highly respected, rigorous, practical education for our students, oriented toward problem solving through the integration of education, research and lifelong learning. In fulfillment of this mission the Department has established the following program educational objectives that describe the expected accomplishments of our graduates after graduation.

### **Educational Objectives**

The Civil Engineering Program at SDSU prepares students to achieve the following educational objectives within the first five years of their career:

- Completion of professional licensure or specialized certification,
- Completion of advanced academic degrees and/or active participation in professional development societies, and
- Assume leadership positions within organizations in their profession, in their communities, and in the global society.

### **Programs**

#### **Majors**

- Civil Engineering, BS

#### **Graduate Programs**

- Civil Engineering, MS
- Geospatial Science & Engineering, Ph.D.

### **Facilities and Services**

The Civil and Environmental Engineering department is housed in Crothers Engineering Hall and maintains over 18,000 square feet of classroom and laboratory space dedicated to undergraduate instruction and research experience, as well as testing laboratories for research and sponsored projects. This includes the Lohr Structures Lab, Fluid Mechanics Lab, HDR Environmental Lab, Geotechnical Lab, Concrete Lab, Structural Materials Lab, Bituminous Lab, Design Studio Laboratories and Student Computer Lab.

### **Student Engagement Opportunities**

Additionally, the program strives to assist students in developing a commitment to high standards of professional conduct by maintaining a strong, active American Society of Civil Engineers Student Chapter Program, promoting summer, cooperative education, and internship employment experiences in civil engineering.

## **Communication Studies and Theatre**

Laurie Haleta, Head  
Department of Communication Studies and Theatre  
Pugsley Center 115 605-688-6131  
e-mail: [laurie.haleta@sdstate.edu](mailto:laurie.haleta@sdstate.edu)

### **Faculty**

Professor Haleta, Head; Distinguished Professor Emeriti JJohnson; Professors Ackman, Shelsta; Professors Emeriti Ferguson, Hefling, Hoogestraat, Peterson, Schliessmann, Widvey; Associate Professor Tolman; Assistant Professors Anderson, Hauschild Mork, Hunter, Klemp, Kuehl, Westwick, Wilburn, Wood; Instructors Carlile, Kleinjan.

### **Department Overview**

The mission of the Department of Communication Studies and Theatre is to provide education in the fields in which communication skills are a primary component and to provide training in universally necessary communication skills. Additionally students may select courses for self-improvement, take courses to meet humanities requirements, or participate in speech or theatre activities.

### **Programs**

#### **Majors**

- Speech Communication, BS
- Speech Communication Major-Speech Education specialization, BS
- Theatre, BS

#### **Minors**

- Communication Studies and Theatre
- Theatre
- Dance

#### **Graduate Programs**

- Communication Studies and Journalism - Communication Studies Specialization, MS

### **Advanced Placement in Speech**

All students are required to take a designated oral communication course for graduation; however, those with previous training and experience in speech may apply to the Department to take an advanced course in Speech and earn credit for 101 concurrently. The disposition of the application for advanced placement rests with the departmental administrator. Application must be made by the end of the third semester or prior to the fourth semester of residence.

### **Student Engagement Opportunities**

Being involved in a student organization is a great way to spend time with other students in the department, promote activities on campus and gain leadership skills.

**Departmental Organizations** - The department has three organizations for qualified students: Pi Kappa Delta (Forensics), Alpha Psi Omega (Theatre), and Lambda Pi Eta (Communication Studies).

**Dance** - The holistic program embraces many genres of dance to include: social, multi-cultural, creative movement, dance for the musical theatre and jazz, tap, ballet and modern dance techniques. The variety ensures that all students no matter their history or training will find opportunities for growth and transformation in the program. For more information contact assistant professor Melissa Hauschild-Mork, Coordinator of Dance.

**Forensics** - Opportunities are provided for participation in SDSU's nationally recognized intercollegiate Forensics program. Local, regional, and national participation is sponsored. Activities include debate, public speaking, and oral interpretation in contests, workshops, and public performances. Any regularly enrolled undergraduate student is eligible to participate. University credit may be earned regardless of major. For more information contact instructor Andrea Carlile, Director of Forensics.

**Theatre** - There are several major, experimental and student productions each year. Students may be cast in or assist with a production. University credit may be earned. Summer theatre also offers undergraduate credit through Prairie Repertory Theatre. For more information contact professor J.D. Ackman, Director of Theatre.

## **Construction & Operations Management**

Teresa Hall, Head

Department of Construction and Operations Management

Byron Garry, Academic Program Coordinator

Solberg Hall 116

605-688-6417

e-mail: [teresa.hall@sdstate.edu](mailto:teresa.hall@sdstate.edu)

[byron.garry@sdstate.edu](mailto:byron.garry@sdstate.edu)

<http://www.sdstate.edu/etm/>

### **Faculty**

Professor Hall, Head; Professor Lu; Professors Emeriti Heusinkveld, Skubic, Sorensen; Associate Professors Garry, Pannell; Assistant Professors Steinlicht, Yordanova; Instructors Bertolini, Merriman, Nusz-Chandler, Prout, Weist.

### **Department Overview**

The Department of Construction and Operations Management offers a combination of theoretical, practical and applications-based courses to prepare graduates for technical management careers. The department's mission is to provide high quality, relevant, and contemporary learning experiences for students; to enhance the economic vitality of the region through outreach, research and service initiatives for industrial constituents; and to promote the department's disciplines through these outreach ventures and scholarly activity.

In addition to the academic programs detailed below, department also delivers the non-degree General Engineering (GE) program for the College of Engineering, including courses in the areas of engineering graphics, computer aided design, industrial safety, project management, and applied manufacturing processes. The General Engineering program provides advising for students who are undecided in their choice of a specific engineering or industry sector management major. Students in the GE program take fundamental engineering, math, and science courses required in most programs in the College of Engineering while considering their options.

### **Programs**

#### **Majors**

- Electronics Technology, BS
- Operations Management, BS
- Construction Management, BS

#### **Graduate Programs**

- Operations Management, MS
- Management Foundations, Certificate
- Systems Management, Certificate

### **Facilities and Services**

The department is located in historic Solberg Engineering Hall.

### **Student Engagement Opportunities**

The department supports two professional honor society chapters to provide recognition for outstanding students. The SDSU chapter of Sigma Lambda Chi is the international honor society for students in construction management who have exhibited excellence in academic, service, and ethics. Undergraduate and graduate students in the department are also eligible for nomination to Epsilon Mu Eta, the national honor society for engineering management. Students are also encouraged to participate in the two affiliated student clubs, the Society of Manufacturing Engineers and the Construction Management Club. The CM club includes student chapters of the Associated General Contractors (AGC) and the National Association of Home Builders (NAHB).

## **Consumer Sciences**

Jane E. Hegland, Department Head

Department of Consumer Sciences

Wagner Hall 229 605-688-5196

e-mail: [jane.hegland@sdstate.edu](mailto:jane.hegland@sdstate.edu)

<http://www.sdstate.edu/cs/>

### **Faculty**

Professor Hegland, Head; Professor Boulware; Professors; Emeriti Enevoldsen, Kamstra, Nussbaumer, Semeniuk, Stoflet; Associate Professors Lyons, Strickler; Associate Professors Emerita Gorham, Rose; Assistant Professors Bell, Cho, Christensen, Johnson, Saboe-Wounded Head, Yeo; Assistant Professor Emerita Swedlund; Instructors Leonard, McKillip, Patel; Lecturer Boersma, Morrison.

### **Department Overview**

The Department of Consumer Sciences enhances the quality of life for consumers, with particular emphasis on the sustainable management of resources in a global context. While the department is home to a diverse collection of disciplines, all the programs are professionally based. All academic and extension programs have integrated elements of leadership, management, customer service, design, and technology. Consumer Sciences strives for high quality dynamic, and innovative teaching, scholarship, and outreach in its quest to develop successful professionals in the areas of apparel merchandising, aviation, consumer affairs, hospitality management, interior design, and leadership. In addition, a strong general education curriculum is part of all majors, which aids students in learning to assimilate all of their educational components.

Consumer Sciences faculty are committed to SDSU's tripartite mission of teaching, scholarship, and outreach, where the focus is on integrating students into the learning environment under close supervision of qualified faculty. As well as teaching and mentoring students, faculty are researchers and scholars who produce new knowledge and serve related professional organizations in leadership capacities. Faculty and students commit themselves to fostering scholarship and outreach efforts that reflect local, regional, national, and/or global contexts; promoting careers in an ever-changing global marketplace; inspiring critical thinking and theory building; encouraging activities with socially responsible impacts on individuals, households, communities, and environments; and celebrating diversity.

Three major themes underpin the Consumer Sciences vision and mission:

- Commerce: Consumer Sciences students learn about design and production processes and consumption patterns and behavior in the global marketplace;
- Creativity: Consumer Sciences students engage in problem-solving activities that produce experiential work within project constraints that is a result of creative collaboration; and
- Resource Management: Consumer Sciences students understand the need for prioritization of resources to help consumers and businesses make optimal decisions.

### **Programs**

#### **Majors**

- Apparel Merchandising, BS
- Aviation Major - Aviation Education Specialization, BS
- Aviation Major - Aviation Maintenance Mgmt Specialization, BS
- Consumer Affairs Major - Family Financial Mgmt Specialization, BS
- Consumer Affairs Major - Consumer Services Management Specialization, BS
- Hospitality Management, BS
- Interior Design, BS

#### **Minors**

- Aviation
- Interior Design
- Leadership
- Leadership and Management of Nonprofit Organizations

## Graduate Programs

- Human Sciences, MS
  - Family Financial Planning Specialization
  - Merchandising Specialization

## Certificates

- Financial and Housing Counseling
- Family Financial Planning
- Merchandising

## Student Engagement Opportunities

Because of the world economy and the importance of developing an international perspective, the department offers travel study opportunities regionally, nationally, and internationally. Programs around the world are available to our students via the Office of International Affairs. Students work with an advisor to ensure that the transfer of credits occurs prior to taking advantage of one of these opportunities.

There are active student organizations associated with each major areas of study: Apparel Merchandising Association, SDSU Flying Jacks, National Consumers League, Hospitality Management Club, American Society of Interior Designers, Nonprofit Leadership Alliance. Students plan educational programs and tours, attend regional and national professional meetings, undertake service projects for the SDSU campus and community, and often plan field trips to manufacturers, professional businesses, museums, trade shows, and more.

The mission of the Department of Agricultural and Biosystems Engineering is to provide professional education at the undergraduate and graduate levels for engineers and technologists who will serve agricultural, biological, and environmental industries and to conduct research and provide technological leadership in engineering design and management for the agricultural community and its affiliated industries.

The educational objectives for the Agricultural and Biosystems Engineering program are fulfilled as graduates develop successful careers in which they continue to grow in their professional skills, assume increasing professional responsibility, and show leadership in their careers, professional organizations, and communities.

## Counseling and Human Development

Jay Trenhaile, Head

Department of Counseling and Human Development

Wenona Hall 312/ Wagner Hall 369

605-688-4190 or 688-4321

e-mail: [jay.trenhaile@sdstate.edu](mailto:jay.trenhaile@sdstate.edu)

<http://www.sdstate.edu/chd/>

## Faculty

Professor Trenhaile, Head; Professors Briddick, Britzman, Davis, Harper, Muxen, Nichols; Emeritus Professor Smith; Associate Professors H. Briddick, W. Briddick, Daniels, Oscarson; Emerita Associate Professors Penor-Ceglian, Rasmussen; Assistant Professors Kang, Letcher; Instructor Graves; Emeritus Assistant Professor Fellner.

## Department Overview

The mission of the Counseling and Human Development department is to provide high quality educational programs to learners who will work in human science fields, and to generate knowledge of human behavior, cognition, and interaction.

Students will participate in practical experiences designed to provide the knowledge, skills, and experiences necessary for careers in individual and family service settings; child/adult focused human services, and/or continued coursework in graduate school.

The Department of Counseling and Human Development is one of the few public university departments in South Dakota that delivers programs at the main campus in Brookings, at the University Centers in Rapid City and Sioux Falls, and on-line.

## Programs

### Majors

- Human Development and Family Studies, BS

### Minors

- Gerontology
- Human Development and Family Studies
- Rehabilitation Services

### Graduate Programs

- Counseling and Human Resource Development, MS
  - Clinical Mental Health Counseling Specialization
  - College Counseling Specialization
  - Rehabilitation and Mental Health Counseling Specialization
  - School Counseling Specialization
  - Administration of Student Affairs Specialization, M.Ed.
- Human Sciences, MS
  - Adult Development in the Workplace Specialization
  - Family and Community Services Specialization

## Facilities

Due to space, the programs with the department are currently housed in their original campus locations prior to the merger: Wenona Hall and Wagner Hall. HDFS, GERO and the MS in EHS program and faculty offices are all located in Wagner Hall. The MEd CHRD and the MS CHRD program and faculty offices are located on the third floor of Wenona Hall. An office for the department head and administrative support is provided in each building.

## Dairy Science

Vikram V. Mistry, Head

Department of Dairy Science

Alfred Dairy Science Hall 136

605-688-4116

email: [vikram.mistry@sdstate.edu](mailto:vikram.mistry@sdstate.edu)

<http://www.sdstate.edu/ds/>

## Faculty

Professor Mistry, Head; Professors Garcia, Kalscheur, Metzger; Professor Emeritus Baer, Parsons; Distinguished Professor Emeritus Schingoethe; Associate Professor Emeritus Henning; Associate Professors Anand, Hassan; Assistant Professors, Anderson, Casper, Patel; Lecturer Bonnemann; Farm Manager, Crego.

## Department Overview

The mission of the Dairy Science Department is to help create a prosperous future for the dairy industry of South Dakota, the region, nation, and world. With expertise in both Dairy Production and Dairy Manufacturing, the department covers the entire spectrum of the dairy industry; from farm to product. The faculty are well recognized in their areas of expertise in research and are excellent instructors. The newly remodeled facilities offer both undergraduate students as well as graduate students opportunities for training on state-of-the-art technologies.

## Programs

### Majors

- Dairy Production, BS
- Dairy Manufacturing, BS
- Dairy Manufacturing Microbiology Specialization, BS

### Graduate Programs

- Biological Sciences, MS
  - Dairy Science Specialization
- Biological Sciences, PhD
  - Dairy Science Specialization



## Facilities

The department is housed in the newly renovated Alfred Dairy Science Hall. The Dairy Research and Training Facility (DRTF) of the Dairy Science Department houses 300 Holstein and Brown Swiss cattle and is a research center in feeding, breeding, and managing a dairy herd. Equally important, it is the site for basic education in dairy cattle evaluation and other aspects of dairy farming. Milk produced at the DRTF is delivered to the state of the art new Davis dairy plant where it is processed into fluid milk, ice cream, butter, cheese, and other dairy products. These products are sold through the Dairy Sales Bar and used in campus dining facilities.

## Student Engagement Opportunities

Students are encouraged to supplement their class instruction with summer internships and extracurricular activities. Leadership opportunities are available through participation in the Dairy Club, Dairy Cattle Judging, Intercollegiate Dairy Challenge, and Dairy Products Evaluation Teams. The Department has strong research programs in both areas. It is an active member of the Midwest Dairy Foods Research Center. Research opportunities for undergraduate students are also available.

## Economics

Eluned Jones Department Head  
Jason Zimmerman, Assistant Department Head  
Department of Economics  
Scobey Hall 138  
605-688-4141  
e-mail: [eluned.jones@sdstate.edu](mailto:eluned.jones@sdstate.edu)  
[jason.zimmerman@sdstate.edu](mailto:jason.zimmerman@sdstate.edu)  
<http://www.sdstate.edu/econ/>

## Faculty

Professor Jones, Head; Professors, Cumber, Diersen, Fausti, Janssen, Klein, Langelett, O'Brien, Pflueger, Santos, Van der Sluis, Warmann, Zimmerman; Professors Emeriti Allen, Dobbs, Greenbaum, Kim, Lamberton, Lundeen, Murra, Peterson, Shane, Taylor, Thompson; Associate Professors Adamson, Davis, Gustafson, Qasmi, Taylor; Assistant Professors Chang, Miller, Wang; Instructors, Heller, Koch, Kuhl, Meyer, Swain, Wipf; Field Specialists Davis, Gessner.

## Department Overview

The Department of Economics plays a vital role in the life of the university and the state through its commitment to quality teaching, research, and outreach. The department resides administratively in the College of Agriculture and Biological Sciences, but also maintains close ties to the College of Arts and Sciences, through which several of its degrees are conferred\*. Departmental coursework includes Accounting, Agricultural and Resource Economics, Business Administration, Economics, Entrepreneurial Studies, and Management. The curriculum provides students with experience in agribusiness, agricultural finance, banking, business finance, business management, entrepreneurship, farm and ranch management, marketing, sales, and related fields. Faculty members are strongly dedicated to preparing students for successful careers.

## Department Objectives

The Department of Economics' teaching objectives are to:

- Present the economic principles necessary for understanding the complexities of the global economy;
- Educate students to apply economic concepts and techniques for decision-making in agricultural business, agricultural and resource economics, economics, business, and entrepreneurship; and,
- Provide a foundation for graduate work in economics, agricultural and resource economics, business administration, management, finance, law, entrepreneurial studies and other related areas of study.

## Programs

### Majors

- Agricultural and Resource Economics, BS
- Agricultural Business, BS
- Economics, BA, BS\*
- Economics - Business Economics Specialization, BA, BS\*
- Entrepreneurial Studies, BS\*

### Minors

- Accounting
- Agricultural Business
- Agricultural Marketing
- Economics
- Entrepreneurial Studies
- Management

### Certificates

- Entrepreneurship
- Agricultural and Environmental Law

### Graduate Programs

- Economics, MS (traditional and accelerated)

## Facilities and Services

The department is housed on the first floor of historic Scobey Hall. Faculty and staff engage the community through one-on-one interaction, presentations, media contacts, and publications. A majority of the agricultural outreach work is shared through SDSU Extension and iGrow.org, with programming on land economics, farm and ranch management, commodity marketing, agricultural finance and entrepreneurship.

## Electrical Engineering and Computer Science

Steven Hietpas, Head  
Department of Electrical Engineering and Computer Science  
Daktronics Engineering Hall 214  
605-688-4526  
e-mail: [steven.hietpas@sdstate.edu](mailto:steven.hietpas@sdstate.edu)  
website: <http://www.sdstate.edu/eecs/>

## Faculty

Professor Hietpas, Head; Associate Professor Hamer, Assistant Department Head; Professors A. Andrawis, M. Andrawis, Brown, Galipeau, Helder Salehnia, Shin; Professors Emeriti Bergum, Ellerbruch, Knabach, Sander; Associate Professors Fan, Fourney, Liu, Min, Tan; Assistant Professors Devaraj, Farrokh Baroughi, Qiao, Sun, Tonkoski, Wang; Instructors Cooley, Gamradt, Kurtenbach, Prohaska.

## Department Overview

The Electrical Engineering and Computer Science Department combines all aspects of electricity, electronics, hardware, and software into one multi-disciplinary unit. The department has well-established, nationally and internationally-known research programs in materials science, nanotechnology, sensors, photovoltaics, and satellite and medical image processing.

## Department Objectives

Graduates, with three years or more experience in their career discipline, will:

- Have achieved increases in duties and responsibilities within their positions and/or have been promoted to new positions.
- Have achieved advanced studies in their discipline or other related professional fields.

## Programs

### Majors

- Electrical Engineering, BS
- Computer Science, BS

## Minors

- Computer Science
- Software Engineering

## Graduate Programs

- Computer Science, MS
- Electrical Engineering, MS
- Electrical Engineering, PhD

## Facilities

The department is housed in a recently dedicated state-of-the-art engineering facility. Students will enjoy 24-hour security-card access to: □ undergraduate labs, dedicated student organization rooms, computer resource labs, robotics club room, and specialized student study areas

## Student Engagement Opportunities

The department offers opportunities for student engagement through research and student organizations. Many outstanding professional activities are available through the student chapters of The Institute of Electrical and Electronics Engineers, Association for Computing Machinery, and the Society of Women Engineers. The Electrical and Computer Engineering Honors group Gamma Rho Chapter of Eta Kappa Nu has been recognized nationally for three consecutive years as an Outstanding Chapter. Active chapters of several engineering honor societies are also available.

## English

Jason McEntee, Head  
Department of English  
Scobey Hall 014  
605-688-5191  
e-mail: [jason.mcentee@sdstate.edu](mailto:jason.mcentee@sdstate.edu)

## Faculty

Associate Professor McEntee, Head; Distinguished Professor Woodard; Professors Brandt, Danker, Donovan, Keller, Taylor; Professors Emeriti Alexander, Brown, Duggan, Evans, Flynn, Kildahl, O'Connor, Ryder, Williams, Witherington, West, Yarbrough; Associate Professor Emerita Mary Haug; Associate Professor Nagy; Assistant Professors Baggett, Flynn, Malone, Smith, Stewart, Wingate; Lecturers Bielfeldt, Michael Haug, Hublou, Madsen; Instructors Andersen, Biever, Brown, Ferrell, Halverson, Horsley, Kluck, Myrick, Nordquist, Serfling.

## Department Overview

The English Department offers instruction in clear thinking and expression; in the history and use of language; in literature (British, American, World, Native American, Women's, Ethnic, etc.); in literary criticism; and in creative writing and technical and professional communication. Courses in the English Department are divided into two areas: English and Linguistics.

## Programs

### Majors

- English, BA
- English Major - English Education Specialization, BA
- English Major - Writing Specialization, BA

### Minors

- English
- Professional Writing
- Peace and Conflict Studies

### Graduate Programs

- English, MA

## Facilities and Services

The department is housed in historic Scobey Hall. The English Department also sponsors and supports community and state-wide events with speaking and teaching engagements through service

learning, by educating students to become world citizens, and through campus and/or community and/or state/regional events such as the annual Consider the Century conference, the Great Plains Writers' Conference, and the Festival of Cultures

## Student Engagement Opportunities

In addition to the academic programs, the English Department offers other activities and support for students. *Oakwood* features creative writing and original artwork by students. The English Club hosts a number of social and literary events. Finally, the English Department awards a number of scholarships to its majors thanks to the generosity of its alumni and friends.

## Geography

George White, Head  
Department of Geography  
109 Wecota Hall  
605-688-4511  
<http://www.sdstate.edu/geo/index.cfm>  
e-mail: [george.white@sdstate.edu](mailto:george.white@sdstate.edu)

## Faculty

Professor White, Head; Professors, J. Gritzner, Napton; Associate Professor Watrel; Assistant Professor Jackson, Hungerford; Professors Emeritus Berg, Hogan, and Sandness; Distinguished Professor Emeritus C. Gritzner.

## Department Overview

The Department of Geography offers enriching academic and life experiences, connecting people to the world in which they live. The department offers programs addressing the complex relationships and linkages of human and natural systems; geography is the science of place. As such, students study and analyze pressing issues ranging from climate change, human modification of the Earth's systems, environmental hazards, resource assessment, and land use to population distributions, urbanization, cultural adaption, political organization of space, and globalization. Students gain experience with tools and techniques including computer cartography, remote sensing, Global Positioning Systems and Geographic Information Systems. These are recognized increasingly as essential for solving many contemporary societal questions. This also makes graduates from the department marketable in numerous business and governmental careers, as well as graduate schools for those seeking advanced degrees.

## Programs

### Majors

- Geography, BS
- Geographic Information Sciences, BS

### Minors

- Geography
- Geographic Information Sciences

### Certificates

- Geographic Information Sciences Certificate

### Graduate Programs

- Geography, MS
- Geospatial Science and Engineering, PhD
- Remote Sensing Engineering Specialization
- Remote Sensing Geography Specialization
- Geographic Information Sciences, Graduate minor

## Facilities and Services

The Geography department is located in Wecota Hall and the Wecota Hall Annex. The department also hosts the Geographic Information Sciences Center of Excellence and produces its own annual Geography Convention, the longest running such event in the United States.

## Student Engagement Opportunities

The department provides numerous opportunities for student engagement. For example, the Geography Club is a student organization centered on both academic and social functions. Membership is open to anyone interested. Additionally, the South Dakota State Geography Convention is student organized and sponsored.

Students and faculty regularly travel including attendance at regional and national geography meetings, as well as travel to other parts of the world in pursuit of their individual scholarly interests. SDSU Geography also has a connection with a university in Romania. The exchanges that result from this relationship provide invaluable international experience for students, which is critical in the increasingly globalized world.

## Health and Nutritional Sciences

Matthew Vukovich, Department Head  
Department of Health and Nutritional Sciences  
Intramural Building 116  
605-688-4668  
e-mail: matt.vukovich@sdstate.edu  
<http://www.sdstate.edu/hns/index.cfm>

## Faculty

Professor Vukovich, Head; Professor Cassel, Dalaly, Hacker, Kattelmann, Krishnan, Sergeev, Specker, Wake, Wang; Professors Emeriti Forsyth, Huether; Associate Professor Dey, Droke, Fokken, Olson; Assistant Professor Binkley, Bowser, Meendering, Roiger, Van Guilder, Zwart; Instructors Brandenburger, Gengler, Hegerfeld-Baker, Kirby, Nelson, Stluka.

## Department Overview

The Department of Health and Nutritional Sciences is dedicated to improving quality of life regionally, nationally, and globally by fostering lifelong learners, conducting innovative science, and delivering effective outreach in the areas of health and nutrition. The integration of academic programs, which focus on nutrition, food science, health, recreation, exercise, and human performance, provides students and faculty with unique opportunities to collaborate and to promote interaction among students in different majors with a common focus on promoting health through proper nutrition and physical activity.

The course offerings help develop students with a strong foundation of knowledge, skills and abilities to enter graduate school or employment within the health care field, industry, or education. Students learn how to critique and analyze research within their designated field and have access to state-of-the-art teaching and research laboratories, nationwide internship programs, and study abroad experiences. The faculty members are nationally recognized as experts in their field and are dedicated to student success.

## Department Objectives

- to improve the quality of life regionally, nationally, and globally by fostering lifelong learners, conducting innovative science, and delivering effective outreach in the areas of health and nutrition.
- to provide premier leadership in health and nutritional sciences dedicated to excellence in learning, discovery, and outreach.

## Programs

### Majors

- Athletic Training
- Dietetics
- Exercise Science
- Health Education
- Nutrition and Food Science
- Physical Education Teacher Education
- Sport, Recreation and Park Management

## Minors

- Food Safety
- Health Education
- Nutrition
- Recreation Administration

## Graduate Programs

- Athletic Training, MS
- Dietetics, MS
- Sport and Recreational Studies, MS
- Nutrition, Exercise, and Food Sciences, MS & PhD

## Student Engagement

The department offers a number of opportunities for student involvement. The student organizations provide professional development and social interaction through numerous events on campus, as well as service learning and travel opportunities. Undergraduate research provides opportunities to work in research laboratories with professors. Students are able to become actively involved in data collection and data analysis as well as have the chance to write, travel, and present research. The department also awards scholarships to incoming and current students.

## History, Political Science, Philosophy, and Religion

April Brooks, Head  
Department of History, Political Science, Philosophy, and Religion  
West Hall  
605-688-4311  
e-mail: april.brooks@sdstate.edu

## Faculty

Professor Brooks, Head; Professors Aguiar, Schmidt; Associate Professor Murphy, Peterson, Vollan; Assistant Professors Agostini, Lane, Potts, D. Wiltse, E. Wiltse, York; Instructors Haag, Otterson, Rynearson, Tinguely, Tritle, Tsakiridis; Distinguished Professor Emeritus Burns; Professors Emeriti Bahr, Bell, Cheever, Crain, Funchion, Lonowski, Miller, Nelson, Sweeney, Tolle.

## Department Overview

The Department of History, Political Science, Philosophy, and Religion complements the vision of South Dakota State University and the College of Arts and Sciences to be nationally distinctive and locally relevant through faculty teaching, service and scholarship. Departmental faculty efforts support a challenging curriculum which encourages civic participation to perpetuate the values and historic traditions of democracy. Its members encourage and prepare students, through a liberal education, to live in an increasingly interconnected world and to understand and appreciate the human diversity created by cultures, geography and time. The political science faculty engenders an awareness and understanding of global events, while the history faculty identifies the historic background and historical trends that influence these events. The philosophy and religion faculty deal with the fundamental questions of life, the basis of knowledge and morality and practices of the world's many religious traditions. This curriculum is presented in a manner that develops and enhances critical thinking and communication skills to prepare students for meaningful employment, further scholarship and community engagement. These efforts facilitate the achievement of national distinction by the department's majors as scholars and engaged citizens.

## Programs

### Majors

- History, BA, BS
- History - Teaching Specialization, BA, BS
- Political Science, BA, BS

## Minors

- History
- Philosophy
- Political Science
- Religion

## Pre-professional Interest Areas

- (Pre-) Law
- (Pre-) Ministerial

## Facilities

The Department of History, Political Science, Philosophy, and Religion is housed in the historic West Hall.

## Student Engagement Opportunities

The department has clubs and activities for students such as:

- History Club
- Political Science Club
- Phi Alpha Theta (History's national honor society)
- Arrowhead Model United Nations program

## Journalism and Mass Communication

Mary Arnold, Head

Department of Journalism and Mass Communication

Yeager Hall 211

605-688-4171

e-mail: [mary.arnold@sdstate.edu](mailto:mary.arnold@sdstate.edu)

<http://www.sdstate.edu/mcom/>

## Faculty

Professor Arnold, Head; Professors Giago, Lucchesi, Olson; Professors Emeriti Lee, Getz; Associate Professors Oguntoyinbo, Paulson; Associate Professors Emerita Laird, Perpich; Assistant Professor: Dailey; Lecturer Koroglu; Instructors Jensen, Klock; Instructor Emeritus C. Cecil.

## Department Overview

South Dakota State University's Department of Journalism and Mass Communication's mission is educating the next generation of media professionals – including journalists, strategic communicators, teachers and researchers. To fulfill our land-grant university mission, the department works closely with journalism and advertising professionals and the scholastic and the Native American community.

## Accreditation

The Department is accredited by the national accrediting body of journalism and mass communication, the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC). The Department has been accredited continuously since accrediting began in 1948.

## Programs

### Majors

- Advertising, BA & BS
- Journalism, BA & BS
- Agricultural Education, Communication and Leadership Major - Communication specialization (with the College of Agriculture and Biological Sciences), BS

### Minors

- Advertising
- Journalism
- Marketing (with the Department of Economics)

### Graduate Programs

- Mass Communication, MMC
- Communication Studies and Journalism - Journalism Specialization, MS

## Facilities

The former Printing and Rural Journalism Building was renamed Yeager Hall in recognition of the contributions of Anson and Ada May Yeager. Mr. Yeager was longtime editor of the Argus Leader in Sioux Falls. The Department moved into expanded and renovated facilities in 2000 that cost \$2.4 million. The Yeager Media Center, completed in 2012, is a high-definition television and new media facility and the primary center for SDSU campus television and media production. There are also three computer laboratories with equipment and software for newswriting; for news editing and digital media; for broadcasting and advertising; and for photojournalism. Broadcast and advertising courses are in the Joe L. Floyd News Media Laboratory. It is connected to digital video and audio production suites. Second floor of Yeager Hall includes a conference room, a reading room, a student lounge, and individual offices for the Department's faculty members.

## Student Engagement Opportunities

Students are invited to participate in one of the many student organizations and clubs advised by faculty in the department:

- Advertising Club (Advised by Professor Roxanne Lucchesi and Assistant Professor Didem Koroglu)
- Journalism Club (Advised by Professor Lyle Olson and Associate Professor Lekan Oguntoyinbo)

## Mathematics and Statistics

Kurt Cogswell, Head

Department of Mathematics and Statistics

Harding Hall 228

605-688-6196

e-mail: [kurt.cogswell@sdstate.edu](mailto:kurt.cogswell@sdstate.edu)

<http://mathstat.sdstate.edu>

## Faculty

Mathematics: Professor Cogswell, Head; Professor Flint, Assistant Head, Professors Abraham, Kemp, Kindermann, Larson, Schaal, Schmidt; Professors Emeriti Ayers, Lacher, Monahan, Nielsen, Yocom; Associate Professors Biesecker, Djira, Ge, Kimm, D. Vestal, S. Vestal; Associate Professors Emeriti Broschat, Clever; Assistant Professors Hatfield, Neumann, Pan, Roe, Saunders, Struck, Ye; Instructors Ahrendsen, Alsaker, Bahr, Christensen, Clark, Diischer, Hales, Ji, Leiferman, Omodt, Ulvestad, Werner; Statistics: Professors Kindermann; Associate Professor Ren; Assistant Professors Brandenburger, Djira, Ge, Hatfield, Roe, Saunders, Struck, Wu, Ye; Instructors Ahrendsen, Bahr.

## Department Overview

The SDSU Department of Mathematics and Statistics is a large, diverse, and active organization. The department's mission is to provide excellent instruction, conduct high-quality research and scholarly activity, and prepare graduates and provide mathematical and statistical services that are both regionally relevant and internationally competitive. The curriculum includes a broad range of challenging and highly applicable undergraduate courses, allowing students to specialize in financial engineering, computational science, mathematics education, or statistics. The consistent high placement rate of graduates into K12 and university teaching positions, financial institutions, businesses, manufacturing firms, research organizations, and graduate programs speaks directly to the department's success in preparing graduates for a wide variety of great 21st century careers.

## Programs

### Majors

- Mathematics, BS
- Mathematics Major - Teaching Specialization, BS

### Minors

- Informatics
- Mathematics
- Statistics

## Graduate Programs

- Mathematics, MS  
Mathematics Major - Statistics Specialization
- Statistics, MS
- Computational Science and Statistics, PhD

## Facilities and Services

The department offices are located in Harding Hall. The Math Help Center, located in Harding Hall 128 and in the Biostress Basement 0020, provides free walk-in tutoring for students in MATH 095, 102, 103, 115, 120, 121, 123, 125, and STAT 281.

## Student Engagement Opportunities

Math majors can engage in research through the summer Research Experiences for Undergraduates. Students can also participate in the two student organizations, Math Club and the National Council of Teachers of Mathematics, that combine fun with professional development opportunities, go on field trips, and attend mathematics conferences.

## Mechanical Engineering

Kurt Bassett, Head

Department of Mechanical Engineering

Crothers Engineering Hall 216

605-688-5426

e-mail: kurt.bassett@sdstate.edu

<http://www.sdstate.edu/me/index.cfm>

## Faculty

Professor Bassett, Head; Professors Delfanian, Moutsoglou; Associate Professors Hu, Duan; Assistant Professors Du, Gent, Michna; Instructors Hein, Peters, Twedt.

## Department Overview

The Department of Mechanical Engineering is focused on developing students' problem-solving talents, built upon a solid understanding of the scientific and mathematical principles that guide engineers. The faculty members are dedicated to providing a challenging and effective learning environment. They continue to build upon their considerable expertise through engineering research and practice.

Throughout the curriculum, classroom theory is extended and applied with learning activities in well-equipped laboratories. Team-oriented design courses prepare students to apply engineering principles to the solution of real-world problems. Most students participate in at least one internship or cooperative work experience during a summer or semester away from campus. Opportunities are also available for students to participate in research projects guided by faculty members working with state-of-the-art engineering equipment.

## Department Mission

The mission of the Department of Mechanical Engineering, in support of the mission of the College of Engineering, is to provide a highly respected, rigorous, and practical professional education for Mechanical Engineering students oriented toward applied problem solving; to conduct meaningful research which broadens the base of engineering and scientific knowledge with a regional emphasis; and to provide technical assistance to existing and emerging businesses, industry and government.

## Programs

### Undergraduate Programs

- Mechanical Engineering, BS
- Sustainable Energy Systems, Minor

### Graduate Programs

- Mechanical Engineering, MS

## Facilities

In addition to the instructional laboratories, the department houses the following research laboratories:

- Biofuels Laboratory
- Materials Evaluation and Testing Laboratory
- Simulation-Based Engineering and Analysis Laboratory

## Student Engagement Opportunities

The department provides opportunities for student engagement through engineering design projects, participation in research, and participation in student organizations. The following student branches of professional societies are active in the department:

- American Society of Mechanical Engineers
- American Society of Heating, Refrigerating and Air-Conditioning Engineers
- Society of Automotive Engineers
- Pi Tau Sigma (Mechanical Engineering Honor Society)

In addition, mechanical engineering students are active in the following engineering organizations:

- Society of Women Engineers
- Engineers Without Borders
- Tau Beta Pi (Engineering Honor Society)
- Alpha Omega Epsilon (Engineering Sorority)
- Sigma Phi Delta (Engineering Fraternity)

## Military Science

MAJ Aaron Schultz, Head

Department of Military Science; Army ROTC

DePuy Military Hall 200

Box 2236 University Station

605-688-6151

e-mail: garnet.wosje@sdstate.edu

## Faculty

Professor, Major Schultz, Department Head; Assistant Professors Ness, Skovly; Adjunct Instructors Mahlen, White

## Programs

The department offers a minor in Military Science. Training Programs

## Army ROTC Scholarships

Qualified students can compete for 4-year, 3-year, and 2-year scholarships that cover full tuition, laboratory and instructional fees, university student fees, transcript, cap and gown, diploma, and selected graduation fees. A flat book rate of \$1200 a year plus a monthly subsistence allowance of \$300, \$350, \$450, or \$500 a month are provided each semester. Four Year Scholarship competition is conducted by the Department of the Army for university bound high school students. Applications are available from high school counselors, on line at [www.armyrotc.com](http://www.armyrotc.com) or directly from SDSU Army ROTC by contacting the department.

## Optional Army Schooling Available to Qualified Cadets

1. Airborne training at Fort Benning, Georgia for 3 weeks
2. Air Assault training for 10 days
3. Cadet Troop Leader Training at selected Army posts with an active Army or Reserve component unit for 2 to 3 weeks
4. Northern Warfare training at Fort Greely, Alaska for 3 weeks
5. Nursing Summer Training Program at selected Army hospitals
6. Cultural Understanding and Language Proficiency Internships
7. Professional internships in specific major areas



## **Modern Languages and Global Studies**

Maria Ramos, Head  
Department of Modern Languages and Global Studies  
Wagner Hall 121A  
605-688-5102  
e-mail: maria.ramos@sdstate.edu

### **Faculty**

Professor Ramos-Garcia, Head; Professors Emeriti Baker, Beattie, Cardenas, Redhead, Richter, Sunde; Professor Baggett; Associate Professors Enz, Owens, Rolz, Spitz; Assistant Professors Alvarez, Garst-Santos, Zhang Instructors Adamyan, Amaya, Arneson, Escondrillas.

### **Department Overview**

The Department of Modern Languages & Global Studies has as its primary mission the undergraduate teaching of languages, literatures, and cultures to SDSU students, both as majors and minors, and offering service courses for all other degrees on campus. The Department offers courses French, German, Spanish, Chinese, Lakota and Global Studies, following the Standards of the American Council on the Teaching of Foreign Languages.

The department aspires to offer students the best preparation possible for their future careers in the fields of their choice, so they will be proficient speakers of the target language, cross-culturally competent and critical thinkers. In addition the department follows a strong tradition of service within the community, the state of South Dakota and beyond. Faculty in the department combine these two areas with research and scholarship in related disciplines, from research on cultural studies and literature, to the scholarship of teaching and learning, to the dissemination of their specialized knowledge to different constituencies, especially language teachers.

### **Modern Language Placement**

Students entering the University with a background in modern languages who are prepared to take courses beyond 101 (up to 310, except SPAN, FREN or GER 211, 212) may apply to receive credit for all previous courses up to 202. Even if the student's career goals do not center on a modern language, a strong background in a language may make a second major or a minor feasible.

Students cannot get first or second year credit for their native language. For more information please check the Modern Language Credit policy in the Academic Evaluation section of this catalog. The faculty of the Department of Modern Languages and Global Studies work with students to determine the program of study that will best prepare them for the career they have chosen. The Department encourages students to investigate programs in other academic areas which will complement or enhance their preparation for a specific career. Such programs include, but are not limited to: Global Studies (see the requirements for the Major and Minor), Economics, and Education (see Education Curriculum for Teachers of Academic Subjects). Students are also strongly encouraged to plan a summer/semester/year experience studying abroad.

### **International Students**

International students enrolled at SDSU are strongly encouraged to discuss with their advisor or the Department Head possible variations in requirements for the departmental majors and minors that take into consideration their mastery of a foreign language and previous international experiences. The Department has placement information as well as specific information on all of its programs available in the main office of the Department of Modern Languages and Global Studies and on the department's web page.

## **Programs**

### **Majors**

- French Studies, BA
- French Studies Major - Teaching Specialization, BA
- German, BA
- German Major - Teaching Specialization, BA
- Global Studies, BA
- Spanish, BA
- Spanish Major - Teaching Specialization, BA

### **Minors**

- French Studies
- German
- Global Studies
- Spanish

### **Facilities**

The department has a new language resource center/ laboratory for language practice and testing. The department offers Computerized Oral Proficiency Interviews which rank student language proficiency and provide a nationally recognized certificate.

### **Student Engagement Opportunities**

The department provides numerous opportunities for student involvement through the departmental clubs. The World Affairs and Languages Club offers a film series and a weekly radio program for all campus among other activities. The department also has French, German, and Spanish clubs, open to any student, as well as two honor societies Delta Phi Alpha German Honor Society, Sigma Delta Pi Spanish Honor Society.

The department also provides travel and outreach opportunities for students, offering study abroad opportunities every year. Some of them include a service-learning component. Students may also participate in service-learning opportunities locally.

## **Music**

David Reynolds, Head  
Department of Music  
Lincoln Music Hall 204  
Box 2212  
605-688-5187  
e-mail: Paul.Reynolds@sdstate.edu  
<http://www.sdstate.edu/mus>

### **Faculty**

Professor Reynolds, Head; Professors Crowe, Diddle, Lis, Walker; Professors Emeriti Canaan, Colson, Hatfield, Johnson, McKinney, Piersel, Walker, D.; Associate Professors Brawand, Toronto; Assistant Professors Jorgensen, Peterson, Ragsdale, Walsh; Instructor Coull.

### **Department Overview**

The South Dakota State University Music Department is shaped by the university's Land Grant status and the spirit of the Morrill Act. Within that context, it is the mission of the Music Department to musically serve the university, state, and region through teaching/advising, research/creative activity, and outreach/general service.

With three degree options, a marching band, three choirs, three concert bands, a symphony orchestra, and two jazz ensembles, there is a musical outlet for everyone in the Department of Music. The department focuses its attention on undergraduate learning, research, creative activity, and service to the discipline of music.

## Department Objectives

- To serve the university, state, and region by delivering an approved and well-defined undergraduate music curricula
- To engage in scholarly and creative musical endeavors which illuminate the underlying principles of the mission
- To provide musically enriching public service outreach activities, both on and off campus
- To provide a musical learning environment where students develop personal interests and leadership skills necessary for the full appreciation of life, empowering them to contribute deeply to the human experience through a wide range of endeavors, and
- To be proactive regarding equity, ethnicity, and cultural diversity

## Accreditation

The Music Department has full membership in the National Association of Schools of Music.

## Programs

### Majors

- Music, BA
- Music - Music Entrepreneurship Specialization, BA
- Music Education, BME

### Minors

- Music

## Music Program Application Requirements

1. Admission as a music major in any of the music degree programs requires the successful completion of an audition in the student's major area of applied instruction.
2. Music majors in all degree programs must choose one area of applied instruction in which to specialize. Further, students must meet the applied proficiency standards of the Department in that area. To that end, students must:
  1. successfully complete a jury examination each semester.
  2. apply for and be granted approval to advance to upper level applied study (300-400 levels).
  3. complete a minimum of 6 hours of upper level (300-400) applied study
3. Piano proficiency is required of all majors. Several approaches to meeting the requirements are available. See the Student Handbook published and available from the Department for more specifics. The piano proficiency must be passed before the senior recital may be scheduled.
4. Voice or instrumental proficiency is required of all keyboard majors.
5. Ensemble Requirements:
  1. All music majors must participate in at least one major ensemble each semester they are enrolled as a regular university student (Internship and Student Teaching semesters excepted). See the Student Handbook for more details.
  2. Participation in small ensembles is strongly encouraged for all majors and minors.
6. A minimum of five pedagogy courses is required for students in the B.M.E program, and while the required pedagogies develop proficiencies within the areas of specialization for B.M.E. students, a functional knowledge of instrumental or vocal techniques outside the specialty is also essential. For instrumental B.M.E. majors, this must include one semester each of string, woodwind, brass, and percussion pedagogies. Six semesters will assure the broadest preparation through multiple levels of woodwind and brass pedagogy. In addition, instrumental B.M.E. majors must take MUS 270/ 271 general voice for instrument majors. For vocal B.M.E. majors, the four

required semesters of vocal pedagogy are augmented by MUS 270/271 general instrument for voice majors.

7. Recommendations for enrolling in student teaching will be issued by the Music Education Coordinator following an interview with the student and his/her advisor.
8. Recommendations for music entrepreneurship students wishing to enroll for the Internship experience must be issued by the program Coordinator.
9. A senior recital is required of all music majors.
10. Majors and minors must enroll for Recital Attendance (MUS 185) each semester they are enrolled for applied music lessons

## Facilities

The department enjoys excellent facilities including historic Lincoln Music Hall and the new, state-of-the-art Performing Arts Center. The Performing Arts Center is the location of the 1000-seat Larson Concert Hall, which plays host annually to some of the world's most important Classical and popular performing artists.

## Student Engagement Opportunities

The department provides students the opportunity to explore the widest variety of musical experiences and thinking through academic study, performance, student organizations, and travel. All SDSU students are welcomed to participate in music ensembles, applied lessons, music appreciation classes, and in some music literature and history offerings. The department also sponsors several clubs and organizations.

- National Association for Music Education
- Music Teachers National Association
- American Choral Directors Association
- Kappa Kappa Psi/Tau Beta Sigma

## Natural Resource Management

David Willis, Department Head

Department of Natural Resource Management

Northern Plains Biostress Laboratory 138C

605-688-6121

e-mail: david.willis@sdsu.edu

www.sdsu.edu/nrm/

## Faculty

Distinguished Professor Willis, Head; Professor Troelstrup, Assistant Head; Distinguished Professor Emeritus Flake; Distinguished Professors Brown, Jenks, W. Johnson; Professors Emeritus Berry, Higgins, Scalet; Professors Chipps, Dieter, Gates, Gilmanov, Hubbard, P. Johnson, Johnston, Larson, Smart; Associate Professors Graeb, Jensen, Stafford, Xu; Assistant Professors Bertrand, Gigliotti, Grovenburg, Perkins, Wuellner; Adjunct Professors, Butler, Chipps, Fredrickson, Longmire, Wylie; Adjunct Associate Professors Blackwell, Klaver, Klumb, Rosentrater, Stafford, Tedesche, Uresk; Adjunct Assistant Professors Adams, Anteau, Austin, Bakker, Finsel, Gigliotti, Holland, James, Lehman, Pegg, Rumble, Swanson, Switzer, Thompson.

## Department Overview

The Department of Natural Resources Management houses undergraduate and graduate programs focused on improving the understanding and management of natural resources. The quality of life for many humans is intimately tied to the use and preservation of natural resources. Thus, educational opportunities in natural resource management at SDSU can lead to a diverse array of career opportunities. The department faculty and staff also conduct research and provide outreach services that contribute to the understanding and management of natural resources on a local and global scale.

## Programs

### Majors

- Ecology and Environmental Science
- Range Science
- Wildlife and Fisheries Science

### Minors

- Range Science
- Botany Minor

### Graduate Programs

- Biological Sciences, MS
- Wildlife and Fisheries Sciences, MS  
Wildlife Specialization  
Fisheries Specialization
- Biological Sciences, PhD
- Wildlife and Fisheries Sciences, PhD

## Facilities and Services

The department is housed within the Northern Plains Biostress Laboratory at SDSU. The Department houses the Oak Lake Biological Field Station and also hosts the South Dakota Cooperative Fish and Wildlife Research Unit, the National Wetlands Inventory, several members of the Geographic Information Science Center of Excellence, and the South Dakota GAP Analysis Project

## Student Engagement Opportunities

Student organizations conduct professional and social functions, serve as an excellent vehicle for students to get to know one another and the faculty, and to learn more about their future profession.

The Department of Natural Resource Management student clubs:

- SDSU American Fisheries Society Student Subunit and the Wildlife and Fisheries Conservation Club are excellent organizations open to students in that major.
- The SDSU Ecology Club is a student chapter of the Ecological Society of America
- Range Club - The South Dakota Student Chapter of the Society for Range Management includes Range Science majors and other students that have a growing interest in the field of range management.
- Judging Teams - Many Range Science majors choose to compete on the Plant Identification and the undergraduate Range Management Exam teams. These teams compete at international contests against teams from colleges in the U.S., Canada and Mexico. Students also help to run range plant identification contests at SDSU.

## Nursing

Linda M. Herrick, Ph.D., RN  
Associate Dean Undergraduate Nursing  
SDSU College of Nursing  
Box 2275, SWG 327  
Brookings, SD 57007-0098  
605-688-6153

## Faculty

Professor Herrick, Associate Dean, Distinguished Professor Hegge; Professors Craig, Foland, Hendrickx, Hulme, Mylant; Professors Emeriti Blazey, Hofland, Olson, Peterson; Associate Professors Carson, Hobbs, Lammers, Minton, Samra, Stenvig, Tschetter, Voss, Wey; Assistant Professors Banik, J. Bassett, Burdette, Elverson, J. Gibson, Hair, Mennenga, Peterson-Lund, Randall, Rowe; Assistant Professors Emeriti Iken, Joffer; Instructors Arends, Atteberry, S.

Bassett, Beauchamp, Birch, Boysen, Brown, Bruner, Buttolph, Cissell, Dangel, Foerster, Forbes, N. Gibson, Haight-Kennedy, Hansen, Hanson, Hesson, Holt, Huber, Johansen, Klawiter, Lubeck, Marckstadt, Mordhorst, Ness, Pasquariello, Van Ruler, Vockrodt, Winterboer.

## Department Overview

The department of Undergraduate Nursing curriculum prepares students for professional practice in a variety of acute care, community, and other settings. This education provides the foundation for the development of professional knowledge, critical thinking, ethical decision-making, leadership skills and pursuit of high standards in health care to influence quality health outcomes.

## Department Objective

The department of Undergraduate Nursing seeks to prepare

- nurses with a broad and basic preparation for professional nursing practice
- nurses prepared to assume professional responsibility for promotion of health and prevention of illness
- nurses able to assume responsibility for the guidance of nursing personnel and the ability to work cooperatively with other health care providers.
- nurses who have the foundation for advanced study in nursing or specialization at the graduate level.
- students to practice in a variety of settings, such as hospitals, community health, industry, Indian Health Service, military, and other institutions.

## Programs

### Major

- Nursing with Standard, Accelerated, and RN Upward Mobility options

### Minor

- Health Science

## Accreditation

The undergraduate nursing program at SDSU is approved by the South Dakota Board of Nursing. Both the undergraduate and graduate programs are accredited by the Commission on Collegiate Nursing Education. The College is a member agency in the American Association of Colleges of Nursing. Candidates for graduation in the standard and accelerated curriculum are eligible to write the National Council Licensure Examination-RN (NCLEX-RN) for licensure as registered nurses. Licensure as a registered nurse (RN) is required by law in every state in order to practice professional nursing.

## Facilities and Services

The College of Nursing has a state of the art Simulation Lab that enables educators to enhance the quality and delivery of rural nursing education. Simulation provides an opportunity for nursing students to practice nursing care with a variety of patients and patient scenarios. The high-technology simulation setting allows students practice in the areas of electronic health records, informatics, and tele-health.

## Student Engagement

The department offers opportunities for student engagement through research, international travel opportunities, a freshmen Health Professionals Learning Community, and student organizations such as the Nursing Students' Association and Sigma Theta Tau International, an honor society for nursing students.

## **Pharmaceutical Sciences**

Omathanu Perumal, Head  
Department of Pharmaceutical Sciences  
SAV 275  
605-688-5598  
e-mail: Omathanu.Perumal@sdstate.edu  
<http://www.sdstate.edu/pha/pharmSci/index.cfm>

### **Faculty**

Associate Professor Perumal, Head; Professor Guan; Associate Professors Chandrasekher, Fahmy, Gunaje, Rahman, Seefeldt; Assistant Professors, Jin, Tummala, Zhang

### **Department Overview**

The Department focuses on a student-centered curriculum that provides a strong foundation in pharmaceutical sciences. In addition, the department has a strong undergraduate research program. These prepare graduates for academic, industry, and research careers in the US and other countries.

The highly talented and dedicated faculty members provide quality education and research training in the pharmaceutical sciences. The department has an active research program in cancer, cardiovascular, neuropharmacology, immunology, and eye diseases. The multidisciplinary research expertise includes medicinal chemistry, pharmacology, molecular biology, and drug delivery systems.

### **Department Objectives**

- To provide high quality education for the B.S. in Pharmaceutical Sciences, professional Pharm.D, and the Ph.D. in Pharmaceutical Sciences.
- To maximize teaching, learning, and scholarship through technology and broad-based improvement of physical facilities.
- To support and develop high quality faculty.
- To develop local, regional, national, and international collaborations.
- To build and sustain excellence in scholarship and research leading to improved healthcare and economic development.

### **Programs**

- Pharmaceutical Sciences, BS in preparation for the Doctor of Pharmacy, PharmD
- Pharmaceutical Sciences, PhD

### **Facilities and Services**

The department is housed in the Avera Health and Science Center. There the department houses the Translational Cancer Research Center. This is a collaborative center between the Department of Pharmaceutical Sciences and Sanford Research to develop new diagnostic, preventive, and treatment approaches for various types of cancer. The department also has a partnership with the Avera Institute for Human Genetics. We continue to seek strategic partnerships with research institutions and pharmaceutical industries.

### **Student Engagement Opportunities**

Membership in the Academy of Student Pharmacists is open to all students in the College, including pre-pharmacy students. Kappa Psi and Kappa Epsilon are pharmacy fraternities for men and women. Rho Chi and Phi Lambda Sigma are scholastic and leadership organizations. The American Association of Pharmaceutical Scientists is an organization representing scientists working in the discovery, development, and manufacture of pharmaceutical products and therapies. The major goals of these organizations are to provide a better appreciation of the scope and aims of the profession and to develop leadership potential.

## **Pharmacy Practice**

James Clem, Head  
Department of Pharmacy Practice  
SAV 149  
605-367-5225  
e-mail: college.pharmacy@sdstate.edu  
<http://www.sdstate.edu/pha/pharmPrac/index.cfm>

### **Faculty**

Professor Clem, Head; Professor Heins, Assistant Head; Professors Farver, Fischer, Helgeland, Jensen Bender, Kutscher, Lemon, Messerschmidt, Mort; Associate Professors Johnson, Laible, Strain, Van Gilder; Assistant Professors Bartel, Hansen, Hayes, Hellwig, Jansen, Kappes, Meyer, Peters, Rausch, Shiyanbola, Adjunct Assistant Professor Lunn.

### **Department Overview**

The Department of Pharmacy Practice builds on the fundamentals of pharmaceutical sciences so that our students gain the knowledge and expertise to become skilled pharmacy practitioners once they complete the Doctor of Pharmacy, PharmD degree program. The department contributes to some of the curriculum leading up to the B.S. in Pharmaceutical Sciences degree and is responsible for the majority of the curriculum in the last two years of the professional program (P3 and P4) leading to the Doctor of Pharmacy (Pharm.D.) degree. The faculty members have practice sites in a wide array of pharmacy practice specialties and at a variety of locations providing students with a wealth of learning opportunities.

### **Department Objectives**

- To educate students in the various aspects of pharmacy practice, utilizing the principles of patient focused care, problem-based learning, and critical thinking.
- To work closely with the Department of Pharmaceutical Sciences to deliver a quality program leading to the Bachelor of Science (B.S.) degree in pharmaceutical sciences and the professional doctor of pharmacy (Pharm.D.) degree.
- To excel in the University tripartite mission of: teaching/advising; research, scholarship, and creative activity; and service (assigned professional and general).
- To prepare pharmacy graduates capable of providing high quality patient-centered and population-based pharmacist care to the people of South Dakota, the region, the nation and the world.

### **Programs**

- Doctor of Pharmacy, PharmD

### **Facilities and Services**

The Department of Pharmacy Practice is located in Avera Health and Science Center. There the department provides service and outreach, including medication education to numerous healthcare organizations, health care professionals, and the general public throughout the state. The faculty is also involved in numerous research endeavors. Among these, are collaborations with clinical trials of new medications and medication use, develop new and innovative pharmacy care delivery strategies, and study innovative teaching approaches to improve the delivery of the pharmacy curriculum.

## **Physics**

Joel Rauber, Head  
Department of Physics  
Daktronics Engineering Hall 255  
605-688-5428  
e-mail: joel.rauber@sdstate.edu  
<http://www.sdstate.edu/phys>

### **Faculty**

Professor Rauber, Head; Professor Browning; Professors Emeriti Duffey, Graetzer, Leisure, Quist; Associate Professors Huh, McTaggart; Assistant Professor Aaron; Lecturer Bonvallet; Instructors Stafford, Vondruska.

### **Department Overview**

The mission of the Department of Physics is to provide high quality instruction and mentoring in physics, to seek new knowledge, and to apply that knowledge for the improvement of society and humankind. The mission is fulfilled by a combination of the courses and academic programs delivered by the department; as well as the research, scholarship, and outreach activities of faculty and students within the department.

The program and course offerings provide students with a strong foundation of knowledge, skills and abilities to enter graduate school or employment within the STEM fields. Students develop an understanding of the mathematical and theoretical foundations of the physical sciences and develop capabilities in laboratory experimental design and analysis. Students have access to state-of-the-art laboratories, nationwide internship programs, and other resources and opportunities that complement the coursework provided in the physics programs. The faculty members are recognized as experts in their field and are dedicated to student success.

### **Department Objectives**

- to serve students with an interest in a professional future in physics or its allied disciplines;
- to serve students interested in professional careers in allied physics fields such as engineering, medical/health physics and many other possibilities;
- to serve students from various colleges within the University who need a basic understanding of physics;
- add to the knowledge base of humanity through research and scholarship
- provide educational support to the citizens of South Dakota and surrounding region through outreach activities.

### **Programs**

#### **Majors**

- Physics, BS
- Physics Major - Science Teaching Specialization, BS

#### **Minors**

- Nuclear Engineering
- Physics

### **Facilities and Services**

The Physics department is located in Daktronics Engineering Hall. The department hosts numerous teachers workshops each summer. The focus of these workshops is to increase student interest and ability in math and science. Several camps are also offered for

students through the College of Engineering which focus on a wide variety of engineering careers, including physics. In addition to these outreach activities, faculty members provide astronomy star parties for local schools, serve as judges for local and regional science fairs and act as a resource for students and teachers statewide.

### **Student Engagement Opportunities**

The department offers opportunities for academic student engagement through coursework, research, internships. Other avenues for student engagement through department are provided by student organizations. The Physics Department sponsors local chapters of The Society for Physics Students (SPS – the primary physics student organization) and SPS (Sigma Pi Sigma – the physics honor society).

## **Plant Science**

David Wright, Department Head  
Douglas Malo, Assistant Department Head  
Brent Turnipseed, Undergraduate Teaching Coordinator  
Department of Plant Science  
Agricultural Hall 219  
605-688-5123 (Department Head, SAG 244)  
605-688-4450 (Teaching Office, SNP 247)  
e-mail: David.Wright@sdstate.edu  
douglas.malo@sdstate.edu  
brent.turnipseed@sdstate.edu  
<http://www.sdstate.edu/ps/>

### **Faculty**

Professor David Wright, Head; Distinguished Professor Malo; Distinguished Professor Emeriti Wrage; Professors Ball, Beck, Bleakley, Boe, Burrows, Carlson, Chalmers, D. Clay, S. Clay, Doolittle, Fennell, Fuller, Gelderman, Graper, Hall, Johnson, Kephart, Langham, Maca, Owens, Schaefer, Schleicher, Sutton, Turnipseed, Woodard; Professors Emeriti Collins, Buchenau, Carson, Dybing, Evenson, Gerwing, Gardner, Hall, Kantack, Kenefick, Kohl, Reeves, Peterson, Schumacher, Shank, Shubeck, Smolik, Walstrom; Associate Professors Chase, Glover, Gonzalez, Gu, Moechnig, Nleya, Ren, Sexton, Tilmon; Associate Professors Emeriti Colburn, Pollmann, Stymiest; Assistant Professors Ali, Burger, Grady, Hadi, M. James, Jiang, Li, Rohila, Szczepaniec, Subramanian, Wu; Assistant Professors Emeritus Bonnemann, Kingsley; Instructor K. James; Instructor Emeritus Evers.

### **Department Overview**

The primary goal of the Department is to prepare students for success and leadership in business, government, and enterprises related to the Agronomy, Horticulture, and Landscape Architecture programs. In addition, students can prepare for graduate study leading to a career in research, teaching, business, or extension. Graduates with training in plant science are sought by agri-business, horticultural businesses, landscape architecture/design firms, private foundations, and federal and state agencies for employment in domestic and international agriculture.

The Plant Science department is also proud of the strong tradition of research and extension, leading to improved plant varieties, increased agricultural productive, better understanding of plant diseases, and new plant varieties for green roofs. The extension activities have translated these advances into public knowledge on topics as varied as the impacts of tillage on soil carbon levels, the genomic basis of grape quality, and green solutions to landscape design.



## Programs

### Majors

- Agronomy, BS
- Horticulture, BS
- Landscape Architecture, BS

### Certification Preparation

- Soil Science Certification

### Minors

- Agronomy
- Horticulture
- Pest Management
- Soil Science

### Graduate Programs

- Plant Science, MS
- Plant Science, PhD
- Biological Sciences, PhD
  - Plant Molecular Biology Specialization
  - Plant Science Specialization

## Facilities and Services

The department is housed in six buildings across campus. These buildings provide research and teaching laboratories, greenhouses, seed house facilities and access to the functional genomics core facility. The on-campus facilities also include the SDSU Seed Testing Laboratory, SDSU Plant Diagnostics Clinic, Seed Certification, and Foundation Seed Stocks Division, which operates as services for the public. In addition, the department conduct research at three research farms near campus and four research stations across the state. The Field Specialists are housed in six regional extension offices across the state. The latest addition is the new McCrory Gardens Education and Outreach Center.

## Student Engagement Opportunities

Numerous opportunities are available for part-time employment, scholarships, and work-study programs. The Arboriculture Club, Agronomy and Conservation Club, Horticulture Club, Landscape Club, or Turfjack Club offer opportunities for fellowship, leadership, and career planning. The Department has nationally recognized crops, horticulture, and soils judging teams.

## Psychology

Brad Woldt, Head  
Department of Psychology  
Scobey Hall 336  
605-688-4322  
e-mail: [bradley.woldt@sdstate.edu](mailto:bradley.woldt@sdstate.edu)  
<http://www.sdstate.edu/psych/index.cfm>

### Faculty

Professor Woldt, Head; Professors Emeriti Branum, Hillner, Norris; Professors Phelps, Spear; Associate Professors Martin, Nowell; Assistant Professors Jenson, Miller; Instructor Jantzer.

## Department Overview

The psychology department provides a robust and challenging undergraduate curriculum that produces a sound knowledge base in the science of psychology, develops and enhances critical thinking, problem solving, and communication skills to prepare students for meaningful employment, further scholarship, sociocultural and

international awareness, and civic involvement and engagement. In addition, the department promotes opportunities for undergraduate research, formal internships, service-learning, and study abroad.

While many students go on to graduate programs in psychology and a wide variety of other areas, many also find positions in their local community, particularly in the human services area. Students with a psychology degree have gone on to graduate programs in many areas including: Clinical and Experimental Psychology, Counseling, Educational Psychology, Law, Medicine, Neuroscience and Public Policy.

## Programs

### Majors

- Psychology
- Psychology Major - Teaching Specialization

### Minors

- Psychology

## Student Engagement Opportunities

The department offers opportunities for student engagement through research, internships, and student organizations. The department sponsors two students organizations, the Psychology Club and Psi Chi, the International Honor Society in Psychology. The Psychology Club is open to any student and provides the opportunity to participate in community service, volunteer projects, and professional development as they learn about internship options, student research opportunities, and the graduate school preparation process. Psi Chi is open to qualified students, provides academic recognition, and seeks to nurture the spark of that accomplishment by offering a climate congenial to members' creative development.

## Sociology and Rural Studies

Mary Emery, Head  
Department of Sociology and Rural Studies  
Scobey Hall 224  
605-688-4132  
email: [Mary.Emery@sdstate.edu](mailto:Mary.Emery@sdstate.edu)  
<http://www.sdstate.edu/soc/>

### Faculty

Professor Emery, Department Head; Professors Arwood, Kayongo-Male, Redlin, Stover; Distinguished Regental Professor Emeritus R. Wagner; Professor Emeriti Hess, Mendelsohn, Satterlee; Associate Professor Emeritus Grant; Assistant Professors Jacquet, Jantzer, Froelich, McCurry, Lecturers: O'Neil, Ahmad; Instructor Schulz.

## Department Information

The Department of Sociology and Rural Studies is a doorway to a number of exciting opportunities for students. They may choose from several programs in which they develop the skills sought by social service, human services, and criminal justice agencies as well as private, government and nonprofit employers. The courses offered by the Department have been organized with two objectives in mind: (1) a sequence for those who may wish to earn an undergraduate major or minor in sociology; and (2) basic service courses that will be of interest and practical help to students in any college.

## Programs

### Majors

- Sociology, BS & BA
- Sociology Major - Teaching Specialization, BS
- Sociology Major - Human Services Specialization, BS
- Sociology Major - Human Resources Specialization, BS

### Minors

- Sociology
- Criminal Justice

### Graduate Programs

- Sociology, MS
- Community Development Specialization, MS
- Sociology, PhD

## Services

The Sociology Department also administers the Rural Life and Census Data Center, which provides businesses, organizations, news media, and local and county agencies with the latest census and rural life information.

## Student Engagement Opportunities

Both graduate and undergraduate students can participate in a number of out of class activities such as clubs, associations and events.

## Teaching, Learning and Leadership

Andrew Stremmel, Department Head  
Department of Teaching, Learning and Leadership  
Wenona Hall 108  
605-688-6418  
e-mail: [andrew.stremmel@sdstate.edu](mailto:andrew.stremmel@sdstate.edu)  
<http://www.sdstate.edu/tll/>

## Faculty

Professor Stremmel, Head; Professors Cutler, DeBates, Erion, Gilkerson, Hacker, Helling, Penrod, Wilson; Professors Emeriti Amiotte, Edeburn, Everett, C.Hanson, D. Jensen, Lingren, P. Miller, J. Pedersen, L. Rogers, G.Steinley; Associate Professors Bowne, Rasmussen; Assistant Professors Bertolini, Burns, Kim, Moeller, Nganga; Instructors Brokmeier, Gloege, Lacher-Starace, Venhuizen; Lecturers Kampmann, Weber.

## Department Overview

The Department of Teaching, Learning, and Leadership prepares educational professionals to be teachers and educational leaders for the 21st century. The department is committed to preparing highly qualified professionals, creating and sharing new knowledge in our profession, and developing outreach opportunities with stakeholders in the field. The departmental vision includes four overarching themes: Responsiveness, Collaboration, Innovation, and Commitment that guide their teaching, research, and service.

## Programs

### Majors

- Early Childhood Education Major- Birth to 5 Specialization
- Early Childhood Education Major- Birth to 8 Specialization
- Early Childhood Education Major - Cooperative Program with either Dakota State University or Northern State University.

- Family and Consumer Sciences Education

### Certification Preparation

- Education Curriculum for Teachers of Academic Subjects
- Teacher Education-Certification Only

### Endorsements

- Early Childhood Education Kindergarten Education Endorsement
- Early Childhood Special Education Endorsement

### Graduate Programs

- Curriculum and Instruction (M.Ed.)  
Adult and Higher Education Specialization  
Early Childhood Education Specialization  
Elementary Education Specialization  
Secondary Education Specialization
- Educational Administration, MEd  
Elementary Education Specialization  
Secondary Education Specialization

## Facilities and Services

The department has several unique facilities and services.

- Family Resource Network  
Child and Adult Care Food Program  
Toy and Resource Lending Library
- Fishback Center for Early Childhood Education

## Student Engagement Opportunities

The department encourages student participation in organizations and honor societies.

- Alpha Tau Alpha is an honor society in Agricultural Education open to majors
- Kappa Delta Pi is an honor society that recognizes outstanding contributions to education
- Student National Education Association is affiliated with the South Dakota Education Association and the National Education Association and provides opportunities for professional growth
- South Dakota Association for the Education of Young Children provides opportunities for professional growth for Early Childhood majors

The department also provides information and assistance as students seek out scholarship, internship, and career opportunities.

## Veterinary and Biomedical Science

Jane Christopher-Hennings, Head  
Veterinary and Biomedical Science  
SAR 105, Box 2175  
605-688-5172  
e-mail: [russell.daly@sdstate.edu](mailto:russell.daly@sdstate.edu)  
<http://www.sdstate.edu/vs/>

## Faculty

Associate Professor Daly, Interim Head; Professors Chase, Christopher-Hennings, Erickson, Knudsen, Hildreth, Holler, Miskimins, Neiger, Nelson, Young; Associate Professors Kaushik, Li; Assistant Professors Fang, Leslie-Steen, Zhang; Adjunct Professors Dee, Lawrence, Lunney, Patel, RajuSeetharaman

## Department Overview

The Veterinary and Biomedical Sciences Department provides advising services for students in the pre-veterinary medicine curriculum and offers courses in the biomedical sciences for

undergraduate and graduate majors in related sciences. The interaction of service, discovery, and education that takes place within the Veterinary and Biomedical Sciences Department results in new knowledge, timely information, and students prepared for careers that make a difference for animals and people alike.

## Programs

### Undergraduate Programs

- Pre-Veterinary Medicine Interest Area
- Animal Health Minor

### Graduate Programs

- Biological Sciences, M.S.
- Biological Sciences, Ph.D.  
Veterinary Microbiology Specialization  
Veterinary Pathobiology Specialization

## Accreditation

American Association of Veterinary Laboratory Diagnosticians Accreditation

## Facilities and services

- Animal Disease Research and Diagnostic Laboratory
- Food Safety Microbiology Laboratory
- Food Emergency Response Network

## Student Engagement Opportunities

The SDSU Veterinary & Biomedical Sciences Department is home to the SDSU Pre-Veterinary Medicine Club. Club participation is strongly encouraged as a great mechanism to enrich student's education and to develop leadership skills. The department also has scholarships available for incoming freshmen and upper-class students active in the Pre-Veterinary Medicine Program.

## Visual Arts

Michael (Tim) Steele, Head  
Department of Visual Arts  
605-688-4103  
fax: 605-688-6769  
e-mail: [sdsu.artdept@sdsu.edu](mailto:sdsu.artdept@sdsu.edu)  
<http://www.sdsu.edu/art/index.cfm>

## Faculty

Professor Steele, Head; Professors French, Wallace; Professors Emeriti Edie, Gambill, Spinar; Professors Emeritae Morgan, Stuart; Associate Professors Cempellin, Clark; Assistant Professors Behl, Carton, Hardin, Melkumyan; Instructors Frewaltdt, Heeren, Reichardt, Stenwedel, Taylor, Van Benschoten, Weaver, Wicks

## Department Overview

The Department offers courses in animation, art education, art history, ceramics, computer graphics, drawing, film, interactive design, graphic design, painting, printmaking, sculpture and web design. Students pursue careers as artists, art educators, illustrators, graphic designers, and web designers. Graduates also pursue graduate study, receiving advanced degrees in art and design.

## Department Objectives

- The Visual Arts Department seeks to enhance academic excellence and strengthen scholarship and artistic activities.
- Encourage the creation of original material objects and virtual forms of graphic design and studio art.
- Inspire critical thinking, study and appreciate the aesthetics and history of ideas in graphic design and studio art.

- Foster creative activities and promote careers in the ever-changing fields of graphic design and studio arts.

## Programs

### Majors

- Art Education, BA & BS
- Graphic Design, BA & BS
- Studio Arts, BA & BS

### Minors

- Studio Arts

### Certificates

- Animation
- Art History
- Ceramics
- Graphic Design
- Painting
- Printmaking
- Sculpture

## Memberships

FATE is the national association dedicated to the promotion of excellence in the development and teaching of college-level foundation courses in both studio and art history.

NCATE The National Council for Accreditation of Teacher Education

International Sculpture Center (ISC) is a member-supported, nonprofit organization that champions the creation and understanding of sculpture and its unique, vital contribution to society.

## Facilities and Services

The department provides ten specialized and two multi-purpose studios, located in Grove Hall in Brookings, and at the University Center in Sioux Falls. The Ritz Gallery is located in Grove Hall and houses a program of public exhibitions with works by students, faculty, alumni, and visiting artists/designers throughout the year. Ritz exhibitions offer visual art enrichment for the campus, community, and the state of South Dakota, as well as the public scrutiny of the Department programs in all of their variety. The annual schedule of 20 exhibitions also functions heavily in the curriculum.

## Student Engagement Opportunities

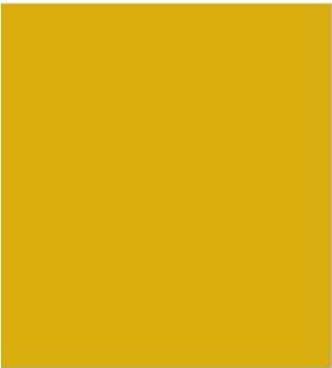
The department offers opportunities for student engagement through creative activities, scholarship and student organizations.

- Art Club
- AIGA (American Institute of Graphic Art)
- Annual juried student art exhibitions
- SoDak Animation Festival
- Honors Art History



# Extended Programs

- *Summer Term 96*
- *Capital University Center - Pierre 97*
- *University Center – Sioux Falls 97*
- *University Center – Rapid City 97*
- *Distance Education 98*
- *Outreach Programs 98*





# Extended Programs

International Affairs & Outreach - Continuing & Extended Education  
Briggs Library Room 119, Box: 2115, Brookings, SD 57007  
e-mail: SDSU.distance@sdstate.edu/

## Introduction

---

The Office of Continuing and Extended Education works to broaden the reach of SDSU, with a commitment to providing quality education no matter where students reside. The office serves students on campus and across the globe. In addition to online education, the Office of Continuing and Extended Education coordinates the program offerings at several off-campus locations. These off-campus attendance centers effectively extend the reach of SDSU by offering

the same quality education to students who want to earn their degree while living and working in their home community. Every year, several thousand students enroll in the 10 degree-programs and 250 courses that SDSU offers online. These often require little more than an internet connection, a book or two, and a motivated, responsible student.

## Summer Term

---

SDSU offers a wide range of courses and degree programs during the summer months as well as numerous special workshops, short courses, distance education classes, evening offerings, and non-credit programs. Summer programming is offered May through August and is characterized by innovation and responsiveness to your needs. Classes are comfortably sized and time is available for

individual attention from the faculty member. Participants need not be regularly matriculated at SDSU but may be admitted as special students through completion of one short form.

The schedule of offerings is located on the Records and Registration website, <http://www.sdstate.edu/campus/records/class-schedules.cfm>





# Capital University Center

The Capital University Center in Pierre was established by the people of Central South Dakota in 1982 to provide opportunities in higher education for the people of the region. In 1983, CUC and South Dakota State University entered into an agreement to enhance educational opportunities for residents of Central South Dakota through the offering of courses designed to transfer to degree-

granting institutions of higher education. In 2003, CUC was fully merged into the SD Board of Regents System. SDSU offers at CUC the Associate of Arts degree in General Studies, the Bachelor of Science degree with a major in Interdisciplinary Studies, and the Master of Science degree in Industrial Management, as well as a variety of general education courses and non-credit programs.

## University Center - Rapid City

The University Center in Rapid City provides both undergraduate and graduate offerings. Undergraduate programs include the Bachelor's of Interdisciplinary Studies (IDS), which allows students whose academic and career goals encompass more than one traditional academic area to put together their own degree unique to their needs. Special opportunities exist in Agriculture, for example, where students may combine an interest in Range Science with Animal Science to form a degree which crosses these two

academic areas. In addition to undergraduate offerings, the College of Education and Human Sciences offers Master of Education and Master of Science programs in Educational Administration and Counseling in Rapid City. These programs serve the military personnel, teachers, administrators, and counselors in Western South Dakota. SDSU coordinates its West River activities with other Regental universities serving the area.

## University Center - Sioux Falls

South Dakota State University, through University Center in Sioux Falls, provides college coursework and degree programs in Sioux Falls. University Center is designed to serve the needs of non-traditional students in the Sioux Falls area. Most courses taught through University Center are taught after 4:00 p.m. The course content, number and contact hours are the same as the identical course taught on campus in the regular day program. However, a typical three-credit course will meet for three hours one night per week rather than one hour three days per week. Coursework is offered during the fall, spring, and summer terms. The start and end

of term for summer at University Center is different from the dates of summer term on campus.

The majors offered in Sioux Falls include General Studies (A.A), Consumer Affairs, General Studies (B.G.S.), Human Development and Family Studies, Graphic Design, Interdisciplinary Studies, Journalism, Nursing, Psychology, and Sociology at the undergraduate level. Pre-engineering courses are also available in Sioux Falls. Master's degrees are offered in Counseling and Nursing. Students in all majors may complete their general education core in Sioux Falls at University Center.



# Distance Education

---

South Dakota State University offers undergraduate and graduate courses using various distance education technologies. Utilizing the DDN (Digital Dakota Network), two-way audio and video classes allow students to actively participate in classroom activities while attending at a location more convenient to the student. South Dakota State University also offers Internet-based courses for students wishing a more flexible schedule. The Internet courses are similar to on campus courses, and students receive the same credit for completing an Internet course as they would for an on campus course. The Electronic University Consortium (EUC) of South Dakota is a single point of contact for information and access to distance education and training available from the six South Dakota public universities. Based upon more than 80 years of

effective off-campus education, South Dakota State University is committed to serving:

- Working adults
- Part-time students
- Time- and place-bound individuals
- K-12 students, teachers and administrators
- Employees seeking career development skills
- Government and military personnel
- Persons with disabilities

For more information concerning distance education call toll free at 866-827-3198, or go to the Distance Education Website at <http://distance.sdstate.edu>

# Outreach Programs

---

South Dakota State University has a long tradition of, and responsibility for, delivering a variety of outreach efforts to locations across the state, region, and world. These include educational services to University Center in Sioux Falls, the University Center in Rapid City, the Capital University Center in Pierre (CUC), Nursing Upward Mobility, and numerous other distance education classes, workshops, and services.

The Office of Continuing and Extended Education provides coordination and support for off-campus educational programs and serves as a conduit for the University's service mission to citizens of South Dakota, the region and world. Outreach Programs are designed to deliver both state- and self-support education through on-site or distance education credit courses, non-credit conferences, short courses, and workshops.

**Credit Programs** - Academic standards and policies governing off-campus and technology communicated courses are identical to the on-campus instructional program. Hence, credit course offerings, instruction and academic standards are the responsibilities of the Vice President for Academic Affairs, Deans of the colleges, and department heads. There are outreach locations throughout South Dakota where credit courses are presented each semester and many courses are available by distance education. Additional locations are added as need and enrollment indicates.

The **Medical Laboratory Science Upward Mobility Program** is committed to providing an education program consistent with the essentials outlined by the National Accrediting Agency for Clinical Laboratory Science (NAACLS). The program provides an educational experience that will provide for the development of

responsible, competent entry-level professionals in medical laboratory science who want to further their training and education.

The curriculum in the program emphasizes basic sciences, medical laboratory sciences, critical thinking skills and communication skills, including structured learning in the laboratories of clinical affiliated hospitals. In order to receive a Bachelor's of Science (B.S.) degree in MLS – a student must successfully complete at least 120 semester credit hours. In addition, to all of the required courses for the program the student must complete all general education requirements and requirements of the College of Arts and Sciences. For further information, contact the program coordinator at 605-688-6016 or visit <http://www.sdstate.edu/cee/degrees/mls.cfm>.

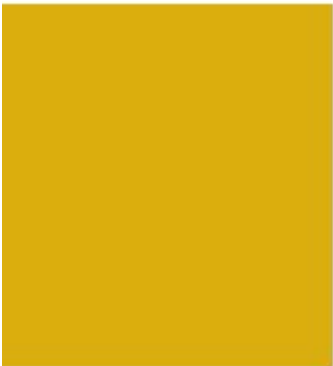
The **Nursing RN Upward Mobility Program** deepens, enhances, and enriches the knowledge and capabilities of already licensed registered nurses across the state and region. This program is designed to enable the registered nurse to provide more comprehensive nursing care, assist in the prevention of disease, promote health care practices, and expand the knowledge and skills necessary for leadership roles in nursing.

The Nursing Upward Mobility program leading to the Bachelor of Science degree is offered for registered nurses desiring to upgrade their associate degrees or diplomas. The program is offered on line via Internet and is available anywhere in the state. Clinical Practicums are performed in the student's community. The Master of Science in Nursing is also offered to various off-campus sites and on-line as needed and as programming allows. For further information, contact the Nursing program at 888-216-9806 or <http://sdstate.edu/nurs/>.



# Academic Programs

- *Certificates 100*
- *Certification Preparation Programs 104*
- *Endorsements 106*
- *Majors and Specializations 107*
- *Minors 209*
- *Pre-Professional Programs 233*



# Academic Programs – Certificate Programs

## Agricultural & Environmental Law Certificate

### Program Contact/Coordinator

GPIDEA Coordinator  
Continuing and Extended Education  
Briggs Library PO Box 2115  
605-688-4154  
E-mail: [gpidea@sdstate.edu](mailto:gpidea@sdstate.edu)  
<http://www.sdstate.edu/cee/>

### Program Information

The Agricultural and Environmental Law certificate program expands the opportunity for degree-seeking students as well as life-long learners to enhance the knowledge of law, emerging legal issues focusing on agriculture, rural communities, and the food industry. The certificate addresses legal concepts pertaining to water quality, land-use and other environmental concerns. Additionally, students gain an appreciation of the challenges created by an expanding population on food production and renewable energy resources.

### Course Delivery Format

Coursework is provided online through the GPIDEA program, a collaborative, multi-institutional consortium. Additional courses may be offered by SDSU instructors on campus and at various attendance centers.

### Requirements for Agricultural and Environmental Law Certificate: 15 Credits

Select two of the following: 6

- HLTH 322 - Public Health Law Credits: 3
- AGECE 356 - Equine Law Credits: 3
- AGECE 366 - Food Law Credits: 3
- AGECE 320 - Ethics in agribusiness Credits: 3

Select one of the following: 3

- AGECE 350 - Environmental law Credits: 3
- AGECE 352 - Agricultural Law Credits: 3

Electives: 6

- Consult advisor to select electives from approved topics such as law, agribusiness, agriculture environment and natural resources.

## Animation Certificate

### Program Contact/Coordinator

Michael (Tim) Steele, Head  
Department of Visual Arts  
South Dakota State University  
Brookings, SD 57007  
605-688-4103  
E-mail: [sdsu.artdept@sdstate.edu](mailto:sdsu.artdept@sdstate.edu)  
<http://www.sdstate.edu/art/index.cfm>

### Program Information

The certificate in animation may be taken by all SDSU students regardless of major and may be selected by Studio Art and Art Education majors as part of their degree. The program prepares students for life-long avocational pursuits in the arts.

### Student Learning Outcomes

Upon completion of the certificate, students are able to demonstrate the following outcomes through studio projects:

- Understanding of basic principles of design and color, concept, media and formats related to animation. This includes the basic traditions, conventions and evolutions of animated forms of art and design.

- Ability to synthesize the use of drawing, two-dimensional design and color, related to animation.
- Knowledge and skills in basic tools, techniques, and technologies sufficient to work from concept to finished animated product.
- The preparation of animation using basic animation techniques and technologies with the opportunity to work at advanced level.

### Additional Academic Requirements

Visual Arts students must maintain at least a program GPA of 2.6 and an overall GPA of 2.5 on a 4.0 scale for the duration of the program.

### Course Delivery Format

Course content is delivered through hands-on studio work combined with lectures, demonstrations and critiques.

Requirements for Animation Certificate: 12 Credits

- ARTD 203 - Animation Foundations I Credits: 3
- ARTD 303 - Animation Foundations II Credits: 3
- ARTD 403 - Intermediate Animation Credits: 3
- ART 492 - Topics Credits: 3

## Art History Certificate

### Program Contact/Coordinator

Michael (Tim) Steele, Head  
Department of Visual Arts  
South Dakota State University  
Brookings, SD 57007  
605-688-4103  
E-mail: [sdsu.artdept@sdstate.edu](mailto:sdsu.artdept@sdstate.edu)  
<http://www.sdstate.edu/art/index.cfm>

### Program Information

The certificate in Art History may be taken by all SDSU students regardless of major and may be selected by Studio Art and Art Education majors as part of their degree. The program prepares students for life-long avocational pursuits in the arts.

### Student Learning Outcomes

Upon completion of the certificate students are able to demonstrate the following outcomes through advanced writing:

- Develop an understanding of the common vocabulary of art and design and of the interaction of these elements and employ this knowledge in analysis.
- Acquire the ability to place works of art and design in historical, cultural and stylistic contexts.
- Ability to analyze works of art and design perceptively and evaluate them critically.
- Opportunity to work at advanced levels.

### Additional Academic Requirements

Visual Arts students must maintain at least a program GPA of 2.6 and an overall GPA of 2.5 on a 4.0 scale for the duration of the program.

### Course Delivery Format

Course content is delivered through classroom lectures.

### Requirements for Art History Certificate: 12 Credits

- ARTH 211 - History of World Art I \* \*\* (G) Credits: 3
- ARTH 212 - History of World Art II \* \*\* (G) Credits: 3
- ARTH 310 - History of US Art and Architecture Credits: 3  
OR ARTH 320 - Modern Art and Architecture Survey Credits: 3
- ART 492 - Topics Credits: 3  
OR ARTH 490 - Seminar (AW) Credits: 3



## Ceramics Certificate

### **Program Contact/Coordinator**

Michael (Tim) Steele, Head  
Department of Visual Arts  
South Dakota State University  
Brookings, SD 57007  
605-688-4103  
E-mail: sdsu.artdept@sdsu.edu  
<http://www.sdsu.edu/art/index.cfm>

### **Program Information**

The certificate in ceramics may be taken by all SDSU students regardless of major and may be selected by Studio Art and Art Education majors as part of their degree. The program prepares students for life-long avocational pursuits in the arts.

### **Student Learning Outcomes**

Upon completion of the certificate, students are able to demonstrate the following outcomes through studio projects:

- Understanding basic design principles related to ceramics: basic traditions, conventions & evolution of the discipline.
- Knowledge and skills in the use of basic tools, techniques and processes sufficient to produce work from concept to finished object including: knowledge of raw materials, technical procedures such as clays, glazes and firing.
- Preparation of clay bodies and glazes, kiln stacking procedures and firing processes & basic special firing methods such as raku.
- The preparation of ceramics using relevant techniques and technologies with opportunity to work at advanced level.

### **Additional Academic Requirements**

Visual Arts students must maintain at least a program GPA of 2.6 and an overall GPA of 2.5 on a 4.0 scale for the duration of the program.

### **Course Delivery Format**

Course content is delivered through hands-on studio work combined with lectures, demonstrations and critiques.

### **Requirements for Ceramics Certificate: 12 Credits**

- ART 251 - Ceramics I \*\* Credits: 3
- ART 351 - Ceramics II Credits: 3
- ART 352 - Ceramics-Intermediate Level Credits: 3
- ART 451 - Ceramics-Advanced Credits: 3

## Entrepreneurship Certificate

### **Program Contact/Coordinator**

Jason Zimmerman, Assistant Department Head  
Department of Economics  
Scobey Hall 142  
605-688-4845  
E-mail: jason.zimmerman@sdsu.edu  
<http://www.sdsu.edu/econ/>

### **Program Information**

The Entrepreneurship Certificate offers a unique set of courses that can help students to develop entrepreneurial ventures. The certificate program offers specialized courses enabling individuals to gain the skills to start or grow their own businesses and pursue entrepreneurial product and service ideas.

### **Student Learning Outcomes**

Entrepreneurial Studies graduates will be able to demonstrate:

- the fundamental knowledge, skills, and experience to think entrepreneurially
- leadership by adopting innovative & creative thought processes
- research, analysis, and presentation skills
- the capacity to evaluate ethical matters within the context of the discipline.

### **Course Delivery Format**

All courses are offered through interactive video at networked sites across South Dakota. Courses are scheduled during evenings and/or weekends.

### **Requirements for Entrepreneurship Certificate: 10 Credits**

Select 10 of the following courses.

- ENTR 202 - Human Resource Operations in Entrepreneurship Credits: 1
- ENTR 203 - Intellectual Property in Entrepreneurship Credits: 1
- ENTR 204 - Finance/ Venture Capital in Entrepreneurship Credit: 1
- ENTR 205 - Legal Issues/Business Structure/Risk Mgmt Credits: 1
- ENTR 206 - Taxation in Entrepreneurship Credits: 1
- ENTR 207 - Financial Analysis/Record Keeping/Accounting in Entrepreneurship Credits: 1
- ENTR 208 - E commerce in Entrepreneurship Credits: 1
- ENTR 301 - Marketing/Promotion in Entrepreneurship Credit: 1
- ENTR 302 - International & Global Marketing in Entrepreneurship Credits: 1
- ENTR 304 - Strategy/Pricing/Location in Entrepreneurship Credit: 1
- ENTR 305 - Selling in Entrepreneurship Credits: 1
- ENTR 306 - The Harvest in Entrepreneurship Credits: 1

## Geographic Information Sciences Certificate

### **Program Coordinator/Contact Information**

George White, Head  
Department of Geography  
109 Wecota Hall  
605-688-4511  
E-mail: george.white@sdsu.edu

### **Program Information**

Geographic information sciences are concerned with geographic concepts, the basic elements used to describe, analyze, model, and make decisions on phenomena distributed on the earth Department and surface. These technologies are utilized by many local, state, and federal governmental agencies, including the US Geologic Survey. With GIS's capability to visually display large amounts of geo-spatial data, thereby making it easier to analyze, there is a demand for college graduates educated in its use.

The certificate in Geographic Information Sciences will prepare students to utilize their knowledge of geography, the physical environment, the cultural environment, geographic applications, and various technologies to meet the challenges of today's society. The program includes the necessary courses to prepare the graduate to function in geographic information science and allows students to develop their knowledge and skills in one of two technical specialties, either GIS or Remote Sensing/Cartography.

The certificate targets people seeking a different level of learning outside of a traditional degree format. The Department delivers the certificate statewide, especially targeting employees of the EROS Data Center. Since the targeted audience will in most cases minimally hold a bachelor's degree, some flexibility in the certificate plan of study will need to be made on a case by case basis. Substitutions and alternate courses may be approved as needed.

### **Academic Requirements**

Students must earn at least a "C" in each course used to meet the certificate requirements.

### **Course Delivery Format**

The program includes lecture, discussion, laboratory research, fieldwork, and travel, with limited online coursework.



## **Requirements for Geographic Information Sciences Certificate: 12 Credits**

- GEOG 383-383L - Cartography and Lab Credits: 3  
OR GEOG 483-483L - Air Photo Interpretation & Lab Credits 3
- GEOG 472 - Introduction to GIS Credits: 3
- Choose one set of technical electives: 6  
GIS technical electives  
Choose two from the following.
  - GEOG 473 - GIS: Data Creation & Integration Credits: 3
  - GEOG 474 - GIS: Vector and Raster Modeling Credits: 3
  - GEOG 475 - GIS Applications Credits: 3
- OR Remote Sensing/Cartography technical electives  
Choose two from the following.
  - GEOG 384-384L -Advanced Cartography & Lab Credits: 3
  - GEOG 484 - Remote Sensing and Lab Credits: 3
  - GEOG 485 -Quantitative Remote Sensing & Lab Credits: 3

## **Graphic Design Certificate**

### **Program Coordinator/Contact Information**

Michael (Tim) Steele, Head  
Department of Visual Arts  
South Dakota State University  
Brookings, SD 57007  
605-688-4103  
E-mail: [sdsu.artdept@sdsu.edu](mailto:sdsu.artdept@sdsu.edu)  
<http://www.sdsu.edu/art/index.cfm>

### **Program Information**

The certificate in graphic design may be taken by all SDSU students regardless of major and may be selected by Studio Art and Art Education majors to assist in their preparation for employment or graduate study. It may also be selected by specific majors such as advertising, architecture, interior design, landscape design, journalism and others to support their major concentration and assist in their preparation for employment and/or graduate study.

### **Student Learning Outcomes**

Upon completion of the certificate, students are able to demonstrate the following outcomes through studio projects:

- Knowledge of basic principles of design, color, concept, media and formats related to graphic design. This includes the basic traditions, conventions and evolutions of design and digital technologies.
- Effective use of typography, image, layout, motion, interactivity and the principles and elements of design.
- Apply skills in basic design, techniques and technology sufficient to work from concept to finished product, including paper and digital applications.
- Ability to critically evaluate about one's personal designs and the designs of others with regard to usefulness, desirability, feasibility, economic viability and sustainability.

### **Additional Academic Requirements**

Visual Arts students must maintain at least a program GPA of 2.6 and an overall GPA of 2.5 on a 4.0 scale for the duration of the program.

### **Course Delivery Format**

Course content is delivered through hands-on studio work combined with lectures, demonstrations and critiques.

### **Requirements for Graphic Design Certificate: 12 Credits**

- ARTD 201 - Graphic Design I Credits: 3
- ARTD 202 - Computer Graphics I Credits: 3
- ARTD 301 - Graphic Design II Credits: 3

- ARTD 302 - Computer Graphics II Credits: 3

## **Painting Certificate**

### **Program Contact/Coordinator**

Michael (Tim) Steele, Head  
Department of Visual Arts  
South Dakota State University  
Brookings, SD 57007  
605-688-4103  
E-mail: [sdsu.artdept@sdsu.edu](mailto:sdsu.artdept@sdsu.edu)  
<http://www.sdsu.edu/art/index.cfm>

### **Program Information**

The certificate in painting may be taken by all SDSU students regardless of major and may be selected by Studio Art and Art Education majors as part of their degree. The program prepares students for life-long avocational pursuits in the arts.

### **Student Learning Outcomes**

Upon completion of the certificate, students are able to demonstrate the following outcomes through studio projects:

- Understanding of basic principles of design and color, concept, media and formats related to painting. This includes the basic traditions, conventions and evolutions of painting as related to representation, illusion and meaning.
- Ability to synthesize the use of drawing, two-dimensional design and color as related to painting.
- Knowledge and skills in basic tools, techniques, and processes sufficient to work from concept to finished product, including paints and surfaces.
- Exploration of expressive possibilities of various media and the diverse conceptual modes available with the opportunity to work at advanced level in at least one technique.

### **Additional Academic Requirements**

Visual Arts students must maintain at least a program GPA of 2.6 and an overall GPA of 2.5 on a 4.0 scale for the duration of the program.

### **Course Delivery Format**

Course content is delivered through hands-on studio work combined with lectures, demonstrations and critiques.

### **Requirements for Painting Certificate: 12 Credits**

- ART 231 - Painting I \*\* Credits: 3
- ART 331 - Painting II Credits: 3
- ART 332 - Painting-Intermediate Level Credits: 3
- ART 431 - Painting III Credits: 3

## **Printmaking Certificate**

### **Program Contact/Coordinator**

Michael (Tim) Steele, Head  
Department of Visual Arts  
South Dakota State University  
Brookings, SD 57007  
605-688-4103  
E-mail: [sdsu.artdept@sdsu.edu](mailto:sdsu.artdept@sdsu.edu)  
<http://www.sdsu.edu/art/index.cfm>

### **Program Information**

The certificate in printmaking may be taken by all SDSU students regardless of major and may be selected by Studio Art and Art Education majors as part of their degree. The program prepares students for life-long avocational pursuits in the arts.

### **Student Learning Outcomes**

Upon completion of the certificate, students are able to demonstrate the following outcomes through studio projects:

- Understanding of basic design principles, concepts, media and formats related to printmaking.

- Ability to synthesize the use of drawing, two-dimensional design and color as related to printmaking.
- Knowledge and skills in the basic tools, techniques and processes sufficient to work from concept to finished product, including knowledge of basic materials and technical procedures such as intaglio and relief.
- The preparation of prints using basic printmaking

#### **Additional Academic Requirements**

Visual Arts students must maintain at least a program GPA of 2.6 and an overall GPA of 2.5 on a 4.0 scale for the duration of the program.

#### **Course Delivery Format**

Course content is delivered through hands-on studio work combined with lectures, demonstrations and critiques.

#### **Requirements for Printmaking Certificate: 12 Credits**

- ART 281 - Printmaking I \*\* Credits: 3
- ART 381 - Printmaking II Credits: 3
- ART 382 - Printmaking-Intermediate Level Credits: 3
- ART 481 - Printmaking-Advanced Credits: 3

## **Sculpture Certificate**

#### **Program Contact/Coordinator**

Michael (Tim) Steele, Head  
 Department of Visual Arts  
 South Dakota State University  
 Brookings, SD 57007  
 605-688-4103  
 E-mail: sdsu.artdept@sdsu.edu  
<http://www.sdsu.edu/art/index.cfm>

#### **Program Information**

The certificate in sculpture may be taken by all SDSU students regardless of major and may be selected by Studio Art and Art Education majors as part of their degree. The program prepares students for life-long avocational pursuits in the arts.

#### **Student Learning Outcomes**

Upon completion of the certificate, students are able to demonstrate the following outcomes through studio projects:

- Understanding of basic design principles with emphasis on three-dimensional design and ability to apply these to sculpture. This includes basic knowledge of the traditions, conceptual modes and evolutions in sculpture.
- Ability to synthesize the use of drawing to support work in sculpture.
- Understanding of the possibilities and limitations of various materials.
- Knowledge and skills in the use of basic tools, techniques, and processes to work from concept to finished product.
- The preparation of sculpture using the broadest range of techniques and concepts with the opportunity to work at advanced level in at least one technique.

#### **Additional Academic Requirements**

Visual Arts students must maintain at least a program GPA of 2.6 and an overall GPA of 2.5 on a 4.0 scale for the duration of the program.

#### **Course Delivery Format**

Course content is delivered through hands-on studio work combined with lectures, demonstrations and critiques.

#### **Requirements for Sculpture Certificate: 12 Credits**

- ART 241 - Sculpture I \*\* Credits: 3
- ART 341 - Sculpture II Credits: 3
- ART 342 - Sculpture III Credits: 3

- ART 441 - Sculpture-Advanced Credits: 3

## **Swine Science Certificate**

#### **Program Contact/Coordinator**

GPIDEA Coordinator  
 Department of Continuing and Distance Education  
 605-688-4154  
 E-mail: gpidea@sdsu.edu

#### **Program Information**

Swine Science is an inter-institutional undergraduate certificate program designed to prepare academically trained students entering the pork industry in such areas as sales and communications, construction, production management, and pharmaceuticals. Upon completion of the required and elective courses, students will be able to apply for a Swine Science Online Certificate from the U.S. Pork Center of Excellence.

#### **Learning Objectives**

Students will be able to:

- Integrate disciplines and concepts in order to facilitate problem solving, creating a more efficient and sustainable production system
- Combine scientific principles and management skills involved in pork production
- Recognize available career opportunities within the pork industry
- Apply personnel, facility, fiscal, and livestock management
- Perform basic swine husbandry
- Understand the impact of societal and industry issues on production management systems
- Explain the pork structure and trends, including production, packing, and integration

#### **Course Delivery Format**

The fully-online programs of the Great Plains IDEA provide flexibility, enabling students to balance career advancement with professional, social and financial commitments. AG\*IDEA, an affiliate of the Great Plains IDEA, is a national consortium of land grant universities offering programs and courses in agriculture disciplines.

#### **Requirements for Swine Science Certificate: 12 Credits**

- AS 202 - Basic Swine Science Credits: 2
- AS 203L - Basic Swine Science Lab Credits: 1
- AS 310 - Employee Mgmt for the Swine Industry Credits: 1
- AS 313 - Swine Health and Biosecurity Credits: 1
- AS 494 - Internship Credits: 1

#### **Production Management**

Select one of the following courses.

- AS 306 - Swine Breeding and Gestation Management Credits: 1
- AS 307 - Swine Farrowing Management Credits: 1
- AS 308 - Swine Nursery and Finishing Management Credits: 1

#### **Elective courses**

Choose five courses not previously selected.

- AS 302 - Swine Environment Management Credits: 1
- AS 303 - Swine Feed Mill Management Credits: 1
- AS 304 - Swine Manure and Nutrient Management Credits: 1
- AS 305 - Swine Nutrition Credits: 1
- AS 306 - Swine Breeding and Gestation Management Credits: 1
- AS 307 - Swine Farrowing Management Credits: 1
- AS 308 - Swine Nursery and Finishing Management Credits: 1
- AS 309 - Swine Business and Records Analysis Credits: 1
- AS 311 - Marketing & Risk Mgmt in the Swine Industry Credits: 1
- AS 312 - Pork Product Quality and Safety Credits: 1
- AS 314 - Pork Export Markets Credits: 1
- AS 315 - Contemporary Issues in the Swine Industry Credits: 1

# Academic Programs – Certification Preparation Programs

## Athletic Coaching Certification

### **Program Contact/Coordinator**

Tracy Nelson, Coordinator  
Department of Health & Nutritional Sciences  
Intramural Building 116  
605-688-4034  
E-mail: Tracy.Nelson@sdstate.edu

### **Program Information**

Persons interested in coaching a sport at the elementary, junior high/middle school, or high school level can complete requirements to have a coaching authorization on their certificate. Some states, including South Dakota, Iowa, and Minnesota, have specific requirements for athletic coaching certification in public schools. Students interested in seeking certification for coaching should consult with the Coaching Certification Coordinator in the Department of Health and Nutritional Sciences to verify the specific requirements for each state. SDSU does require an American Sports Education Program Workshop for those interested in obtaining coaching certification.

To be a coach at the elementary or junior high/middle school level or to be an assistant coach at the high school level, students should take: PE 354-354L - Prevention & Care of Athletic Injuries & Lab Credits: 3

In general, persons wishing to be a head coach at the high school level must also take a course in each sport s/he wishes to coach. The coaching classes are:

- PE 467-467L - Coaching Swimming and Lab Credits: 2
- PE 469-469L - Coaching Baseball/Softball and Lab: Officiating Credits: 2
- PE 470-470L - Coaching Basketball and Lab Credits: 2
- PE 471-471L - Coaching Football & Lab: Officiating Credits: 2
- PE 472-472L - Coaching Golf and Lab Credits: 2
- PE 473-473L - Coaching Track and Field/Cross Country and Officiating Country Credits: 2
- PE 474-474L - Coaching Wrestling and Officiating Credits: 2
- PE 475-475L - Coaching Volleyball and Officiating Credits: 2
- PE 476-476L - Coaching Gymnastics and Officiating Credits: 2

## Soil Science Certification

### **Program Contact/Coordinator**

David Wright, Department Head  
Brent Turnipseed, Undergraduate Teaching Coordinator  
Department of Plant Science  
Agricultural Hall 219  
605-688-5123  
E-mail: David.Wright@sdstate.edu  
E-mail: brent.turnipseed@sdstate.edu

### **Program Information**

The soil science certification curriculum is open to students of all majors and focuses on basic soil sciences, covering such topics as soil biology, chemistry, conservation, contaminants, and land management. Students completing the recommended coursework may seek employment in areas of agricultural production, marketing, management, and conservation.

### **Accreditation, Certification, and Licensure**

Students seeking certification or licensure as a professional soil scientist should contact their advisor and refer to <https://www.soils.org/certifications/cpps-cpsc>

### **Course Delivery Format**

The program coursework is available on campus, in classrooms and laboratories, as well as field-based settings.

### **Requirements for Soil Science Certification: 21 Credits**

The following courses are strongly recommended for students seeking certification or licensure as a professional soil scientist.

- PS 213-213L - Soils and Lab \* \*\* Credits: 3
- PS 310-310L Soil Geography & Land Use Interpret & Lab(G) Credits 3
- PS 323 - Soil Fertility & Plant Nutrient Management Credits: 3
- PS 362-362L - Environmental Soil Mgmt & Lab Credits: 3
- PS 412-512 - Environmental Soil Chemistry Credits: 3
- PS 421-421L/521-521L - Soil Microbiology and Lab Credits: 3
- Soils Elective Credits: 3

## Teacher Education-Certification Only

### **Program Contact/Coordinator**

Andrew Stremmel, Department Head  
Department of Teaching, Learning and Leadership  
Wenona Hall 108  
605-688-6418  
E-mail: andrew.stremmel@sdstate.edu  
<http://www.sdstate.edu/tll/>

### **Program Information**

The certification-only program allows those with baccalaureate degrees to earn a teaching certificate, preparing them for work as highly qualified professional educators in their chosen teaching areas. The curriculum consists of academic study, professional preparation and field experience, providing students with pedagogical and content-specific knowledge, readying them to work with diverse populations of learners.

### **Admission Guidelines**

Admission to the program requires a 2.5 CGPA; a 2.6 GPA in the major; and completion of English Composition, Speech, and College Algebra with no grade less than "C." The following guidelines are applicable at all South Dakota Regental institutions:

- The teacher candidate must have a baccalaureate degree from an accredited institution of higher education.
- In order to be admitted to the certification only program, the candidate must meet teacher education program admission requirements. In addition, the candidate must complete the PRAXIS II content exam in his/her major as specified by the South Dakota Department of Education (SDDOE). The candidate must meet or exceed the minimum score required for certification in South Dakota.
- The candidate will complete all teacher certification courses as identified by the institution, including the appropriate special methods course but not to include other content major courses, and sit for the PRAXIS II Principles of Learning and Teaching exam.
- When the candidate meets the minimum required score on the PRAXIS II Principles of Learning and Teaching exam for certification in South Dakota and all other program completion requirements set forth by the institution, the institution will recommend the candidate for teacher certification.
- The SDDOE will maintain accountability for the candidate scores on the PRAXIS II content exam. The universities will maintain accountability for the candidate scores on the PRAXIS II Principles of Learning and Teaching exam.
- The certification only program is limited to K-12 specific content areas and 7-12 specific content areas.
- Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED & ELED 488.
- Please contact the specific coordinator for information about Art Education, Agricultural Education, Family and Consumer Sciences Education, Music Education, and Physical Education as these programs differ significantly from other content areas.
- There are additional GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

## Accreditation

National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

## Certification and Licensure

To seek certification and licensure, candidates who have completed their baccalaureate degree will complete the teacher education coursework are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

## Course Delivery Format

Courses in Secondary Education are delivered face to face, online and hybrid (face to face and online combination). Most secondary education courses have practical applications in field experience settings in K-12 or 7-12.

## Requirements for Teacher Education Certification Only program

- EDFN 338 - Foundations of American Education Credits: 1-2
- EPSY 302 - Educational Psychology Credits: 3
- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credit: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2
- Teaching Methods Courses Credits: 1-4
- Special Methods (varies by content area) Credits: 1-4
- Native American Course Approved for Teacher Education  
AIS/HIST 368 - History & Culture of the American Indian  
OR AIS/ANTH 421 - Indians of North America Credits:3
- EDFN 365 - Computer-Based Technology & Learning Credits 2
- EDFN 427- Middle School: Philosophy & Application Credits: 2
- EDFN 475 - Human Relations Credits: 3
- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 - Social Foundations, Management & Law Credits: 2
- EDER 415 Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching or SEED 488 - 7-12 Student Teaching Credits: 8

## Education Curriculum for Teachers of Academic Subjects

### Program Contact/Coordinator

Andrew Stremmel, Department Head  
Department of Teaching, Learning and Leadership  
Wenona Hall 108  
605-688-6418  
E-mail: andrew.stremmel@sdstate.edu  
<http://www.sdstate.edu/tll/>

### Program Information

The Secondary Teacher Education program prepares students to teach in an academic major and/or other fields in which they are appropriately prepared. Students complete the requirements for a B.S or B.A. degree in an academic major before or while meeting the requirements for South Dakota teacher certification. The program in Teacher Education is a certification program in which students who are completing a major in an academic discipline of their choice can become certified in secondary education (middle and high school) in one or several subject areas and/or K-12 teaching in art, world languages, music, or physical education.

### Course Delivery Format

Courses in Secondary Education are delivered face to face, online and hybrid (face to face and online combination). Most secondary education courses have practical applications in field experience settings in K-12 or 7-12.

### Program Admission

The coursework for teacher education is divided into three professional semesters. In addition, once one has finished the

professional sequence, he/she must be recommended for certification to teach in South Dakota. The requirements for each are as follows:

### Admission into Professional Semester I:

In order to register for the two courses of Professional Semester I (PS I) a candidate must be at least a sophomore at the beginning of the semester in which he/she is taking the PS-I courses.

### Admission into Professional Semester II:

Candidates admitted into Professional Semester II are considered members of the Teacher Education Program and are classified as "Education Candidates." In order to achieve this status, a candidate must have:

1. Achieved a junior status at the University;
2. Completed PS-I with grades of "C" or better and be recommended by PS-I faculty;
3. Hold an overall GPA of 2.5 or higher;
4. Completed PSYC 101, SOC 100 or SOC 150, with a grade of "C" or better;
5. Met competency requirements:
  - English: a grade of "C" or above in ENGL 101 or credit by examination
  - Math: a grade of "C" or above in MATH 102 or 104 or higher level math course or credit by examination
  - Speech: a grade of "C" or above in SPCM 101 or higher or credit by examination;
  - Completed an application for admission to Teacher Education which includes appropriate biographical and background information; and
6. Have a current transcript on file in the department office.

### Admittance into Professional Semester III:

Education candidates will be permitted to register for the courses of Professional Semester III if they have:

1. Achieved senior standing at the University;
2. Achieved a passing score on the Praxis Content Exam;
3. Been admitted to the Teacher Education Program and successfully completed all standard requirements therein (or alternatives decided by the Admissions and Scholastic Standards Committee);
4. Successfully completed all prerequisite coursework for the professional education program, including one special methods course\* in a major field, the South Dakota Indian Studies requirement and the computer proficiency requirement;
5. Have the following minimum GPA's:
  - Education courses 2.8
  - All courses completed at the "c" level or above
  - Courses in the major 2.6
  - Overall cumulative 2.5
  - OR Completed all competency plans and/or other activities prescribed by the Admissions and Scholastic Standards Committee;
- Have recommendations on file in the department office from both the major adviser and the content methods instructor (these recommendations must include the candidate's GPA in his/her major);
- Meet with the placement supervisor of the Office of Field Experiences before October 1 (for those student teaching in Spring) or February 1 (for those student teaching in the Fall) and complete an Application for Student Teaching (rather than wait for these deadlines, it is advisable to complete this application at least 1 semester before PS-III);
- Hold non-probationary status; and
- When student teaching, a background check may be required.  
\*See major department section for special methods courses.

### Recommendation for Certification

In order to be recommended for certification, a candidate must have:

1. A bachelor's degree, in a approved content area;
2. Satisfactory student teaching recommendations from both the cooperating teacher(s) and university supervisor;
3. The following minimum GPA's:
  - Education courses 2.8
  - All courses completed at the "c" level or above
  - Courses in the major 2.6
  - Overall cumulative 2.5

**OR** Completed all competency plans and/or other activities prescribed by the Admissions and Scholastic Standards Committee;

4. Taken the required exit exam(s), including the Praxis Principles of Teaching and Learning earning required cut scores;
5. Satisfactorily completed exit interview with Performance Portfolio and required projects in PS-III; and
6. Applied for certification through the Certifying Officer in the College of Education and Human Sciences.

### Teaching Specialization Requirements

#### Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

#### Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0

#### Complete prior to entry into Professional Semester III

- Special Methods (varies by content area) Credits: 1-4
- Native American Course Approved for Teacher Education Credits: 3  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
**OR** AIS/ANTH 421 - Indians of North America\*\*

- EDFN 365 - Computer-Based Tech & Learning Credits: 2
- EDFN 427 Middle School: Philosophy & Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

#### Professional Semester III

- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 - Social Foundations, Management & Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching **OR** SEED 488 - 7-12 Student Teaching Credits: 8

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED 488 and ELED 488

#### Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

## Academic Programs – Endorsements

### Early Childhood Education Kindergarten Education Endorsement

#### Program Contact/Coordinator

Lynda Venhuizen, ECE Coordinator  
Department of Teaching, Learning, and Leadership  
Pugsley Hall 141 Box 2203  
South Dakota State University  
Brookings, SD 57007  
<http://www.sdstate.edu/tll/>

#### Program Information

Students or graduates may seek additional certification to their primary teaching certificates authorizing them to teach in other age/grade spans and/or content areas. A Kindergarten Education Endorsement may be added to the Birth through Age 5 Specialization, Birth through Age 8 Specialization, or Cooperative Programs in the Early Childhood Education major.

#### Accreditation

National Association for the Education of Young Children  
National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

#### Certification and Licensure

Candidates who have completed the curriculum may apply for the Kindergarten Education endorsement on their teaching certificate. They are not required to take an additional PRAXIS test to add this endorsement in South Dakota. However, those educators seeking initial certification and licensure in their content area must complete the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

#### Requirements for Kindergarten Education Endorsement 9 Credits

- ELED 412 - Kindergarten Education Credits: 3 (Fall)
- ECE 495 - Practicum Credits: 1\*
- Additional coursework in early childhood education: 5

\*Verified teaching experience in kindergarten within the five-year period immediately preceding the application may be accepted in lieu of the above field experiences at the equivalency of one year's teaching experience for one semester hour credit for a maximum of three semester hours of the total credit hours required.

### Early Childhood Special Education Endorsement

#### Program Contact/Coordinator

Lynda Venhuizen, ECE Coordinator  
Department of Teaching, Learning, and Leadership  
Pugsley Hall 141 Box 2203  
South Dakota State University  
Brookings, SD 57007  
<http://www.sdstate.edu/tll/>

#### Program Information

Students or graduates may seek additional certification to their primary teaching certificates authorizing them to teach in other age/grade spans and/or content areas. An Early Childhood Special Education Endorsement may be added to the Birth through Age 5 Specialization, Birth through Age 8 Specialization, or Cooperative Programs in the Early Childhood Education major.

#### Accreditation

National Association for the Education of Young Children  
National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

#### Certification and Licensure

With this curriculum and the accompanying early childhood education coursework, candidates are eligible to take the Praxis content tests and apply for a teaching license with an early childhood special education endorsement in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state. Additionally, students seeking the early childhood special education endorsement must take and pass a Praxis content exam related to early childhood special education. The minimum scores varies by state.

#### Requirements for Early Childhood Special Education Endorsement: 9 Credits

- ECE 468 - Early Intervention in Family-Centered Practices Credits: 3
- ECE 470 - Early Childhood Inclusion Strategies Credits: 3
- ECE 495 - Practicum Credits: 3



# Academic Programs – Majors

## Advertising Major

### Program Coordinator/Contact

Mary Arnold, Head  
Department of Journalism and Mass Communication  
Yeager Hall 211  
605-688-4171  
E-mail: mary.arnold@sdsu.edu  
http://www.sdsu.edu/mcom/

### Program Information

A major in advertising will prepare students with effective written and visual communication, critical thinking, design, and research skills. Graduate have experience working on teams to develop solutions for clients and competitive design strategies. Students are encouraged to select one of the following emphases within Advertising: Creative Strategy, Interactive Media, or Public Relations.

- *Interactive Media Emphasis.* Students seeking employment in the areas of print and broadcast, online and social media planning; interactive marketing; research; and media sales take this emphasis.
- *Creative Strategy Emphasis.* Students who want to work in the account management and creative areas of advertising, including copywriting, take this emphasis. It is recommended that students seeking a career in advertising art direction take this emphasis and pursue a double major in Graphic Design or a minor in Art through the Department of Visual Arts.
- *Public Relations Emphasis.* Students who want to work in public relations and corporate marketing positions requiring an understanding of integrated marketing communications take this emphasis.

### Academic Requirements

Advertising majors must have a “C” or better in Freshman Composition; must have a graduation average of 2.5 in journalism and mass communication courses; take a minimum of 72 credit hours outside of journalism and mass communication, and must have grades of “C” or better in all major courses.

### Equipment and Supplies

Students are also encouraged to purchase a Macintosh laptop and software appropriate for the discipline.

### Accreditation

Accrediting Council on Education in Journalism and Mass Communications (ACEJMC).

### Course Delivery Format

The department offers coursework in classroom, studio, online, and field-based settings.

### Requirements for Advertising Major: 120 Credits

Bachelor of Arts and Bachelor of Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication Credits: 3
- Goal #2 Oral Communication Credits: 3
- Goal #3 Social Sciences/Diversity ECON 201 Credits: 6
- Goal #4 Arts and Humanities/Diversity: Credits: 6 (MCOM 151 Recommended)
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar MCOM 109 Recommended Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 28-34

Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 41

- ECON 370 - Marketing Credits: 3
- MCOM 210-210L - Basic Newswriting and Studio Credits: 3
- MCOM 220-220L – Intro to Digital Media and Lab Credits: 3
- MCOM 416 - Mass Media in Society (G) Credits: 3  
OR ADV 476 - International and Ethnic Advertising Credits: 3
- MCOM 430-530 - Media Law Credits: 3
- MCOM 494 - Internship Credits: 2
- ADV 370 - Advertising Principles Credits: 3
- ADV 371-371L Advertising Copy & Layout & Studio (AW) Credits 3
- ADV 442-442L - Integrated Marketing Communication and Campaigns Studio Credits: 3, 0
- ADV or MCOM Electives Credits: 0-5

Choose one of the following suggested emphases: 12

### Creative Strategies Emphasis

- ADV 314 - Sales, Promotion and Marketing Credits: 3
- ADV 372-372L - Advertising Media Strategies & Lab Credits: 3
- ADV 489 - Portfolio Production & Design Credits: 1-3
- MCOM 339-339L - Publication Design and Lab Credits: 3,0  
OR MCOM 359-359L Desktop Publishing & Projects & Lab Credits: 3

### Interactive and Media Emphasis

- ADV 372-372L - Advertising Media Strategies& Lab Credits: 3
  - ADV 411-411L - Media Analytics and Studio Credits: 3
- Select Two Courses from the Following Group
- ADV 314 - Sales, Promotion and Marketing Credits: 3
  - ADV 343 - Strategies - Public Relations Credits: 3
  - ADV 472 - Media Research and Planning Credits: 3

### Public Relations Emphasis

- ADV 243 - Public Relations Principles Credits: 3
- ADV 343 - Strategies - Public Relations Credits: 3
- ADV 472 - Media Research and Planning Credits: 3
- MCOM 340-340L - Broadcast Announcing and Performance and Lab Credits: 3 OR ADV 492 - Topics Credits: 1-5

Electives: 8-13

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

# Agricultural & Biosystems Engineering Major

## Program Coordinator/Contact

Van Kelley, Department Head  
Department of Agricultural and Biosystems Engineering  
Agricultural Engineering 107  
605-688-5141  
E-mail: van.kelley@sdstate.edu  
http://www.sdstate.edu/abe/

## Program Information

Agricultural and Biosystems Engineering is the science of engineering applied to the products and processes of agriculture and related industries. Design projects solicited from industry provide students with relevant "real world" design experience. This provides hands on learning in variety of technical areas such as natural resource management, irrigation and drainage, water resources development, machine dynamics and design, precision agriculture, agricultural power, properties and processing of biological materials, environmental control for livestock, indoor air quality, structures, control and disposal of agricultural wastes, computers, or instrumentation.

## Additional Academic Requirements

To earn the Bachelor of Science Degree in Agricultural and Biosystems Engineering, students must have an average grade of "C" or better in courses taken and required in the ABE curriculum and take the Fundamentals of Engineering examination prior to graduation.

## Student Outcomes

Agricultural and Biosystems Engineering graduates will:

- Advance within the agricultural and biosystems engineering profession as practicing engineers and consultants to positions of management, supervision, or leadership in a diversity of organizations or companies within the areas of agricultural and off-road machines; processing of food, fiber, and energy products; management of natural resources; structural systems; information and control systems; or other related areas.
- Obtain graduate degrees at recognized research universities in agricultural and biosystems engineering or related fields.
- Obtain professional registration or other professional certification where appropriate.

## Accreditation, Certification, and Licensure

The undergraduate Agricultural and Biosystems Engineering program is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>. ABET is a federation of 32 professional societies representing applied science, computing, engineering, and technology. Most state licensing boards and certification programs require graduation from an ABET-accredited program as the first step in the registration or certification process for professional practice. Additionally, the Fundamentals in Engineering examination is required for becoming a registered Professional Engineer. For more details on dates, time and location, go to the South Dakota Board of Technical Professions website.

## Course Delivery Format

The ABE program engages students in lecture, laboratory, and field based learning experiences. Senior students are members of design teams which design, build, test and demonstrate engineered products and processes.

## Requirements for Agricultural and Biosystems Engineering Major: 130 Credits

Bachelor of Science

System General Education Requirements\*: 33

- Goal #1 Written Communication: ENGL 101 & 2771 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6

- Goal #5 Mathematics: MATH 123 Credits: 4
- Goal #6 Natural Sciences: PHYS 211-211L and 213-213L Credits: 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: GE 109-109L\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

Major Requirements: 80

- BIOL 101-101L - Biology Survey I and Lab Credits: 3
- MATH 125 - Calculus II \* Credits: 4
- MATH 225 - Calculus III \* Credits: 4
- MATH 321 - Differential Equations Credits: 3
- CHEM 112-112L - General Chemistry I & Lab\* Credits: 3, 1
- CSC 130 - Visual Basic Programming Credits: 3
- GE 101 - Introduction to Engineering and Technology Credits: 1
- GE 121 - Engineering Design Graphics I Credits: 1
- GE 123 - Computer Aided Drawing Credits: 1
- EM 214 - Statics Credits: 3
- EM 215 - Dynamics Credits: 3
- EM 321 - Mechanics of Materials Credits: 3
- ME 314 - Thermodynamics Credits: 3
- EM 331 - Fluid Mechanics Credits: 3
- EE 300-300L - Basic Electrical Engineering I & Lab Credits: 3
- ABE 132 - Engineering Tools for Agricultural & Biological Engineers Credits: 1
- ABE 222 - Project Development for Agricultural and Biological Engineers Credits: 1
- ABE 314-314L - Ag Power and Machines and Lab Credits: 4
- ABE 324-324L Ag Structures & Indoor Envnt & Lab Credits: 4
- ABE 343-343L - Engineering Properties of Biological Materials and Lab Credits: 3
- ABE 434-434L - Natural Resources Engineering & Lab Credits: 4
- ABE 444-444L/544-544L - Unit Operations of Biological Materials Processing and Lab Credits: 4
- ABE 463-463L - Instrumentation for Agricultural and Biological Systems and Lab Credits: 3
- ABE 464-464L - Monitoring and Controlling Agriculture and Biological Systems and Lab Credits: 2
- ABE 411 - Design Project III Credits: 2
- ABE 422 - Design Project IV (AW) Credits: 2
- Select one of the following courses
  - MATH 331 - Advanced Engineering Mathematics Credits: 3
  - MATH 373 - Introduction to Numerical Analysis Credits: 3
  - STAT 281 - Introduction to Statistics Credits: 3
- Select one of the following courses
  - CHEM 108-108L - Organic & Biochemistry & Lab Credits: 4, 1
  - CHEM 326-326L - Organic Chemistry I and Lab Credits: 3, 1
- Select one of the following courses
  - ABE 330 - Entrepreneurship Opportunities in Agricultural and Biosystems Engineering Credits: 1
  - ABE 494 - Internship Credits: (1-6)
  - ABE 496 - Field Experience Credits: 1-6
  - ABE 498 - Undergraduate Research/Scholarship Credits: 1-3

Electives: 12

- The elective program for each student must be approved by the advisor and will include 12 credit hours of technical electives, at least 6 credits from 300 or above level courses in the College of Engineering.
- GE 310 - Geometric Dimensioning and Tolerancing Credits: 2
- AST 353-353L Physical Climatology & Meteorology & Lab Credits 3
- ABE 491 - Independent Study Credits: 1-3
- ABE 492/592 - Topics Credits: 1-4
- ABE 494 - Internship Credits: 1-6
- ABE 496 - Field Experience Credits: 1-6
- ABE 497 - Cooperative Education Credits: 1-6

- CSC 314 - Assembly Language Credits: 3
- CSC 317 - Computer Organization and Architecture Credits: 3
- EE 422 - Engineering Economics and Management Credits: 2<sup>2</sup>
- GEOG 472 - Introduction to GIS Credits: 3
- MATH 331 - Advanced Engineering Mathematics Credits: 3
- MNET 320-320L - Computer Aided Design/Drawing and Lab Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3

### Food and Biomaterials Engineering

- ABE 455-455L - Principles of Biological Separation Processing and Lab Credits: 3
- AS 345-345L - Value-Added Meat Products and Lab Credits: 3
- AS 441-541 - Advanced Meat Science and Lab Credits: 3
- CEE 323-323L Water Supply & Wastewater Engineering & Lab Credits 3
- CEE 424/524 - Industrial Waste Treatment Credits: 3
- CHEM 328-328L - Organic Chemistry II & Lab Credits: 3, 1
- DS 313-313L - Technical Control of Dairy Products I & Lab Credits: 3
- DS 321-321L - Dairy Product Processing I and Lab Credits: 5
- DS 322-322L - Dairy Product Processing II and Lab Credits: 5
- DS 421 - Dairy Plant Management Credits: 3
- MICR 231-231L - General Microbiology & Lab Credits: 4
- MICR 311-311L - Food Microbiology and Lab Credits: 4
- NFS 341-341L - Food Science and Lab Credits: 4
- NFS 351-351L - Principles of Food Processing & Lab Credits: 3
- NFS 360-360L - Food Chemistry and Lab Credits: 4

### Structures and Environment Emphasis

- CEE 346-346L - Geotechnical Engineering & Lab Credits: 4
- CEE 353 - Structural Theory Credits: 3
- CEE 455 - Steel Design Credits: 3
- CEE 456 - Concrete Theory and Design Credits: 3
- CEE 482 - Engineering Administration Credits: 3<sup>2</sup>
- ME 410 - Principles of HVAC Engineering Credits: 3
- ME 415 - Heat Transfer Credits: 3
- ME 439-439L - HVAC System Design and Lab Credits: 3
- ME 451 - Automatic Controls Credits: 3
- MNET 320-320L Computer Aided Design/Drawing & Lab Credits 3

### Power and Machinery Emphasis

- ABE 350-350L - Hydraulic & Pneumatic Systems & Lab Credits: 3
- ME 321 - Fundamentals of Machine Design Credits: 3
- ME 323 - Vibrations Credits: 3
- ME 341-341L - Metallurgy and Lab Credits: 3
- ME 362 - Industrial Engineering Credits: 3
- ME 412 - Internal Combustion Engines Credits: 3
- ME 415 - Heat Transfer Credits: 3
- ME 421 - Design of Machine Elements Credits: 3
- ME 438-438L - Machine Design-Case Studies & Lab Credits: 3
- PS 362-362L - Environmental Soil Mgmt & Lab Credits: 3

### Water and Natural Resources Engineering Emphasis

- ABE 390 - Seminar Credits: 1
- AST 463/563 - Agricultural Waste Management Credits: 3
- CEE 106-106L - Elementary Surveying and Lab Credits: 4
- CEE 323-323L Water Supply & Wastewater Engineering&Lab Credits 3
- CEE 434/534 - Hydrology Credits: 3
- CEE 346-346L - Geotechnical Engineering and Lab Credits: 4
- CEE 423 - Municipal Water Distribution & Collection System Design Credits: 3
- CEE 432 - Hydraulic Engineering Credits: 3
- PS 213-213L - Soils and Lab \* \*\* Credits: 2, 1
- PS 362-362L - Environmental Soil Mgmt and Lab \*\* Credits: 3
- PS 483 - Irrigation – Crop and Soil Practices Credits: 3

**Total Required Credits: 130**

### Curriculum Notes

<sup>1</sup>Required to receive a "C" or better in ENGL 277.

<sup>2</sup>Technical elective credit not given for both CEE/CM 482 and EE 422.

<sup>3</sup>Students must take these courses, with the exception that they may choose to replace one of these four Agricultural and Biosystems Engineering courses with four additional technical elective credits (300 or higher in the College of Engineering) in addition to the basic technical elective requirements.

\* The 30 credit Board of Regents System General Education Requirements (SGRs).

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Agricultural & Resource Economics Major

### Program Contact/Coordinator

Eluned Jones, Head

Jason Zimmerman, Assistant Department Head

Department of Economics

Scobey Hall 142 605-688-4845

E-mail: jason.zimmerman@sdstate.edu

http://www.sdstate.edu/econ/

### Program Information

The major in Agricultural and Resource Economics provides a rigorous education in economic theory and quantitative methods applied to agriculture and resource management. Students develop analytical and critical-thinking skills, and are well prepared for careers in agricultural policy analysis, natural resource stewardship, or future graduate study. The curriculum emphasizes economic theory, agricultural economics, quantitative methods, and agricultural and biological sciences electives. Students interested in pursuing a graduate degree in economics or related fields are well prepared.

### Program Admission

To be admitted, students must have completed at least 64 semester credits toward graduation, earned a cumulative grade point average of at least 2.1 for all courses taken, and attained at least a 2.1 grade point average for the following courses: ECON 201, ECON 202, ACCT 210, ENGL 101, and MATH 121 (or MATH 123). Students remain enrolled in Pre-Economics in the appropriate college until the requirements are met.

### Student Learning Outcomes

Agricultural and Resource Economics students will:

- Understand the economic principles and complexities that underlie the global economy;
- Apply economic concepts and techniques for decision-making;
- Communicate effectively;
- Think critically;
- Behave ethically and humanely.

### Course Delivery Format

The program offers courses on campus, with limited online coursework, usually during the summer.

### Requirements for Agricultural & Resource Economics Major: 120 Credits

Bachelor of Science in Agriculture

System General Education Requirements\*: 31-32

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 121 or MATH 123 Credits: 4-5
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 5

- Select Group 1 Courses for Bachelor of Science in Ag Credits: 5

Major Requirements: 49

- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- ECON 201 - Principles of Microeconomics \* \*\*Credits: 3
- ECON 202 - Principles of Macroeconomics \* (G) Credits: 3
- ECON 301 - Intermediate Microeconomics Credits: 3
- ECON 302 - Intermediate Macroeconomics Credits: 3
- ECON 372 - Introduction to Resource & Environmental Economics Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3
- ECON 423 - Introduction to Econometrics Credits: 3
- ECON 428 - Mathematical Economics Credits: 3
- ECON 472 - Resource & Environmental Economics Credits: 3
- AGECE 271-271L - Farm and Ranch Mgmt and Lab Credits: 4
- AGECE 354 - Agricultural Marketing and Prices Credits: 3
- AGECE 479 - Agricultural Policy (AW) (G) Credits: 3
- ENGL 379 - Technical Communication (AW) Credits: 3

Choose one of the following:

- ECON 431-531 - Managerial Economics Credits: 3
- ECON 440-540 - Economics of International Sector Credits: 3
- ECON 450-550 - Industrial Organization Credits: 3
- ECON 460-560 - Economic Development \*\* (G) Credits: 3

Choose one of the following:

- AGECE 352 - Agricultural Law Credits: 3
- AGECE 354 - Agricultural Marketing and Prices Credits: 3
- AGECE 430 Advanced Agricultural Marketing & Prices Credits: 3
- AGECE 473-473L - Rural Real Estate Appraisal & Lab Credits: 3

Choose one of the following:

- AGECE 478-478L - Agricultural Finance and Lab Credits: 3
- BADM 310 - Business Finance Credits: 3

General Electives: 28-30

### Environmental Economics Emphasis:

Choose one of the following:

- PS 213-213L - Soils and Lab \* \*\* Credits: 2, 1
- NRM 110 - Environmental Conservation \*\* (G) Credits: 3

Choose two of the following:

- BIOL/PHIL 383 - Bioethics \*\* (G) Credits: 4
- PHIL 100 - Introduction to Philosophy \* Credits: 3
- PHIL/REL 454 - Environmental Ethics \*\* Credits: 3  
One of these courses may be substituted for ECON 428, Mathematical Economics.
- ABS 475-475L - Integrated Natural Resource Mgmt & Lab (AW) Credits: 3
- PS 362-362L - Environmental Soil Mgmt and Lab \*\* Credits: 3
- PS 446 - Agroecology (G) Credits: 3

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Agricultural Business Major

### Program Coordinator/Contacts

Eluned Jones, Head

Jason Zimmerman, Assistant Department Head

Department of Economics

Scobey Hall 142

605-688-4845

E-mail: jason.zimmerman@sdstate.edu

### Program Information

The major in Agricultural Business prepares students to excel in the challenging environment of the modern agricultural industry. Graduates are creative, adaptable, and well educated in economics and management. The program combines education in management and economics with a strong technical knowledge in production agriculture and skills in problem solving. The curriculum emphasizes economic theory, agricultural business management, quantitative methods, and agricultural and biological science electives. Students interested in pursuing a graduate degree in economics, business, or related fields are well prepared by this degree program.

### Program Admission

To be admitted, students must have completed at least 64 semester credits toward graduation, earned a cumulative grade point average of at least 2.1 for all courses taken, and attained at least a 2.1 grade point average for the following courses: ECON 201, ECON 202, ACCT 210, ENGL 101, and MATH 121 (or MATH 123). Students remain enrolled in Pre-Economics in the appropriate college until the requirements are met.

### Student Learning Outcomes

Agricultural Business students will:

- Understand the economic principles and complexities that underlie the global economy;
- Apply economic concepts and techniques for decision-making;
- Communicate effectively;
- Think critically;
- Behave ethically and humanely.

### Course Delivery Format

The program offers courses on campus, with limited online coursework, usually during the summer.

### Requirements for Agricultural Business Major: 120 Credits Bachelor of Science in Agriculture

System General Education Requirements\*: 31-32

- Goal #1 Written Communication: ENGL 101 **and** 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 121 **or** MATH 123 Credits: 4
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 5

- Select Group 1 Courses for Bachelor of Science in Ag Credits: 5

Major Requirements: 48

- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- ECON 201 - Principles of Microeconomics \* \*\* Credits: 3
- ECON 202 - Principles of Macroeconomics \* (G) Credits: 3
- ECON 301 - Intermediate Microeconomics Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3

- BADM 310 - Business Finance Credits: 3
- BADM 360 - Organization and Management Credits: 3
- BADM 424 - Operations Research Credits: 3
- BADM 460 - Human Resource Management Credits: 3
- AGECE 354 - Agricultural Marketing and Prices Credits: 3
- AGECE 479 - Agricultural Policy (AW) (G) Credits: 3
- CSC 325 - Management Information Systems Credits: 3
- ENGL 379 - Technical Communication (AW) Credits: 3
- AGECE 371 - Agricultural Business Management Credits: 3

Choose one of the following: 3

- BADM 350 - Legal Environment of Business Credits: 3
- AGECE 352 - Agricultural Law Credits: 3

Choose one of the following: 3

- ECON 302 - Intermediate Macroeconomics Credits: 3
- ECON 330 - Money and Banking Credits: 3

Choose two of the following: 6

(at least one must be at the 400-level)

- AGECE 271-271L - Farm and Ranch Mgmt and Lab Credits: 4
- AGECE 364 - Introduction to Cooperatives Credits: 3
- AGECE 372 - Intro to Resource & Environmental Economics Credits: 3
- AGECE 430 - Advanced Ag Marketing and Prices Credits: 3
- AGECE 454 - Economics of Grain & Livestock Marketing Credits: 3
- AGECE 471 - Advanced Farm & Ranch Management Credits: 3
- AGECE 473-473L - Rural Real Estate Appraisal & Lab Credits: 3
- AGECE 478-478L - Agricultural Finance and Lab Credits: 3
- AGECE 484 - Trading in Agricultural Futures and Options Credits: 3
- AGECE 494 - Internship Credits: 1-6
- ECON 472 - Resource & Environmental Economics Credits: 3

**Electives: 20-22**

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Agricultural Education, Communication and Leadership Major - Agricultural Education specialization

### Program Contact/Coordinator

Donald Marshall, Associate Dean

College of Agriculture and Biological Sciences

Agricultural Hall 156

605-688-5133

E-mail: Donald.Marshall@sdstate.edu

### Program Information

The Agricultural Education Communication and Leadership Major is a multidisciplinary program that provides a strong foundation in agricultural sciences. The major allows students the flexibility to select a plan of study based on their interests and skills by choosing one of three specializations: Education, Communication, or Leadership. Students in the Agricultural Education specialization will complete a professional education curriculum, as well as supportive instruction in technical agriculture, basic science, and other competencies. Graduates of the Education Specialization will qualify for a secondary teaching certificate, and will also be prepared for a variety of careers in the agricultural industry.

### Student Learning Outcomes

Upon completion of the major, students will:

- Have broad knowledge of animal science, agronomy, agricultural systems technology, and agri-business and be prepared to teach these subjects at the secondary level.
- Understand education concepts related to effective teaching and learning at the secondary level of education.
- Be prepared to coordinate an effective program of high school vocational agriculture and serve as FFA advisor.
- Be prepared for a variety of careers in agricultural production or agribusiness.
- Locate and evaluate information to aid in decision making.
- Have sufficient core competencies for effective lifetime learning.
- Have a broad understanding of global challenges and issues related to food systems and agriculture
- Demonstrate effective written and oral communications skills
- Demonstrate critical thinking and decision making skills

### Accreditation, Certification, and Licensure

Accreditation

National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Course Delivery Format

Most courses are delivered by traditional lecture/format, and some are offered by online delivery.

### Requirements for Agricultural Education, Communication and Leadership Major - Agricultural Education specialization: 120 Credits

Bachelor of Science in Agriculture

System General Education Requirements: 31

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101 Credits: 3
- Goal #3 Social Sciences/Diversity: SOC 100 and ECON 201 or ECON 202 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics MATH 102 Credits: 3
- Goal #6 Natural Sciences: BIOL 101-101L and CHEM 106-106L Credits: 7

Institutional Graduation Requirements: 5

- Goal #1 First Year Seminar: AGED 109 Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: PS 213-213L\*\* Credits: 3

Major Requirements: 57-58

- GEOG 131-131L Physical Geog: Weather & Climate & Lab Credits 4
- BIOL 103-103L - Biology Survey II and Lab Credits: 3 or GEOG 132-132L Phys Geog Natural Landscapes & Lab Credits: 4
- PHYS 101-101L - Survey of Physics \* & Lab Credits: 4
- AGECE 271-271L - Farm and Ranch Mgmt and Lab Credits: 4
- ANTH 421-521 - Indians of North America Credits: 3
- AS 101-101L - Introduction to Animal Science & Lab Credits: 3
- AS 241-241L - Introduction to Meat Science and Lab Credits: 3
- AS 285-285L - Livestock Eval and Marketing and Lab Credits: 4



- AST 202-202L Construction Technology& Materials & Lab Credits 2
- AST 311-311L - Applied Electricity for Teachers & Lab Credits: 1
- AST 211-211L Ag & Outdoor Power for Teachers & Lab Credits: 1
- AGED 491 - Independent Study Credits: 1-3 (1 credit Welding)
- AGED 404 - Program Plan in Ag Education (AW) Credits: 3
- AGED 408 - Supervision of Work Experience & Youth Orgs Credits: 2
- AGED 412-412L - Preparation for Supervised Teaching Internship in AGED and Lab Credits: 4, 0
- AGED 488 - 7-12 Student Teaching in AGED Credits: 6
- AGED 494 - Internship Credits: 1-12 (1 credit required)
- HO 111-111L - Introduction to Horticulture & Lab Credits: 2, 1
- PS 103-103L - Crop Production and Lab Credits: 3
- NRM 110 - Environmental Conservation \*(G) Credits: 3  
or WL 220 - Intro to Wildlife and Fisheries Mgmt Credits: 3
- DS 130-130L - Introduction to Dairy Science and Lab Credits: 3  
or DS 231 - Dairy Foods Credits: 3

Supporting Course: 20-3

- AGED 405 - Philosophy of Career and Technical Ed Credits: 2
- AGED 295 - Practicum Credits: 1
- EDFN 365 - Computer-Based Technology and Learning Credits: 2
- EDFN 427 - Middle School: Philosophy & Application Credits 2
- EDFN 475 - Human Relations Credits: 3
- EPSY 302 - Educational Psychology Credits: 3
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0
- SPED 405 Educating Secondary Students w/ Disabilities Credits 2
- SEED 450 - 7-12 Reading & Content Literacy Credits: 2

Elective Credits: 2-3

Contact advisor for approved agricultural related electives.

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Agricultural Education, Communication & Leadership Major - Communication specialization

### Program Contact/Coordinator

Donald M. Marshall  
Associate Dean and Director  
Academic Programs of the College of  
Agriculture and Biological Sciences  
Berg Agricultural Hall 156  
605-688-5133  
E-mail: donald.marshall@sdstate.edu  
<http://www.sdstate.edu/abs/index.cfm>

Mary Arnold, Head  
Journalism and Mass  
Communication Department  
Yeager Hall 211  
605-688-4171  
mary.arnold@sdstate.edu  
<http://www.sdstate.edu/mcom/>

### Program Information

The Agricultural Education Communication and Leadership Major is a multidisciplinary program that provides a strong foundation in agricultural sciences. The major allows students the flexibility to select a plan of study based on their interests and skills by choosing one of three specializations: Education, Communication, or Leadership. Students specializing in communication take courses in agriculture along with courses in the Journalism and Mass Communication department.

Graduates of the Communication specialization report agricultural information to farmers and ranchers, consumers, governmental agencies, agribusinesses, commodity groups, and legislators through

positions in public relations, sales, marketing, journalism, social media, and the government.

### Student Learning Outcomes

Upon completion of the major, students will:

- Have introductory knowledge of animal science, agronomy, and agri-business.
- Have in-depth knowledge of journalism and mass communication.
- Demonstrate effective written and oral communications skills
- Be prepared for a career related to agribusiness communication.
- Locate and evaluate information to support communication
- Have sufficient core competencies for effective lifetime learning.
- Have a broad understanding of global challenges and issues related to food systems and agriculture and the ability to communicate these topics to the public
- Demonstrate critical thinking and decision making skills.

### Equipment and Supplies

Students are encouraged to purchase a Macintosh laptop and software appropriate for the discipline.

### Course Delivery Format

The program offers coursework in classroom, studio, online, and field-based settings.

**Requirements for Agricultural Education, Communication and Leadership Major - Communication specialization: 120 Credits**  
Bachelor of Science in Agriculture

System General Education Requirements\*: 31

- Goal #1 Written Communication: ENGL 101 & 201\* Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 201\* or 202\* and 3 credit elective. Credits: 6
- Goal #4 Humanities and Arts/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102\* Credits: 3
- Goal #6 Natural Sciences: BIOL 101-101L\* and CHEM 106-106L\* Credits: 7

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: AGED or MCOM 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 5

- Group 1 Courses for Bachelor of Science in Ag Credits: 5

Major Requirements: 44-45

- LEAD 310 - Leadership in Context \*\* Credits: 3
- AS 101-101L - Introduction to Animal Science & Lab Credits: 3
- MCOM 155 - Information Gathering Credits: 2
- MCOM 210-210L - Basic Newswriting and Studio Credits: 3
- MCOM 220-220L - Intro to Digital Media and Lab Credits: 3
- MCOM 265-265L - Basic Photography and Studio Credits: 2
- MCOM 311-311L - News Editing and Editing Lab Credits: 3
- MCOM 430-530 - Media Law Credits: 3
- MCOM 490 - Seminar Credits: 1
- MCOM 494 - Internship Credits: (1-12) (2 credits required)
- PHYS 101-101L - Survey of Physics \* and Lab Credits: 4
- PS 103-103L - Crop Production and Lab Credits: 3
- SPCM 215 - Public Speaking \* Credits: 3 or SPCM 410 - Organizational Communication (AW) Credits: 3
- MCOM 316 - Magazine Writing and Editing Credits: 3  
or MCOM 332-332L Broadcast Writing & Reporting & Studio Credits 3  
or MCOM 410 - Advanced Reporting Credits: 3  
or MCOM 438-438L - Public Affairs Reporting & Studio (AW) Credits: 3

Capstone Requirements: 3-4

Choose one of the following:

- ABS 475-475L - Integrated Natural Resource Management and Lab (AW) Credits: 3
- AGECE 421 - Farming & Food Systems Economics Credits 3
- AGECE 478-478L - Agricultural Finance and Lab Credits: 3
- AS 474-474L - Cow/Calf Management and Lab Credits: 3
- AS 475 - Feedlot Operations and Management Credits: 3
- AS 477-477L - Sheep and Wool Production and Lab Credits: 3
- AS 478-478L - Swine Production and Lab Credits: 3
- AST 303-303L - Design Mgmt Experience and Lab Credits: 3
- AST 463- Agricultural Waste Management (AW) Credits: 3
- DS 412-412L - Dairy Farm Management and Lab Credits: 4
- PS 440-440L Crop Mgmt with Precision Farming & Lab Credits: 3
- RANG 485-485L Advanced Integrated Ranch Mgmt & Lab Credits 3

Electives: 35-36

- Agricultural Elective Credits: 9
- MCOM Elective Credits: 10
- General Elective Credits: 16-17

**Total Required Credits: 120**

### Curriculum Notes

Students must have at least 25 credits in 300+ level courses, excluding internships, cooperative education, or field experience courses.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **Agricultural Education, Communication and Leadership Major - Leadership specialization**

### Program Contact/Coordinator

Donald Marshall, Associate Dean

College of Agriculture and Biological Sciences

Agricultural Hall 156

605-688-5133

E-mail: Donald.Marshall@sdstate.edu

### Program Information

The Agricultural Education Communication and Leadership Major is a multidisciplinary program that provides a strong foundation in agricultural sciences. The major allows students the flexibility to select a plan of study based on their interests and skills by choosing one of three specializations: Education, Communication, or Leadership. Graduates of the Agricultural Education, Communication and Leadership Major - Leadership specialization will be well prepared for employment with agricultural organizations such as breed associations and commodity organizations.

### Student Learning Outcomes

Upon completion of the major, students will:

- Have introductory knowledge of animal science, agronomy, and agri-business.
- Have in-depth knowledge of principles of leadership.
- Demonstrate effective written and oral communications skills
- Be prepared for a career related to leadership of agricultural organizations.
- Locate and evaluate information to support decision making
- Have sufficient core competencies for effective lifetime learning.

- Have a broad understanding of global challenges and issues related to food systems and agriculture and the ability to communicate these topics to the public
- Demonstrate critical thinking and decision making skills.

### Course Delivery Format

Most courses are delivered by traditional lecture/format, and some are offered by online delivery.

### Requirements for Agricultural Education, Communication and Leadership Major - Leadership Specialization: 120 Credits Bachelor of Science in Agriculture

System General Education Requirements\*: 31

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 201\* **or** ECON 202\* and SOC 240\* Credits: 6
- Goal #4 Arts and Humanities/Diversity: Credits: 6 PHIL 220 Credits: 3 and elective
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences: BIOL 101-101L\* and CHEM 106-106L\* Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Experience: AGED or MCOM 109 Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 2

- Group 1 Courses for Bachelor of Science in Ag Credits: 2

Major Requirements: 33-36

- ABS 203 - Global Food Systems \*\* (G) Credits: 3
- LEAD 310 - Leadership in Context \*\* Credits: 3
- ABS 482 - International Experience (G) Credits: 2-4, **or** 494 - Internship, **or** 498 - Undergraduate Research Credits: 2-4
- AGECE 479 - Agricultural Policy (AW) (G) Credits: 3
- AS 101-101L - Introduction to Animal Science & Lab Credits: 3
- LEAD 210 - Foundations of Leadership\*\* Credits: 3
- LEAD 410 - Leadership: Senior Seminar Credits: 1
- LEAD/LMNO 435 – Org. Leadership & Team Dvlpmt Credits: 3
- LEAD 496 - Field Experience: Leadership in Action Credits: 2
- PS 103-103L - Crop Production and Lab Credits: 3
- SPCM 215 - Public Speaking \* Credits: 3 **or** SPCM 410 - Organizational Communication (AW) Credits: 3

Capstone Requirement: 3-4

Choose one of the following:

- ABS 475-475L - Integrated Natural Resource Mgmt and Lab (AW) Credits: 3
- AGECE 421 - Farming and Food Systems Economics Credits: 3
- AGECE 478-478L - Agricultural Finance and Lab Credits: 3
- AS 474-474L - Cow/Calf Management and Lab Credits: 3
- AS 475 - Feedlot Operations and Management Credits: 3
- AS 477-477L - Sheep & Wool Production & Lab Credits: 3
- AS 478-478L - Swine Production and Lab Credits: 3
- AST 303-303L - Design Mgmt Experience & Lab Credits 3
- AST 463 - Agricultural Waste Management (AW) Credits: 3
- DS 412-412L - Dairy Farm Management & Lab Credits: 4
- PS 440-440L Crop Mgmt w/ Precision Farming & Lab Credits 3
- RANG 485-485L Advanced Integrated Ranch Mgmt & Lab Credits 3

Electives: 46-49

- MCOM Elective Credits: 2
- General Electives Credits: 44-47

**Total Required Credits: 120**

## Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Agricultural Science Major (Associate of)

### Program Contact

Donald Marshall, Associate Dean  
College of Agriculture and Biological Sciences  
Agricultural Hall 156  
605-688-5133  
E-mail: Donald.Marshall@sdstate.edu

### Program Information

The two-year Agricultural Science program is designed for the student who does not find it advisable or possible to enter a regular four-year college program in Agriculture Science. A typical student in this situation could be one who desires some education but not necessarily four years before returning to the farm or ranch. Courses in the major field of concentration must be from departments within the College of Agriculture and Biological Sciences and be related to agriculture. All courses in the major field of concentration need not be in one department, although this may be a possibility.

General electives may be selected from any area and allow students to develop special competencies or interests. Students should consult their advisor when selecting courses in the major field of concentration. These courses should relate to career interests.

### Student Learning Outcomes

Agricultural Science students will:

- Have an introductory knowledge of animal science, agronomy, agricultural systems technology, and agri-business.
- Have an applied understanding of the principles underlying the chosen area of emphasis.
- Be prepared to manage a family farm or ranch or for a career in agribusiness.
- Locate and evaluate information to aid in decision making.
- Be prepared to enter the job market or a four-year degree program.
- Have sufficient core competencies for effective lifetime learning.

### Course Delivery Format

Courses are delivered in lecture, laboratory, and field-based formats, and some are offered by online delivery.

### Requirements for General Agriculture Major: 60 Credits

Associate of Science in Agriculture

Major Requirements: 36

- SGR Goal #1 ENGL 101\* Credits: 3
- SGR Goal #2 SPCM 101\* Credits: 3
- SGR Goal #3 \*: Social Science Credits: 3
- SGR Goal #4 \*: Humanities and Arts Credits: 3
- SGR Goal #5 Mathematics *minimum MATH 102 or MATH 104* Credits: 3
- SGR Goal #6 \*: Natural Science Credits: 3
- First Year Seminar: (ABS 109\*\* suggested) Credits: 2
- Major field of concentration Credits: 16

General Electives: 24

**Total Required Credits: 60**

## Curriculum Notes

\*A minimum of 15 credits Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 32 credits.

Proficiency Examination

Each student enrolled in an Associate of Arts degree program must take the Proficiency Examination after the completion of 32 passed credit hours or prior to graduation. The student must have completed, or be enrolled in courses required to complete the 18 credit hours. Students who do not complete the proficiency exam requirements cannot continue registration at the university.

## Agricultural Science Major (Bachelor of)

### Program Contact

Donald Marshall, Associate Dean  
College of Agriculture and Biological Sciences  
Agricultural Hall 156  
605-688-5133  
E-mail: Donald.Marshall@sdstate.edu

### Program Information

The Agricultural Science curriculum is designed for the student undecided as to a specific major field of study within the area of agriculture, or who may want to combine multiple fields of study within agriculture, or plans to return to the farm or ranch after college. A large number of free electives are available allowing the student to take courses in the different disciplines needed for a diversified career or to manage a production unit.

General electives may be selected from any area and allow students to develop special competencies or interests. When qualifying for a Bachelor of Science degree a student may, through a choice of electives, complete courses in business, prepare for graduate study, or enroll in special areas of study such as plant and/or animal science.

### Student Learning Outcomes

Agricultural Science students will:

- Have broad knowledge of animal science, agronomy, agricultural systems technology, and agri-business.
- Have an in-depth understanding of the principles underlying a chosen area of emphasis.
- Be prepared to manage a farm or ranch enterprise or for a career in agribusiness.
- Locate and evaluate information to aid in decision making.
- Have sufficient core competencies for effective lifetime learning.
- Have a broad understanding of global challenges and issues related to food systems and agriculture
- Demonstrate effective written and oral communications skills
- Demonstrate critical thinking and decision making skills

### Course Delivery Format

Courses are delivered in lecture, laboratory, and field-based formats, and some are offered by online delivery.

### Requirements for General Agriculture Major: 120 Credits

Bachelor of Science in Agriculture

System General Education Requirements\*: 31

- Goal #1 Written Communication: ENGL 101 **and** 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 201 **or** 202 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: BIOL 101-101L **and** CHEM 106-106L Credits: 7

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: (ABS 109\*\* suggested) Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: PS 213-213L\*\* Credits: 3

#### College Requirements: 13

- AS 101-101L - Introduction to Animal Science & Lab Credits: 3  
or DS 130-130L Introduction to Dairy Science and Lab
- AGECE 271-271L - Farm and Ranch Mgmt & Lab Credits: 4
- PS 103-103L - Crop Production and Lab Credits: 3
- BIOL 103-103L - Biology Survey II and Lab\* Credits: 3

#### Major Requirements: 21-23

- CHEM 108-108L - Organic and Biochem & Lab Credits: 4, 1  
OR CHEM 120-120L - Elementary Organic Chemistry and Lab Credits: 4  
OR MICR 231-231L - General Microbio and Lab Credits: 4  
OR PHYS 101-101L - Survey of Physics and Lab Credits: 4
- BIOL 371 - Genetics Credits: 3  
OR PS 383-383L - Principles of Crop Improvmt and Lab (AW) Credits: 3  
OR AS 332 - Livestock Breeding and Genetics Credits: 4
- ACCT 210 - Principles of Accounting I Credits: 3  
OR STAT 281 - Introduction to Statistics Credits: 3
- AGECE 354 - Agricultural Marketing and Prices Credits: 3
- AS 233-233L - Applied Animal Nutrition and Lab Credits: 4
- AGECE 271-271L - Farm and Ranch Management and Lab Credits: 4

#### Elective Coursework

##### Agriculture Electives: 6

Select at least six credits from the following courses.

- Any course with the prefix(es) of ABE, ABS, AS, AST, DS, EES, HO, LA, NRM, PR, PRM, RANG or VET

##### Ag Product Electives: 2-4

Select at least one class from the following courses.

- AS 241-241L - Introduction to Meat Science and Lab Credits: 3
- AS 285-285L Livestock Eval. & Marketing & Lab Credits 4
- AST 443-443L - Food Processing and Engineering Fundamentals and Lab Credits: 3
- DS 231 - Dairy Foods Credits: 3
- PS 303-303L - Seed Technology and Lab Credits: 3
- PS 308-308L - Grain Grading and Lab Credits: 2
- PS 312 - Grain and Seed Production and Processing Credits: 3

##### Capstone Elective: 3-4

Select one of the following courses.

- ABS 475-475L - Integrated Natural Resource Management and Lab (AW) Credits: 3
- AGECE 421 - Farming and Food Systems Economics Credits: 3
- AS 474-474L - Cow/Calf Management and Lab Credits: 3
- AS 477-477L - Sheep and Wool Production and Lab Credits: 3
- AS 478-478L - Swine Production and Lab Credits: 3
- AST 303-303L - Design Management Experience and Lab Credits: 3
- DS 412-412L - Dairy Farm Management and Lab Credits: 4
- PS 440-440L - Crop Management with Precision Farming and Lab Credits: 3
- RANG 485-485L - Advanced Integrated Ranch Management and Lab Credits: 3

##### Communication Elective: 3

Select one of the following Advanced Writing courses.

- ABS 475-475L - Integrated Natural Resource Management and Lab (AW) Credits: 3
- ENGL 379 - Technical Communication (AW) Credits: 3

##### Program Concentration Electives or General Electives: 31-36

#### Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Agricultural Systems Technology Major

#### Program Coordinator/Contact

Van Kelley, Department Head  
Department of Agricultural and Biosystems Engineering  
Agricultural Engineering 107  
605-688-5141  
E-mail: van.kelley@sdstate.edu  
<http://www.sdstate.edu/abe/>

#### Program Information

Agricultural Systems Technology graduates serve an increasingly complex agricultural industry in a wide variety of ways. These individuals have a sound fundamental knowledge of agricultural and biological sciences related to the technical, mechanical and energy aspects. This background combined with a solid understanding of the interactions between agriculture and society provides AST graduates many career opportunities. Graduates use their technological knowledge, coupled with managerial and leadership skills, to increase America's food and energy supply, and may pursue careers in renewable energy such as ethanol and bio-diesel, farm machinery and equipment, natural resources, livestock facilities and systems, and production agriculture.

#### Course Delivery Format

The program engages students in lecture, laboratory, and in hands-on, field-based learning experiences.

#### Requirements for Agricultural Systems Technology Major: 120 Credits Bachelor of Science in Agriculture

##### System General Education Requirements\*: 34-35

- Goal #1 Written Communication: ENGL 101 & 201<sup>1</sup> Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102  
and MATH 120 or MATH 115 Credits: 5 or 6
- Goal #6 Natural Sciences: PHYS 111-111L,  
and CHEM 106-106L or CHEM 112-112L Credits: 8

##### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: AST 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: PS 213-213L - Soils and Lab \* \*\* Credits: 3

##### College Requirements: 11

##### Group 1 Courses for Bachelor of Science in Agriculture

- PS 103-103L - Crop Production and Lab Credits: 3
- AST 342-342L - Applied Electricity and Lab Credits: 3
- AST 333-333L - Soil and Water Mechanics and Lab Credits: 3
- *Group 1 Courses - completed as part of major Credits: 2*

##### Major Requirements: 72

##### Major Core: 36

- AST 203-203L - Intro to Precision Agriculture & Lab Credits: 2
- ABE 490 - Seminar (AW) Credits: 1
- ACCT 210 - Principles of Accounting I Credits: 3
- AST 463- Agricultural Waste Management (AW) Credits: 3
- BADM 350 - Legal Environment of Business Credits: 3

- AST 213-213L - Ag, Industrial & Outdoor Power & Lab Credits: 3 **OR** AST 313-313L - Farm Machinery Systems Management and Lab Credits: 3
- AST 273-273L - Microcomputer Applications in Agriculture and Lab Credits: 3
- Choose one from the following:
  - AST 303-303L - Design Mgmt Experience & Lab Credits 3
  - AST 494 - Internship Credits: 1-2
  - AST 496 - Field Experience Credits: 1-2
  - AST 497 - Cooperative Education Credits: 1-2
- GE 121 - Engineering Design Graphics I Credits: 1
- GE 123 - Computer Aided Drawing Credits: 1
- BIOL 101-101L - Biology Survey I and Lab Credits: 3
- AST 353-353L - Physical Climatology & Meteorology & Lab Credits: 3
- AST 412-412L/512-512L - Fluid Power Technology and Lab Credits: 3
- AST 423-423L - Rural Structures and Lab Credits: 3
- AST 426-426L - Emerging Technologies in Agriculture and Lab Credits: 3

Technical Electives: 36

It is strongly recommended that students choose one of the following emphasis areas

#### Business Emphasis

- ECON 201 - Principles of Microeconomics \* \*\* Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- AGECE 271-271L - Farm and Ranch Mgmt and Lab Credits: 4
- AGECE 354 - Agricultural Marketing and Prices Credits: 3
- AGECE 454 - Economics of Grain and Livestock Marketing
- AGECE 479 - Agricultural Policy (AW) (G) Credits 3
- AST 443-443L - Food Processing & Engineering Fundamentals and Lab Credits: 3
- Any 200 level or above selected from *AGECE, AST, BADM, ACCT, AS, ECON, PS, ENTR* Credits: 11
- Science Electives selected from *CHEM, PHYS, BIOL, MICR, ZOOL* Credits: 3

#### Precision Ag Emphasis

- PHYS 113-113L – Intro to Physics II & Lab\* Credits:4
- ET 210-210L – Intro to Electronic Systems Credits:4
- AST 213-213L - Ag, Industrial & Outdoor Power & Lab Credits: 3 **OR** AST 313-313L Farm Machinery Systems Mgmt & Lab Credits:3
- CSC 130 - Visual Basic Programming Credits:3
- ET 232-232L - Digital Electronics & Microprocessors & Lab Credits:3
- ET 240 - Techniques of Servicing Credits:3
- PS 323 - Soil Fertility and Plant Nutrient Management Credits: 3
- PS 440-440L Crop Mgmt with Precision Farming & Lab Credits: 3
- GEOG 472 - Introduction to GIS Credits:3
- GEOG 484-484L - Remote Sensing and Lab Credits:3
- Any course 300 level or above selected from *ET, CSC, AST, PHYS, GEOG, PS* Credits: 4

#### Processing Emphasis

- AS 101-101L – Intro to Animal Science and Lab Credits: 3 **OR** DS 130-130L - Introduction to Dairy Science and Lab Credits: 3
- AS 241-241L - Introduction to Meat Science and Lab Credits: 3
- AS 350 - Meat Product Safety and HACCP Credits: 3
- MICR 231-231L - General Microbiology and Lab Credits: 4
- MICR 311-311L - Food Microbiology and Lab Credits: 4
- DS 321-321L - Dairy Product Processing I and Lab Credits: 5
- DS 421 - Dairy Plant Management Credits: 3
- AST 443-443L - Food Processing & Engineering Fundamentals and Lab Credits: 3
- PS 308-308L - Grain Grading and Lab Credits: 3
- Elective courses selected from *AS, DS, PS, AST, ABS, MICR* Credits: 5

#### Production Emphasis

- AGECE 271-271L - Farm and Ranch Mgmt and Lab Credits: 4
- AGECE 354 - Agricultural Marketing and Prices Credits: 3
- PS 223-223L - Principles of Plant Pathology and Lab Credits: 3
- PS 305-305L - Insect Biology and Lab (COM) Credits: 3 **OR** PS 307-307L - Insect Pest Management and Lab Credits: 3
- PS 323 - Soil Fertility and Plant Nutrient Management Credits: 3
- PS 440-440L Crop Mgmt w/ Precision Farming & Lab Credits 4
- AS 101-101L – Intro to Animal Science and Lab Credits: 3 **OR** DS 130-130L – Intro to Dairy Science and Lab Credits: 3
- Any 200 level or above courses select from *AGECE, AST, BADM, ACCT, AS, ECON, PS, ENTR* Credits: 10

#### Total Required Credits: 120

#### Curriculum Notes

1 minimum grade of “C” required in ENGL 201.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student’s first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits, English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

### Agronomy Major

#### Program Contact/Coordinator

David Wright, Department Head  
 Brent Turnipseed, Undergraduate Teaching Coordinator  
 Department of Plant Science  
 Agricultural Hall 219  
 605-688-5123  
 E-mail: David.Wright@sdstate.edu  
 E-mail: Brent.Turnipseed@sdstate.edu  
<http://www.sdstate.edu/ps/>

#### Program Information

The Agronomy major provides broad training in the plant and soil sciences and in crop production technology. The integrated program is designed to provide students with an understanding and knowledge base in crops, soils, weeds, entomology, plant pathology, breeding and genetics, precision agriculture, natural resource management, and the interaction of production systems. This major is recommended for students interested in cropping systems, natural/agricultural resource management, or the agribusiness areas of crops, soils, and pest management. Individuals can prepare for careers in crop consulting, crop/plant research, and with private industry managing agricultural inputs such as pesticides and fertilizers; developing improved seed traits, plant sciences, genomics, and producing seed; and for work with government agencies, such as the Extension Service, Farm Service Agency, Agricultural Research Service, and Natural Resources Conservation Service.

#### Accreditation, Certification, and Licensure

- Students seeking Soil Science Certification should contact their advisor and refer to <https://www.soils.org/certifications/cpss-cpsc>
- Students seeking Certification as a professional agronomist should contact their advisor and refer to <https://www.agronomy.org/certifications/cpag>

#### Course Delivery Format

The program coursework is available on campus, in classroom and laboratory settings, as well as field-based settings.

#### Requirements for Agronomy Major: 125 Credits

Bachelor of Science in Agriculture

System General Education Requirements\*: 31-34

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* or 215 or 222 Credits: 3



- Goal #3 Social Sciences/Diversity: ECON 201 or 202 **AND** SOC 100, 150, or 240 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 or 115 or 120 Credits: 3-5
- Goal #6 Natural Sciences: BIOL 151-151L **and** BIOL 153-153L or BOT 201-201L Credits: 7-8

- PS 320 - Crop Judging Credits: 1-2<sup>1</sup> (2 credits to fulfill major requirement)
- PS 383-383L - Principles of Crop Improvement & Lab (AW) Credits: 3<sup>2</sup>
- PS 423-523 - Turfgrass Stress Physiology Credits: 3
- PS 440-440L Crop Mgmt w/ Precision Farming & Lab Credit: 3
- PS 453-553 - Advanced Genetics Credits: 3

#### Institutional Graduation Requirements\*\*:

- Goal #1 First Year Seminar: PS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: PS 213-213L \*\* Credits: 3

#### Major Requirements: 59-62

- PS 103-103L - Crop Production and Lab Credits: 3<sup>A</sup>
- PS 109 - First Year Seminar Credits: 2 (credits count for IGR #1) A
- PS 213-213L - Soils and Lab Credits: 2, 1 (credits count for IGR #1) A
- PS 223-223L - Principles of Plant Pathology & Lab Credits: 3<sup>A</sup>
- PS 305-305L - Insect Biology and Lab Credits: 3<sup>A</sup> **or** PS 307-307L - Insect Pest Management and Lab Credits: 3<sup>A</sup>
- PS 323 - Soil Fertility & Plant Nutrient Management Credits: 3<sup>A</sup>
- PS 343-343L - Weed Science and Lab Credits: 3<sup>A</sup>
- PS 390 - Seminar (AW) Credits: 1<sup>A</sup>
- PS 494 - Internship Credits: 0.5-2<sup>A</sup>
- PS 490 - Seminar for Internship Credits: .5-1<sup>A</sup>
- ABS 475-475L - Integrated Natural Resource Management and Lab (AW) Credits: 3<sup>A</sup>
- PS 383-383L - Prepls of Crop Improvement & Lab (AW) Credits: 3 **or** BIOL 202-202L - Genetics & Organismal Bio & Lab Credits: 4 **or** BIOL 371 - Genetics Credits: 3
- BOT 327-327L - Plant Physiology and Lab Credits: 4
- PS 492 Topics Credit: 1 **and** PS 421-421L Soil Micro & Lab Credits: 3<sup>A</sup> **or** MICR 231-231L - General Microbiology & Lab Credits: 4
- CHEM 106-106L - Chemistry Survey & Lab Credits: 3, 1 **or** CHEM 112-112L General Chemistry I & Lab Credits: 3, 1
- CHEM 120-120L Elementary Organic Chem & Lab Credits: 3, 1 **or** CHEM 108-108L - Organic & Biochem & Lab Credits: 4, 1
- PHYS 101-101L - Survey of Physics\* & Lab Credits: 4 **or** PHYS 111-111L - Intro to Physics I & Lab\* Credits: 4
- STAT 281 - Introduction to Statistics Credits: 3
- ENGL 379 - Technical Communication (AW) Credits: 3
- AGECE 354 - Agricultural Marketing and Prices Credits: 3 **or** AS 285-285L - Livestock Evaltn & Marketing & Lab Credits: 4 **or** BADM 474 - Personal Selling Credits: 3

#### Natural Resources Stewardship Elective: 3-4

Select one of the following courses<sup>A</sup>:

- ABS 203 - Global Food Systems (G) Credits: 3
- ABS 482-582 - International Experience (G) Credits: 3
- BIOL 383 - Bioethics \*\* (G) Credits: 4
- PS 243 - Principles of Geology Credits: 3<sup>2</sup>
- PS 307-307L - Insect Pest Management and Lab Credits: 3<sup>2</sup>
- PS 310-310L - Soil Geog. & Land Use Interpret. & Lab(G) Credits 3<sup>2</sup>
- PS 362-362L - Environmental Soil Mgmt & Lab Credits: 3<sup>2</sup>
- PS 446-546 - Agroecology (G) Credits: 3<sup>2</sup>

#### Plant Science Electives: 13

Select at least *two credits* from each of the three areas listed.

#### Crops

- PS 222-222L - Fundamentals of Turf Mgmt and Lab Credits: 3
- PS 303-303L - Seed Technology and Lab Credits: 3
- PS 308-308L - Grain Grading and Lab Credits: 2
- PS 312 - Grain and Seed Production and Processing Credits: 3
- PS 313 - Forage Crop and Pasture Management Credits: 3

#### Plant Protection

- PS 307-307L - Insect Pest Management and Lab Credits: 3<sup>2</sup> **or** PS 305-305L - Insect Biology and Lab Credits: 3<sup>2</sup>
- PS 333-333L - Diseases of Field Crops and Lab Credits: 3
- PS 415-415L/515-515L - Mycology and Lab Credits: 3
- PS 431-531 - Insect Ecology and Biological Control Credits: 3
- PS 450-450L - Field Study of Plant Disease Diagnosis & Lab Credits 2

#### Soils/Environmental Protection

- PS 243 - Principles of Geology\* Credits: 3<sup>2</sup>
- PS 244 - Geological Resources of South Dakota Lab Credits: 1
- PS 310-310L Soil Geog & Land Use Interpret & Lab(G) Credits: 3<sup>2</sup>
- PS 321 - Soil Judging Credits: 1<sup>1</sup>
- PS 362-362L - Environmental Soil Mgmt & Lab Credits: 3<sup>2</sup>
- PS 412-512 - Environmental Soil Chemistry Credits: 3
- PS 421-421L - Soil Microbiology and Lab Credits: 3<sup>2</sup>
- PS 446-546 - Agroecology (G) Credits: 3<sup>2</sup>
- PS 473-473L - Rural Real Estate Appraisal and Lab Credits: 3
- PS 483 - Irrigation – Crop and Soil Practices Credits: 3

#### Elective Credits: 17

#### Total Required Credits: 125

#### Curriculum Notes

1 Cannot be used to solely meet area requirements.

2 Can only be used to meet requirements in one section

A Agronomy Major Core Curriculum: A student must have a 2.5 GPA or higher and a grade of C or higher in the courses used to satisfy the Agronomy core curriculum in order to graduate with a major in Agronomy.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## American Indian Studies Major

#### Program Contact/Coordinator

Richard Meyers, Lecturer and Coordinator of American Indian Studies and Tribal Outreach  
American Indian Education and Cultural Center  
605-688-6416  
E-mail: richard.meyers@sdstate.edu

#### Program Information

This is an inter-college program of American Indian culture studies. Coursework in various departments of the University provides a broad base for understanding the past, present, and possible futures of American Indian people. The program recognizes the historical and contemporary significance of American Indian experiences. Study of these experiences promotes understanding of the pluralist nature of the United States and responds to the growing need for multicultural sensitivity and awareness. Students desiring more information or interested in the program should consult with the coordinator and their academic advisor.

#### Student Learning Outcomes

- Discipline-Specific Knowledge - Graduates will demonstrate an understanding of the principles of tribal sovereignty;

government and policy; American Indian history, religion, and literature.

- Communication - Graduates will demonstrate a basic proficiency in a tribal language; And to present effective oral and written presentations on research involving American Indians.
- Critical Thinking - Graduates will demonstrate a mastery of problem-solving skills that integrate research with contemporary issues that confront indigenous people both locally and globally.

### Course Delivery Method

Courses for the AIS major are delivered in face to face environments, utilizing lectures, discussions, and applied learning.

### Requirements for American Indian Studies Major: 120 Credits Bachelor of Arts

#### System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity AIS/LAKL 101 and AIS/LAKL 102 Credits: 8
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

#### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility AIS/HIST 368 Credits: 3

#### College Requirements\*\*: 28

##### Bachelor of Arts Specifications

- Modern Language Credits: 3-14 (completion & competency in one language at the 202 level or a department-approved advanced upper division language course)
- Humanities Credits: 6
- Social Sciences Credits: 8

SGRs, IGRs, and/or Major coursework may satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

#### Major Requirements\*\*: 55

##### Major Core: 32

- AIS 100 - Introduction to American Indian Studies Credits: 3
- AIS/LAKL 101 - Introductory Lakota I \* \*\* Credits: 4
- AIS/LAKL 102 - Introductory Lakota II \* Credits: 4
- AIS/LAKL 201 - Intermediate Lakota I Credits: 3
- AIS/LAKL 202 - Intermediate Lakota II Credits: 3
- SOC 350 - Race and Ethnic Relations (G) Credits: 3
- AIS/HIST 368 History & Culture of the American Indian Credits 3
- AIS/ENGL 445 - American Indian Literature Credits: 3  
OR AIS/ENGL 447 - American Indian Lit. of Present Credits: 3
- AIS 462 - Formation of Federal Indian Policy Credits: 3
- AIS 492 - Topics Credits: 3

#### Elective Credits: 23

Select from the following courses.

- AIS 103 - American Indian Cultures & the Classroom Credits: 3
- AIS/REL 238 - Native American Religions \* Credits: 3
- AIS/ENGL 256 - Literature of the American West\*\* Credits: 3
- AIS/WMST 362 - Indigenous Feminisms Credits: 3
- AIS 400 - Education and Native Peoples Credits: 3
- AIS 410 - North American Ethnology Credits: 3
- AIS/POLS 417 American Indian Government & Politics Credits: 3

- AIS/ANTH 421- Indians of North America \*\* Credits: 3
- AIS/ENGL 445 - American Indian Literature Credits: 3  
or AIS/ENGL 447 American Indian Lit. of Present Credits: 3
- AIS/GEOG 467 - Geography of the American Indian Credits: 3
- AIS 491 - Independent Study Credits: 1-3
- AIS 492 - Topics Credits: 1-3
- AIS 496 - Field Experience Credits: 1-12

#### Elective Credits: 39

- Select an Advanced Writing course

#### Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Animal Science Major - Business and Production Specialization

### Program Coordinator/Contact

Joseph Cassady, Head  
Department of Animal Science  
Animal Science Complex 103A  
605-688-5166  
E-mail: cheryl.best@sdstate.edu  
<http://www.sdstate.edu/ars/index.cfm>

### Program Information

The Animal science program provides instruction in animal breeding, feeding and nutrition, management, selection and evaluation, marketing, meats, and wool. The Specialization allows students to focus their studies on Business and Production, with an emphasis on the principles of genetics, nutrition, physiology, range, and meats as they affect production and management of livestock.

Program courses pertain to beef cattle, horses, sheep, and swine and the applications of various disciplines to the breeding, feeding, management, and marketing of livestock and livestock products. Students interested in Veterinary medicine may supplement this program of study with the (Pre-) Veterinary Medicine Curriculum.

### Course Delivery Format

The Animal Science program provides hands-on experiences in the classroom, laboratories, field trips, and at the livestock teaching units.

### Requirements for Animal Science Major - Business and Production Specialization: 120 Credits

Bachelor of Science in Agriculture

#### System General Education Requirements\* Credits: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101 Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences BIOL 101-101L and BIOL 103-103L Credits 6

#### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: AS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 1-3

- Group 1 Courses from the College of Agriculture and Biological Sciences Credits: 1-3

Major Requirements: 66-67

Animal Science Core: 23

- AS 101-101L - Introduction to Animal Science & Lab Credits: 3
- AS 233-233L - Applied Animal Nutrition and Lab Credits: 4
- AS 241-241L - Introduction to Meat Science and Lab Credits: 3
- AS 285-285L - Livestock Evaluation & Marketing & Lab Credits: 4
- AS 323 - Advanced Animal Nutrition Credits: 3
- AS 332 - Livestock Breeding and Genetics Credits: 4
- AS 433-433L - Livestock Reproduction and Lab Credits: 3
- AS 489 - Current Issues in Animal Science (AW) Credits: 2

Science Electives: 16-17

- CHEM 106-106L - Chemistry Survey and Lab\* Credits: 4
- CHEM 120-120L - Elementary Organic Chem & Lab\* Credits: 4  
OR CHEM 108-108L - Organic and Biochem and Lab\* Credits: 5
- VET 223-223L - Anatomy and Physiology of Domestic Animals and Lab Credits: 4
- PHYS 101-101L - Survey of Physics \* and Lab Credits 4  
OR MICR 231-231L - General Microbiology and Lab Credits: 4

Production Electives: 9

- AS 365-365L - Horse Production and Lab Credits: 3
- AS 345-345L - Value-Added Meat Products and Lab Credits: 3
- AS 441-541 - Advanced Meat Science and Lab Credits: 3
- AS 474-474L - Cow/Calf Management and Lab Credits: 3
- AS 475 - Feedlot Operations and Management Credits: 3
- AS 477-477L - Sheep and Wool Production and Lab Credits: 3
- AS 478-478L - Swine Production and Lab Credits: 3
- RANG 485-485L Advanced Integrated Ranch Mgmt & Lab Credits 3

Business Electives: 18

- ACCT 210 - Principles of Accounting I Credits: 3
- ECON 201 - Principles of Microeconomics \* \*\* Credits: 3

Select 12 credits from the following courses

- ACCT 211 - Principles of Accounting II Credits: 3
- AGECE 271-271L -Farm & Ranch Management & Lab Credits: 4
- AGECE 352 - Agricultural Law Credits: 3
- AGECE 354 - Agricultural Marketing and Prices Credits: 3
- AGECE 364 - Introduction to Cooperatives Credits: 3
- AGECE 371 - Agricultural Business Management Credits: 3
- AGECE 421 - Farming & Food Systems Economics Credits: 3
- AGECE 454 - Economics of Grain & Livestock Marketing Credits: 3
- AGECE 471 - Advanced Farm & Ranch Management Credits: 3
- AGECE 478-478L - Agricultural Finance and Lab Credits: 3
- AGECE 479 - Agricultural Policy (AW) (G) Credits: 3
- AGECE 484 - Trading in Ag Futures & Options Credits: 3
- BADM 280 - Personal Finance Credits: 3
- BADM 310 - Business Finance Credits: 3
- BADM 334 - Small Business Management Credits: 3
- BADM 350 - Legal Environment of Business Credits: 3
- BADM 351 - Business Law Credits: 3
- BADM 360 - Organization and Management Credits: 3
- BADM 474 - Personal Selling Credits: 3
- ECON 330 - Money and Banking Credits: 3
- ECON 370 - Marketing Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3

Elective Credits: 15-18

**Total Required Credits: 120**

**Curriculum Notes**

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

**Animal Science Major - Science Specialization**

**Program Coordinator/Contact**

Joseph Cassady, Head  
Department of Animal Science  
Animal Science Complex 103A  
605-688-5166  
E-mail: cheryl.best@sdstate.edu  
<http://www.sdstate.edu/ars/index.cfm>

**Program Information**

The Animal science program provides instruction in animal breeding, feeding and nutrition, management, selection and evaluation, marketing, meats, and wool. The Specialization allows students to focus their studies on the science of genetics, nutrition, physiology, range, and meats as they affect production and management of livestock.

Program courses pertain to beef cattle, horses, sheep, and swine and the applications of various disciplines to the breeding, feeding, management, and marketing of livestock and livestock products. Students interested in Veterinary medicine may supplement this program of study with the (Pre-) Veterinary Medicine Curriculum.

**Course Delivery Format**

The Animal Science program provides hands-on experiences in the classroom, laboratories, field trips, and at the livestock teaching units.

**Requirements for Animal Science Major - Science Specialization: 120 Credits**

Bachelor of Science in Agriculture

System General Education Requirements:\*\* 34

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 201 or 202 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 121-121L Credits: 5
- Goal #6 Natural Sciences: BIOL 151-151L and 153-153L Credits: 8

Institutional Graduation Requirements:\*\* 5

- Goal #1 First Year Seminar: AS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 1-3

- Group 1 Courses from the College of Agriculture and Biological Sciences Credits: 1-3

Major Requirements: 76

Animal Science Core: 22

- AS 101-101L - Introduction to Animal Science & Lab Credits: 3
- AS 233-233L - Applied Animal Nutrition and Lab Credits: 4
- AS 241-241L - Introduction to Meat Science and Lab Credits: 3
- AS 323 - Advanced Animal Nutrition Credits: 3
- AS 332 - Livestock Breeding and Genetics Credits: 4
- AS 433-433L - Livestock Reproduction and Lab Credits: 3
- AS 489 - Current Issues in Animal Science (AW) Credits: 2

#### Production Courses: 6

- AS 365-365L - Horse Production and Lab Credits: 3
- AS 474-474L - Cow/Calf Management and Lab Credits: 3
- AS 477-477L - Sheep and Wool Production and Lab Credits: 3
- AS 478-478L - Swine Production and Lab Credits: 3

#### Science Requirements: 48

- Select from the following Physics Sequence
  - PHYS 111-111L - Intro to Physics I and Lab\* Credits: 4
  - PHYS 113-113L - Intro to Physics II & Lab\* Credits: 4**OR**
  - PHYS 211-211L - University Physics I and Lab\* Credits: 4
  - PHYS 213-213L - University Physics II and Lab \* Credits: 4
- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1
- CHEM 114-114L - General Chemistry II & Lab \* Credits: (3, 1)
- CHEM 326-326L - Organic Chemistry I and Lab Credits: (3, 1)
- CHEM 328-328L - Organic Chemistry II and Lab Credits: (3, 1)
- CHEM 464 - Biochemistry I Credits: 3
- BIOL 371 - Genetics Credits: 3
- MICR 231-231L - General Microbiology and Lab Credits: 4
- VET 223-223L - Anatomy and Physiology of Domestic Animals and Lab Credits: 4

#### Elective Credits: 2-4

#### Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Apparel Merchandising Major

#### Program Contact/Coordinator

Jane E. Hegland, Head  
Department of Consumer Sciences  
Wagner Hall 229  
605-688-5196  
E-mail: jane.hegland@sdstate.edu  
<http://www.sdstate.edu/cs/>

#### Program Information

Apparel Merchandising is the perfect major for students who would like to spend their career in one of many roles in the dynamic, ever-changing fashion industry. Careers such as store or department manager, buyer, or visual merchandiser are typical. Students in apparel merchandising acquire a broad knowledge of people and their behavior, an understanding of the world at large and technical knowledge and skills to select fabrics and plan and produce fashion goods.

#### Course Delivery Format

Students learn through lecture, laboratory, and hands-on learning experiences. A 7-week (280 hour) full-time summer practicum compatible with career goals is a program requirement.

#### Requirements for Apparel Merchandising Major: 120 Credits

Bachelor of Science in Education and Human Sciences

#### System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* or 215 Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 201 or 202  
AND PSYC 101 or SOC 100 Credits: 6
- Goal #4 Arts and Humanities/Diversity: ARTH 100  
AND HIST 121 or HIST 122 Credits: 6

- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences Credits: 6

#### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: EHS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

#### College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

#### Consumer Sciences Department Requirements: 7

- LEAD 210 - Foundations of Leadership\*\* Credits: 3  
or CS 230 - Consumer Behavior Credits: 3
- CS 377 - Professional Documents Credits: 1
- CS 430 - Consumer Decision Making Credits: 3  
or LEAD 435 Org. Leadership & Team Development Credits: 3

#### Major Requirements: 48

- AM 172 - Introduction to Apparel Merchandising Credits: 2
- AM 231-231L - Ready-To-Wear Analysis and Lab Credits: 3
- AM 242-242L - Textiles I and Lab Credits: 3
- AM 253 - Socio-Psychological Aspects of Dress Credits: 3
- AM 274-274L - Fashion Promotion and Lab Credits: 3
- AM 282 - Customer Service Credits: 2
- AM 315-315L - Apparel Design and Lab Credits: 3
- AM 352 - History of Dress in the Western World Credits: 3
- AM 361-361L - Aesthetics and Lab Credits: 3, 0
- AM 372-372L - Trending and Buying and Lab Credits: 3
- AM 381 - Professional Behavior at Work Credits: 3
- AM 462 - Retail Management Credits: 3
- AM 472-472L - Merchandising and Lab Credits: 3
- AM 473-473L - Global Sourcing and Lab (AW) Credits: 3
- AM 480 - Travel Studies Credits: 1
- AM 490 - Seminar Credits: 3
- AM 495 - Practicum Credits: 3
- AM 477 - Current Issues in the Workplace Credits: 1

#### Elective Credits: 28

#### Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Architectural Studies Major

#### Program Contact/Coordinator

Brian Rex, Head  
Department of Architecture  
SIM 108 605-688-4841  
E-mail: brian.rex@sdstate.edu  
<http://www.sdstate.edu/arch/>

#### Program Information

The core academic experience offered in the Department of Architecture is our 3 and a half years of professional study leading to a Master of Architecture degree. All students who go through our program will matriculate through all the courses in our professional program.\* There are two paths a student can follow to enter these advanced professional years of study. Path A and Path B students take the 3.5 years of professional study together in the same sections.

**Path A** (4 year B.Sc.Arch.Stud. + 2 year M.Arch.) is comprised of a four year Bachelor of Science in Architectural Studies and a two year professional Master of Architecture degree. This is the typical path for high school graduates and university transfers wanting a design based liberal arts education leading into a professional education in architecture. The core professional years of study are the last 3.5 years of this 6 year program. Professional studies begin in the spring of the third year. Students graduating with a B.Sc.Arch.Stud. from SDSU will apply for admission into the graduate M.Arch. degree.

**Path B** (3.5 year M.Arch.) People who already have a B.A. or B.Sc. degree of any specialization from an accredited university can apply for admission (based primarily on undergraduate academic achievement and a portfolio that demonstrates an educated ability to make things) into the first semester of the 3.5 years of professional studies and matriculate through these years to a Master of Architecture degree. Students provisionally admitted with insufficient graphic capacity may be required to take fundamental drawing and / or design courses the Fall semester before beginning professional study.

### Course Delivery Format

The curriculum is interactive, haptic and performance based, offering problem solving experiences in all major areas of professional practice.

### Requirements for Architectural Studies Major: 120 Credits

Bachelor of Science and Bachelor of Arts in Arts and Sciences

System General Education Requirements\*: 31

- Goal #1 Written Communication: ENGL 101\* & 201\* Credits 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: POLS 210\* and Elective Credits: 6
- Goal #4 Arts and Humanities/Diversity: ART 111\* and ARCH 241\*(G) Credits: 6
- Goal #5 Mathematics: MATH 120\* Credits: 3
- Goal #6 Natural Sciences: PHYS 111-111L and BIOL 101-101L\* Credits: 7

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: ARCH 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: Select A&S Social Science Course Credits: 3

College Requirements: 17-34

Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences (GEOG 131-131L Credits: 4)
- Social Sciences Credits: 12
- Humanities Credits: 8 (ART 112 Credits: 3)

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 57

- ARCH 131 - Building Thinking Credits: 2
- ARCH 151 - Design Practice I Credits: 2
- ARCH 152 - Design Practice II Credits: 2

- ARCH 241 - Building History I Credits: 3
- ARCH 251 - Design Practice III Credits: 4
- ARCH 252 - Design Practice IV Credits: 4
- ARCH 242 - Building History II Credits: 2
- ARCH 351 - Collaboration Studio Credits: 5
- ARCH 341 - Building history III (AW) Credits: 2
- ARCH 321 - Drawing, modeling, & notation Credits: 2
- ARCH 352 - Architecture studio I Credits: 5
- Select six credits from the following:  
ARCH 331 - Building Shop I Credits: 2  
ARCH 332 - Building Shop II Credits: 2  
ARCH 431 - Building Shop III Credits: 2
- ARCH 382 - Travel Studies Credits: 1
- ARCH 411 Site, Environment, Urbanism & Public Space Credits: 2
- ARCH 421 - Building Information Technologies Credits: 2
- ARCH 451 - Architecture Studio II Credits: 5
- ARCH 452 - Architecture Studio III Credits: 5
- ARCH 492 - Topics Credits: 3

Supporting Coursework: 17

- CM 216 - Construction Materials Credits: 3
- CM 232-232L - Cost Estimating and Lab Credits: 3
- CM 332 - Building Construction Methods & Systems Credits: 3
- CM 353-353L - Construction Structures and Lab Credits: 3
- ID 329-329L - Building Codes & Regulations & Lab Credits: 2
- MNET 231-231L - Manufacturing Processes I & Lab Credits: 3

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Art Education Major

### Program Contact/Coordinator

Michael (Tim) Steele, Head  
Department of Visual Arts  
South Dakota State University  
Brookings, SD 57007  
605-688-4103  
E-mail: [sdsu.artdept@sdsu.edu](mailto:sdsu.artdept@sdsu.edu)  
<http://www.sdsu.edu/art/index.cfm>

### Program Information

The Art Education Program prepares majors for careers as art educators in public and private elementary or secondary schools (K-12). The curriculum prepares students for state licensure through successful completion of the national PRAXIS competency exam. Students pursue either a B.S. or a B.A. degree, including instruction in specific technical skills, application of theory and conceptual development, and Teacher Education coursework.

### Student Learning Outcomes

The artist-teacher learns to connect an understanding of educational processes with an understanding of the relationship of the arts, sciences, and humanities, in order to apply art competencies in teaching situations and integrate art/design instruction into the total process of education. As defined by the National Association of the Colleges of Art and Design, upon completion of the program, majors demonstrate the following studio art outcomes:

- Understand basic expressive, technical, procedural and organizational skills and conceptual insights that can develop through art and design experiences.



- Knowledge of traditional processes as well as newer technological developments in art and design.
- Understanding how to make students emphatically aware of the all-important process of artistic creation from conceptualized image to finished work.

Graduates also demonstrate the following teaching competencies:

- Understanding of child development and the identification and understanding of principles of learning as they relate to art education.
- Understanding of the philosophical and social foundation underlying art in education and the ability to express a rationale for personal attitudes and beliefs.
- Ability to utilize aptitudes, experiential backgrounds, and interests of individuals and groups of students and to devise learning experiences to meet assessed needs.
- Ability to utilize current methods and materials available in all fields and levels of art education.
- Basic understanding of the principles and methods of developing curricula and the short- and on-term instructional units that comprise them.
- Ability to accept, amend, or reject methods and materials based on personal assessment of specific teaching situations.
- Knowledge of evaluative techniques and the ability to apply them in assessing both the progress of students and the objectives and procedures of the curriculum.
- Ability to organize personal continuing study and ability to incorporate knowledge gained into self-evaluation and professional growth.

#### Additional Academic Requirements

Visual Arts students must maintain at least a major GPA of 2.6 and an overall GPA of 2.5 on a 4.0 scale for the duration of the program.

#### Accreditation, Certification, and Licensure

##### Accreditation

National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

##### Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

#### Course Delivery Format

Course content is delivered through hands-on studio work combined with lectures, demonstrations and critiques.

#### Requirements for Art Education Major: 120 Credits

Bachelor of Arts or Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity<sup>+</sup> (Select SOC 100\* and/or PSYC\* \*\* Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3  
AIS/HIST 368 History of American Indians  
**OR** AIS/ANTH 421 Indians of North America

College of Arts & Sciences Requirements: 17-34

Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirement: 49

- ART 110 - First Review Credits: 0.5
- ART 111 - Drawing I \* \*\* Credits: 3
- ART 112 - Drawing II \* \*\* Credits: 3
- ART 121 - Design I 2D \* \*\* Credits: 3
- ART 122 - Design II Color Credits: 3
- ART 123 - Three Dimensional Design \* \*\* Credits: 3
- ART 200 Portfolio Review Jury on Student Progress Credits 0.5
- ART 211 - Drawing III-Figurative \*\* Credits: 3
- ARTH 211 - History of World Art I \* \*\* (G) Credits: 3
- ARTH 212 - History of World Art II \* \*\* (G) Credits: 3
- ARTH Advanced Writing Course Credits: 3  
ARTH 310 -History of United States Art and Architecture (AW)  
or ARTH 320 - Modern Art and Architecture Survey (AW)  
or ARTH 490 - Seminar (AW)
- Advisor Approved Elective Credits: 1.5  
ART 192 - Topics: Digital Photography or MCOM 265-265L - Basic Photography and Studio *Strongly Recommended* for Praxis preparation
- ART 400 - Senior Review Credits: 0.5
- ARTE 414 - K-12 Art Methods Credits: (2-3)
- ARTE 491-591 - Independent Study Credits: (1-3)
- ART 231 - Painting I \*\* Credits: 3
- ART 241 - Sculpture I \*\* Credits: 3
- ART 251 - Ceramics I \*\* Credits: 3
- ART 281 - Printmaking I \*\* Credits: 3
- ARTD 202 - Computer Graphics I Credits: 3

Teaching Specialization Requirements

Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

Professional Semester II

- SEED 450 - 7-12 Reading & Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0

Complete prior to entry into Professional Semester III

- ARTE Methodology Coursework
- Native American Course Approved for Teacher Education  
AIS/HIST 368 History & Culture of the American Indian  
**OR** AIS/ANTH 421 - Indians of North America\*\* Credits:3
- EDFN 365 -Computer-Based Technology & Learning Credits: 2
- EDFN 427 Middle School: Philosophy & Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

### Professional Semester III

- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 - Social Foundations, Management & Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching or SEED 488 - 7-12 Student Teaching Credits: 8

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED and ELED 488

### Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

### Total Credits Required: 120

### Curriculum Notes

+ *ARTH 211 or 212 satisfies SGR Goal #3 for BA in Art Education only*

\*The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Athletic Training Major

### Program Coordinator/Contact Information

Dr. Trevor C. Roiger, EdD, AT  
South Dakota State University  
Intramural Building 116 Box 2203  
Brookings, SD 57007

### Program Information

A major in Athletic Training is intended to prepare students for entry into clinical practice as licensed athletic trainers. Athletic trainers are health care professionals who collaborate with physicians to optimize activity and participation of patients and clients. Upon completion of the curriculum, students will be eligible to challenge the national certifying examination for athletic trainers through the Board of Certification (BOC). The professional portion of the Athletic Training curriculum takes two years to complete and implements competencies and proficiencies as defined by the Education Council of the National Athletic Trainers' Association.

In addition to completing the courses required for the curriculum, students will complete clinical experiences at high schools, universities, sports medicine clinics, and medical and rehabilitation clinics under the supervision of preceptors who are appropriately credentialed health care professionals.

Admittance into the professional phase of the athletic training program is based on a competitive application process. Students complete the application process during their sophomore year. Students who are admitted into the athletic training program will complete the program over the course of their final two years at SDSU.

### Student Learning Outcomes

Graduates with the Athletic training major should be able to:

- Outcome #1: Demonstrate their competence and confidence in the domains of athletic training as defined by the BOC – both cognitive and psychomotor tasks.
  - Domain #1: Prevention

- Domain #2: Clinical Evaluation and Diagnosis
- Domain #3: Immediate Care
- Domain #4: Treatment, Rehabilitation and Reconditioning
- Domain #5: Organization and Administration
- Domain #6: Professional Responsibility
- Outcome #2: Demonstrate preparation for the BOC certification examination.
- Outcome #3: Think critically – utilize information obtained through traditional or non-traditional sources to solve problems related to academic or professional practice.
- Outcome #4: Work effectively within a group or team to solve a problem or task.
- Outcome #5: Locate, evaluate and prepare information for presentation in various research formats.
- Outcome #6: Discuss issues current to the profession of athletic training and/or allied health and medical professions of the sports medicine umbrella.
- Outcome #7: Evaluate their total experience (academic, clinical instruction and field experience) within the Athletic Training curriculum to the program evaluation tool.
- Outcome #8: Utilize technology to complete tasks common to the profession of Athletic Training.

### Accreditation, Certification, Licensure

#### Accreditation

The undergraduate Athletic Training major is accredited by the Commission on Accreditation of Athletic Training Education.

#### Licensure and Certification

Upon successful completion of the Athletic Training curriculum, a student is eligible to write the Board of Certification (BOC) national certifying examination to become an Athletic Trainer. Information about the examination can be found at [www.bocatc.org](http://www.bocatc.org).

### Course Delivery Format

As a competency based program, instruction occurs through didactic (classroom), clinical education and clinical experience components.

### Requirements for Athletic Training Major: 120 Credits

Bachelor of Science

System General Education Requirements\*: 32-33

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: HDFS 210 and PSYC 101 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: CHEM 106-106L and CHEM 120-120L or CHEM 108-108L Credits: 8-9

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: EHS 109 \*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Major Requirements: 68-69

- AT 164 - Introduction to Athletic Training Credits: 2
- PE 354-354L Prevention & Care of Athletic Injuries & Lab Credits: 2
- HLTH 120 - Community Health Credits: 2
- OR HLTH/HSC 212 - Contemporary Health Problems Credits 2
- OR HLTH/HSC 443 - Public Health Science (G) Credits: 3
- NURS 201 - Medical Terminology Credits: 1
- NURS 323 - Introduction to Pathophysiology Credits: 3
- PHA 201 - Medications and Wellness Credits: 2
- PE 350 - Exercise Physiology Credits: (2-3)

- PE 400-400L - Exercise Test and Prescription & Lab Credits: 3
- PE 454-454L - Biomechanics and Lab Credits: 3
- PSYC 451 - Psychology of Abnormal Behavior \*\* Credits: 3
- AT 441-441L - Athletic Training Techniques I & Lab Credits: 3
- AT 442-542L - Athletic Training Techniques II Credits: 3
- AT 443-443L Athletic Training Techniques III & Lab Credits: 3
- AT 444 - Athletic Training Techniques IV Credits: 2
- AT 371 - Athletic Training Clinical Experience I Credits: 2
- AT 372 - Athletic Training Clinical Experience II Credits: 2
- AT 373 -Athletic Training Clinical Experience III Credits 2
- AT 374 - Athletic Training Clinical Experience IV Credits 2
- AT 454 - Athletic Injury Assessment-Lower Extremity Credits 2
- AT 456 -Athletic Injury Assessment-Upper Extremity Credits: 2
- AT 462 - Interventions I Credits: 3
- AT 464 - Interventions II Credits: 2
- AT 471 - Fall Clinical Experience Credits: 1
- AT 474 - Interventions III (AW) Credits: 2
- AT 490 - Seminar Credits: 2
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 325-325L - Physiology and Lab Credits: 4
- NFS 315 - Human Nutrition Credits: 3

Elective Credits: 12-13

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Aviation Major - Aviation Education Specialization

### Program Contact/Coordinator

Cody Christensen, Assistant Professor

Department of Consumer Sciences

Box: 2275A Wagner Hall 229

Brookings, SD 57007

E-mail: [cody.christensen@sdstate.edu](mailto:cody.christensen@sdstate.edu)

<http://www.sdstate.edu/cs/undergraduate-programs/aviation.cfm>

### Program Information

The Aviation Education Specialization is for students who wish to become Certified Flight Instructors and later be professional pilots in industry. Many of our graduates are in the airlines, military, government, and corporate workplaces. Top performing students of this option are often brought on as flight instructors in the SDSU program during their junior and senior years.

### Student Learning Outcomes

Graduates of the aviation education program will be able to:

- Apply the general education core to the aviation profession.
- Demonstrate instructional knowledge in single and multi-engine aircraft to the FAA commercial pilot standard.
- Demonstrate instructional knowledge through creating and teaching relevant aviation topics to colleagues.

Additionally, all students will participate in a senior capstone course that is designed to bridge the gap between their educational experience and future career. Students are evaluated using direct and indirect assessment to assure competency within the profession using a comprehensive assessment plan.

### Course Delivery Formats

Aviation students learning in lecture, laboratory, and field-based flight training.

### Requirements for Aviation Major - Aviation Education

#### Specialization: 120 Credits

Bachelor of Science in Education and Human Sciences

System General Education Requirements\*: 32

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101 Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 and PSYC 101 or SOC 100 Credits:6
- Goal #4 Humanities and Arts/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: GEOG 131-131L and PHYS 101-101L Credits: 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: EHS 109\*\* Credits:2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Consumer Sciences Department Requirements: 7

- LEAD 210 - Foundations of Leadership\*\* Credits: 3
- CS 377 - Professional Documents Credits:1
- LEAD 435 - Organizational Leadership and Team Development Credits: 3

Major Requirements: 58

- AVIA 101 - Introduction to General Aviation Credits: 1
- AVIA 150-150L - Intro to Aviation Meteorology & Lab Credits: 2
- AVIA 170 - Fundamentals of Flight Theory Credits: 3
- AVIA 171 - Introductory Flight I Credits: 2
- AVIA 180 - Attitude Instrument Theory Credits: 2
- AVIA 181 - Introductory Flight II Credits: 2
- AVIA 200 - Aviation Safety Credits: 3
- AVIA 201 - Aviation Weather Credits: 2
- AVIA 300 - Human Factors in Aviation Credits: 3
- AVIA 302 - Aviation Law Credits: 2
- AVIA 305 - Introduction to Aviation Administration Credits: 3
- AVIA 340 - Advanced Flight Principles Credits: 3
- AVIA 370 - Professional Pilot Theory I Credits: 3
- AVIA 372 - Professional Flight I Credits: 2
- AVIA 375 - Professional Pilot Theory II Credits: 3
- AVIA 377 - Professional Flight II Credits: 2
- AVIA 400 - Air Transportation System Credits: 3
- AVIA 440 - Curriculum Design in Aviation (AW) Credits: 3
- AVIA 450 - Methods of Teaching in Aviation Credits: 3
- AVIA 470 - Professional Flight Instructor Theory I Credits: 2
- AVIA 471 - Professional Flight Instructor Theory II Credits: 2
- AVIA 474 - Certified Flight Instructor I Credits: 2
- AVIA 475 - Certified Flight Instructor II Credits: 2
- AVIA 489 - Aviation Senior Seminar Credits: 3

Supporting Coursework: 3

- ACCT 210 - Principles of Accounting I Credits: 3

Elective Credits: 13

**Total Required Credits: 120**

## Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Aviation Major - Aviation Maintenance Management Specialization

### Program Contact/Coordinator

Cody Christensen, Assistant Professor

Department of Consumer Sciences

Box: 2275A Wagner Hall 229

Brookings, SD 57007

E-mail: cody.christensen@sdstate.edu

http://www.sdstate.edu/cs/undergraduate-programs/aviation.cfm

### Program Information

The Aviation Maintenance Management Specialization is focused on students who wish to repair and maintain aircraft. SDSU has partnered with approved FAA A&P programs across the United States to offer a four-year degree in aviation maintenance management. Students will go through maintenance training at an approved maintenance school and will then come to SDSU to finish up the degree requirements. Students may work for the Chief of Aviation Maintenance at SDSU prior to graduation.

### Course Delivery Formats

Aviation students learning in lecture, laboratory, and field-based flight training.

### Requirements for Aviation Major - Aviation Maintenance Management Specialization: 120 Credits

Bachelor of Science in Education and Human Sciences

System General Education Requirements\*: 32

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101 Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 and PSYC 101 or SOC 100 Credits: 6
- Goal #4 Humanities and Arts/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: GEOG 131-131L & PHYS 101-101L Credits: 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar EHS 109\*\* Credits:2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Consumer Sciences Department Requirements: 7

- LEAD 210 - Foundations of Leadership\*\* Credits: 3
- CS 377 - Professional Documents Credits:1
- LEAD 435 Organizational Leadership & Team Devlpt Credits: 3

Major Requirements: 42

- AVIA 101 - Introduction to General Aviation Credits: 1
- AVIA 200 - Aviation Safety Credits: 3
- AVIA 300 - Human Factors in Aviation Credits: 3
- AVIA 302 - Aviation Law Credits: 2
- AVIA 305 - Introduction to Aviation Administration Credits: 3
- AVIA 400 - Air Transportation System Credits: 3

Supporting Coursework: 27

- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- BADM 310 - Business Finance Credits: 3
- BADM 350 - Legal Environment of Business Credits: 3
- BADM 360 - Organization and Management Credits: 3
- CSC 105 - Introduction to Computers Credits: 3
- ECON 201 - Principles of Microeconomics \* \*\* Credits: 3
- ENGL 379 - Technical Communication (AW) Credits: 3
- SOC 353 - Sociology of Work Credits: 3

Electives: 32 – Consult with advisor for approved list.

**Total Required Credits: 120**

## Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Biochemistry Major

### Program Contact/Coordinator

James A. Rice, Professor and Head

South Dakota State University

131 Avera Health Sciences Building Box 2202

Brookings, SD 57007

605-688-5151

E-mail: james.rice@sdstate.edu

E-mail: chembiochem.sdstate.edu

### Program Information

One of the fastest growing scientific disciplines is also one of the youngest – biochemistry. Biochemistry is the application of atomic and molecular principles to the description of plant and animal life processes. This multi-faceted science includes the study of all life forms and depends on basic concepts derived from chemistry, biology, physics, and mathematics. Training in biochemistry at the undergraduate level positions students well for careers in biotechnology, pharmaceutical development, government laboratories, and is very appropriate as a pre-professional course of study. The B.S. in Biochemistry curriculum at SDSU builds upon a solid foundation in chemistry, and incorporates selected aspects of biology, physics, and mathematics to complete the undergraduate degree. In addition to completing the degree requirements listed below, biochemistry students engage in undergraduate research with faculty members in the department.

### Student Learning Outcomes

Biochemistry graduates will demonstrate the following capacities:

- Possess a foundational knowledge of the contemporary theories of biochemistry and molecular biology
- Apply the foundational knowledge of the field toward answering unknown questions
- Effectively communicate scientific information in written and verbal formats
- Safely handle chemical/biological agents and chemical equipment
- Become proficient in the design and execution of experimental procedures
- Use a variety of techniques to evaluate experimental outcomes
- Develop the human skills to work effectively in a team setting
- Efficiently search the relevant chemical literature
- Develop an understanding of the career opportunities within and outside of the field

## Course Delivery Format

Courses offered in the Biochemistry curriculum are taught in a variety of formats which address student learning outcomes: Didactic (lecture) methods ensure the development of foundational knowledge of chemistry; Practical (laboratory) methods ensure the development of laboratory skills and training; A combination of didactic and practical methods ensure the successful completion of the undergraduate research project.

## Requirements for Biochemistry Major: 120 Credits

Bachelor of Science in Arts and Sciences

System General Education Requirements\*: 34

- Goal #1 Written Communication: ENGL 101 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 123-MATH 123L Credits: 5
- Goal #6 Natural Sciences: CHEM 115-115L and 127-127L Credits: 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: CHEM 109 Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34  
Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences BIOL 151-151L Credits: 3  
and BIOL 153-153L Credits: 3  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 55

- MATH 125 - Calculus II \* Credits: 4
- STAT 381 - Introduction to Probability and Statistics Credits: 3
- PHYS 211-211L - University Physics I and Lab\* Credits: 4
- PHYS 213-213L - University Physics II and Lab \* Credits: 4
- CHEM 229-229L - Transformations of Organic Molecules and Lab Credits: 3, 1
- CHEM 237 - Intermediate Laboratory Investigations Credits: 2
- CHEM 348-348L - Biophysical Chemistry and Lab Credits: 3, 1
- CHEM 464 - Biochemistry I Credits: 3
- CHEM 466 - Laboratory Methods- Biochemistry Credits: 1
- CHEM 465 - Biochemistry II Credits: 3
- CHEM 498 Undergraduate Research/Scholarship (AW) Credits 3
- Advanced Biology Elective Credits: 10
- Advanced Chemistry Elective Credits: 10

General Electives: 15

**Total Required Credits: 120**

## Curriculum Notes

CHEM 498, Undergraduate Research - The required undergraduate research project must be in biochemistry and for at least 3 credits. The research project is usually completed during the summer preceding registration in CHEM 498. (Students must register for CHEM 498 in spring semester)

CHEM 498 credit is given for completing a written paper of the research project and presenting the paper at a scientific meeting in a semester after the project is completed. Refer to the department for information about additional summer research experiences.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Biology Major

### Program Coordinator/Contact

Volker Brözel, Department Head  
Department of Biology and Microbiology  
Alfred Dairy Science Hall 228  
605-688-6141  
E-mail: biomicro@abs.sdstate.edu  
<http://www.sdstate.edu/biomicro/>

### Program Information

The curriculum in General Biology provides breadth of exposure to fundamental areas of biology. Students majoring in Biology without a specialization take coursework providing a balance of cell, molecular, and organismal classes. Students select from microbiology, botany and animal based classes based on their desired career path.

### Academic Requirements

A minimum GPA of 2.0 must be maintained in the major courses.

### Course Delivery Format

Program coursework is on-campus, in classroom and laboratories, as well as field-based settings. Additional coursework is available at off-campus attendance centers. Limited coursework is available online.

## Requirements for Biology Major: 120 Credits

Bachelor of Science in Biological Sciences

System General Education Requirements\*: 33-35

- Goal #1 Written Communication: ENGL 101 & 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101 Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics<sup>1</sup> Credits: 4-6  
MATH 102 and MATH 120  
or MATH 115  
or MATH 121-121L  
or MATH 123 (123L)
- Goal #6 Natural Sciences BIOL 151-151L & 153-153L Credits 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar BIOL 109-109L\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

### Major Requirements: 59-65

Biology and Microbiology: 13

- BIOL 202-202L - Genetics and Organismal Biology and Lab Credits: 3, 1
- BIOL 204-204L - Genetics & Cellular Bio & Lab Credits: 3, 1
- MICR 233-233L - Intro Microbiology and Lab Credits: 3, 1
- BIOL 290 - Seminar Credits: 1

Chemistry: 16

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1
- CHEM 114-114L - General Chemistry II and Lab\* Credits: 3, 1
- CHEM 326-326L - Organic Chemistry I and Lab Credits: 3, 1
- CHEM 328-328L - Organic Chemistry II and Lab Credits: 3, 1



Physics: 4-8

- PHYS 111-111L - Intro to Physics I & Lab\* Credits: 4 and PHYS 113-113L - Intro to Physics II & Lab\* Credits: 4
- OR PHYS 101-101L - Survey of Physics\* and Lab<sup>2</sup> Credits: 4

Mathematics: 3-4

- MATH 125 - Calculus II \* Credits: 4
- OR STAT 281 - Introduction to Statistics Credits: 3

Advanced Writing: 3

- ENGL 379 - Technical Communication (AW) Credits: 3

#### Select One Plan of Study

- General Biology Major Credits: 20-21
- Pre-professional Specialization Credits: 23-27
- Secondary Education Specialization Credits: 48-49

#### General Biology Major: 20-21

- Biology majors without specializations are required to complete at least 10 additional departmental credits at the 300-400 level (Biol, Bot, or Micr) 10 Credits
- In addition, select one of the following paths: 10-11 Credits
  - BIOL 373 - Evolution Credits: 3
  - BIOL 221-221L - Human Anatomy and Lab Credits: 4
  - BIOL 325-325L - Physiology and Lab Credits 4
- OR
  - BIOL 373 - Evolution Credits: 3
  - BOT 201-201L - General Botany and Lab\* Credits: 3
  - BOT 327-327L - Plant Physiology and Lab Credits: 4

Electives: 15-23

**Total Required Credits: 120**

#### Curriculum Notes

1. Students planning for professional or graduate degree programs should take MATH 121 or 123 and 125.
2. PHYS 101-101L is not sufficient for students planning to enter professional or graduate degree programs.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits (Biology-Pre-professional specialization is exempt).

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **Biology Major - Pre-professional Specialization**

#### Program Coordinator/Contact

Volker Brözel, Department Head  
Department of Biology and Microbiology  
Alfred Dairy Science Hall 228  
605-688-6141  
E-mail: biomicro@abs.sdstate.edu  
<http://www.sdstate.edu/biomicro/>

#### Program Information

The curriculum in the Biology pre-professional specialization is designed for students planning to apply to health-related pre-professional programs (i.e. pre-chiropractic, pre-dentistry, pre-medicine, pre-optometry, pre-occupational therapy, pre-physical therapy and pre-physician assistant.)

#### Academic Requirements

A minimum GPA of 2.0 must be maintained in the major courses.

#### Course Delivery Format

Program coursework is on-campus, in classroom and laboratories, as well as field-based settings. Additional coursework is available at off-campus attendance centers. Limited coursework is available online.

## **Requirements for Biology Major - Pre-professional Specialization: 120 Credits**

Bachelor of Science in Biological Sciences

System General Education Requirements\*: 33-35

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101 Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 4-6  
MATH 102 and MATH 120  
or MATH 115  
or MATH 121-121L  
or MATH 123 (123L)
- Goal #6 Natural Sciences: BIOL 151-151L & BIOL 153-153L Credits: 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: BIOL 109-109L\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

Major Requirements: 62-71

Biology and Microbiology: 13

- BIOL 202-202L Genetics & Organismal Bio & Lab Credits 3, 1
- BIOL 204-204L - Genetics & Cellular Bio and Lab Credits: 3, 1
- MICR 233-233L - Introductory Microbio & Lab Credits: 4, 0
- BIOL 290 - Seminar Credits: 1

Chemistry: 16

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1
- CHEM 114-114L - General Chemistry II and Lab\* Credits: 3, 1
- CHEM 326-326L - Organic Chemistry I and Lab Credits: 3, 1
- CHEM 328-328L - Organic Chemistry II and Lab Credits: 3, 1

Physics: 4-8

- PHYS 111-111L - Intro to Physics I & Lab\* Credits: 4 and PHYS 113-113L - Intro to Physics II & Lab\* Credits: 4
- OR PHYS 101-101L - Survey of Physics\* and Lab<sup>2</sup> Credits: 4

Mathematics: 3-4

- MATH 125 - Calculus II \* Credits: 4
- OR STAT 281 - Introduction to Statistics Credits: 3

Advanced Writing: 3

- ENGL 379 - Technical Communication (AW) Credits: 3

Specialization Core Requirements

- BIOL 221-221L - Human Anatomy and Lab Credits: 4<sup>1</sup>
- BIOL 325-325L - Physiology and Lab Credits: 4<sup>1</sup>
- MICR 439- Medical and Veterinary Immunology Credits: 3

Elective Credits

Select at least four courses from the list of courses.

- BIOL 383 - Bioethics \*\* (G) Credits: 4
- BIOL 494 - Internship Credits: 3<sup>2</sup> OR BIOL 498 - Undergraduate Research/Scholarship Credits: 3<sup>2</sup>
- CHEM 464 - Biochemistry I Credits: 3
- MICR 424-524 - Medical and Veterinary Virology Credits: 3
- MICR 433-533 - Medical Microbiology Credits: 3
- MICR 436 - Molecular and Microbial Genetics Credits: 4
- MICR 440L - Infectious Disease Lab Credits:
- PE 454-454L - Biomechanics and Lab Credits: 3<sup>3</sup>
- BIOL 476-576 - Advanced Mammalian Physiology Credits: 4
- BIOL 467-467L/567-567L - Parasitology and Lab Credits: 3
- BIOL 483-483L - Developmental Biology and Lab Credits: 4

## Suggested Electives

Recommended if not taken to meet core requirements.

- CHEM 466 - Laboratory Methods- Biochemistry Credits: 1
- HLTH 120 - Community Health Credits: 2
- HLTH 364-364L - Emergency Medical Tech & Lab Credits: 4
- MICR 440L - Infectious Disease Lab Credits: 3
- NFS 315 - Human Nutrition Credits: 3
- NURS 323 - Introduction to Pathophysiology Credits: 3
- PSYC 101 - General Psychology \* \*\* Credits: 3
- SPCM 201 - Interpersonal Communication Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3
- MATH 121-121L - Survey of Calculus and Lab\* Credits: 5  
OR MATH 123 - Calculus I \* Credits: 4 and MATH 125 - Calculus II \* Credits: 4

## Total Required Credits: 120

### Curriculum Notes

<sup>1</sup> Pre-Vet students can substitute VET 223-223L, Anatomy and Physiology of Domestic Animals and Lab and one additional course (at least 4 credits) from the Health Related electives (or an advanced animal science course like Advanced Animal Nutrition or Reproductive Physiology).

<sup>2</sup> A total of 3 credits is required for field study, internships, and research experiences to count as one elective. These credits can be combined from various experiences.

<sup>3</sup> Recommended only for Pre-Chiro, Pre-OT, and Pre-PT programs.

<sup>4</sup> PHYS 101-101L is generally not sufficient for students planning to enter professional or graduate degree programs.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits (Biology-Preprofessional specialization is exempt).

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits, English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Biology Major - Secondary Education Specialization

### Program Coordinator/Contact

Volker Brözel, Department Head  
Department of Biology and Microbiology  
Alfred Dairy Science Hall 228  
605-688-6141  
E-mail: biomicro@abs.sdstate.edu  
<http://www.sdstate.edu/biomicro/>

### Program Information

The curriculum in the Biology Secondary Education specialization is designed to provide students with the background needed for a successful career teaching biology in middle and high schools. Students complete a broad distribution of courses that include all the major areas in Biology as well as coursework in pedagogical and professional development. For secondary education majors that may teach in a rural school or apply to graduate school, speak to an advisor about taking additional chemistry, physics, and math classes.

### Academic Requirements

A minimum GPA of 2.0 must be maintained in the major courses.

### Accreditation, Certification, and Licensure

#### Accreditation

National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

#### Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the

Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Course Delivery Format

Program coursework is on-campus, in classrooms and laboratories, as well as field-based settings. Additional coursework is available at off-campus attendance centers. Limited coursework is available online.

### Requirements for Biology Major - Secondary Education

#### Specialization: 120 Credits

System General Education Requirements\*: 33-35

- Goal #1 Written Communication: ENGL 101 & 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101 Credits: 3
- Goal #3 Social Sciences/Diversity: SOC 100 and/or PSYC 101 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 4-6  
MATH 102 and MATH 120  
or MATH 115  
or MATH 121-121L  
or MATH 123 (123L)
- Goal #6 Natural Sciences: BIOL 151-151L & 153-153L Credits: 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: BIOL 109-109L\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility (Suggested AIS/ANTH 421 or AIS/HIST 368) Credits: 3

Major Requirements: 48-49

Biology and Microbiology: 13

- BIOL 202-202L - Genetics & Organismal Bio & Lab Credits 3, 1
- BIOL 204-204L - Genetics & Cellular Bio and Lab Credits: 3, 1
- MICR 233-233L - Introductory Microbio & Lab Credits: 4, 0
- BIOL 290 - Seminar Credits: 1

Chemistry and Physics: 16

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 4
- CHEM 114-114L - General Chemistry II and Lab\* Credits 4
- CHEM 326-326L - Organic Chemistry I and Lab Credits: 4
- PHYS 101-101L - Survey of Physics \* and Lab Credits: 4

Advanced Writing: 3

- ENGL 379 - Technical Communication (AW) Credits: 3

Specialization Requirements: 16-17

- BOT 201-201L - General Botany and Lab\* Credits: 3
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 373 - Evolution Credits: 3
- NRM 311-311L - Principles of Ecology and Lab Credits: 3
- Take at least one of the following
  - BIOL 200-200L - Animal Diversity and Lab\* Credits: 4
  - BIOL 325-325L - Physiology and Lab Credits: 4
  - BIOL/PHIL - 383 Bioethics\*\* (G) Credits: 4
  - CHEM 328-328L - Organic Chemistry II and Lab Credits: 4
  - PHIL/REL 454-554 - Environmental Ethics \*\* Credits: 3
  - WL 302 - Animal Behavior Credits: 3

Teaching Specialization Requirements

Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

### Professional Semester II

- SEED 450 - 7-12 Reading & Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0

### Complete prior to entry into Professional Semester III

- SEED 413 - 7-12 Science Methods Credits: 3
- Native American Course Approved for Teacher Education AIS/HIST 368 History & Culture of the American Indian OR AIS/ANTH 421 - Indians of North America\*\* Credits:3
- EDFN 365 -Computer-Based Technology & Learning Credits: 2
- EDFN 427 Middle School: Philosophy & Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

### Professional Semester III

- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 - Social Foundations, Management & Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching or SEED 488 - 7-12 Student Teaching Credits: 8

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED and ELED 488

### Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

### Total Credits Required: 120

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **Biotechnology Major**

### Program Coordinator/Contact

Volker Brözel, Department Head  
Department of Biology and Microbiology  
Alfred Dairy Science Hall 228  
605-688-6141  
E-mail: biomicro@abs.sdstate.edu  
<http://www.sdstate.edu/biomicro/>

### Program Information

This interdisciplinary program helps prepare students in fundamental sciences so that they may successfully compete for career opportunities in the growing life sciences industries. Graduates with expertise in biotechnology fill increasing demand from employers utilizing technologies such as molecular biology, genetic engineering, tissue culture, reproductive intervention, and biomass conversion in a variety of applications, such as vaccine and pharmaceutical development, agronomic seed production, livestock breeding, genetic diagnostic testing, identity and parentage verification, criminal forensics, biorenewable product development, or biomedical research.

Students may choose this major for preparation for admission to professional schools such as medicine, dentistry, optometry,

pharmacy, and veterinary medicine. The program provides an excellent background for students entering graduate school in a life sciences discipline.

### Academic Requirements

A minimum GPA of 2.0 must be maintained in the major courses.

### Course Delivery Format

Program coursework is on-campus, in classroom and laboratories, as well as field-based settings. Additional coursework is available at off-campus attendance centers. Limited coursework is available online.

### Requirements for Biotechnology Major: 120 Credits

Bachelor of Science in Biological Sciences

#### System General Education Requirements\*: 34

- Goal #1 Written Communication: ENGL 101 & 201 Credits: 6
- Goal #2 Oral Communication Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Humanities and Arts/Diversity Credits: 6
- Goal #5 Mathematics: MATH 121-121L or 123-123L Credits: 5
- Goal #6 Natural Sciences BIOL 151-151L & 153-153L Credits: 8

#### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: BIOL 109-109L\*\* Credits 1, 1
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: Credits: 3

#### Major Requirements: 72

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1
- CHEM 114-114L - General Chemistry II and Lab\* Credits: 3, 1
- CHEM 326-326L - Organic Chemistry I and Lab Credits: 3, 1
- CHEM 328-328L - Organic Chemistry II and Lab Credits: 3, 1
- CHEM 464 - Biochemistry I Credits: 3
- CHEM 466 - Laboratory Methods- Biochemistry Credits: 1
- PHYS 111-111L - Introduction to Physics I and Lab\* Credits: 4
- PHYS 113-113L - Introduction to Physics II and Lab\* Credits: 4
- BIOL 202-202L - Genetics & Organismal Bio & Lab Credits: 4
- BIOL 204-204L Genetics & Cellular Biology & Lab Credits 3,1
- MICR 233-233L - Intro Microbiology and Lab Credits: 4, 0
- ABS 205 - Biotechnology in Agriculture & Medicine Credits: 2
- STAT 281 - Introduction to Statistics Credits: 3
- MICR 436 - Molecular and Microbial Genetics Credits: 4
- MICR 450 - Applied Microbiology & Biotechnology Credits: 3
- MICR 438L - Techniques in Molecular Biology Lab Credits: 2
- STAT 435-535 - Applied Bioinformatics Credits: 2
- PHIL/BIOL 383 - Bioethics \*\* (G) Credits: 4

#### Advanced Writing Requirement

Select one of the following courses.

- AGECE 479 - Agricultural Policy (AW) (G) Credits: 3
- PS 383-383L - Principles of Crop Improvement & Lab (AW) Credits:3
- ENGL 379 - Technical Communication (AW) Credits: 3

#### Advanced Fundamentals Requirement

Select at least three credits from the following courses.

- BIOL 483-483L - Developmental Biology & Lab Credits: 4
- MICR 332 - Microbial Physiology Credits: 2
- MICR 332L - Microbial Physiology Lab Credits: 2
- MICR 439-539 - Medical & Veterinary Immunology Credits: 3
- MICR 424-524 - Medical and Veterinary Virology Credits: 3
- VET 223-223L - Anatomy and Physiology of Domestic Animals and Lab Credits: 4

### Applications Requirement

Select at least three credits from the following courses.

- ABE 343-343L - Engineering Properties of Biological Materials and Lab Credits: 3
- AS 332 - Livestock Breeding and Genetics Credits: 4
- AS 433-433L - Livestock Reproduction and Lab Credits: 3
- DS 301-301L - Dairy Microbiology and Lab Credits: 3
- DS 411-411L - Dairy Breeds and Breeding and Lab Credits: 3
- HO 312-312L - Plant Propagation and Lab Credits: 3
- HO/PS 383-383 L Principles of Crop Improvement and Lab Credits: 3
- MICR 440L - Infectious Disease Lab Credits: 3

### Experiential Learning Requirement

Students will complete at least 3 credits from the following courses. Prefixes may vary with approval by program coordinator.

- BIOL/MICR 494 - Internship Credits: 1-6
- BIOL/MICR 498 Undergraduate Research/Scholarship Credits 1-6

Elective Credits: 8-9

### Total Required Credits: 120

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Chemistry Major

### Program Contact/Coordinator

James A. Rice, Professor and Head  
South Dakota State University  
131 Avera Health Sciences Building Box 2202  
Brookings, SD 57007  
605-688-5151  
E-mail: james.rice@sdstate.edu  
chembiochem.sdstate.edu

### Program Information

Chemistry is often referred to as the central science because of its strong connections to the other natural sciences and mathematics. Chemistry is therefore an area of study that allows students vast opportunity to explore the unknown and to address some of human society's most pressing scientific problems. Professional chemists are employed in a number of diverse fields: governmental policymakers, pharmaceutical/industrial chemists, intellectual property attorneys, high school teachers, and physicians. Undergraduate training in chemistry at SDSU provides students with enhanced critical thinking skills and problem-solving abilities, attributes which are highly desired in the modern workforce. The chemistry major is also excellent preparation for professional study in medicine, dentistry, business, and law. The American Chemical Society (ACS), in recognition of the quality and rigor of the curriculum, certifies the B.S. degree in chemistry offered by the department. In addition to completing the degree requirements listed below, students engage in independent research projects in collaboration with departmental faculty; this capstone experience affords students a means to apply the knowledge of the discipline to questions for which the answers are unknown.

### Emphases

The ACS-certified chemistry major offers optional emphases in environmental chemistry and chemical physics. These emphases are developed through the selection of elective courses and undergraduate research experiences that provide expertise appropriate to one of these three areas.

### Student Learning Outcomes

Upon completing a B.S. in Chemistry, graduates will:

- Possess a foundational knowledge of the contemporary theories of chemistry
- Apply the foundational knowledge of the field toward answering unknown questions
- Effectively communicate scientific information in written and verbal formats
- Safely handle chemicals and chemical equipment
- Become proficient in the design and execution of experimental procedures
- Use a variety of techniques to evaluate experimental outcomes
- Develop the human skills to work effectively and efficiently in a team setting
- Efficiently search the relevant chemical literature
- Develop an understanding of the career opportunities within and outside of the field

### Additional Academic Requirements

A grade of "C" or better is required in all courses required for the major.

### Accreditation, Certification, and Licensure

The B.S. in Chemistry is certified by the American Chemical Society (ACS), which serves as recognition of a high quality and rigorous curriculum.

### Course Delivery Format

Courses offered in the B.S. Chemistry curriculum are taught in a variety of formats which address student learning outcomes: Didactic (lecture) methods ensure the development of foundational knowledge of chemistry; Practical (laboratory) methods ensure the development of laboratory skills and training. A combination of didactic and practical methods ensures the successful completion of the undergraduate research project.

### Requirements for Chemistry (ACS certified) Major: 120 Credits Bachelor of Science

System General Education Requirements\*: 34

- Goal #1 Written Communication: ENGL 101, and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 123-MATH 123L Credits: 5
- Goal #6 Natural Sciences CHEM 115-115L & 127-127L Credits 8

Institutional Graduation Requirements:\*\* 5

- Goal #1 First Year Seminar: CHEM 109 Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34  
Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 51

Major Core Requirements: 42

- MATH 125 - Calculus II \* Credits: 4
- MATH 225 - Calculus III \* Credits: 4
- PHYS 211-211L - University Physics I & Lab\* Credits: 4
- PHYS 213-213L - University Physics II & Lab\* Credits: 4
- CHEM 229-229L - Transformations of Organic Molecules and Lab Credits: 3, 1
- CHEM 237 - Intermediate Laboratory Investigations Credits: 2
- CHEM 242-242L - Chemical Equilibrium and Thermodynamics and Lab Credits: 4, 1
- CHEM 332-332L - Analytical Chemistry and Lab Credits: 3, 1
- CHEM 452-452L - Inorganic Chemistry and Lab Credits: (3, 1)
- CHEM 464 - Biochemistry I Credits: 3
- CHEM 466 - Laboratory Methods- Biochemistry Credits: 1
- CHEM 498 Undergraduate Research/Scholarship AW Credits 1-12 <sup>1</sup>

Advanced Chemistry Electives: 9

- CHEM 329 - Organic Chemistry III Credits: 2
- CHEM 329L - Organic Chemistry III Lab Credits: 2
- CHEM 345 Quantum Mechanics of Chemical Systems Credits 2
- CHEM 347 - Chemical Kinetics Credits: 2
- CHEM 348-348L - Biophysical Chemistry and Lab Credits: 3, 1
- CHEM 432 - Analytical Chemistry II Credits: 2
- CHEM 433 - Bioanalytical Chemistry Credits: 2
- CHEM 465 - Biochemistry II Credits: 3
- CHEM 482 - Environmental Chemistry Credits: 3
- CHEM 484 - Chemical Toxicology Credits: 3

General Electives: 19

### Emphases

Within the major, electives may be selected to develop an American Chemistry Society recognized emphasis.

### Chemical Physics Emphasis

The following courses may be taken as electives to develop the chemical physics emphasis:

- Advanced physics electives (beyond the required) Credits: 3
- Advanced mathematics electives (beyond the required) Credits 3
- CHEM 498 Undergraduate Research/Scholarship Credits: 1-12  
*At least 3 credits in physical chemistry. Field work and/or studies of modeling in physical chemistry are encouraged as a component of the undergraduate research experience.*

### Environmental Chemistry Emphasis

The following courses may be taken as electives to develop the environmental chemistry emphasis:

- CHEM 482 - Environmental Chemistry Credits: 3-4
- Select one of the following sequences:
  - PS 213-213L Soils and Lab Credits 3  
AND PS 412 Environmental Soil Chemistry Credits: 3
  - MICR 231-231L - General Microbiology and Lab Credits: 4  
AND MICR 310-310L Environmental Microbiology & Lab Credits: 4
  - PS 421-421L Soil Microbiology and Lab Credits: 3  
AND CEE 434 – Hydrology Credits: 3
- CHEM 498 - Undergraduate Research/Scholarship Credits: 1-12  
*At least 3 credits in physical chemistry. Field work and/or studies of modeling in environmental systems are encouraged as a component of the undergraduate research experience.*

**Total Required Credits: 120**

### Notes:

<sup>1</sup>CHEM 498 Undergraduate Research: The required research project must be at least 3 credits in Chemistry.. CHEM 498 credit is given for completing a written paper of the research project and presenting

the paper at a scientific meeting in a semester after the project is completed. The research project is usually completed during the summer preceding registration in CHEM 498. Consult the department for information about additional summer research experiences.

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits, English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Civil Engineering Major

### Program Contact/Coordinator

Nadim Wehbe, Interim Head  
Department of Civil and Environmental Engineering  
Crothers Engineering Hall 120  
605-688-5427  
E-mail: Civil and Environmental Engineering  
<http://www.sdstate.edu/cvlee/index.cfm>

### Program Information

Civil Engineering includes the location, design, construction, and the operation and maintenance of highways, airports, buildings, bridges, dams, water supply and distribution systems, waste water collection systems and treatment plants, irrigation and drainage systems, river and harbor improvements and many other infrastructure facilities essential in modern life. Civil Engineers are responsible for all aspects of the world's infrastructure.

To prepare students for these responsibilities, the program provides opportunities for them to solve engineering problems, promote original thought, illustrate the work expected of engineers and stimulate interest and enthusiasm for design. Seniors design teams work on comprehensive, open-ended projects involving scope and definition, evaluation of alternatives on the basis of economic, social, environmental, and other factors, concluding with the preparation of a functional design, plans, specifications and final cost estimates.

### Academic Requirements

The following requirements must be met to earn a Bachelor of Science Degree in Civil Engineering:

- Combined average of "C" or better in the Civil Engineering courses;
- Combined average of "C" or better in the mathematics courses;
- Minimum grade of "C" in Math 123, Math 125, EM 214, EM 215, EM 321, and EM 331.
- Students that fail to earn a "C" or better in any of these courses will be required to take them in each subsequent semester until the requirement is met.
- Students must take the Fundamentals of Engineering examination prior to graduation.

### Student Learning Outcomes

The program's mission and educational objectives are accomplished by providing undergraduate students with an educational program that will result in the following outcomes by the time of graduation:

- An ability to apply knowledge of mathematics, science, and engineering
- An ability to design and conduct experiments, as well as to analyze and interpret data
- An ability to design a system, component, or process to meet prescribed objectives
- An ability to function on multi-disciplinary teams
- An ability to identify, formulate, and solve engineering problems
- An understanding of professional and ethical responsibility



- An ability to communicate effectively
- The broad education necessary to understand the impact of engineering solutions in a global and societal context
- A recognition of the need for, and an ability to engage in lifelong learning
- A knowledge of contemporary issues
- The skills to apply the tools and techniques of modern engineering practice

- CEE 432 - Hydraulic Engineering Credits: 3
- CEE 455 - Steel Design Credits: 3
- CEE 456 - Concrete Theory and Design Credits: 3
- CEE 464 - Civil Engineering Capstone Design I Credits: 1
- CEE 465 Civil Engineering Capstone Design II (AW) Credits 2
- CEE 482 - Engineering Administration Credits: 3
- CEE 490 - Seminar Credits: (1-3)

### Accreditation, Certification, Licensure

#### Accreditation

The department has been accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

#### Licensure

The Fundamentals of Engineering examination is a national licensure examination that covers material taught in an ABET-accredited engineering program. This exam is a graduation requirement for Civil Engineers and for any engineer who wishes to be licensed as a Professional Engineer.

### Course Delivery Format

The Civil Engineering degree requires design coursework in five areas: structural, geotechnical, environmental, transportation, water resources and hydraulics. These skills are applied in classroom, laboratory, and field-based settings.

### Requirements for Civil Engineering Major: 130 Credits

Bachelor of Science

#### System General Education Requirements\*: 33

- Goal #1 Written Communication: ENGL 101, and ENGL 201 or ENGL 277 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 123 Credits: 4
- Goal #6 Natural Sciences PHYS 211-211L and 213-213L Credits 8

#### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: GE 109-109L\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: CEE 225\*\* Credits: 3

#### Major Requirements: 80

- CHEM 112-112L - General Chemistry I and Lab Credits: 3, 1
- CHEM 114 - General Chemistry II\* Credits: 3 or CHEM 120 - Elementary Organic Chemistry\* Credits: 3
- Additional Departmental Approved Basic Science Course Credits: 3
- MATH 125 - Calculus II \* Credits: 4
- MATH 225 - Calculus III \* Credits: 4
- MATH 321 - Differential Equations Credits: 3
- STAT 381 - Introduction to Probability and Statistics Credits: 3
- EM 214 - Statics Credits: 3
- EM 215 - Dynamics Credits: 3
- EM 321 - Mechanics of Materials Credits: 3
- EM 331 - Fluid Mechanics Credits: 3
- CEE 106-106L - Elementary Surveying and Lab Credits: 4
- CEE 216-216L - Materials and Lab Credits: 3
- CEE 282 - Computer-Aided Design Credits: 3
- CEE 311 - Structural Materials Lab Credits: 1
- CEE 323-323L - Water Supply and Wastewater Engineering and Lab Credits: 3
- CEE 331 - Fluid Mechanics Lab Credits: 1
- CEE 340-340L - Engineering Geology and Lab Credits: 3
- CEE 346-346L - Geotechnical Engineering and Lab Credits: 4
- CEE 353 - Structural Theory Credits: 3
- CEE 363 - Highway and Traffic Engineering Credits: 3

#### Technical Elective Credits: 12

Complete a total of four courses in at least two of the five technical areas: (geotechnical, environmental, structural, transportation, and water resources). Technical electives require approval by the advisor or department head.

- CEE 208-208L - Engineering Surveys and Lab Credits: 3
- CEE 304 - Land Surveying Credits: 3
- CEE 434/534 - Hydrology Credits: 3
- CEE 411-411L - Bituminous Materials and Lab Credits: 3
- CEE 422-422L - Environmental Engineering Instrumentation and Lab Credits: 3
- CEE 423/523 - Municipal Water Distribution and Collection System Design Credits: 3
- CEE 424/524 - Industrial Waste Treatment Credits: 3
- CEE 435/535 - Water Resources Engineering Credits: 3
- CEE 443/543 - Matrix Analysis of Structures Credits: 3
- CEE 446/546 - Advanced Geotechnical Engineering Credits: 3
- CEE 447-547 - Foundation Engineering Credits: 3
- CEE 452/552 - Prestressed Concrete Credits: 3
- CEE 458/558 - Design of Timber Structures Credits: 3
- CEE 467/567 - Transportation Engineering Credits: 3
- CEE 491 - Independent Study Credits: (1-3)
- CEE 492/592 - Topics Credits: (1-3)
- CEE 494 - Internship Credits: (1-6)
- EE 300-300L - Basic Electrical Engineering I and Lab Credits: 3
- ME 314 - Thermodynamics Credits: 3

### Total Required Credits: 130

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs).

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Computer Science Major

### Program Contact/Coordinator

George Hamer, Assistant Department Head  
Department of Electrical Engineering and Computer Science  
Daktronics Engineering Hall 214  
605-688-4526  
E-mail: [sdsu.eecs@sdstate.edu](mailto:sdsu.eecs@sdstate.edu)  
website: <http://www.sdstate.edu/eecs/>

### Program Information

Computer Scientists play key roles in many walks of life in today's society. Graduates of the program work in many different areas such as; application programmer, network designer, database administrator, information technologist, game development, and many others. CS related jobs are among the ten fastest growing careers that show a lot of promise and opportunity for growth.

Majors complete a core of basic computer science courses that includes the study of programming and algorithms, data structures, database concepts, computer architecture and organization, programming languages, compilers, operating systems, and software

engineering. Important courses in closely related fields, e.g., discrete mathematics, digital logic design, scientific computation, and probability and statistics are also taken. Computer Science students are required to study all aspects of computing, including hardware, software, and theory.

### Student Learning Outcomes

The program must enable students to attain, by the time of graduation, the ability to:

- apply knowledge of computing and mathematics appropriate to the discipline.
- analyze a problem, and identify and define the computing requirements appropriate to its solution.
- design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.
- function effectively on teams to accomplish a common goal.
- understand professional, ethical, legal, security and social issues and responsibilities.
- communicate effectively with a range of audiences.
- analyze the local and global impact of computing on individuals, organizations, and society.
- recognize the need for and the ability to engage in continuing professional development.
- use current techniques, skills, and tools necessary for computing practice.
- apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.
- apply design and development principles in the construction of software systems of varying complexity.

### Additional Academic Requirements

Computer Science students must pass all CSC and SE courses with a grade of C or better. All graduating seniors are required to take the Major Field Test in Computer Science, which is given once per semester.

### Accreditation

The B.S. program in Computer Science is accredited by the Computing Accreditation Commission of ABET.

### Course Delivery Format

A majority of the courses are taught on campus in smart classrooms. The smart classrooms allow for a variety of methods for student engagement and faculty are able to record and post their lectures on-line.

### Requirements for Computer Science Major: 120 Credits

Bachelor of Science in Computer Science

System General Education Requirements\*: 33

- Goal #1 Written Communication: ENGL 101 and 277 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 123 Credits: 4
- Goal #6 Natural Sciences PHYS 111-111L & 113-113L Credits: 8  
OR PHYS 211-211L and PHYS 213-213L Credits: 8  
OR CHEM 112-112L and CHEM 114-114L Credits: 8  
OR BIOL 153-153L and BIOL 151-151L Credits: 8

Institutional Graduation Requirements:\*\* 5

- Goal #1 First Year Seminar: GE 109-109L\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

Major Requirements: 45

- CSC 150-150L - Computer Science I Credits: 3
- CSC 250 - Computer Science II Credits: 3
- CSC 300 - Data Structures Credits: 3
- CSC 314 - Assembly Language Credits: 3
- CSC 317 - Computer Organization and Architecture Credits: 3
- CSC 346 - Object Oriented Programming Credits: 3
- CSC 354 - Introduction to Systems Programming Credits: 3
- CSC 445 - Introduction to Theory of Computation Credits: 3
- CSC 303 Ethical & Security Issues in Computing (G) Credits: 2
- CSC 446 - Compiler Construction Credits: 3
- CSC 456 - Operating Systems Credits: 3
- CSC 461 - Programming Languages Credits: 3
- CSC 470 - Software Engineering Credits: 3
- CSC 484 - Database Management Systems Credits: 3
- CSC 485 - Software Engineering II (AW) Credits: 3

Supporting Coursework: 27

- MATH 125 - Calculus II \* Credits: 4
- MATH 253 - Logic, Sets, and Proof Credits: 3
- MATH 215 - Matrix Algebra Credits: 2
- MATH 316 - Discrete Mathematics Credits: 3
- MATH 374 - Scientific Computation I Credits: 3
- EE 245-245L - Digital Systems and Lab Credits: 4
- STAT 281 - Introduction to Statistics Credits: 3
- Natural Science (Credits: 4)  
PHYS 111-111L and PHYS 113-113L  
or PHYS 211-211L and PHYS 213-213L  
or CHEM 112-112L and CHEM 114-114L  
or BIOL 151-151L and BIOL 153-153L

Technical Electives: 12

- Technical electives must be 300 level or higher.
- A minimum of 9 of the 12 technical credits must be in approved CS or SE courses.
- 3 of the 12 credits may come from a departmental approved support area.

**Total Required Credits: 120**

### Game Programming Emphasis:

The Computer Science program offers an emphasis in game programming. This emphasis deals with a wide range of both hardware and software related topics relating to game development. The Game Programming course will provide the students with an understanding of some of the tools used in game development such as C/C++, DirectX and OpenGL. The Artificial Intelligence course will provide the students with a foundation that will allow the students to understand how games can make effective decisions based upon the current game state. The Computer Networks course will provide the students with a foundation that will allow the students to understand how to deal with multiplayer LAN and WAN based games. The Microcontroller Systems Design course will provide the students with a foundation that will allow the students to understand how to communicate with the microcontrollers found inside of console and handheld gaming systems. The Embedded Systems Programming course will provide the students with a foundation that will allow students to understand how to develop games for console and handheld gaming systems. Students interested in the Game Programming Emphasis are encouraged to take courses from the list of elective courses below.

- CSC 450/550 - Game Programming Credits: 3
- CSC 447/547 - Artificial Intelligence Credits: 3
- CSC 474/574 - Computer Networks Credits: 3
- EE 347-347L - Microcontroller Systems Design & Lab Credits 3
- SE 440 - Embedded Systems Credits: 3

### Information Technology Management Emphasis:

Information is one of the most important assets of any organization. The use of the computer and software in the current Information Age requires business to employ individuals savvy in producing, manipulating, and analyzing data. Business leaders understand that management of the organizational information systems must be entrusted to a competent and knowledgeable person. Students interested in Information Technology Management Emphasis should take courses:

- CSC 205 - Advanced Computer Applications Credits: 3
- CSC 325 - Management Information Systems Credits: 3
- CSC 474/574 - Computer Networks Credits: 3
- CSC 484 - Database Management Systems Credits: 3

### Software Engineering Emphasis:

The Computer Science Program offers an emphasis in Software Engineering. This emphasis deals with the engineering design aspects of software such as quality control, software assurance, requirements and specifications as well as the human-machine interface. Students interested in the Software Engineering Emphasis should take the courses below.

- SE 320 Software Requirements & Formal Specifications AW Credits 3
- SE 330 - Human Factors and User Interface (G) Credits: 3
- SE 410 - Software Test and Quality Assurance Credits: 3
- SE 440 - Embedded Systems Credits: 3

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs).

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits, English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Construction Management Major

### Program Contact/Coordinator

Byron Garry, Academic Program Coordinator  
Department of Construction and Operations Management  
Solberg Hall 116  
605-688-6417  
E-mail: byron.garry@sdstate.edu  
<http://www.sdstate.edu/etm/>

### Program Information

The Construction Management program prepares graduates to assume entry level management positions in construction and related industries. While the CM curriculum is primarily focused on commercial building construction, the department also offers courses in heavy-highway-utilities and residential construction. The CM curriculum has been developed using the guidelines provided by the Associated Schools of Construction (ASC) and the Associated General Contractors (AGC). To meet industry expectations, the CM program also provides instruction in LEED (Leadership in Energy and Environmental Design) concepts, and design-build project delivery.

### Accreditation, Certification, and Licensure

The program is accredited by the American Council for Construction Education (ACCE) which is the accreditation body for construction management programs. Students take the Certified Professional Constructor (CPC) Level 1 exam from the American Institute of Constructors Certification Commission as their required exit exam.

### Academic Requirements

Construction Management students must have a minimum grade of "C" in all of the courses that are designated as prerequisites for the required courses, have a 2.25 cumulative GPA, and take the CPC exam in order to graduate.

### Course Delivery Format

The program provides coursework on campus, in classroom, laboratory, and in field based settings.

### Requirements for Construction Management Major: 123 Credits Bachelor of Science in Engineering

System General Education Requirements\*: 32

- Goal #1 Written Communication: ENGL 101, and 277 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: PHYS 111-111L, and CHEM 106-106L Credits: 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: GE 109-109L\*\* Credits: 3
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: GE 231\*\* Credits: 3

Major Requirements: 66

- CM 124 - Construction Graphics Credits: 2
- CM 210-210L - Construction Surveying and Lab Credits: 3
- CM 216 - Construction Materials Credits: 3
- CM 232-232L - Cost Estimating and Lab Credits: 3
- CM 320-320L - Construction Soil Mechanics and Lab Credits: 3
- CM 332 - Building Construction Methods & Systems Credits: 3
- CM 333 - Mechanical, Electrical, Plumbing Systems Credits: 3
- CM 353-353L - Construction Structures and Lab Credits: 3
- CM 374 - Heavy Construction Methods and Systems Credits: 3
- CM 400-500 - Risk Mgmt & Construction Safety Credits: 3
- CM 410 - Construction Project Mgmt & Supervision Credits: 3
- CM 443 - Construction Planning and Scheduling Credits: 3
- CM 473 - Construction Law and Accounting (AW) Credits: 3
- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- CSC 105 - Introduction to Computers Credits: 3
- GE 121 - Engineering Design Graphics I Credits: 1
- GE 101 - Introduction to Engineering and Technology Credits: 1
- GE 241 - Applied Mechanics Credits: 3
- MATH 121-121L - Survey of Calculus and Lab\* Credits: 5
- STAT 281 - Introduction to Statistics Credits: 3
- MGMT 310 - Business Finance Credits: 3
- MGMT 325 - Management Information Systems Credits: 3
- MGMT 360 - Organization and Management Credits: 3
- MGMT 460 - Human Resource Management Credits: 3

Total Required Credits: 123

### Cooperative Education Program:

Students have the opportunity to work in industry and receive technical elective credit for the experience through CM 497. A formal work plan must be approved by the Program Coordinator of Construction Management prior to the work experience. Further information can be found in the Program's Cooperative Education policy.

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits, English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **Consumer Affairs Major - Consumer Services Management Specialization**

### **Program Contact/Coordinator**

Lorna Saboe-Wounded Head, Program Leader  
Department of Consumer Sciences  
Wagner Hall 229  
605-688-5196  
E-mail: Lorna.WoundedHead@sdstate.edu  
<http://www.sdstate.edu/cs/>

### **Program Information**

The Family Financial Management Specialization is for students interested in the financial services industry and focuses on principles and practice related to family financial planning including insurance planning, investment strategies, income tax planning, retirement preparation, estate planning, and case studies to assist individuals and families with individualized family financial planning goals.

### **Additional Academic Requirements**

A grade of "C" or better is required in all courses with a CA prefix.

### **Course Delivery Format**

Students learn through lecture, laboratory, and hands-on learning experiences. An 8-week (320 hour) full time summer internship compatible with career goals is a program requirement.

### **Requirements for Consumer Affairs Major - Consumer Services Management Specialization: 120 Credits**

Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202, and PSYC 101 or SOC 100 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: EHS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3  
*Select one of the following*
- IDL 100 - Concepts in Sustainability\*\* Credits: 3
- GLST 201 - Global Studies I \* \*\* (G) Credits: 3
- POLS 253 - Current World Problems \* \*\* (G) Credits: 3
- PSYC 244 - Environmental Psychology \*\* Credits: 3
- PSYC 364 - Cross Cultural Psychology\*\* Credits: 3
- PSYC 441 - Social Psychology \*\* Credits: 3
- SOC 462-562 - Population Studies \*\* Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Consumer Sciences Department Requirements: 6-7

- LEAD 210 - Foundations of Leadership\*\* Credits: 3 or CS 282 - Customer Service Credits : 2
- CS 377 - Professional Documents Credits:1
- CS 381 - Professional Behavior at Work Credits: 3 or LEAD 435 - Organizational Leadership and Team Development Credits: 3

Major Requirement Credits: 43

Consumer Affairs Core Requirements: 28

- CA 150 - Introduction to Consumer Affairs Credits: 2
- CA 230 - Consumer Behavior Credits: 3
- CA 289 - Consumers in the Market Credits: 3
- CA 340 - Work Family Interface (AW) Credits: 3
- CA 345 - Foundations in Financial Management Credits: 3
- CA 412 - Emerging Issues in Consumer Affairs Credits: 2
- CA 430 - Consumer Decision Making Credits: 3
- CA 487 - Transition to the Professional World Credits: 2
- CA 490 - Seminar Credits: 1
- CA 494 - Internship Credits: 3
- HDFS 241 - Family Relations Credits: 3

Consumer Services Management Specialization Requirements: 15

- BADM 350 - Legal Environment of Business Credits: 3
- BADM 360 - Organization and Management Credits: 3
- CA 442 - Family Resource Management Lab Credits: 3
- FCSE 421 - Adult Education Credits: 3
- HMGMT 455 - Meeting and Convention Management Credits: 3

Electives: 33-34

**Total Required Credits: 120**

### **Curriculum Notes**

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **Consumer Affairs Major - Family Financial Management Specialization**

### **Program Contact/Coordinator**

Lorna Saboe-Wounded Head, Program Leader  
Department of Consumer Sciences  
Wagner Hall 229  
605-688-5196  
E-mail: Lorna.WoundedHead@sdstate.edu  
<http://www.sdstate.edu/cs/>

### **Program Information**

The Consumer Services Management (CSM) Specialization focuses on the application of resource management concepts for families of varying structures and conditions and implementation strategies for working with diverse adult audiences.

The Consumer Affairs curriculum prepares students to qualify for employment or graduate study in family financial planning, consumer behavior, consumer product marketing, consumer economics, and consumer education and policy development. Career opportunities also exist in non-profit organizations and government.

### **Additional Academic Requirements**

A grade of "C" or better is required in all courses with a CA prefix.

### **Course Delivery Format**

Students learn through lecture, laboratory, and hands-on learning experiences. An 8-week (320 hour) full time summer internship compatible with career goals is a program requirement.

**Requirements for Consumer Affairs Major - Family Financial Management Specialization: 120 Credits**  
Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 **and** 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 **and** PSYC 101 **or** SOC 100 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: EHS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3  
*Select one of the following*
  - IDL 100 - Concepts in Sustainability\*\* Credits: 3
  - GLST 201 - Global Studies I \* \*\* (G) Credits: 3
  - POLS 253 - Current World Problems \* \*\* (G) Credits: 3
  - PSYC 244 - Environmental Psychology \*\* Credits: 3
  - PSYC 364 - Cross Cultural Psychology\*\* Credits: 3
  - PSYC 441 - Social Psychology \*\* Credits: 3
  - SOC 462-562 - Population Studies \*\* Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Consumer Sciences Department Requirements: 6-7

- LEAD 210 - Foundations of Leadership\*\* Credits: 3 **or** CS 282 - Customer Service Credits: 2
- CS 377 - Professional Documents Credits: 1
- CS 381 - Professional Behavior at Work Credits: 3 **or** LEAD 435 - Organizational Leadership and Team Development Credits: 3

Major Requirements: 43

Consumer Affairs Core Requirements: 28

- CA 150 - Introduction to Consumer Affairs Credits: 2
- CA 230 - Consumer Behavior Credits: 3
- CA 289 - Consumers in the Market Credits: 3
- CA 340 - Work Family Interface (AW) Credits: 3
- CA 345 - Foundations in Financial Management Credits: 3
- CA 412 - Emerging Issues in Consumer Affairs Credits: 2
- CA 430 - Consumer Decision Making Credits: 3
- CA 487 - Transition to the Professional World Credits: 2
- CA 490 - Seminar Credits: 1
- CA 494 - Internship Credits: 3
- HDFS 241 - Family Relations Credits: 3

Family Financial Management Specialization Requirements: 15

- ACCT 210 - Principles of Accounting I Credits: 3
- BADM 350 - Legal Environment of Business Credits: 3
- CA 350 - Family Financial Management I Credits: 3
- CA 450 - Family Financial Management II Credits: 3
- ECON 201 - Principles of Microeconomics \* \*\*Credits: 3

Electives: 33-34

**Total Required Credits: 120**

**Curriculum Notes**

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

**Dairy Manufacturing Major**

**Program Contact/Coordinator**

Vikram V. Mistry, Head

Department of Dairy Science

Alfred Dairy Science Hall 136

605-688-4116

fax: 605-688-6276

E-mail: vikram.mistry@sdstate.edu

<http://www.sdstate.edu/ds/>

**Program Information**

Dairy Science is an application of the sciences, engineering and technology, and business for the study of milk production and processing. The Dairy Manufacturing Major focuses on processing and merchandising of milk and milk products. The degree is designed to prepare students for a wide range of outstanding, challenging and rewarding career opportunities ranging from industry to private enterprise, government, research and higher education.

**Course Delivery Format**

The coursework for the program includes lectures, labs, and hands-on experiences. Many of the Dairy Science classes include lab components that are conducted at the University's farm and plant. Students are encouraged to supplement their class instruction with summer internships and extracurricular activities.

**Requirements for Dairy Manufacturing Major: 120 Credits**

Bachelor of Science in Agriculture

System General Education Requirements\*: 30-32

- Goal #1 Written Communication: ENGL 101 **and** 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 **and** an additional **non** ECON class Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 **or** MATH 115 Credits: 3-5
- Goal #6 Natural Sciences: BIOL 101-101L **and** 103-103L Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 DS 109 - First Year Seminar\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 11

- Group 1 Courses in Agriculture Credits: 4
- DS 130-130L - Introduction to Dairy Science and Lab Credits: 3
- MICR 311-311L - Food Microbiology and Lab Credits: 4

Major Requirements: 50-51

- ACCT 210 - Principles of Accounting I Credits: 3
- AST 443-443L - Food Processing and Engineering Fundamentals and Lab Credits: 3 (Fall)
- CHEM 106-106L - Chemistry Survey and Lab\* Credits: (3,1) **or** CHEM 112-112L - General Chemistry I & Lab Credits: 3, 1
- CHEM 108-108L - Organic & Biochemistry & Lab Credits: 4, 1



- or CHEM 120-120L - Elementary Organic Chem & Lab\* Credits: 3, 1
- DS 202 - Dairy Products Judging Credits: 1
- DS 301-301L - Dairy Microbiology and Lab Credits: 3
- DS 313-313L - Technical Control of Dairy Products I & Lab Credits: 3
- DS 321-321L - Dairy Product Processing I and Lab Credits: 5
- DS 322-322L - Dairy Product Processing II and Lab Credits: 5
- DS 421 - Dairy Plant Management Credits: 3
- DS 422-422L - Technical Control of Dairy Products II & Lab Credits: 4
- DS 490 - Seminar (AW) Credits: 1
- DS 496 - Field Experience Credits: (3-12)
- MICR 231-231L - General Microbiology & Lab Credits: 4
- PHYS 101-101L - Survey of Physics \*& Lab Credits: 4
  - or PHYS 111-111L - Intro to Physics I and Lab\* Credits: 4
  - or PHYS 211-211L - University Physics I and Lab\* Credits: 4

Electives: 23-24

- ECON, BADM, STAT, ACCT, or ENTR (except ECON 202 and ACCT 210) Elective Credits: 3
- NFS Elective Credits: 3
- Other Elective Credits: 17-18

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Dairy Manufacturing Major - Microbiology Specialization

### Program Contact/Coordinator

Vikram V. Mistry, Head

Department of Dairy Science

Alfred Dairy Science Hall 136

605-688-4116

fax: 605-688-6276

E-mail: vikram.mistry@sdstate.edu

http://www.sdstate.edu/ds/

### Program Information

Dairy Science is an application of the sciences, engineering and technology, and business for the study of milk production and processing. A Dairy Science degree is designed to prepare students for a wide range of outstanding, challenging and rewarding career opportunities ranging from industry to private enterprise, government, research and higher education. The Dairy Manufacturing Major - Microbiology Specialization provides a focused curriculum for students with a strong interest in pursuing Microbiology related careers within the dairy industry.

### Course Delivery Format

The coursework for the program includes lectures, labs, and hands-on experiences. Many of the Dairy Science classes include lab components that are conducted at the University's farm and plant. Students are encouraged to supplement their class instruction with summer internships and extracurricular activities.

## Requirements for Dairy Production Major - Microbiology

### Specialization: 120 Credits

Bachelor of Science in Agriculture

System General Education Requirements\*: 32-34

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 and an additional non ECON class Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 or MATH 115 Credits: 3-5
- Goal #6 Natural Sciences: CHEM 112-112L & 114-114L Credits: 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: DS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 7

- DS 130-130L - Introduction to Dairy Science & Lab Credits: 3
- MICR 311-311L - Food Microbiology and Lab Credits: 4

Major Requirements: 76

- ACCT 210 - Principles of Accounting I Credits: 3 or STAT 281 - Introduction to Statistics Credits: 3
- AST 443-443L - Food Processing and Engineering Fundamentals and Lab Credits: 3
- BIOL 101-101L - Biology Survey I and Lab Credits: 3 or BIOL 151-151L - General Biology I and Lab\* Credits: 4
- BIOL 103-103L - Biology Survey II and Lab\* Credits: 3 or BIOL 153-153L - General Biology II and Lab\* Credits: 4
- BIOL 202-202L - Genetics & Organismal Biology & Lab Credits: 4
- BIOL 204-204L - Genetics and Cellular Biology and Lab Credits: 4
- CHEM 326-326L - Organic Chemistry I and Lab Credits: 4
- CHEM 328-328L - Organic Chemistry II and Lab Credits: 4
- CHEM 464 - Biochemistry I Credits: 3
- CHEM 466 - Laboratory Methods- Biochemistry Credits: 1
- DS 202 - Dairy Products Judging Credits: 1
- DS 301-301L - Dairy Microbiology and Lab Credits: 3
- DS 313-313L - Technical Control of Dairy Products I & Lab Credits: 3
- DS 321-321L - Dairy Product Processing I and Lab Credits: 5
- DS 322-322L - Dairy Product Processing II and Lab Credits: 5
- DS 421 - Dairy Plant Management Credits: 3
- DS 422-422L - Technical Control of Dairy Products II & Lab Credits: 4
- DS 490 - Seminar (AW) Credits: 1
- DS 496 - Field Experience Credits: 3
- MICR 231-231L - General Microbiology and Lab Credits: 4
- MICR 310-310L - Environmental Micro and Lab Credits: 4
- MICR 332 - Microbial Physiology Credits: 2
- MICR 332L - Microbial Physiology Lab Credits: 2
- MICR 436 - Molecular and Microbial Genetics Credits: 4

Total Required Credits: 120

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

Students in this program need only complete 7 of the 11 required Group 1 Electives in Agriculture to meet ABS College requirements.

## Dairy Production Major

### **Program Contact/Coordinator**

Vikram V. Mistry, Head  
Department of Dairy Science  
Alfred Dairy Science Hall 136  
605-688-4116  
fax: 605-688-6276  
E-mail: vikram.mistry@sdstate.edu  
http://www.sdstate.edu/ds/

### **Program Information**

Dairy Science is an application of the sciences, engineering and technology, and business for the study of milk production and processing. The Dairy Production major focuses on the study of milk production, management of the farm, feeding, breeding and herd health. The degree is designed to prepare students for a wide range of outstanding, challenging and rewarding career opportunities ranging from industry to private enterprise, government, research and higher education.

### **Course Delivery Format**

The coursework for the program includes lectures, labs, and hands-on experiences. Many of the Dairy Science classes include lab components that are conducted at the University's farm and plant. Students are encouraged to supplement their class instruction with summer internships and extracurricular activities.

### **Requirements for Dairy Production Major: 120 Credits**

Bachelor of Science in Agriculture

System General Education Requirements\*: 31-33

- Goal #1 Written Communication: ENGL 101 **and** 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 **and** an additional **non** ECON class Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 **or** MATH 115 Credits: 3-5
- Goal #6 Natural Sciences: CHEM 106-106L **or** 112-112L, **and** BIOL 103-103L Credits: 7

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: DS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 11

- AGECE 271-271L - Farm and Ranch Management and Lab Credits: 4
- AS 233-233L - Applied Animal Nutrition and Lab Credits: 4
- PS 103-103L - Crop Production and Lab Credits: 3

Major Requirements: 53-55

- AS 323 - Advanced Animal Nutrition Credits: 3
- AS 433-433L - Livestock Reproduction and Lab Credits: 3
- BIOL 101-101L - Biology Survey I and Lab Credits: 3
- BIOL 371 - Genetics Credits: 3  
**or** AS 332 - Livestock Breeding and Genetics Credits: 4
- CHEM 108-108L - Organic & Biochem & Lab Credits: 4, 1  
**or** CHEM 120-120L Elementary Organic Chem & Lab Credits: 3, 1
- DS 130-130L - Introduction to Dairy Science and Lab Credits: 3
- DS 202 - Dairy Products Judging Credits: 1
- DS 212 - Dairy Cattle Evaluation Credits: 2
- DS 301-301L - Dairy Microbiology and Lab Credits: 3
- DS 411-411L - Dairy Breeds and Breeding and Lab Credits: 3
- DS 412-412L - Dairy Farm Management and Lab Credits: 4
- DS 413-513 - Physiology of Lactation Credits: 3
- DS 432 - Dairy Cattle Feeding Credits: 3
- DS 490 - Seminar (AW) Credits: 1

- DS 496 - Field Experience Credits: 3-12
- MICR 231-231L - General Microbio & Lab Credits: 4
- PHYS 101-101L - Survey of Physics \* & Lab Credits: 4  
**or** PHYS 111-111L - Introduction to Physics I & Lab\*  
**or** PHYS 211-211L - University Physics I & Lab\* Credits: 4
- VET 223-223L - Anatomy and Physiology of Domestic Animals and Lab Credits: 4
- AS/AST 463- Agricultural Waste Management (AW) Credits: 3
- PS 213-213L - Soils and Lab \* \*\* Credits: 2, 1  
**or** PS 313 - Forage Crop and Pasture Management Credits: 3

Elective Credits: 12

**Total Required Credits: 120**

### **Curriculum Notes**

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Dietetics Major

### **Program Coordinator/Contact**

Kendra Kattelmann, Coordinator  
Department of Health and Nutritional Sciences  
605-688-5161  
E-mail: kendra.kattelmann@sdstate.edu

### **Program Information**

Dietetics is the education and practice of food, nutrition and wellness and offers a wide variety of jobs in the health promotion and wellness area. Registered dietitians are pivotal in the preventive health care and community nutrition programs. Additionally, a registered dietitian is essential to the total care of a patient in a healthcare facility, giving nutritional guidance and instruction. Students develop an understanding and competency in food, nutrition, wellness, and management and a good background in the basic and behavioral sciences to apply the science of nutrition for the promotion of health and disease prevention.

The employment opportunities are in health promotion and wellness programs, public health agencies, foodservice and food production industries, schools, universities, the armed services, hospitals, nursing homes, and state, national and international organizations. Governmental regulations require the services of dietitians in federally supported programs. The consulting services of a dietitian are often sought by architects and hospital administrators in planning and equipping food preparation and services facilities.

### **Additional Program Requirements**

Students must be current on immunizations and complete a criminal background check to complete education components of program.

### **Student Learning Outcomes**

Upon completion of the dietetics major, students will demonstrate:

- Core knowledge for the registered dietitian:
- Scientific and Evidence Base of Practice: integration of scientific information and research into practice
- Professional Practice Expectations: beliefs, values, attitudes and behaviors for the professional dietitian level of practice
- Clinical and Customer Services: development and delivery of information, products and services to individuals, groups and populations
- Practice Management and Use of Resources: strategic application of principles of management and systems in the provision of services to individuals and organizations

- Knowledge to support the underlying principles of practice: food and food systems, physical and biological science, and behavioral and social science foundation of the dietetics profession
- Effective communication practices
- The ability to work in teams to solve problems
- Critical thinking skills
- Personal/professional attitudes and values
- Knowledge of ethical practices
- Leadership skills

- ACCT 210 - Principles of Accounting I Credits: 3
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 325-325L - Physiology and Lab Credits: 4
- CHEM 326-326L - Organic Chemistry I and Lab Credits: 3, 1
- CHEM 328-328L - Organic Chemistry II and Lab Credits: 3, 1
- CHEM 464 - Biochemistry I Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3  
or HSC 445 Epidemiology Credits: 3
- MICR 231-231L - General Microbiology and Lab Credits: 4
- NURS 201 - Medical Terminology Credits: 1
- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- NFS 487 - Transition to Professional World Credits: 1

### Accreditation, Certification and Licensure

The program is accredited by the Accreditation Council for Education of Nutrition and Dietetics as a Didactic Program in Dietetics by the Accreditation Council for Education of Nutrition and Dietetics, the accrediting agency for Academy of Nutrition and Dietetics.

Upon completion of the program and Bachelors of Science requirements, the student will receive a verification statement from the program director and are then eligible to apply for the supervised practice experience (dietetic internship). To become a registered dietitian, one must satisfactorily complete the South Dakota State University's dietetics program, an accredited supervised practice (dietetic internship) and pass the national registration examination for registered dietitians. The dietetic internships are post-graduation, require additional fees, and are competitive.

### Course Delivery Format

The program offers coursework through lecture, discussion, laboratory, clinical education and clinical experience components.

### Requirements for Dietetics Major: 120 Credits

Bachelor of Science in Education and Human Sciences

System General Education Requirements\*: 32

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: PSYC 101 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences CHEM 112-112L and 114-114L Credits 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: EHS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Major Requirements: 80

- HMG 251 - Foodservice Sanitation Credits: 1
- NFS 141-141L - Foods Principles and Lab Credits: 4
- NFS 315 - Human Nutrition Credits: 3
- NFS 322-322L - Assessment and Counseling Skills in Nutrition and Lab Credits: 4
- NFS 323 - Nutrition Across the Life Cycle Credits: 3
- NFS 341-341L - Food Science and Lab Credits: 4
- NFS 380 Foodservice Operations & Purchasing Mgmt Credits: 3
- NFS 381-381L Quantity Food Production & Service & Lab Credits 4
- NFS 422 - Advanced Human Nutrition Credits: 4
- NFS 423-423L - Medical Nutrition Therapy I and Lab Credits: 3
- NFS 424-424L - Community Nutrition and Lab Credits: 3
- NFS 425-425L- Medical Nutrition Therapy II and Lab Credits: 3
- BADM 460 - Human Resource Management Credits: 3
- NFS 490 - Seminar (AW) Credits: (1-2)
- NFS 495 - Practicum Credits: 2

Electives: 1

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Early Childhood Education Major - Cooperative Program with DSU or NSU

### Program Contact/Coordinator

Lynda Venhuizen, ECE Coordinator  
Department of Teaching, Learning, and Leadership  
Pugsley Hall 141 Box 2203  
South Dakota State University  
Brookings, SD 57007  
<http://www.sdstate.edu/tll/>

### Program Information

The cooperative elementary education specialization with Dakota State University (DSU) and Northern State University (NSU) is for students who are interested in teaching certification for elementary and middle school grades in the public school system in South Dakota. The program prepares professionals who work in educational settings with children in order to promote their cognitive, physical, emotional, and social development. Program content includes the theory and practice of working with children and their families and communities. The courses specific to elementary education are offered by DSU and NSU faculty on the SDSU campus. Students complete a student teaching experience at the Fishback Center for Early Childhood Education and at a selected public school. It typically takes five years to complete the cooperative program.

### Student Learning Outcomes

Early Childhood Education follows student learning outcomes as outlined by the National Association for the Education of Young Children (NAEYC).

- Standard 1. Promoting child development and learning
- Standard 2. Building family and community relationships
- Standard 3. Observing, documenting, and assessing to support young Children and families
- Standard 4. Using developmentally effective approaches
- Standard 5. Using content knowledge to build meaningful curriculum
- Standard 6. Becoming a professional
- Standard 7. Early childhood field experiences

## Accreditation, Certification, and Licensure

### Accreditation

National Association of the Education of Young Children  
National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

### Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Course Delivery Format

Courses in Early Childhood Education are delivered face to face, online and hybrid (face to face and online combination). All ECE courses have practical applications in field experience settings in childcare and Pre-K-Grade 3.

### Requirements for Early Childhood Education Major - Cooperative Program: 120 Credits

Bachelor of Science in Education and Human Sciences

#### System General Education Requirements\*: 31

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity HDFS 210 and PSYC 101 Credits: 6
- Goal #4 Arts and Humanities/Diversity: ART 121 and ENGL 240 Credits: 6
- Goal #5 Mathematics: MATH 102 or higher Credits: 3
- Goal #6 Natural Sciences: GEOG 131-131L and BIOL 101-101L Credits: 7

#### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: EHS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: HIST 151 \*\* or HIST 152\*\* Credits: 3

#### College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

#### Major Requirements: 34

- ECE 150-150L - Early Experience and Lab Credits: 2
- ECE 371-371L - Infant and Toddler: Developmentally Appropriate Practices and Lab Credits: 3
- ECE 372 - Preschool to Middle Childhood Development Credits: 2
- ECE 228-228L - Guidance with Young Children & Lab Credits: 2, 1
- ECE 361-361L - Methods and Materials/Early Childhood Education and Lab (AW) Credits: 2, 1
- ECE 362-362L - Early Childhood Curriculum & Assessment and Lab Credits: 2, 0
- ECE 363-363L - Emergent Literacy & Numeracy and Lab Credits 3
- ECE 488 - Student Teaching (Pre-K) Credits: 6
- ECE 420 - Health, Safety & Nutrition of Young Children Credits: 2
- ECE 465 Documentation, Inquiry & Teacher Research Credits 2
- ECE 464 - Parent/Child Relationships in a Professional Context Credits: 3
- ECE 441 - Professional Issues in Child & Family Studies Credits: 3

#### Supporting Coursework: 34

- EDFN 338 - Foundations of American Education Credits: 2
- EDFN 365 - Computer-Based Technology & Learning Credits 2
- EDFN 475 - Human Relations Credits: 3
- EPSY 302 - Educational Psychology Credits: 3
- MATH 341 - Math Concepts for Teachers I Credits: 3
- MATH 342 - Math Concepts for Teachers II Credits: 3

- PE 360-360L K-8 Physical Education Methods & Lab Credits: 2
- MUS 351 - Elementary School Music Methods Credits: 2
- POLS 100 - American Government \* Credits: 3
- GEOG 210 - World Regional Geography \* \*\* (G) Credits: 3
- Native American Course Approved for Teacher Education Credits:3  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
**OR** AIS/ANTH 421 - Indians of North America\*\*
- HLTH 420/520 - Methods of Health Instruction Credits: 2
- SPED 100 - Introduction to Persons with Exceptionalities Credits: 3

#### Cooperative ELED Certification Requirements: 35

- ELED 383 - Practicum (S-I) Credits: 1
- ELED 440 - K-8 Language Arts Methods (S-I) Credits: 2
- SPED 441 - Inclusive Methods for Diverse Learners (S-I) Credits: 2 **DSU only**
- MLED 300 - Survey of Middle Level Education (SU) Credits: 1
- ELED 303 - Earth and Physical Science for Elementary Teachers/Lab (SU) Credits: 4
- CSC 105 Introduction to Computers (F) Credits: 3 **DSU only**
- EDFN 455 - Literacy Assessment & Instruction (F) Credits: 3 **NSU only**
- ELED 495 - Practicum (F) Credits: 1
- ELED 320 - K-8 Science Methods (F) Credits: 3
- ELED 330 - K-8 Math Methods (F) Credits: 3
- ELED 360 - K-8 Social Studies Methods (F) Credits: 2
- EDFN 440 - Classroom Management (S-II) Credits: 2
- EDFN 442 - Diverse Needs of Students & Their Families (S-II) Credits: 2 **NSU only**
- ELED 488 - K-8 Student Teaching (S-II) Credits: 8
- ELED 450 K-8 Reading Methods (S-II) Credits: 3

#### Total Required Credits: 141

#### Curriculum Notes

- A pre-graduate check is required 2 semesters before graduation semester. At beginning of graduation semester, a graduation application must be completed.
- A grade of "C" or better is required in PSYC 101, ENGL 101, SPCM 101, MATH 102, and all majors courses with an HDFS or ECE prefix.
- Students must meet all GPA Requirements (2.6 for graduation) and be accepted into the ECE Teacher Education program ECE-PSII and ECE-PS III.
- Students will be required to pass the PRAXIS content and Principles of Teaching and Learning exams in order to be considered a Highly Qualified Teacher.
- The rotation of the cooperative ELED certification courses is indicated as follows: S-I (Spring I), F (Fall), SU (Summer) and S-II (Spring II).
- Students are required to complete 106 credits of SDSU coursework. These courses, with SDSU electives, do not constitute a degree program. Instead, students complete an additional 35 credits from the cooperating university (NSU) to fully meet the requirements for the ECE Coop-NSU/DSU specialization.
- All courses are required for certification. Upon graduation, students would be eligible for dual certification in early childhood education (Birth to Age Five) and elementary education (K - Grade 8).

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSUy has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **Early Childhood Education Major- Birth to 5 Specialization**

### **Program Contact/Coordinator**

Lynda Venhuizen, ECE Coordinator  
Department of Teaching, Learning, and Leadership  
Pugsley Hall 141 Box 2203  
South Dakota State University  
Brookings, SD 57007  
<http://www.sdstate.edu/tll/>

### **Program Information**

This program prepares students to work in educational settings such as Head Start, preschool programs, and child care centers. The program prepares professionals who work in educational settings with children in order to promote their cognitive, physical, emotional, and social development. Program content includes the theory and practice of working with children and their families and communities. Students can choose to focus on infant and toddler development and care and/or administration of early childhood programs. Students complete student teaching in the Fishback Center for Early Childhood Education on campus and complete a practicum in an off-campus early childhood setting. Students interested in a South Dakota Kindergarten Education Endorsement on their teaching certificate are also required to complete a practicum experience in a kindergarten classroom.

### **Student Learning Outcomes**

Early Childhood Education follows student learning outcomes as outlined by the National Association for the Education of Young Children

- Standard 1. Promoting child development and learning
- Standard 2. Building family and community relationships
- Standard 3. Observing, documenting, and assessing to support young Children and families
- Standard 4. Using developmentally effective approaches
- Standard 5. Using content knowledge to build meaningful curriculum
- Standard 6. Becoming a professional
- Standard 7. Early childhood field experiences

### **Accreditation, Certification, and Licensure**

#### Accreditation

National Association of the Education of Young Children  
National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

#### Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### **Course Delivery Format**

Courses in Early Childhood Education are delivered face to face, online and hybrid (face to face and online combination). All ECE courses have practical applications in field experience settings in childcare and Pre-K-Grade 3.

### **Requirements for Early Childhood Education Major - Birth to 5 Specialization: 120 Credits**

Bachelor of Science in Education and Human Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3

- Goal #3 Social Sciences/Diversity: HDFS 210, and PSYC 101 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6 *Select Course to meet Globalization Requirement*
- Goal #5 Mathematics: MATH 102 or higher Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: EHS 109 \*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: (ANTH/AIS 421\*\* or AIS/HIST 368\*\* Recommended) Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Major Requirements: 58

- ECE 150-150L - Early Experience and Lab Credits: 2
- ECE 371-371L - Infant and Toddler: Developmentally Appropriate Practices and Lab Credits: 3
- ECE 372 - Preschool to Middle Childhood Dvlpmt Credits: 2

Professional Semester I

- ECE 228-228L - Guidance with Young Children and Lab Credits: 2, 1
- ECE 361-361L - Methods and Materials/Early Childhood Education and Lab (AW) Credits: 2, 1
- ECE 362-362L - Early Childhood Curriculum & Assessment and Lab Credits: 2, 0
- ECE 363-363L - Emergent Literacy and Numeracy and Lab Credits: 3, 0

Professional Semester II

- ECE 488 - Student Teaching (Pre-K) Credits: 6
- ECE 420 - Health, Safety & Nutrition of Young Children Credits: 2
- ECE 465 Documentation, Inquiry & Teacher Research Credits 2
- ECE 464 - Parent/Child Relationships in a Professional Context Credits: 3
- ECE 470 - Early Childhood Inclusion Strategies Credits: 3

Professional Semester III

- ECE 487 Orientation to Child & Family Studies Practicum Credit 1
- ECE 495 - Practicum Credits: 8
- ECE 455 - Admin & Supervision of Early Childhood Setting Credits: 2
- ECE 441 - Professional Issues in Child & Family Studies Credits: 2

Additional Coursework

- HDFS 241 - Family Relations Credits: 3
- EDFN 365 - Computer-Based Technology and Learning Credits: 2
- EDFN 475 - Human Relations Credits: 3
- Native American Course Approved for Teacher Education Credits:3  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
OR AIS/ANTH 421 - Indians of North America\*\*

Electives: 25

- CSC 150-150L - Computer Science I Credits: 3  
*Recommended for students who need to develop computer application skills*

**Total Required Credits: 120**

## Curriculum Notes

- A pre-graduate check is required 2 semesters before graduation semester. At beginning of graduation semester, a graduation application must be completed.
- A grade of "C" or better is required in PSYC 101, ENGL 101, SPCM 101, MATH 102, and all majors courses with an HDFS or ECE prefix.
- Students must meet all GPA Requirements (2.6 for graduation) and be accepted into the ECE Teacher Education program ECE-PSII and ECE-PS III.
- Students will be required to pass the PRAXIS content and Principles of Teaching and Learning exams in order to be considered a Highly Qualified Teacher.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Early Childhood Education Major- Birth to 8 Specialization

### Program Contact/Coordinator

Lynda Venhuizen, ECE Coordinator  
Department of Teaching, Learning, and Leadership  
Pugsley Hall 141 Box 2203  
South Dakota State University  
Brookings, SD 57007  
<http://www.sdstate.edu/tll/>

### Program Information

This program prepares professionals who work in educational settings with children in order to promote their cognitive, physical, emotional, and social development. Program content includes the theory and practice of working with children and their families and communities. In addition to being prepared to work in early childhood settings such as Head Start, preschools, and child care centers, those who successfully complete this specialization meet the requirements for a South Dakota Birth to age 8 Early Childhood teaching certificate which enables them to teach grades K-3. Students student teach in the Fishback Center for Early Childhood Education and a first, second, or third grade classroom.

### Student Learning Outcomes

Early Childhood Education follows student learning outcomes as outlined by the National Association for the Education of Young Children

- Standard 1. Promoting child development and learning
- Standard 2. Building family and community relationships
- Standard 3. Observing, documenting, and assessing to support young Children and families
- Standard 4. Using developmentally effective approaches
- Standard 5. Using content knowledge to build meaningful curriculum
- Standard 6. Becoming a professional
- Standard 7. Early childhood field experiences

### Accreditation, Certification, and Licensure

#### Accreditation

National Association of the Education of Young Children  
National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

#### Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota.

Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Course Delivery Format

Courses in Early Childhood Education are delivered face to face, online and hybrid (face to face and online combination). All ECE courses have practical applications in field experience settings in childcare and Pre-K-Grade 3.

### Requirements for Early Childhood Education Major - Birth to 8 Specialization: 120 Credits

Bachelor of Science in Education and Human Sciences

System General Education Requirements\*: 31-32

- Goal #1 Written Communication: ENGL 101 **and** 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: HDFS 210 **and** PSYC 101 Credits: 6
- Goal #4 Arts and Humanities/Diversity: ENGL 240 **and** additional course for SGR4/Globalization Requirement Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: GEOG 131-131L and BIOL 101-101L\* Credits: 7-8

Institutional Graduation Requirements\*\*: 8

- Goal #1 First Year Seminar: EHS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: (ANTH/AIS 421 or AIS/HIST 368 *recommended*) Credits:3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Major Requirements: 50

- ECE 150-150L - Early Experience and Lab Credits: 2
- ECE 371-371L - Infant and Toddler: Developmentally Appropriate Practices and Lab Credits: 3
- ECE 372 - Preschool to Middle Childhood Development Credits 2

Professional Semester I

- ECE 228-228L Guidance with Young Children & Lab Credits: 1, 1
- ECE 361-361L - Methods and Materials/Early Childhood Education and Lab (AW) Credits: 2, 1
- ECE 362-362L - Early Childhood Curriculum & Assessment and Lab Credits: 2, 1
- ECE 363-363L - Emergent Literacy & Numeracy & Lab Credits: 3

Professional Semester II

- ECE 488 - Student Teaching (*Pre-k-3*) Credits: 6
- ECE 420 - Health, Safety & Nutrition of Young Children Credits: 2
- ECE 465 Documentation, Inquiry & Teacher Research Credits 2
- ECE 464 - Parent/Child Relationships in a Professional Context Credits: 3
- ECE 470 - Early Childhood Inclusion Strategies Credits: 3

Complete prior to entry into Professional Semester III

- ECE 495 - Practicum Credits: 2
- ECE 478-478L - Integrated Curriculum in Birth-to-Age Eight Education and Lab Credits: 4
- ECE 475 - Pedagogy and Guidance in Primary Grade Classrooms Credits: 2
- EDFN 466-466L - Literacy in Primary Grades ad Lab Credits: 3
- MATH 141 - Survey of Mathematics Credits: 3



### Professional Semester III

- ECE 488 - Student Teaching (K-3) Credits: 1-12
- ECE 473 - Orientation to K-3 Student Teaching Credits: 2

### Additional Coursework

- HDFS 241 - Family Relations Credits: 3
- EDFN 365 - Computer-Based Technology and Learning Credits: 2
- EDFN 475 - Human Relations Credits: 3
- Native American Course Approved for Teacher Education Credits: 3  
AIS/HIST 368 History & Culture of the American Indian  
OR AIS/ANTH 421 - Indians of North America\*\*
- MATH 342 Math Concepts for Teachers II Credits: 3
- PE 360-360L K-8 Physical Education Methods & Lab Credits 2
- MUS 351 - Elementary School Music Methods Credits: 2
- PHYS 101-101L - Survey of Physics \* and Lab Credits: 4  
or CHEM 106-106L - Chemistry Survey and Lab\* Credits: 4  
or PHYS 185-185L - Intro to Astronomy I and Lab\* Credits: 3

Electives: 4-5

### Total Required Credits: 120

#### Curriculum Notes

- A pre-graduate check is required 2 semesters before graduation semester. At beginning of graduation semester, a graduation application must be completed.
- A grade of "C" or better is required in PSYC 101, ENGL 101, SPCM 101, MATH 102, and all majors courses with an HDFS or ECE prefix.
- Students must meet all GPA Requirements (2.6 for graduation) and be accepted into the ECE Teacher Education program ECE-PSII and ECE-PS III.
- Students will be required to pass the PRAXIS content and Principles of Teaching and Learning exams in order to be considered a Highly Qualified Teacher.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Ecology and Environmental Science Major

### Program Contact/Coordinator

Dr. Nels Troelstrup, Assistant Department Head  
Department of Natural Resource Management  
Northern Plains Biostress Laboratory, Room 138D  
605-688-5503  
E-mail: Nels.Troelstrup@sdstate.edu  
www.sdstate.edu/nrm/

### Program Information

The Ecology and Environmental Science major includes a strong core in biophysical sciences and a variety of elective courses that allow students to follow their interests within the major. Most students enrolled in this major are planning careers with environmental monitoring and regulatory agencies or private consulting firms. Students are given the opportunity to select from two emphases, Ecology and Environmental Science.

- The Ecology Emphasis allows substantial flexibility in course selection for those interested in employment with state or federal agencies, or private consulting firms as an ecologist.
- The Environmental Science Emphasis is for students seeking careers or graduate programs to address contemporary environmental issues. This emphasis includes a broad selection of elective credits, allowing the student to design a track optimal for their future career or graduate education path.

### Accreditation, Certification, and Licensure

The Ecology and Environmental Science program is based on certification requirements of the Ecological Society of America. Curricula are designed so that upon completion, ecology students may become a Certified Ecologist from the Ecological Society of America.

### Course Delivery Format

Program coursework is delivered on-campus, in lecture, discussion, and laboratory settings, and off-campus in numerous field-based settings.

### Requirements for Ecology and Environmental Science Major: 120 Credits

Bachelor of Science in Biological Sciences

System General Education Requirements\*: 33-35

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: Credits: 4-6  
MATH 102 and MATH 120  
OR MATH 115  
OR MATH 121-121L  
OR MATH 123 (123L)
- Goal #6 Natural Sciences: BIOL 151-151L and 153-153L Credits 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: NRM109-109L\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: PS 213-213L\*\* Credits: 3

Major Requirements: 50

- BIOL 371 - Genetics Credits: 3
- MICR 231-231L - General Microbiology and Lab Credits: 4
- NRM 311-311L - Principles of Ecology and Lab Credits: 3, 1
- ABS 475-475L - Integrated Natural Resource Management and Lab (AW) Credits: 3  
or ENGL 379 - Technical Communication (AW) Credit: 3
- CHEM 112-112L - General Chemistry I and Lab\* Credits: 4
- CHEM 114-114L - General Chemistry II and Lab \* Credits: 4
- CHEM 326-326L - Organic Chemistry I and Lab Credits: 4
- PHYS 111-111L - Introduction to Physics I and Lab\*Credits: 4
- PHYS 113-113L - Intro to Physics II and Lab\* Credits: 4
- STAT 281 - Introduction to Statistics Credits: 3
- EES 425-425L - Disturbance Ecology & Lab Credits: 4
- PS 243 - Principles of Geology\* Credits: 3  
or BIOL 373 - Evolution Credits: 3
- EES 275 - Intro to Environmental Science \*\* (G) Credits: 3  
or NRM 464-564 - Ecosystem Ecology Credits: 3
- GEOG 472 - Introduction to GIS Credits: 3  
or BOT 419-419L Plant Ecology and Lab Credits: 3

Emphasis Credits: 15-25

Consult an advisor to select courses for either the ecology or environmental science emphasis.

- **Ecology Emphasis Credits: 15-20**
- **Environmental Science Emphasis Credits: 25**

Electives: 5-17

### Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Economics Major

### Program Contact/Coordinator

Eluned Jones, Head  
Jason Zimmerman, Assistant Department Head  
Department of Economics  
Scobey Hall 142 605-688-4845  
E-mail: jason.zimmerman@sdstate.edu  
<http://www.sdstate.edu/econ/>

### Program Information

The major in Economics provides rigorous training in economic theory and quantitative methods. Students develop analytical and critical-thinking skills, and are well trained for careers in policy analysis, business, or for future graduate study. The major allows students to customize their program of study by choosing electives in economics, business, accounting, agricultural economics, or entrepreneurship. Students interested in pursuing a graduate degree in economics or related fields are well prepared with an economics degree.

### Program Admission

To be admitted, students must have completed at least 64 semester credits toward graduation, earned a cumulative grade point average of at least 2.1 for all courses taken, and attained at least a 2.1 grade point average for the following courses: ECON 201, ECON 202, ACCT 210, ENGL 101, and MATH 121 (or MATH 123). Students remain enrolled in Pre-Economics in the appropriate college until the requirements are met.

### Student Learning Outcomes

Economics students will:

- Understand the economic principles and complexities that underlie the global economy;
- Apply economic concepts and techniques for decision-making;
- Communicate effectively;
- Think critically;
- Behave ethically and humanely.

### Course Delivery Format

The program offers courses on campus, with limited online coursework, usually during the summer.

### Requirements for Economics Major: 120 Credits

Bachelor of Arts or Bachelor of Science

System General Education Requirements\*: 31-32

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 201 and Non ECON course Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 123 Credits: 4-5
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts and Sciences Requirements: 17-34

Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
  - ECON 202 - Principles of Macroeconomics \* (G) Credits: 3
- Humanities Credits: 6

Bachelor of Science

- Natural Science Credits: 14
  - With 6 credits of Biological Sciences
  - With 8 credits of Physical Sciences
- Social Sciences Credits: 12
  - ECON 202 - Principles of Macroeconomics \* (G) Credits: 3
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 39

- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- ECON 301 - Intermediate Microeconomics Credits: 3
- ECON 302 - Intermediate Macroeconomics Credits: 3
- ECON 330 - Money and Banking Credits: 3
- ECON 423 - Introduction to Econometrics Credits: 3
- ECON 428 - Mathematical Economics Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3
- ENGL 379 - Technical Communication (AW) Credits: 3
- Electives in AGECE or ECON (except ECON 101) Credits: 6

Choose Two Courses from the Following: 6

- ECON 403 - History of Economic Thought Credits: 3
- ECON 405 - Comparative Economic Systems Credits: 3
- ECON 433 - Public Finance (AW) Credits: 3
- ECON 440 - Economics of International Sector Credits: 3
- ECON 450 - Industrial Organization Credits: 3
- ECON 453 - Risk Management-Personal & Business Credits: 3
- ECON 460 - Economic Development \*\* (G) Credits: 3
- ECON 472 - Resource & Environmental Economics Credits: 3
- ECON 482 - Labor Economics Credits: 3

General Electives: 27-39

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Economics Major - Business Specialization

### Program Contact/Coordinator

Eluned Jones, Head  
Jason Zimmerman, Assistant Department Head  
Department of Economics  
Scobey Hall 142 605-688-4845  
E-mail: jason.zimmerman@sdstate.edu  
<http://www.sdstate.edu/econ/>

### Program Information

The major in Economics with a Business Economics Specialization combines the analytical rigor of an economics degree with the practical skills of a management degree. Students can tailor the program to their interests by choosing from a variety of electives in areas such as accounting, finance, marketing, and entrepreneurship. Career opportunities for Business Economics majors include management, finance, banking, sales, real estate, and marketing. The Business Economics specialization also serves to prepare students for graduate work in law, economics, and business.

### Program Admission

To be admitted, students must have completed at least 64 semester credits toward graduation, earned a cumulative grade point average of at least 2.1 for all courses taken, and attained at least a 2.1 grade point average for the following courses: ECON 201, ECON 202, ACCT 210, ENGL 101, and MATH 121 (or MATH 123). Students remain enrolled in Pre-Economics in the appropriate college until the requirements are met.

### Student Learning Outcomes

Business Economics students will:

- Understand the economic principles and complexities that underlie the global economy;
- Apply economic concepts and techniques for decision-making;
- Communicate effectively;
- Think critically;
- Behave ethically and humanely.

### Course Delivery Format

The program offers courses on campus, with limited online coursework, usually during the summer.

### Requirements for Economics Major - Business Specialization: 120 Credits

Bachelor of Arts or Bachelor of Science

System General Education Requirements\*: 31-32

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101 Credits: 3
- Goal #3 Social Sciences/Diversity: Credits: 6
- Goal #4 Arts and Humanities/Diversity: Credits: 6
- Goal #5 Mathematics: MATH 121 or MATH 123 Credits: 4-5
- Goal #6 Natural Sciences: Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Requirements: 17-34

Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 51

- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- ECON 201 - Principles of Microeconomics \* \*\*Credits: 3
- ECON 202 - Principles of Macroeconomics \* (G) Credits: 3
- ECON 301 - Intermediate Microeconomics Credits: 3
- ECON 302 - Intermediate Macroeconomics Credits: 3
- BADM 310 - Business Finance Credits: 3
- BADM 350 - Legal Environment of Business Credits: 3

- BADM 360 - Organization and Management Credits: 3
- BADM 370 - Marketing Credits: 3
- BADM 460 - Human Resource Management Credits: 3
- BADM 482 - Business Policy and Strategy Credits: 3
- ENGL 379 - Technical Communication (AW) Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3
- CSC 325 - Management Information Systems Credits: 3
- One additional upper division course with the prefix ECON (excluding ECON 494) Credits: 3
- Electives in upper division courses with the prefixes ACCT, AGECEC, BADM, ECON, ENTR, or MGMT Credits: 9

General Electives: 8-21

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Electrical Engineering Major

### Program Coordinator/Contact

George Hamer, Assistant Department Head  
Department of Electrical Engineering and Computer Science  
Daktronics Engineering Hall Building 214  
605-688-4526  
E-mail: [sdsu.eecs@sdstate.edu](mailto:sdsu.eecs@sdstate.edu)  
website: <http://www.sdstate.edu/eecs/>

### Program Information

Electrical engineers play key roles in solving technical problems in many areas including biomedical engineering, communications, computers and digital hardware, electronic materials and sensor devices, image processing, control systems, alternative energy and power systems.

The program begins the first year developing a strong foundation in mathematics, science, and communications. Following this are two intensive years of study in circuit and machine theory, electronics, signal and system theory, electronic material and devices, digital and microprocessor systems. The capstone of the program is Senior Design I and II, a two-semester sequence taken in the senior year that places every student on a team that designs, builds, tests, and demonstrates a significant electrical engineering project. The projects are often in collaboration with SDSU researchers or industry and provide students valuable "real world" team design experience.

Realizing that each student is an individual, the degree program includes elective coursework. Students pick technical and non-technical courses to best suit their needs and interests. The non-technical (15), technical (12 EE 400 level), and required (103) credits comprise the 130 credit degree.

Students have the opportunity to receive credit for work in industry through the Internship and Cooperative Education program. Additional information can be found in the Program's Internship and Cooperative Education policy, located on the program's Web site.

### Additional Program Requirements

In addition to the graduation requirements and academic performance specified in this catalog, to earn the Bachelor of Science degree in Electrical Engineering a student must earn a CGPA of 2.0 or higher for all his/her Electrical Engineering courses combined. All

graduating seniors are required to take the Fundamentals of Engineering examination which leads to professional registration.

### Student Learning Outcomes

#### Program Educational Objectives

The EE program educational objectives are to equip individuals who, after graduation and initial work experience,

- have achieved increases in duties and responsibilities and/or been promoted.
- have achieved advanced studies in electrical engineering or other related professional fields.

#### Student Outcomes

All graduates will have an ability to:

- apply knowledge of science, engineering, and mathematics through differential equations, complex variables, linear algebra, and discrete mathematics;
- design and conduct experiments, as well as to analyze and interpret data;
- design a system, component, or process to meet desired needs;
- function on multi-disciplinary teams;
- identify, formulate, and solve engineering problems;
- understand professional and ethical responsibility;
- communicate effectively;
- understand the impact of electrical engineering solutions in a global and societal context;
- recognize the need for, and the ability to engage in, life-long learning;
- be knowledgeable of contemporary issues;
- use the techniques, skill, and modern engineering tools necessary for engineering practice.

### Accreditation, Certification, Licensure

#### Accreditation

The undergraduate Electrical Engineering (EE) major is accredited by the Engineering Accreditation Commission of ABET.

#### Licensure

Upon successful completion of the Electrical Engineering curriculum, a student is required to take the Fundamentals of Engineering (FE) exam. After five years of engineering work experience under a professional engineer (PE), the student is allowed to take the PE exam to become a licensed PE.

### Course Delivery Format

A majority of the courses are taught on campus in smart classrooms. A significant number of courses have an associated lab component that strengthens students' hand-on practical experience. The smart classrooms allow for a variety of methods for student engagement and faculty are able to record and post their lectures on-line.

### Requirements for Electrical Engineering Major: 130 Credits

#### Bachelor of Science

#### System General Education Requirements\*: 33

- Goal #1 Written Communication: ENGL 101 and 277 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 123 Credits: 4
- Goal #6 Natural Sciences: CHEM 112-112L, and PHYS 211-211L Credits: 8

#### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: GE 109-109L\*\* Credits: 2
- Goal #2 Culture Awareness and Social and Environmental Responsibility Credits: 3

#### College Requirements: 27

- MATH 125 - Calculus II \* Credits: 4
- MATH 225 - Calculus III \* Credits: 4
- MATH 331 - Advanced Engineering Mathematics Credits: 3
- MATH 321 - Differential Equations Credits: 3
- PHYS 213-213L - University Physics II and Lab \* Credits: 4
- ME 314 - Thermodynamics Credits: 3
- CSC 150-150L - Computer Science I Credits: 3
- CSC 317 - Computer Organization and Architecture Credits: 3

#### Major Requirements: 53

- EE 102 - Introduction to Electrical Engineering II Credits: 1
- EE 220-220L - Circuits I and Lab Credits: 4
- EE 222-222L - Circuits and Machines and Lab Credits: 4
- EE 224L - EE Software Tools Lab Credits: 1
- EE 245-245L - Digital Systems and Lab Credits: 4
- EE 260 - Electronic Materials Credits: 3
- EE 310 - Probabilistic Methods in Electrical Engineering Credits: 3
- EE 316 - Signals and Systems I Credits: 3
- EE 320-320L - Electronics I Credits: 4
- EE 347-347L - Microcontroller Systems Design and Lab Credits: 3
- EE 360 - Electronic Devices Credits: 3
- EE 315 - Linear Control Systems Credits: 3
- EE 317 - Signals and Systems II Credits: 3
- EE 321-321L - Electronics II and Lab Credits: 4
- EE 385 - Electromagnetics Credits: 4
- EE 422 - Engineering Economics and Management Credits: 2
- EE 464-464L - Senior Design I and Lab Credits: 2
- EE 465-465L - Senior Design II and Lab (AW) Credits: 2

#### Technical Electives: 12

The 12 required technical electives must be from Electrical Engineering courses at the 400 level. These may be selected from specialization areas: Biomedical, Communications, Computers, Electronic Devices, Image Processing, or Power Systems. All EE majors are strongly advised to select technical electives in a coherent manner to meet desired professional/employment goals.

Some suggested areas of emphasis are listed below, which also identify courses outside of EE (courses outside of EE do not apply toward the required technical elective credits). Thus, students are not required to take all courses in an emphasis area. Following are some suggested areas and supporting courses.

### Biomedical Engineering Emphasis

- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 325-325L - Physiology and Lab Credits: 4
- EE 420-420L/520-520L - Electronics III and Lab Credits: 4
- EE 450-550 - Biomedical Signal Processing Credits: 3
- EE 454 Biomedical Instrumentation and Electrical Safety Credits 3

### Communications and Advanced Electronics Emphasis

- CSC 474 - Computer Networks Credits: 3
- EE 420-420L- Electronics III and Lab Credits: 4
- EE 424-424L- RF Electronics and Lab Credits: 3
- EE 470 - Communications Engineering Credits: 3
- EE 471-471L- Fiber Optic Comm. & Lab Credits: 4
- PHYS 361 - Optics Credits: 3

### Computers-Digital Hardware Emphasis

- CSC 474/574 - Computer Networks Credits: 3
- EE 420-420L/520-520L - Electronics III and Lab Credits: 4
- EE 440-440L/540-540L - VLSI Design and Lab Credits: 3
- EE 492-592 - Topics Credits: (1-3)
- MATH 471-571 - Numerical Analysis I Credits: 3

### Electronic Devices and Materials Emphasis

- EE 424-424L/524-524L - RF Electronics and Lab Credits: 3
- EE 440-440L/540-540L - VLSI Design and Lab Credits: 3
- EE 460-460L- Sensor & Measurements Lab Credits: 2, 1
- EE 492-592 - Topics Credits: (1-3)
- PHYS 331 - Introduction to Modern Physics Credits: 3
- PHYS 361 - Optics Credits: 3
- PHYS 439-539 - Solid State Physics Credits: 4
- PHYS 471-571 - Quantum Mechanics Credits: 4

### Image Processing Emphasis

- EE 470 - Communications Engineering Credits: 3
- EE 475-575 - Digital Image Processing Credits: 3
- MATH 471-571 - Numerical Analysis I Credits: 3
- PHYS 361 - Optics Credits: 3

### Power Systems Emphasis

- EE 430-430L - Electromechanical Systems and Lab Credits: 4
- EE 434-434L - Power Systems and Lab Credits: 4
- EE 436-436L Photovoltaic Systems Engineering & Lab Credits: 3, 1
- EE 438 - Power Technology Tour Credits: 1
- EE 470 - Communications Engineering Credits: 3
- EE 492-592 - Topics Credits: (1-3)

### Cooperative Education Program

Students have the opportunity to work in industry and receive technical elective credit for the experience through EE 494 (Internship) or EE 497 (Cooperative Education). A formal work plan must be approved by the Electrical Engineering administration prior to the work experience. Further information can be found in the Program's Internship and Cooperative Education policy, located on the program's Web site.

### Total Required Credits: 130

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs).

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Electronics Technology Major

### Program Contact/Coordinator

Byron Garry, Academic Program Coordinator  
Department of Construction and Operations Management  
Solberg Hall 116 605-688-6417  
E-mail: byron.garry@sdstate.edu  
<http://www.sdstate.edu/etm/>

### Program Information

The Electronics Technology Bachelor of Science degree program is a hands-on, lab-based blend of electronics theory and application. The program has three key components: electronics foundations, advanced electronics applications, and applied management. The goal is to prepare graduates to use technical and managerial skills to be successful in a variety of career choices. Electronics technology courses include circuits, analog and digital systems (intro and advanced), networking, industrial controls and PLCs, PCB design, power systems, and communication systems. The program also includes project management, quality systems management, statistics, and industrial safety.

### Course Delivery Format

The program provides coursework on campus, in classroom, laboratory, and in field-based settings.

### Requirements for Electronics Technology Major: 120 Credits Bachelor of Science in Engineering

#### System General Education Requirements\*: 32

- Goal #1 Written Communication: ENGL 101 and 277 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 and Goal # 3 Elective Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: PHYS 111-111L and CHEM 106-106L Credits: 8

#### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: GE 109-109L\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility:: GE 231 - Technology, Society, and Ethics\*\* Credits: 3

#### Major Requirements: 67

- GE 121 - Engineering Design Graphics I Credits: 1
- GE 123 - Computer Aided Drawing Credits: 1
- CSC 105 - Introduction to Computers Credits: 3
- MATH 121-121L - Survey of Calculus and Lab\* Credits: 5
- PHYS 113-113L - Intro to Physics II and Lab\* Credits: 4
- ET 210-210L - Introduction to Electronic Systems Credits: 4
- ET 232-232L - Digital Electronics & Microprocessors & Lab Credits: 3
- ET 240 - Techniques of Servicing Credits: 2
- ET 325-325L - Advanced Analog Electronics & Lab Credits: 3
- ET 330-330L - Microcontrollers and Networks & Lab Credits: 3
- ET 332-332L - Advanced Digital Electronics and Lab Credits: 3
- ET 345-345L - Power Systems and Lab Credits: 3/0
- ET 380-380L - Circuit Boards and Design and Lab Credits: 3, 0
- ET 451-451L - Industrial Controls and PLCs and Lab Credits: 3, 0
- ET 426-426L - Communication Systems and Lab Credits: 4
- ET 471-471L - Capstone Experience & Lab (CI) (AW) Credits 1

#### Supporting Coursework: 31

- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- GE 425-525 - Occupational Safety & Health Mgmt Credits: 3
- MGMT 310 - Business Finance Credits: 3
- MGMT 325 - Management Information Systems Credits: 3
- MGMT 360 - Organization and Management Credits: 3
- MGMT 460 - Human Resource Management Credits: 3
- OM 462-562 - Quality Management Credits: 3
- OM 469-569 - Project Management Credits: 2
- OM 494 - Internship (AW) Credits: 1-3
- Technical Elective Credits: 4

### Total Required Credits: 120

### Management Minor

Student may choose additional courses needed to fulfill the requirements for the Management Minor offered through the Economics Department.

### Cooperative Education Program

Students have the opportunity to work in industry and receive technical elective credit for the experience through ET 497. A formal work plan must be approved by the Program Coordinator of Electronics Engineering Technology prior to the work experience. Further information can be found in the Program's Cooperative Education policy.

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits, English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **English Major**

### **Program Coordinator/Contact**

Jason McEntee, Head  
Department of English  
Scobey Hall 014  
605-688-5191  
E-mail: jason.mcentee@sdstate.edu

### **Program Information**

The English major prepares students for teaching careers; for writing and editorial work; for professional schools of law, business, theology, library science, and social work; and for any endeavor in which facility in the use of language is essential.

### **Additional Academic Requirements**

To count toward the Major, courses must be passed with a minimum grade of "C." Students who take ENGL 222 - one of the three required 300-400 level courses on British or American literature or the Capstone course must be on American literature since 1860. Students who take ENGL 242 - one of the required courses must be on British literature since 1660. Topics courses may only fulfill the specific requirements when approved by the department. All sections of English 210 count as a major elective.

### **Course Delivery Format**

The department offers coursework on campus, online, and at attendance centers around the state.

### **Requirements for English Major: 120 Credits**

Bachelor of Arts in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101 Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity (Select from ENGL and HIST) Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*:<sup>5</sup>

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts and Sciences Bachelor of Arts Requirements: 17-28  
Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8 (Select HIST complimentary to SGR #4 choice)
- Humanities Credits: 6

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 39

- ENGL 151 - Introduction to English Studies Credits: 3<sup>1</sup>
- ENGL 221 - British Literature I \* \*\* (G) Credits: 3
- ENGL 241 - American Literature I \* \*\* Credits: 3

- ENGL 222 - British Literature II \* \*\* (G) Credits: 3  
or ENGL 242 - American Literature II \* \*\* Credits: 3
- One Writing Course Credits: 3  
ENGL 379 - Technical Communication (AW)  
ENGL 383 - Creative Writing  
ENGL 483-583 - Advanced Creative Writing  
ENGL 492-592 - Topics (on Professional or Creative Writing)<sup>2</sup>
- One Linguistics Course Credits: 3  
LING 203 - English Grammar  
LING 420-520 - The New English  
LING 425-525 - The Structure of English  
LING 443-543 - Development of the English Language  
LING 452-552 - General Semantics
- One Multi-Cultural/Minority Topics Course Credits: 3  
ENGL 211 - World Literature I \* \*\* (G)  
ENGL 212 - World Literature II \* (G)  
ENGL 248 - Women in Literature \* \*\*  
ENGL 249 - Literature of Diverse Cultures \* \*\*  
ENGL 410 - Mythology and Literature (AW)  
ENGL 445 - American Indian Literature  
ENGL 447 - American Indian Literature of the Present  
ENGL 268 - Literature \* (if multicultural topic)\*\*  
ENGL 492-592 - Topics (if multicultural topic)\*\*
- 300-400 Level English or American Literature Courses Credits 9
- English or Linguistics Electives: 6
- ENGL 479 Capstone Course & Writing in the Discipline (AW)<sup>3</sup>  
Credits: 3

Supporting Coursework: 6

- HIST 111 - World Civilizations I \* \*\* Credits: 3  
and HIST 112 - World Civilizations II \* \*\* (G) Credits: 3  
**OR**
- HIST 121 - Western Civilization I \* \*\* Credits: 3  
and HIST 122 - Western Civilization II \* \*\* (G) Credits: 3

Electives: 29-41

**Total Required Credits: 120**

### **Curriculum Notes**

<sup>1</sup> The department strongly recommends that students take ENGL 151 prior to their jr. yr.

<sup>2</sup> When approved by the department.

<sup>3</sup> Students must have senior standing and have completed 151 in order to enroll in 479.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits, English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **English Major - English Education Specialization**

### **Program Coordinator/Contact**

Jason McEntee, Head  
Department of English  
Scobey Hall 014  
605-688-5191  
E-mail: jason.mcentee@sdstate.edu

### **Program Information**

The English Education specialization is designed to prepare students for a career in secondary school teaching. Students complete coursework in literature, linguistics, writing, history, and pedagogy to prepare for classroom teaching in public or private middle or high schools; others go on to seek advanced degrees in education, literature, language, rhetoric, writing, and literacy.



### Additional Academic Requirements

To count toward the Major, courses must be passed with a minimum grade of "C." Students who take ENGL 222 - one of the three required 300-400 level courses on British or American literature or the Capstone course must be on American literature since 1860. Students who take ENGL 242 - one of the required courses must be on British literature since 1660. Topics courses may only fulfill the specific requirements when approved by the department. All sections of English 210 count as a major elective.

### Accreditation, Certification, and Licensure

#### Accreditation

National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

#### Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Course Delivery Format

The department offers coursework on campus, online, and at attendance centers around the state.

### Requirements for English Major - English Education

#### Specialization: 120 Credits

Bachelor of Arts in Arts and Sciences

#### System General Education Requirement\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity SOC 100 and/or PSYC 101 Credits 6
- Goal #4 Arts and Humanities/Diversity (Select from ENGL and HIST) Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

#### Institutional Graduation Requirement\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

#### College of Arts and Sciences Bachelor of Arts Requirements: 17-28 Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8 (Select HIST complimentary to SGR #4 choice)
- Humanities Credits: 6

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

#### Major Requirements: 36

- ENGL 151 - Introduction to English Studies Credits: 3
- LING 203 - English Grammar Credits: 3
- ENGL 221 - British Literature I \* \*\* (G) Credits: 3
- ENGL 240 - Juvenile Literature \* \*\* Credit: 3
- ENGL 241 - American Literature I \* \*\* Credits: 3

- ENGL 222 - British Literature II \* \*\* (G) Credits: 3  
or ENGL 242 - American Literature II \* \*\* Credits: 3
- ENGL 330 - Shakespeare Credits: 3
- ENGL 424 - 7-12 Language Arts Methods (AW) Credits: 3
- ENGL 445 - American Indian Literature Credits: 3  
or ENGL 447 - American Indian Lit of the Present Credits: 3
- ENGL 479 - Capstone Course & Writing in the Discipline (AW) Credits: 3
- English or Linguistics Electives: 6

#### Supporting Coursework: 6

- HIST 111 - World Civilizations I \* \*\* Credits: 3  
and HIST 112 - World Civilizations II \* \*\* (G) Credits: 3  
OR
- HIST 121 - Western Civilization I \* \*\*Credits: 3  
and HIST 122 - Western Civilization II \* \*\* (G) Credits: 3

#### General Electives: 12

- EDFN 489 - Professional Issues in Education *Suggested*

#### Teaching Specialization Requirements

##### Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

##### Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0  
Complete prior to entry into Professional Semester III
- ENGL 424 7-12 Language Arts Methods AW Credits Credits 3
- Native American Course Approved for Teacher Education Credits: 3  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
OR AIS/ANTH 421 - Indians of North America\*\*
- EDFN 365 - Computer-Based Technology & Learning Credits 2
- EDFN 427 Middle School: Philosophy & Application Credits 2
- EDFN 475 - Human Relations Credits: 3

##### Professional Semester III

- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 - Social Foundations, Management & Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- SEED 488 - 7-12 Student Teaching Credits: 8

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED 488 and ELED 488

#### Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

### Total Required Credits: 120

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

# **English Major - Writing Specialization**

## **Program Contact/Coordinator**

Jason McEntee, Head  
Department of English  
Scobey Hall 014 605-688-5191  
E-mail: jason.mcentee@sdstate.edu

## **Program Information**

Students with an English Major - Writing specialization receive a well-rounded background in literature, but with more intensive work in Creative and/or Professional writing. This program serves students seeking careers in creative or professional writing.

## **Additional Academic Requirements**

To count toward the Major, courses must be passed with a minimum grade of "C." Students who take ENGL 222 - one of the three required 300-400 level courses on British or American literature or the Capstone course must be on American literature since 1860. Students who take ENGL 242 - one of the required courses must be on British literature since 1660. Topics courses may only fulfill the specific requirements when approved by the department. All sections of English 210 count as a major elective.

## **Course Delivery Format**

The department offers coursework on campus, online, and at attendance centers around the state.

## **Requirements for English Major - Writing Specialization: 120 Credits**

Bachelor of Arts in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and ENGL 201 or 283 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity (Select from ENGL and HIST) Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\* :5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Arts Requirements: 17-28  
Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8 (Select HIST complimentary to SGR #4 choice)
- Humanities Credits: 6

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications.

Major Requirements: 39

- ENGL 151 - Introduction to English Studies Credits: 3
- ENGL 479 Capstone Course & Writing in the Discipline AW Credits 3

One Course in English Literature

- ENGL 221 - British Literature I \* \*\* (G) Credits: 3
- ENGL 222 - British Literature II \* \*\* (G) Credits: 3
- ENGL 330 - Shakespeare Credits: 3
- ENGL 334 - English Drama: Credits: 3
- ENGL 335 - English Novel: Credits: 3
- ENGL 422-522 - Age of Chaucer Credits: 3

- ENGL 423-523 - Old and Middle English Literature Credits: 3
- ENGL 427-527 - Advanced Shakespeare Credits: 3
- ENGL 428-528 English Renaissance/16th Century Literature Credits 3
- ENGL 434-534 - 18th Century English Literature Credits: 3
- ENGL 437-537 - English Romantic Literature Credits: 3
- ENGL 438-538 - English Victorian Literature Credits: 3
- ENGL 439-539 - Modern English Literature Credits: 3
- ENGL 440-540 - Contemporary English Literature Credits: 3
- ENGL 492-592 - Topics Credits: (1-5)

One course in American Literature

- ENGL 241 - American Literature I \* \*\* Credits: 3
- ENGL 242 - American Literature II \* \*\* Credits: 3
- ENGL 256 - Literature of the American West \* \*\* Credits: 3
- ENGL 356 - American Poetry: Credits: 3
- ENGL 367 - American Short Story: Credits: 3
- ENGL 368 - American Novel: Credits: 3
- ENGL 453-553 - American Renaissance Credits: 3
- ENGL 454-554 - American Realism and Naturalism Credits: 3
- ENGL 459-559 - American Lit Between the Wars Credits 3
- ENGL 460-560 - Contemporary American Literature Credits: 3
- ENGL 492-592 - Topics Credits: (1-5)

One course in Multi-Cultural/Women's Literature

- ENGL 211 - World Literature I \* \*\* (G) Credits: 3
- ENGL 212 - World Literature II \* (G) Credits: 3
- ENGL 248 - Women in Literature \* \*\* Credits: 3
- ENGL 249 - Literature of Diverse Cultures \* \*\* Credits: 3
- ENGL 445 - American Indian Literature Credits: 3
- ENGL 447 - American Indian Literature of the Present Credits 3

Five courses in Writing or Rhetoric

- ENGL 283 - Creative Writing I \* \*\* Credits: 3
- ENGL 379 - Technical Communication (AW) Credits: 3
- ENGL 383 - Creative Writing Credits: 3
- ENGL 483-583 - Advanced Creative Writing Credits: 3
- ENGL 492-592 - Topics Credits: (1-5)

Two Electives Courses in Literature

- ENGL 240 - Juvenile Literature \* \*\* Credits: 3
- ENGL 250 - Science Fiction \* Credits: 3
- ENGL 256 - Literature of the American West \* \*\* Credits: 3
- ENGL 268 - Literature \* Credits: 3
- ENGL 380 - Futuristic Communications Credits: 3
- ENGL 484 - Literary Criticism Credits: 3
- ENGL 492-592 - Topics Credits: (1-5)

One course in Linguistics

- LING 203 - English Grammar Credits: 3
- LING 420-520 - The New English Credits: 3
- LING 425-525 - The Structure of English Credits: 3
- LING 443-543 Development of the English Language Credits 3
- LING 452-552 - General Semantics Credits: 3

Supporting Coursework: 6

- HIST 111 - World Civilizations I \* \*\* Credits: 3  
and HIST 112 - World Civilizations II \* \*\* (G) Credits: 3  
**OR**
- HIST 121 - Western Civilization I \* \*\*Credits: 3  
and HIST 122 - Western Civilization II \* \*\* (G) Credits: 3

Electives: 29-41

- ENGL 494 - Internship Credits:1-12 *highly recommended*
- See other departments' courses for additional content-based writing electives.

**Total Required Credits: 120**

## Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Entrepreneurial Studies Major

### Program Contact/Coordinator

Eluned Jones, Head

Jason Zimmerman, Assistant Department Head

Department of Economics

Scobey Hall 142 605-688-4845

E-mail: jason.zimmerman@sdstate.edu

<http://www.sdstate.edu/econ/>

### Program Information

The major in Entrepreneurial Studies is designed to enhance entrepreneurial talent by providing students with the knowledge, skills and experiences to think entrepreneurially and create value in our society. The program allows students cultivate a mindset for thinking creatively and develop the ability to be innovative. The curriculum emphasizes entrepreneurship, business management, and interdisciplinary electives.

### Student Learning Outcomes

Entrepreneurial Studies graduates will be able to demonstrate:

- the fundamental knowledge, skills, and experience to think entrepreneurially
- leadership by adopting an innovative and creative thought processes
- research, analysis, and presentation skills
- the capacity to evaluate ethical matters within the context of the discipline.

### Course Delivery Format

The program offers courses on campus, with limited online coursework, usually during the summer.

### Requirements for Entrepreneurial Studies Major: 120 Credits

Bachelor of Science in Arts and Sciences

System General Education Requirements\* 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\* 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34  
Bachelor of Science

Natural Science Credits: 14

With 6 credits of Biological Sciences

With 8 credits of Physical Sciences

- STAT 281 - Intro to Statistics: Credits 3
- Social Sciences Credits: 12  
Humanities Credits: 8

SGRs, IGRs, and/or Major coursework may satisfy some or all of the above requirements. Consult program advisor for details. See the

College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirement Credits: 58

- ECON 201 - Principles of Microeconomics \* \*\* Credits: 3
- ECON 202 - Principles of Macroeconomics \* (G) Credits: 3
- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- ENTR 236 - Innovation & Creativity Credits: 3
- ENTR 237 - ENTR II: Entrepreneurship Development Credits: 3
- BADM 310 - Business Finance Credits: 3
- ENTR 338 - ENTR III: New Venture Creation Credits: 3
- BADM 334 - Small Business Management Credits: 3
- BADM 350 - Legal Environment of Business Credits: 3
- BADM 360 - Organization and Management Credits: 3
- BADM 370 - Marketing Credits: 3
- ENGL 379 - Technical Communication (AW) Credits: 3
- ENTR 410 - Financing Innovative Ideas Credits: 3
- BADM 457 - Business Ethics Credits: 3
- BADM 460 - Human Resource Management Credits: 3
- CSC 325 - Management Information Systems Credits: 3
- BADM 476-576 - Marketing Research Credits: 3
- ENTR 483 - Small Business Consulting Credits: 3  
or ENTR 494 - Internship Credits: 3
- ENTR 488 - Entrepreneurial Studies Capstone Credits: 1

Elective Credits: 13

**Total Required Credits: 120**

## Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Exercise Science Major

### Program Coordinator/Coordinator

Jessica Meendering, Coordinator

Department of Health and Nutritional Sciences

Phone: (605) 688-5949

E-mail: Jessica.Meendering@sdstate.edu

### Program Information

The South Dakota State University Exercise Science Program aspires to prepare health and fitness professionals with a strong understanding of the scientific concepts behind the application that is practiced in a variety of health and fitness careers. The mission of the Exercise Science program at South Dakota State University is to prepare competent entry-level Exercise Science professionals in the cognitive (knowledge), psychomotor (skills), and affective (abilities) learning domains that will assist others in adopting and championing healthy, active lifestyles.

The Exercise Science graduate will have the ability to raise awareness about health and physical activity, change behavior, and create environments that support good health practices, including, but not limited to exercise and physical activity. The exercise science professional assists people to develop self-responsibility for their own health and wellness, and implement health assessments and wellness programs that promote a healthy lifestyle. Exercise Science professionals work and study in commercial, clinical, and workplace settings to increase health, fitness, and quality of life for the general

population. The exercise science professional is also able to apply their knowledge of acute and chronic exercise physiology to promote better health, reduce chronic disease, or to enhance the performance of athletes.

### Student Learning Outcomes

- The goal of the Exercise Science program is to provide quality academic instruction and learning experiences in order to prepare:
- Students to procure entry-level employment in the health/fitness/wellness field, or continue formal education in schools offering advanced degrees in health related graduate programs
- Students to obtain the ACSM Health Fitness Specialist certification
- Produce qualified employees to the health and fitness profession
- Provide academic satisfaction to student graduates
- Provide an academic curriculum that engages students with hands on experiences and individual support to foster student retention

Upon completion of the exercise science major, students will:

- Implement personal fitness assessments
- Prescribe exercise and healthy lifestyle habits
- Create comprehensive wellness programs for diverse population needs
- Demonstrate effective communication/interpersonal skills

### Program application

Students interested in exercise science should complete coursework to meet system and institutional general education requirements, as well as BIOL 221 and BIO 225 during their freshman and sophomore years. Students who declare Exercise Science will be assigned an adviser who works closely with the Exercise Science Program. Application for admission into the Exercise Science major can begin during or after a student's sophomore year (approximately 32 credit hours). Students must complete BIOL 221 Human Anatomy and BIOL 325 Physiology by the final semester of the application year.

Students will complete an application to the Exercise Science program that consists of submission of the following components: application form, letter of reference form, two letters of recommendation, self-evaluation questions and an academic transcript. A portion of the applicants will be called in for a formal face to face interview. Approximately 25-30 students are accepted into the program each year. However, please note that there are generally more students applying than can be accepted, so the process is competitive. Therefore, completion of basic requirements does not guarantee entrance into the Exercise Science program. The minimum selection criteria are as follows: student should display an interest and desire to pursue a career in an exercise science related field; successful completion (C or better) of BIOL 221 Anatomy and BIOL 325 Human Physiology; cumulative GPA of 2.75 or better; and the verification of technical standards. Students will be notified as to their admission status in early March.

### Accreditation, Certification, and Licensure

The program is accredited by the Commission on Accreditation of Allied Health Education Programs upon recommendation of the Committee on Accreditation for the Exercise Sciences. All Exercise Science students have the opportunity to sit for the Health and Fitness Specialist Certification through the American College of Sports Medicine during their final year in the program.

### Course delivery format

Course instruction occurs through face to face and online course instruction that includes lectures, discussions, laboratories, internship and field experiences, and service learning.

### Requirements for Exercise Science Major: 120 Credits

Bachelor of Science

System General Education Requirements\*: 32-33

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: HDFS 210 and PSYC 101 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: CHEM 106-106L **and** 108-108L **OR** CHEM 112-112L and 114-114L Credits: 8-9

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: EHS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Major Requirements: 48-50

- PE 354-354L - Prevention and Care of Athletic Injuries and Lab Credits 2
- HLTH 364-364L Emergency Medical Technician and Lab Credits 4  
**or** HLTH 250-250L Pre-Professional First Aid & CPR & Lab Credits 2
- HLTH 445 - Epidemiology Credits: 3
- NURS 201 - Medical Terminology Credits: 1
- NURS 323 - Introduction to Pathophysiology Credits: 3
- PE 350 - Exercise Physiology Credits: (2-3)
- PE 454-454L - Biomechanics and Lab Credits: 3
- HLTH/HSC 200 Complementary & Alternative Hlthcare Credits 3  
**or** HLTH/HSC 230 Stress Management for Life Credits: 3
- HSC 302 - Wellness and the Family Credits: 2
- NFS 315 - Human Nutrition Credits: 3
- PE 367 - Health and Human Performance Credits: 3
- PE 395 - Practicum Credits: 3
- PE 400-400L - Exercise Test and Prescription & Lab Credits: 3
- PE 450-550 - Clinical Exercise Physiology Credits: 3
- HNS 490-590 - Seminar Credits: 3
- HNS 494-594 - Internship Credits: 1
- HNS 496-596 - Field Experience Credits: 2
- HLTH 479-479L - Health Promotion Programming and Evaluation and Lab Credits: 2
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 325-325L - Physiology and Lab Credits: 4
- CHRD 475 - Wellness Counseling Credits: 2
- PE 455-555 - ECG and Clinical Stress Testing Credits: 3

Electives: 30-33

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **Family & Consumer Sciences Education Major**

### **Program Contact/Coordinator**

Deb Debates, Professor  
Department of Teaching, Learning and Leadership  
Wenona Hall 108  
605-688-5039  
E-mail: deb.debates@sdstate.edu  
http://www.sdstate.edu/tll/

### **Program Information**

As a family and consumer sciences educator, the FCSE graduate is qualified to teach content in a wide range of settings, including in middle and high schools, occupational training programs, adult programs, or to serve as an extension educator. The FCSE program prepares students with comprehensive subject matter background from all areas of family and consumer sciences, contributing to the versatility of the major. The program focuses on characteristics of various learners or clients, learning principles and different applications of the teaching-learning process.

### **Accreditation, Certification, and Licensure**

Accreditation  
National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

### **Certification and Licensure**

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### **Course Delivery Format**

Coursework in the FCSE program is delivered using lectures, discussions, group work, and applied learning in field experiences, practicums, and internships.

### **Requirements for Family and Consumer Sciences Education**

#### **Major: 120 Credits**

Bachelor of Science in Education and Human Sciences

#### System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits:3
- Goal #3 Social Sciences/Diversity: PSYC 101\* and HDFS 210\* Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Science: Credits: 6 *Biology or Chemistry recommended*

#### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: EHS 109\*\* Credits: 3
- Cultural Awareness & Social & Environmental Responsibility Credits: 3 *Suggested: AIS/ANTH 421 or AIS/HIST 368*

#### College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

#### Major Requirements: 82

- CA 442 - Family Resource Management Lab Credits: 3 or HDFS 425-525 - Family Resiliency Credits: 3
- Native American Course Approved for Teacher Education Credits: 3  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
OR AIS/ANTH 421 - Indians of North America\*\*
- AM 231-231L - Ready-To-Wear Analysis and Lab Credits: 3
- CA 289 - Consumers in the Market Credits: 3

- CA 345 - Foundations in Financial Management Credits: 3
- ECE 420 - Health, Safety & Nutrition of Young Children Credits: 2
- HDFS 227 - Human Dvlpmnt & Personality I: Childhood Credits: 3
- ECE 228-228L Guidance with Young Children & Lab Credits: 1-2, 1
- FCSE 331 - Work Force Preparation in FCS Credits: 2
- ID 150-150L - Introduction to Interior Design I & Lab Credits: 4
- HDFS 337 - Human Development II: Adolescence Credits: 3
- HDFS 410/510 - Parenting Credits: 3
- HMGT 171 - Introduction to Hospitality Industry Credits: 3
- NFS 111 - Food, People and the Environment\*\* Credits: 3
- NFS 141-141L - Foods Principles and Lab Credits: 4
- NFS 221 - Survey of Nutrition Credits: 3
- AGED 295 - Practicum Credits: 1
- FCSE 405 - Philosophy of Career & Technical Edu. Credits: 2
- EDFN 475 - Human Relations Credits: 3
- EDFN 365 Computer-Based Technology & Learning Credits: 2
- EDFN 427 Middle School: Philosophy & Application Credits: 2
- EPSY 302 - Educational Psychology Credits: 3
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0
- SPED 405 Educating Secondary Students w/Disabilities Credits 2
- FCSE 411 Philosophy & Methods in FCS (AW) Credits 4
- FCSE 412-412L - Preparation for Student Teaching in FSCE and Lab Credits: 4
- FCSE 488 - 7-12 Student Teaching FCSE Credits: 1-6
- Electives: 1-4

### **Total Required Credits: 120**

### **Curriculum Notes**

Students must receive a grade of "C" or better in all majors courses, SPCM 101, ENGL 101 and MATH 102, and have a cumulative GPA of 2.5 or above in order to be admitted to the teacher education program.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **French Studies Major**

### **Program Coordinator/Contact Information**

Maria T. Ramos-Garcia, Head  
Marie-Pierre Baggett, French Program Coordinator  
Department of Modern Languages and Global Studies  
SWG 121 Box 2203  
South Dakota State University  
605-688-5101  
E-mail: Marie-Pierre.Baggett@sdstate.edu  
http://www.sdstate.edu/mfl/index.cfm

### **Program Information**

The French major at SDSU consists of language, culture, literature and professional courses to prepare students for careers in which they will use French as a language for communication. The major offers flexibility and can easily be added to another major.

### **Student Learning Outcomes**

Upon the completion of the French major, students should be able to:

- Speak, read and write French at the intermediate-high or advanced level
- Demonstrate knowledge and understanding of the cultures and communication cultures of the Francophone world
- Demonstrate knowledge of the French civilizations and its cultural products, such as literature, art, government, etc.

### Additional Academic Requirements

There are no application requirements to enroll in the French Studies major. However, students with previous knowledge of the language must take the placement test and register for an appropriate course. Additionally, all the courses for the major must be passed with a grade of "C" or better.

### Course Delivery Format

Most courses in the French major are offered face-to-face on campus. Some upper-division courses are offered as part of the French cooperative program with NSU and USD and they use different types of distance delivery, including simultaneous television (DDN) and online delivery.

### Requirements for French Studies Major: 120 Credits

Bachelor of Arts

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Culture Awareness and Social and Environmental Responsibility Credits: 3

College of Arts and Sciences Bachelor of Arts Requirements: 17-28  
Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

### Major Requirements: 37

- FREN 102 - Introductory French II \* (G) Credits: 4
- FREN 201 - Intermediate French I \* \*\* Credits: 4
- FREN 202 - Intermediate French II \* \*\* Credits: 4
- FREN 310 - French Language Skills Credits: 3
- FREN 333 - Topics in Francophone Culture (COM) Credits: 3
- FREN 433 - French Culture & Civilization (AW) Credits: 3
- Literature, Language, and Culture Elective Credits: 16  
*9 Credits must be 300-400 Level French Courses*

*The following is a suggested sequence.*

- FREN 211 - Intermediate Oral Practice I Credits: 2
- FREN 212 - Intermediate Oral Practice II Credits: 2
- FREN 353 - Exploring Literature in French Credits: 3
- FREN 385 Travel Study Abroad Francophone (G) Credits: 1-6
- FREN 491 - Independent Study Credits: 1-3
- FREN 492 - Topics Credits: 1-3
- FREN 496 - Field Experience Credits: 1-6
- Select additional credits with prefix FREN

Elective Credits: 47

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## French Studies Major - Teaching Specialization

### Program Coordinator/Contact Information

Maria T. Ramos-García, Head  
Marie-Pierre Baggett, French Program Coordinator  
Department of Modern Languages and Global Studies  
SWG 121 Box 2203  
South Dakota State University  
605-688-5101  
E-mail: Marie-Pierre.Baggett@sdstate.edu  
<http://www.sdstate.edu/mfl/index.cfm>

### Program Information

The French major at SDSU consists of language, culture, literature and professional courses to prepare students for careers in which they will use French as a language for communication. The major offers flexibility and can easily be added to another major.

### Student Learning Outcomes

Upon the completion of the French major, students should be able to:

- Speak, read and write French at the intermediate-high or advanced level
- Demonstrate knowledge and understanding of the cultures and communication cultures of the Francophone world
- Demonstrate knowledge of the French civilizations and its cultural products, such as literature, art, government, etc.

### Additional Academic Requirements

There are no application requirements to enroll in the French Studies major. However, students with previous knowledge of the language must take the placement test and register for an appropriate course. Additionally, all the courses for the major must be passed with a grade of "C" or better.

### Accreditation, Certification, and Licensure

Accreditation

National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Course Delivery Format

Most courses in the French major are offered face-to-face on campus. Some upper-division courses are offered as part of the French cooperative program with NSU and USD and they use different types of distance delivery, including simultaneous television (DDN) and online delivery.

### Requirements for French Major - Teaching Specialization: 120 Credits

Bachelor of Arts

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6



- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

#### Institutional Graduation Requirements\*\*:

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Culture Awareness and Social and Environmental Responsibility Credits: 3

#### College of Arts and Sciences Bachelor of Arts Requirements: 17-28 Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

#### Major Requirements: 37

- FREN 102 - Introductory French II \* (G) Credits: 4
- FREN 201 - Intermediate French I \*\*\* Credits: 4
- FREN 202 - Intermediate French II \*\*\* Credits: 4
- FREN 310 - French Language Skills Credits: 3
- FREN 333 - Topics in Francophone Culture (COM) Credits: 3
- FREN 433 - French Culture & Civilization (AW) Credits: 3
- Literature, Language, and Culture Elective Credits: 16  
9 Credits must be 300-400 Level French Courses

*The following is a suggested sequence.*

- FREN 211 - Intermediate Oral Practice I Credits: 2
- FREN 212 - Intermediate Oral Practice II Credits: 2
- FREN 353 - Exploring Literature in French Credits: 3
- FREN 385 Travel Study Abroad Francophone (G) Credits: 1-6
- FREN 491 - Independent Study Credits: 1-3
- FREN 492 - Topics Credits: 1-3
- FREN 496 - Field Experience Credits: 1-6
- Select additional credits with prefix FREN

#### Teaching Specialization Requirements

##### Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

##### Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0

##### Complete prior to entry into Professional Semester III

- MFL 420 - K-12 Foreign Language Methods Credits: 3
- Native American Course Approved for Teacher Education Credits: 3  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
OR AIS/ANTH 421 - Indians of North America\*\*
- EDFN 365 - Computer-Based Technology and Learning Credits: 2
- EDFN 427-527 - Middle School: Philosophy & Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

##### Professional Semester III

- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 - Social Foundations, Management & Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching or SEED 488 - 7-12 Student Teaching Credits: 8

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED 488 and ELED 488

#### Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

#### Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## General Studies (Associate of Arts)

#### Program Coordinator/Contact

Christy Osborne, Coordinator and Advisor  
College of Arts and Sciences  
Wintrose Student Success Center 102  
605-688-4691  
E-mail: [christy.osborne@sdstate.edu](mailto:christy.osborne@sdstate.edu)  
<http://www.sdstate.edu/cee/degrees/general-studies.cfm>

#### Program Information

The Associate of Arts degree in General Studies provides a foundation of general education courses at the university level supporting bachelor's degree programs, lifelong learning, leadership, service, and careers requiring general education coursework. Students completing this degree will have fulfilled the Board of Regents general education core requirements for a bachelor's degree at any of the Regental universities in South Dakota.

#### Academic Requirements

Each student enrolled in an Associate of Arts degree program must take the Proficiency Examination after the completion of 32 passed credit hours or prior to graduation. The student must have completed, or be enrolled in courses required to complete the 18 credit hours specified below. Students who do not complete the proficiency exam requirements cannot continue registration at the university.

#### Course Delivery Format

Many courses necessary to fulfill the requirements of the AA in General Studies are available by distance education.

#### Requirements for General Studies Major: 60 Credits

Associate of Arts

#### System General Education Requirements: 30 Credits

- SGR Goal 1 \* ENGL 101 - Composition I \* Credits: 3 and ENGL 201 - Composition II \* Credits: 3
- SGR Goal 2 \* SPCM 101\* - Fundamentals of Speech Credits: 3
- SGR Goal 3 \*: Social Sciences/Diversity Credits: 6
- SGR Goal 4 \*: Humanities and Arts/Diversity Credits: 6
- SGR Goal 5 \*: Mathematics Credits: 3
- SGR Goal 6 \*: Natural Sciences Credits: 6

General Electives: 30 Credits

#### Total Required Credits: 60

## General Studies (Bachelor of)

### **Program Coordinator/Contact Information**

Carey Kilmer, Student Services Facilitator  
Continuing and Extended Education  
Briggs Library Room 119  
605-688-4959 or 866-827-3918 (toll free)  
E-mail: Carey.Kilmer@sdstate.edu  
<http://www.sdstate.edu/cee/degreess/generalstudies.cfm>

### **Program Information**

The Bachelor of General Studies program through the College of Arts and Sciences is designed for adult and returning students who have already completed significant college credit and want to complete a baccalaureate degree. The Bachelor of General Studies offers students the flexibility to select coursework from a variety of focus areas: allied health; business; education; fine arts; humanities; social science; science, engineering and mathematics; technology; and wellness.

### **Admission Requirements**

For SDSU admission requirements, visit [www.sdstate.edu/admission](http://www.sdstate.edu/admission). Potential students should pick up an application from an attendance center or apply online:

- Visit SDSU's site [www.sdstate.edu](http://www.sdstate.edu)
- Choose "Admissions"
- Choose "Undergraduate Admissions"
- Complete the online application.

Potential students should schedule an appointment to meet with the student services facilitator to have their transcript evaluated. Once accepted, students will work closely with their advisor to prepare their degree completion plan.

### **Course Delivery Format**

Adult and returning students will have the ability to complete the Bachelor of General Studies online, on-campus, or through an attendance center (Capital University Center, University Center – Sioux Falls, or University Center – Rapid City).

### **Requirements for General Studies Major: 120 Credits**

Bachelor of General Studies

System General Education Requirements\*: 30

- SGR #1 Written Communication: ENGL 101 - Composition I \* and ENGL 201 - Composition II \*\* Credits: 6
- Goal #2 Oral Communication Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

Major Requirements: 48

- GS 491 - Independent Study Credits: 3
- Completion of 15 credits in at least 3 of the designated General Studies focus areas (45 credits): *20 credits or more of the focus area credits must be numbered 300 or above.*
  - Allied Health (Courses such as anatomy, athletic training, health sciences)
  - Business (Courses such as business administration, consumer affairs, economics, ag econ, entrepreneurial studies)
  - Education (Courses such as early childhood education, art education, ag education)
  - Fine Arts (Courses such as art, art history, interior design, theater, music)

- Humanities (Courses such as foreign languages, English, religion, philosophy, mass and speech communication)
- Social Science (Courses such as anthropology, human development, political science, psychology, sociology)
- Science, Engineering and Mathematics (Courses such as biology, chemistry, construction management, mathematics)
- Technology (Courses such as agricultural systems technology, computer science, electrical engineering technology)
- Wellness (health, physical education and recreation; wellness)

Electives: 37

**Total Required Credits: 120**

### **Curriculum Notes**

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Geographic Information Sciences Major

### **Program Coordinator/Contact Information**

George White, Head  
Department of Geography  
109 Wecota Hall  
605-688-4511  
E-mail: [george.white@sdstate.edu](mailto:george.white@sdstate.edu)

### **Program Information**

The major in Geographic Information Sciences allows students to gain hands-on experience with computerized Geographic Information System (GIS) that integrate hardware, software, and data for capturing, managing, analyzing, and displaying all forms of geographically referenced information. GIS allows researchers to work with data in many ways that reveal relationships, patterns, and trends in the form of maps, globes, reports, and charts. With GIS's capability to enhance geo-spatial data analysis, there is a demand for GIS trained college graduates by many local, state, and federal governmental agencies, including the US Geologic Survey.

Qualified students may also enhance their academic experience and career qualifications with participation in the GIScCE Center of Excellence Scholars Program. The program is both an academic and a professional curriculum designed to enable SDSU students to achieve educational and research experiences that uniquely qualify them for a career in GISc/Remote Sensing.

### **Academic Requirements**

Students must earn at least a "C" in each course used to meet the major requirements.

### **Course Delivery Format**

The Geographic Information Sciences program includes lecture, discussion, laboratory research, fieldwork, and travel, with limited online coursework.

### **Requirements for Geographic Information Sciences Major: 120 Credits**

Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34  
Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 41

- MATH 120 - Trigonometry \* Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3
- GEOG 131-131L - Physical Geography: Weather & Climate & Lab Credits: 4
- GEOG 132-132L - Physical Geography: Natural Landscapes & Lab Credits: 4
- GEOG 200 - Introduction to Human Geography (G) Credits: 3
- GEOG 210 - World Regional Geography \* \*\* (G) Credits: 3
- GEOG 383-383L - Cartography and Lab Credits: 3
- GEOG 447 - Geography of the Future Credits: 3
- GEOG 483-483L - Air Photo Interpretation and Lab Credits: 3
- GEOG 484-484L - Remote Sensing and Lab Credits: 3
- GEOG 472 - Introduction to GIS Credits: 3
- GEOG 473-573 - GIS: Data Creation and Integration Credits: 3
- GEOG 474-574 - GIS: Vector and Raster Modeling Credits: 3  
or GEOG 475/575 - GIS Applications Credits: 3

Electives: 41

- *Suggested Elective:* GEOG 382 - Geographic Research Methods (AW) Credits: 3
- For those seeking careers in GISc programming, these additional courses are suggested:
  - GEOG 384-384L - Advanced Cartography and Lab Credits: 3
  - GEOG 485-485L Quantitative Remote Sensing & Lab Credits: 3
  - CSC 105 - Introduction to Computers Credits: 3
  - CSC 150-150L - Computer Science I Credits: 3
  - CSC 205 - Advanced Computer Applications Credits: 3
  - CSC 474/574 - Computer Networks Credits: 3
  - MATH 115 - Precalculus \* Credits: 5
  - MATH 215 - Matrix Algebra Credits: 2
  - GE 120-120L - Engineering Drawing/CAD & Lab Credits: 3
  - GE 121 - Engineering Design Graphics I Credits: 1
  - CEE 106-106L - Elementary Surveying and Lab Credits: 4
  - CEE 304 - Land Surveying Credits: 3
  - CEE 434/534 - Hydrology Credits: 3

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Geography Major

### Program Coordinator/Contact Information

George White, Head  
Department of Geography  
109 Wecota Hall  
605-688-4511  
E-mail: george.white@sdstate.edu

### Program Information

Geography is the scientific study of the distribution of both physical and human features of the Earth's surface. Geographers seek to describe, relate and explain the natural and cultural phenomena that distinguish places around the world. Geographers focus upon "where" and "why" questions concerning the global environment. Geography also functions as a bridge between the natural sciences; its perspective on the location of phenomena makes it unique among the academic disciplines. The process of change is a fundamental theme in geography and the examination of how humankind modifies the Earth is a continual emphasis. The study of geography is thus of vital concern to all citizens and provides graduates with numerous career opportunities in business, education, and government.

The Geography program is designed to provide the student with a general education as well as a concentration in the major field of study. The faculty recommends that majors take several courses in disciplines closely related to their specific area of interest in geography. Those interested in physical geography might register for associated courses in physics, agricultural sciences, botany or other allied disciplines. If one is interested in human geography, course work in sociology, economics, history, political science or foreign language or some other social science might be considered. For technical geography, computer science and mathematics courses are recommended. Qualified students may also enhance their academic experience with participation in the Undergraduate Scholars Program.

### Program Emphases

- The Planning Emphasis stresses research techniques and is oriented toward future employment in governmental, industrial, military, or planning positions.
- The Environmental Planning and Management Emphasis is designed to prepare students for careers in governmental, industrial, managerial, recreational areas, and commercial corporations.

### Academic Requirements

Students must complete a minimum of 18 upper division credits in major courses and earn at least a "C" in each course used to meet the major requirements.

### Course Delivery Format

Geography is not only a classroom subject but one that also includes laboratory research, fieldwork, and travel, as well as limited online coursework.

### Requirements for Geography Major: 120 Credits

Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34  
Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 35

Complete a minimum of 18 upper division credits.

- GEOG 131-131L - Physical Geography: Weather and Climate and Lab\* Credits: 4
- GEOG 132-132L - Physical Geography: Natural Landscapes and Lab\* Credits: 4
- GEOG 200 - Introduction to Human Geography \* \*\* (G) Credits: 3
- GEOG 210 - World Regional Geography \* \*\* (G) Credits: 3
- GEOG 382 - Geographic Research Methods (AW) Credits: 3
- GEOG 383-383L - Cartography and Lab Credits: 3  
or GEOG 472 - Introduction to GIS Credits: 3  
or GEOG 483-483L - Air Photo Interpretation & Lab Credits: 3
- GEOG 447 - Geography of the Future Credits: 3
- Advanced Physical Geography & Human-Earth Relationships Credits: 3
- Regional Geography & Advanced Human Geography Credits: 3
- 200-level and above GEOG Elective Credits: 6  
*maximum of 3 credits of GEOG 494 (Internship)*

Electives: 47

**Planning Emphasis**

- GEOG 365 - Land Use and Planning\*\* Credits: 3
- GEOG 461 - Urban Geography Credits: 3
- GEOG 464 - Local and Regional Planning Credits: 3
- GEOG 483-483L - Air Photo Interpretation and Lab Credits: 3
- GEOG 484-484L - Remote Sensing and Lab Credits: 3
- GEOG 473-573 - GIS: Data Creation and Integration Credits: 3
- GEOG 474-574 - GIS: Vector and Raster Modeling Credits: 3
- *Highly Recommended Electives*
  - PLAN 471-571 - Principles of State, Regional and Community Planning Credits: 3
  - PLAN 472-572 - Techniques of State, Regional and Community Planning Credits: 3

**Environmental Planning and Management Emphasis**

- GEOG 310-310L - Soil Geography & Land Use Interpretation & Lab\*\* (G) Credits: 3
- GEOG 337 - Atmospheric Sciences Credits: 3
- GEOG 339 - Geomorphology Credits: 3
- GEOG 343 - Environmental Disasters & Human Hazards Credits: 3
- GEOG 351 - Economic Geography Credits: 3
- GEOG 365 - Land Use and Planning\*\* Credits: 3
- GEOG 383-383L - Cartography and Lab Credits: 3
- GEOG 425 - Population Geography Credits: 3
- GEOG 484-484L - Remote Sensing and Lab Credits: 3
- GEOG 473-573 - GIS: Data Creation and Integration Credits: 3
- GEOG 474-574 - GIS: Vector and Raster Modeling Credits: 3

**Total Required Credits: 120**

**Curriculum Notes**

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.  
\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).  
(G) Globalization Requirement.  
(AW) Advanced Writing Requirement.  
Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

**German Major**

**Program Coordinator/Contact Information**

Eckhard Rolz, German Program Coordinator  
Department of Modern Languages and Global Studies  
SWG 121  
605-688-5101

**Program Information**

The German major at SDSU consists of language, culture, literature and professional courses to prepare students for careers in which they will use German as a language for communication. The major offers flexibility and can easily be added to another major.

**Student Learning Outcomes**

Graduates with a German major should be able to:

- Speak, read and write German at the intermediate-high or advanced level
- Demonstrate knowledge and understanding of the cultures and communication cultures of the German-speaking world
- Demonstrate knowledge of the German civilizations and its cultural products, such as literature, art, government, etc.

**Additional Academic Requirements**

There are no application requirements to enroll as a German major. However, students with previous knowledge of the language must take the placement test and register for an appropriate course. Additionally, all the courses for the major must be passed with a grade of "C" or better.

**Course Delivery Format**

Most courses in the German major are offered face-to-face on campus. Some upper-division courses are offered as part of the German cooperative program with NSU and USD and they use different types of distance delivery, including simultaneous television (DDN) and online delivery.

**Requirements for German Major: 120 Credits**

Bachelor of Arts in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Culture Awareness and Social and Environmental Responsibility Credits: 3

College of Arts and Sciences Bachelor of Arts Requirements: 17-28  
Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 36

Major Core: 14

- GER 101 - Introductory German I \* (G) Credits: 4
- GER 102 - Introductory German II \* (G) Credits: 4
- GER 201 - Intermediate German I \* \*\* Credits: 3
- GER 202 - Intermediate German II \* \*\* Credits: 3

Major Electives: 22

Select at least 18 upper-division credits.

*The following is a suggested sequence.*

Composition and Conversation: 3

- GER 330 - Reading & Writing for Communication Credits: 3

Advanced Language Electives: 4

- GER 310 - Practical German Language Skills Credits: 3
- GER 411 Advanced Composition & Conversation I Credits 3
- GER 412 Advanced Composition & Conversation II Credits 3

Literature Electives: 4

- GER 353 - Introduction to German Literature - Credits
- GER 453 - Survey of German Literature I Credits: 3
- GER 454 - Survey of German Literature II Credits: 3
- GER 392 & 492 - Topics (if literature focused) Credits: 2-3

Culture and Civilization: 3

- GER 433 - German Civilization I (AW) Credits: 3
- GER 434 - German Civilization II (AW) Credits: 3
- GER 380 - Deutschland Heute Credits: 3
- GER 392 & 492 - Topics (if culture focused) Credits: 2-3

Additional credits may come from travel or field experiences

*All majors are strongly encouraged to study abroad in a German-speaking country.*

- GER 491 - Independent Study Credits: 1-3
- GER 296 & 396 - Field Experience Credits: 1-6

Electives: 47

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## German Major - Teaching Specialization

### Program Contact/Coordinator

Maria T. Ramos-Garcia, Head

Eckhard Rolz, German Program Coordinator

Department of Modern Languages and Global Studies

SWG 121

605-688-5101

E-mail: [Maria.ramos@sdstate.edu](mailto:Maria.ramos@sdstate.edu)

<http://www.sdstate.edu/mfl/index.cfm>

### Program Information

The German major at SDSU consists of language, culture, literature and professional courses to prepare students for careers in which they will use German as a language for communication. The major offers flexibility and can easily be added to another major.

### Student Learning Outcomes

Graduates with a German major should be able to:

- Speak, read and write German at the intermediate-high or advanced level
- Demonstrate knowledge and understanding of the cultures and communication cultures of the German-speaking world
- Demonstrate knowledge of the German civilizations and its cultural products, such as literature, art, government, etc.

### Application Requirements

There are no application requirements to enroll as a German major. However, students with previous knowledge of the language must take the placement test and register for an appropriate course. Additionally, all the courses for the major must be passed with a grade of "C" or better. Refer to the Department of Teaching, Learning and Leadership for more information the teacher education program and application.

### Accreditation, Certification, and Licensure

Accreditation

National Council for Accreditation of Teacher Education Programs

South Dakota Department of Education

Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Course Delivery Format

Most courses in the German major are offered face-to-face on campus. Some upper-division courses are offered as part of the German cooperative program with NSU and USD and they use different types of distance delivery, including simultaneous television (DDN) and online delivery.

### Requirements for German Major Teaching Specialization 120 Credits

Bachelor of Arts

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Culture Awareness and Social and Environmental Responsibility Credits: 3

College of Arts and Sciences Bachelor of Arts Requirements: 17-28

Bachelor of Arts

- Modern Languages Credits: 3-14 (completion and competency in one language at the 202 level or a department-approved advanced upper division language course)
- Social Sciences Credits: 8
- Humanities Credits: 6

SGRs, IGRs, and/or Major coursework may satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 36

Major Core: 14

- GER 101 - Introductory German I \* (G) Credits: 4
- GER 102 - Introductory German II \* (G) Credits: 4
- GER 201 - Intermediate German I \* \*\* Credits: 3
- GER 202 - Intermediate German II \* \*\* Credits: 3

Major Electives: 22

Select at least 18 upper-division credits.

*The following is a suggested sequence.*

Composition and Conversation: 3

- GER 330 - Reading & Writing for Communication Credits: 3
- Advanced Language Electives: 4

- GER 310 - Practical German Language Skills Credits: 3
- GER 411 Advanced Composition & Conversation I Credits 3
- GER 412 Advanced Composition & Conversation II Credits 3

Literature Electives: 4

- GER 353 - Introduction to German Literature - Credits
  - GER 453 - Survey of German Literature I Credits: 3
  - GER 454 - Survey of German Literature II Credits: 3
  - GER 392 & 492 - Topics (if literature focused) Credits: 2-3
- Culture and Civilization: 3

- GER 433 - German Civilization I (AW) Credits: 3
- GER 434 - German Civilization II (AW) Credits: 3
- GER 380 - Deutschland Heute Credits: 3
- GER 392 & 492 - Topics (if culture focused) Credits: 2-3

Additional credits may come from travel or field experiences

*All majors are strongly encouraged to study abroad in a German-speaking country.*

- GER 491 - Independent Study Credits: 1-3
- GER 296 & 396 - Field Experience Credits: 1-6

Electives: 13

Teaching Specialization Requirements

Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0

Complete prior to entry into Professional Semester III

- MFL 420 - K-12 Foreign Language Methods Credits: Credits: 3
- Native American Course Approved for Teacher Education Credits: 3  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
OR AIS/ANTH 421 - Indians of North America\*\*
- EDFN 365 Computer-Based Technology & Learning Credits: 2
- EDFN 427-Middle School: Philosophy & Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

Professional Semester III

- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 - Social Foundations, Management & Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching or SEED 488 - 7-12 Student Teaching Credits: 8\*

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED 488 and ELED 488

Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

**Total Required Credits: 120**

**Curriculum Notes**

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **Global Studies Major**

**Program Coordinator/Contact Information**

Maria T. Ramos-Garcia, Head

Eckhard Rolz, Program Coordinator

Department of Modern Languages and Global Studies

SWG 121 Campus Box 2275

605-688-5101

South Dakota State University

Brookings, SD 57007

**Program Information**

The Global Studies major integrates content and theory from a number of disciplines leading to an understanding of the interrelated processes of globalization in an increasingly interdependent world. Globalization, which has occurred over centuries, accelerated dramatically in the last half of the 20th century stimulated by rapid transportation and technological developments, leading to instant communication between all parts of the world. International activities are now globally based on new relationships between countries resulting from diminution of national boundaries and increased recognition of the global nature of environmental conditions, economics, politics, health and safety, the spread of terrorism, and the perceived homogenization of culture.

**Student Learning Outcomes**

By embracing two broad themes - intercultural competence and authentic global citizenship- the Global Studies major will:

- prepare students through the social sciences, natural sciences, and humanities with knowledge and a broad understanding of global society and the societies of diverse foreign countries and cultures;
- enable students to apply analytical and philosophical tools for interpretation of and critical thinking about global issues and data;
- prepare students for employment in many fields including government, non-governmental organizations, business with international marketing, journalism and other fields that require professionals with interdisciplinary education, global literacy, and cross-cultural competencies;
- provide the training, tools, and experiences for global studies majors to become authentic global citizens; and
- utilize the international resources of SDSU to benefit the citizens of South Dakota, the United States, and the world.

**Course Delivery Format**

Courses with the prefix GLST are offered face-to-face. Other courses required for the major may also be available via internet.



## Requirements for Global Studies Major: 120 Credits Bachelor of Arts

System General Education Requirements\*: 30

- Goal #1 Written Communication Credits: 6
  - ENGL 101 - Composition I \* Credits: 3
  - ENGL 201 - Composition II \* Credits: 3
- Goal #2 Oral Communication Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6 <sup>satisfied in the major</sup>
  - ECON 202 - Principles of Macroeconomics Credits: 3
  - GEOG 210 - World Regional Geography Credits: 3
- Goal #4 Arts and Humanities/Diversity Credits: 6 <sup>satisfied in the major</sup>
  - HIST 112 - World Civilizations II Credits:3
  - REL 250 - World Religions Credits:3
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3 <sup>satisfied in the major</sup>
  - POLS 253 - Current World Problems \* \*\* (G) Credits: 3

College of Arts & Sciences Bachelor of Arts Requirements: 17-28 Credits  
Bachelor of Arts

- Modern Languages Credits: 3-14\* (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*).  
\*There are 21 total credits of language required for the college & major.
- Social Sciences Credits: 8
- Humanities Credits: 6

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 43

Major Core: 18

- HIST 112 - World Civilizations II \* \*\* (G) Credits:3
- GLST 201 - Global Studies I \* \*\* (G) Credits: 3
- POLS 253 - Current World Problems \* \*\* (G) Credits: 3
- ECON 202 - Principles of Macroeconomics \* (G) Credits:3
- REL 250 - World Religions \* (G) Credits:3
- GEOG 210 - World Regional Geography \* \*\* (G) Credits:3

Modern Languages Requirement: 21

Option 1 - 7 Credits in one language above the 202 level

Option 2 - Qualified Waiver

May be waived if examination shows the student has achieved a level of language learning equivalent to that of students who have completed 21 credit hours in a language and are able to use the language at an intermediate level (Intermediate Low according to the ACTFL scale). The Department will evaluate the documentation. A student may be exempt from examination at SDSU if he or she has successfully completed one or more of the nationally administered tests showing an equivalent level of proficiency.

Option 3 - Two Languages

Global Studies students may, with the approval of the Coordinator of Global Studies and Department Head, design a Modern Language program that combines two languages. Students have the option of completing coursework in two languages offered at SDSU through the intermediate level (101, 102, 201, and 202) or combining one of the languages offered at SDSU through the 202 level with a less commonly taught language (e.g. Arabic, Chinese, Japanese, Russian, etc.). This option, including an assessment plan, must be approved in advance by the Department.

Global Studies Major Electives: 15

In consultation with an academic advisor, students develop a plan of study using courses listed below for a total of 15 credit with at least:

- 2 different prefixes minimum
- No more than 9 credits per prefix;
- No more than 3 credits of lower division coursework

Other courses not listed below that have a significant global emphasis may also qualify but must be approved in advance

- World Economics/Geography
  - ABS 203 Global Food Systems Credits: 3
  - ECON 405 Comparative Economic Systems Credits: 3
  - ECON 440 Economics of International Sector Credits: 3
  - ECON 460 Economic Development Credits: 3
  - GEOG 320 Regional Geography Credits: 3
  - GEOG/REL 353 Geography of Religion Credits: 3
  - GEOG 400 Cultural Geography Credits: 3
  - GEOG 415 Environmental Geography Credits: 3
  - GEOG 425 Population Geography Credits: 3
  - GEOG 447 Geography of the Future Credits: 3
  - GEOG 459 Political Geography Credits: 3
  - GEOG 460 Geopolitics Credits: 3
  - GEOG 492 Geography of Terrorism Credits: 3
  - LMNO 201 Introduction to Leadership and Management of Non-Governmental Organizations Credits: 3
- World History/Politics
  - HIST 312 History of Modern Asia Credits: 3
  - HIST 313 History of the Middle East Credits: 3
  - HIST 401 History of Religious Thought Credits: 3
  - HIST 410 World History since 1945 Credits: 3
  - HIST 418 History of Latin America Credits: 3
  - HIST 420 Contemporary Europe Credits: 3
  - HIST 445 Cold War Europe Credits: 3
  - HIST 492 Topics—Turkey: East meets West Credits: 3
  - POLS 165 Political Ideologies Credits: 3
  - POLS 341/EURS 301 European Democratic Govt Credits: 3
  - POLS 347/LAS 302 Latin American Politics Credits: 3
  - POLS 350 International Relations Credits: 3
  - POLS 352/EURS 301 European Union Credits: 3
  - POLS 454 International Law and Organization Credits: 3
  - POLS 462/PHIL 424 Modern Political Philosophy Credits: 3
- World Cultures/Societies
  - ANTH 210 Cultural Anthropology Credits: 3
  - ARTH 212 History of World A Credits: 3
  - ARTH 320 Modern Art and Architecture Survey Credits: 3
  - ENGL 212 World Literature II Credits: 3
  - ENGL 249 Literature of Diverse Cultures Credits: 3
  - ENGL 470 Capstone Course in Peace & Conflict Studies Credits 3
  - EURS 300 Topics in European Cultures Credits: 3
  - EURS 301 Societies in European Cultures Credits: 3
  - FREN 333 Topics in Francophone Cultures Credits: 3
  - FREN 433 French Civilization Credits: 3
  - FREN 492 Race, Revolution, & Slavery: Perspectives on Haiti Credits 3
  - GER 380 Deutschland Heute Credits: 3
  - GER 434 German Civilization II Credits: 3
  - GLST/ENGL 380 Futuristic Communications Credits: 3
  - GLST/PHIL 480 Ethics of Globalization Credits: 3
  - GLST 491 Model UN Credits: 3
  - GLST 492 Canadian Values, Institutions, & Human Rights Credits: 3
  - GLST 492 Race, Revolution, and Slavery: Perspectives on Haiti Credits: 3
  - LAS 301 Latin American Cultures Credits: 3
  - LAS 302 Latin American Societies Credits: 3
  - PHIL 424/POLS 462 Modern Political Philosophy Credits: 3

- PHIL 454/554/ REL 332 Environmental Ethics Credits: 3
- REL/GEOG 353 Geography of Religion Credits: 3
- SOC 350 Race and Ethnic Relations Credits: 3
- SPAN 433 Spanish Culture and Civilization Credits: 3
- SPAN 435 Latin American Culture & Civilization Credits: 3
- SPAN 476 19th and 20th Century Spain Credits: 3
- SPAN 484 20th Century Latin America Credits: 3
- SPAN 492 Visions of the US from the Hispanic World Credits: 3

#### Cross Cultural Experiences: 3

- Students may use a variety of travel experience courses in the catalog to fulfill this requirement for a cross-cultural experience outside of the United States that includes at least three credits of academic coursework and lasts at least 4 weeks.
- Students may select several shorter experiences that add up to four weeks total with approval from the department head. However, a semester or academic year abroad is highly recommended.
- Exceptions to the cross cultural experience must be pre-approved by the department head.
- International students may petition for an exemption from the cross-cultural experience.
- Credits may be applied to another requirement when appropriate.
- Academic credit will be considered only from an accredited institution or through an SDSU approved international exchange program.
- All students must have the approval before beginning the cross cultural experience.

#### Capston Experience: 3

- GLST 401 - Global Studies II (G) (AW) Credits: 3

#### Electives: 43

#### Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Graphic Design Major

#### Program Contact/Coordinator

Michael (Tim) Steele, Head  
 Department of Visual Arts  
 South Dakota State University  
 Brookings, SD 57007  
 605-688-4103  
 E-mail: sdsu.artdept@sdsu.edu  
 http://www.sdsu.edu/art/index.cfm

#### Program Information

The major in Graphic Design prepares students for entry-level design positions. Graphic designers are professionals who plan and execute designs for visual communication according to the needs of audiences and in the context for which they are intended. The graphic design degree includes a five-semester sequence of courses beginning in the sophomore year which apply knowledge of art, design, digital technologies, and illustration with the intent to interpret, inform, instruct or persuade in consideration of physical, human, social, and cognitive factors.

A 30-hour visual arts core taken in conjunction with the graphic design sequence supports the degree and creates a foundation for success. Through taking the core, majors qualify for the Art Minor which adds breadth and depth to the degree.

#### Student Learning Outcomes

Upon graduation, majors demonstrate their competence in graphic design through senior projects and create portfolios needed for competing for professional positions. As defined by the American Institute of Graphic Arts (AIGA), upon completion of the degree, students are able to demonstrate the following outcomes through advanced writing and senior portfolio:

- Knowledge of design principles, theories, and history.
- Knowledge of how visual communication is planned, produced and distributed.
- Practice in new approaches to generate innovative visual communication solutions.
- Ability to construct narratives and scenarios in the creation of the design solutions.
- Effective use of typography, image, layout, motion, interactivity, and the principles and elements of design.
- Practice of critical evaluation about one's own designs and the designs of others with regard to usefulness, desirability, feasibility, economic viability and sustainability.
- Ability to work independently while learning and apply new technologies.

#### Additional Academic Requirements

Visual Arts students must maintain at least a major GPA of 2.6 and an overall GPA of 2.5 on a 4.0 scale for the duration of the program.

#### Course Delivery Format

Course content is delivered through hands-on studio work combined with lectures, demonstrations and critiques.

#### Requirements for Graphic Design Major: 120 Credits

Bachelor of Arts and Bachelor of Science

#### System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity+ Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

#### Institutional Graduation Requirements\*\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility+ Credits: 3

#### College of Arts & Sciences Requirements: 17-34

Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
  - Humanities Credits: 6

Bachelor of Science

- Natural Science Credits: 14
  - With 6 credits of Biological Sciences
  - With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 42

- Advanced Writing Course Credits: 3
- ARTH 310 - History of US Art and Architecture (AW)
- ARTH 320 - Modern Art and Architecture Survey (AW)
- ARTH 490 - Seminar (AW)
- Animation, Photography, or Video Media Electives Credits: 6
- ART/ARTD Electives Credits: 6
- ARTD 201 - Graphic Design I Credits: 3
- ARTD 202 - Computer Graphics I Credits: 3
- ARTD 301 - Graphic Design II Credits: 3
- ARTD 302 - Computer Graphics II Credits: 3
- ARTD 304 - Motion Graphics Credits: 3
- ARTD 352 - Design Media I Credits: 3
- ARTD 351 - Visual Communication I Credits: 3
- ARTD 451 Visual Communication II Senior Portfolio Credits: 3
- ARTD 452 - Design Media II Credits: 3

Supporting Coursework: 25.5

- Art History Elective Credits: 3
- ART 110 - First Review Credits: 0.5
- ART 111 - Drawing I \* \*\* Credits: 3
- ART 112 - Drawing II \* \*\* Credits: 3
- ART 121 - Design I 2D \* \*\* Credits: 3
- ART 122 - Design II Color Credits: 3
- ART 123 - Three Dimensional Design \* \*\* Credits: 3
- ART 200 Portfolio Review Jury on Student Progress Credits: 0.5
- ART 400 - Senior Review Credits: 0.5
- ARTH 211 - History of World Art I \* \*\* (G) Credits: 3
- ARTH 212 - History of World Art II \* \*\* (G) Credits: 3

Electives: 5.5-13.5

**Total Required Credits: 120**

### Curriculum Notes

+ Students may use one Art course but cannot duplicate a course to meet SGR and IGR.

By written request to the Department Head, Graphic Design majors may substitute ARTD animation or a video production course for the MCOM photography requirement.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits, English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Health Education Major

### Program Contact/Coordinator

September Kirby, Program Coordinator  
Intramural Building 116  
South Dakota State University  
605-688-5387  
E-mail: september.kirby@sdstate.edu

### Program Information

The health education program is designed to prepare students in conducting health education and health promotion activities in a non-classroom setting. The program objectives are to facilitate the development of professional skills in program planning, implementation and evaluation as well as offer a broad course work curriculum in personal and community health.

Majoring in health education is an excellent foundation for students to apply to various graduate and professional programs, which may include: medical school, physician's assistant school, chiropractor school, physical therapy school, occupational therapy school, and health administration and counseling.

### Student Learning Outcomes

Graduates of the health education major, students should be able to:

- Think critically – utilize information obtained through various sources to solve problems related to academic and/or professional practice.
- Work effectively within a group or team to solve problems
- Demonstrate competence and confidence in preparing health education/promotion programs to a variety of target populations.
- Discuss current issues related to the field of health education

### Accreditation, Certification, and Licensure

Upon graduating with the health education major, students are encouraged to apply for and take the Certified Health Education Specialist exam.

### Course delivery format

Instruction for the health education major occurs through face to face and online course delivery methods.

### Requirements for Health Education Major: 120 Credits

Bachelor of Science

System General Education Requirements\*: 32

- Goal #1 Written Communication ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication Credits: 3
- Goal #3 Social Sciences/Diversity Psyc 101 and HDFS 210 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: CHEM 106-106L and 108-108L OR CHEM 112-112L and 114-114L Credits: 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: EHS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: NFS 111\*\* Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Major Requirements: 52

- HLTH 120 - Community Health Credits: 2
- HLTH 200 Complementary & Alternative Healthcare Credits: 3
- HLTH 479-479L - Health Promotion Programming & Evaluation and Lab Credits: 2
- HLTH 250-250L - Pre-Professional First Aid & CPR & Lab Credits: 2
- HLTH 420/520 - Methods of Health Instruction Credits: 2
- HLTH 230 - Stress Management for Life Credits: 3
- PE 350 - Exercise Physiology Credits: 3
- PE 352 - Adapted Physical Education Credits: 2
- HLTH 443 - Public Health Science (G) Credits: 3
- HSC 260 - Women's Health Issues Credits: 3
- HLTH 445 - Epidemiology Credits: 3
- HDFS 441 - Professional Issues in Human Development and Family Studies Credits: 3
- NFS 315 - Human Nutrition Credits: 3
- PSYC 358 - Behavior Modification Credits: 3
- PSYC 417 - Health Psychology \*\* Credits: 3
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 325-325L - Physiology and Lab Credits: 4
- NURS 201 - Medical Terminology Credits: 1
- ENGL 379 - Technical Communication (AW) Credits: 3

Electives: 29

**Required Total Credits: 120**

## Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## History Major

### Program Coordinator/Contact

April Brooks, Head

Department of History, Political Science, Philosophy, and Religion

Box 0510 West Hall

605-688-4311

E-mail: april.brooks@sdstate.edu

http://www.sdstate.edu/hist/index.cfm

### Program Information

The history curriculum is adaptable to personal interests and needs, allowing students to explore the past and make connections to the present. The Bachelor of Arts or the Bachelor of Science degree in history prepares students for careers in various professional occupations, law, journalism, teaching, business, public service, library sciences, international work, historical research, and provides a necessary background for graduate work or other specialized training.

### Student Learning Outcomes

History graduates will be able to effectively communicate research, analyze, interpret, and apply information in various professional contexts.

### Course Delivery Format

The program provides courses online and face to face on campus and at various off-campus attendance centers.

### Requirements for History Major: 120 Credits

Bachelor of Arts and Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101, and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Requirements: 17-34

Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

Bachelor of Science

- Natural Science Credits: 14
  - With 6 credits of Biological Sciences
  - With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 36

- HIST 111 - World Civilizations I \* \*\* Credits: 3  
or HIST 121 - Western Civilization I \* \*\* Credits: 3
- HIST 112 - World Civilizations II \* \*\* (G) Credits: 3  
or HIST 122 - Western Civilization II \* \*\* (G) Credits: 3
- HIST 151 - United States History I \* \*\* Credits: 3
- HIST 152 - United States History II \* \*\* Credits: 3
- HIST 280 - Writing History Credits: 3
- HIST 480 - Historical Methods & Historiography (AW) Credits: 3
- Upper Division Non-US History Courses Credits: 6
- Additional Upper Division Courses (US or Non US History) Credits: 12

Electives: 38-45

**Total Required Credits: 120**

## Curriculum Notes

No more than 6 credits in HIST 491-591 - Independent Study and HIST 494 - Internship may be counted toward the major or minor. No grade below a "C" in history courses may be used to fulfill major and minor requirements.

\*The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## History Major - Teaching Specialization

### Program Coordinator/Contact

April Brooks, Head

Department of History, Political Science, Philosophy, and Religion

Box 0510 West Hall

605-688-4311

E-mail: april.brooks@sdstate.edu

### Program Information

The history curriculum is adaptable to personal interests and needs, allowing students to explore the past and make connections to the present. Students pursuing a History Teaching Specialization may select either a Bachelor of Arts or Bachelor of Science degree in preparation for careers in various fields related to education. The program also provides a necessary background for graduate work or other specialized training.

### Student Learning Outcomes

History graduates will be able to effectively communicate, research, analyze, interpret, and apply information in various professional contexts.

### Accreditation, Certification, and Licensure

Accreditation

National Council for Accreditation of Teacher Education Programs

South Dakota Department of Education

## Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

## Course Delivery Format

The program provides courses online and face to face on campus and at various off-campus attendance centers.

## Requirements for History Major - Teaching Specialization: 120 Credits

Bachelor of Arts and Bachelor of Science in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101, and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity PSYC 101 and/or SOC 100 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Requirements: 17-34

Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 36

- HIST 111 - World Civilizations I \* \*\* Credits: 3  
or HIST 121 - Western Civilization I \* \*\* Credits: 3
- HIST 112 - World Civilizations II \* \*\* (G) Credits: 3  
or HIST 122 - Western Civilization II \* \*\* (G) Credits: 3
- HIST 151 - United States History I \* \*\* Credits: 3
- HIST 152 - United States History II \* \*\* Credits: 3
- HIST 280 - Writing History Credits: 3
- HIST 480 - Historical Methods & Historiography (AW) Credits: 3
- Upper Division Non-US History Courses Credits: 6
- Additional Upper Division Courses: (HIST 368 Recommended) Credits: 12

Electives: 14-15

## Teaching Specialization Requirements

Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0

Complete prior to entry into Professional Semester III

- SEED 415 - 7-12 Social Science Methods Credits: 3
- Native American Course Approved for Teacher Education Credits: 3  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
OR AIS/ANTH 421 - Indians of North America\*\*
- EDFN 365 - Computer-Based Technology & Learning Credits 2
- EDFN 427-527 - Middle School: Philosophy and Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

Professional Semester III

- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 - Social Foundations, Management and Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching or SEED 488 - 7-12 Student Teaching Credits: 8

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED 488 and ELED 488

## Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

## Total Required Credits: 120

## Curriculum Notes

No more than 6 credits from HIST 491-591 - Independent Study and HIST 494 - Internship may be counted toward the major or minor.

No grade below a "C" in history courses may be used to fulfill major requirements.

\*The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits, English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Honors College Distinction

### **Program Coordinator**

Timothy Nichols, Dean  
Honors Hall 119, 605-688-5268  
Brookings, SD 57007  
E-mail: timothy.nichols@sdstate.edu  
<http://www.sdstate.edu/honors/>  
<https://d21.sdbor.edu/d21/lp/homepage/home.d21?ou=475113>

### **Program Information**

The Van D. and Barbara B. Fishback Honors College at South Dakota State University provides talented motivated students in any major with an enriched, personalized curricular pathway and experiential learning opportunities which allow them to maximize their learning at South Dakota State University.

### **Program Admission and Requirements**

Students who earn a 27 or higher ACT score and/or are in the top ten percent of their high school graduating class are eligible to take Honors College courses. Students not meeting these requirements but who wish to take Honors College courses should contact the Honors College. Continuing students need a 3.0 cumulative grade point average to enroll in Honors College courses.

When a student decides that they intend to pursue graduation with Honors College distinction, they submit an Honors College Continuing Enrollment Form and sign the Honors College Student Ethic. At this point, students are officially enrolled as Honors College students, Dean Nichols is added as a second academic advisor to their program, and their progress is audited each semester to ensure progress toward requirements for graduation with Honors College distinction, and eligibility for Priority Registration.

### **Student Learning Outcomes**

Graduates from the Van D. and Barbara B. Fishback Honors College demonstrate academic excellence, well-rounded, multi-disciplinary, global perspectives, critical thinking, creativity and problem solving skills, and oral and written communication abilities. Moreover, they are exemplars of the qualities of character elucidated in the *Honors College Student Ethic*.

### **Affiliation**

The Van D. and Barbara B. Fishback Honors College is a member of the Upper Midwest Honors Council and the National Collegiate Honors Council.

### **Course Delivery Format**

Honors courses are characterized by high levels of student engagement, faculty/student interaction, communications, critical thinking and multi-disciplinary perspectives. Most courses are taught face-to-face on the Brookings campus in lecture/discussion/seminar formats. Many Honors College courses also include hands-on laboratory, service, travel and experiential components. A few Honors College courses are delivered each year through on-line and hybrid delivery formats.

### **Requirements for Honors College Distinction: 24 Credits**

- *Honors* General Education: 12-15 credits
- HON 109 First Year Seminar is not required but strongly recommended for first-semester students.
- Students enroll in Honors sections of general education courses; for example English 101 – Honors; Biology 151-151L – Honors; Economics 202 – Honors; etc. Some 20 Honors general education are offered each semester; students may choose the sections that fit best with their academic interests, educational and professional goals.
- Honors Colloquium HON 303: 3-6 credits
- Honors Contracted coursework (300-400 level, in students major/minor field of study): 3-6 credits
- Honors Independent Study HON 491: 3 credits
- 24-27 credits in Honors
- 3.5 cumulative grade point average

## Horticulture Major

### **Program Contact**

David Graper, Coordinator  
Department of Plant Science  
Northern Plains Biostress Laboratory 254A  
605-688-6253  
E-mail: David.Graper@sdstate.edu

### **Program Information**

The Horticulture major is designed to prepare students for careers in nursery production, landscape, tree and turf management, garden center operation, greenhouse production, or for entry into research and graduate study in horticulture. Greenhouse facilities and extensive field plots in woody and herbaceous ornamentals, turf, fruit, and vegetables provide students with the opportunity to experience all aspects of plant production and management.

### **Program Emphases**

The Horticulture Major offers five areas of emphasis. Students with an interest in:

- Crop management and production technologies of greenhouse, nursery, turf, fruit, or vegetable crops can tailor their program of studies using the Production Emphasis.
- Careers in managing nurseries, landscape maintenance, arboriculture, garden centers or greenhouse businesses should follow the Business Emphasis.
- Careers in food crop production and marketing should follow the Food Crop Emphasis.
- Careers in turf management should follow the Turfgrass Emphasis.
- Pursuing a graduate degree or laboratory science career should follow the Science Emphasis.

### **Course Delivery Format**

Students learn through hands-on and face-to-face learning in lecture, laboratory, and field-based experiences.

### **Requirements for Horticulture Major: 120 Credits**

Bachelor of Science in Agriculture

System General Education Requirements\*: 30-31

- Goal #1 Written Communication: ENGL 101 **and** 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6  
*suggested SGR#3 course that fulfills Globalization*
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: BIOL 101-101L or 151-151L Credits 3-4 and BOT 201-201L Credits: 3

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: PS 109\*\* Credits: 2
- Goal #2 Cultural Awareness & Social & Environmental Responsibility PS 213-213L\*\* Credits: 2, 1

College Requirements: 9

- HO 111-111L - Introduction to Horticulture & Lab Credits: 2, 1
- PS 213-213L - Soils and Lab \* \*\* Credits: 2, 1
- PS 223-223L - Principles of Plant Pathology and Lab Credits: 3
- PS 305-305L - Insect Biology and Lab Credits: 3

Major Requirements: 71

- CHEM 106-106L - Chemistry Survey and Lab\* Credits: (3,1)
- CHEM 108-108L - Organic and Biochemistry and Lab\* Credits: 4, 1
- PHYS 101-101L - Survey of Physics \* and Lab Credits: 4
- BOT 327-327L - Plant Physiology and Lab Credits: 4
- PS 200-200L - Weed Mgmt for Horticulture and Lab Credits: 2



- HO 222-222L - Fundamentals of Turf Mgmt and Lab Credits: 3
- HO 250-250L - Woody Plants: Trees and Lab Credits: 3
- HO 260 - Woody Plants: Shrubs and Vines Credits: 2
- HO 311-311L - Herbaceous Plants and Lab Credits: 3
- HO 312-312L - Plant Propagation and Lab Credits: 3
- HO 324 - Horticulture Pests I: Entomology Credits: 2
- HO 325 - Horticulture Pests II: Diseases Credits: 2
- HO 330 - Arboriculture Credits: 2
- HO 350 - Environmental Stewardship in Horticulture Credits: 3
- HO 411 - Fruit Crop Systems or HO 440-540 - Vegetable Crop Systems (2 modules) Credits: 2
- HO 412-412L - Greenhouse Management and Lab Credits: 3
- HO 415 - Nursery Management Credits: 3
- HO 434 - Local Food Production Credits: 2
- HO 464 - Senior Project I (AW) Credits: 1
- HO 465 - Senior Project II (AW) Credits: 2
- HO 494 - Internship or HO 496 - Field Experience Credits: 1

Technical Emphasis Electives: 15

Select credits from the following lists. It is recommended that students select from one set of technical electives.

### Business Emphasis

The Horticulture Major offers five areas of emphasis. Students with an interest in nursery management, landscape maintenance, arboriculture, or garden center or greenhouse business should follow the Business Emphasis.

Business Electives: 15

- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- AST 434-434L - Landscape Irrigation and Lab <sup>†††</sup>Credits: 3
- BADM 280 - Personal Finance Credits: 3
- BADM 310 - Business Finance <sup>††</sup> Credits: 3
- BADM 334 - Small Business Management Credits: 3
- BADM 350 - Legal Environment of Business <sup>††</sup> Credits: 3
- BADM 360 - Organization and Management <sup>††</sup> Credits: 3
- ECON 201 - Principles of Microeconomics \* \*\* Credits: 3
- ECON 202 - Principles of Macroeconomics \* (G) Credits: 3
- HO/BOT 303-303L Forest Ecology & Mgmt & Lab <sup>†††</sup>Credits 3
- HO 331 - Arboricultural Operations Credits: 1
- HO 383-383L - Principles of Crop Imprvmt and Lab Credits: 3
- HO 422 - Current Issues in Turfgrass Science Credits:1
- HO 423-523 - Turfgrass Stress Physiology Credits: 3
- HO 440-540 - Vegetable Crop Systems or HO 411-511 - Fruit Crop Systems<sup>†</sup> Credits: 1-3
- HO 434 - Local Food Production Credits: 3
- HO 491 - Independent Study Credits: 1-2
- HO 498 - Undergraduate Research/Scholarship Credits: 1-3
- HO 494 - Internship Credits 1-2  
or HO 496 - Field Experience Credits: 1-3

<sup>†</sup> Modules must be different than those used to satisfy core curriculum.

<sup>††</sup> Students seeking a Management Minor must take BADM/MGMT 310 and BADM/MGMT 360, and may take BADM/MGMT 350.

<sup>†††</sup> It is recommended that students take no more than 6 credits of HO/AST courses in developing a plan of study for the Business Emphasis.

### Food Crop Emphasis

The Horticulture Major offers five areas of emphasis. Students with an interest in food crop production and marketing should follow the Food Crop Emphasis.

Food Crop Electives: 15

- AST 434-434L - Landscape Irrigation and Lab Credits: 3
- BADM 334 - Small Business Management Credits: 3
- ENTR 301 - Marketing/Promotion in Entrepreneurship Credits 1
- HO 440-540 - Vegetable Crop Systems or HO 411-511 - Fruit Crop Systems <sup>†</sup> Credits 1-3
- HO 434 - Local Food Production Credits: 3
- HO 491 - Independent Study Credits: 1-2
- HO 498 - Undergraduate Research/Scholarship Credits: 1-3
- HO 494 - Internship Credits 1-2 or HO 496 - Field Experience Credits: 1-3
- MICR 231-231L - General Microbiology and Lab Credits: 4
- MICR 311-311L - Food Microbiology and Lab Credits: 4
- NFS 111 - Food, People and the Environment\*\* Credits: 3
- NFS 251 - Food Safety and Technology Credits: 3

<sup>†</sup>Modules must be different than those used to satisfy core curriculum.

### Production Emphasis

The Horticulture Major offers five areas of emphasis. Students interested in crop management and production technologies of greenhouse, nursery, turf, fruit, or vegetable crops can tailor their program of studies using the Production curriculum.

Production Electives: 15

- AST 434-434L - Landscape Irrigation and Lab Credits: 3
- HO 303-303L - Forest Ecology and Mgmt and Lab Credits: 3
- HO 327-327L - Golf Course Design &Mgmt and Lab Credits: 3
- HO 331 - Arboricultural Operations Credits: 1
- HO 383-383L Principles of Crop Improvement &Lab Credits: 3
- HO 422 - Current Issues in Turfgrass Science Credits: 1
- HO 423-523 - Turfgrass Stress Physiology Credits: 3
- HO 434 - Local Food Production Credits: 2-6
- HO 440-540 - Vegetable Crop Systems or HO 411-511 - Fruit Crop Systems<sup>†</sup> Credits: 1-3
- HO 491 - Independent Study Credits: 1-2
- HO 498 Undergraduate Research/Scholarship Credits: 1-3
- HO 494 - Internship Credits: 1-2  
or HO 496 - Field Experience Credits: 1-3
- LA 201 - Introduction to Landscape Design Credits: 3
- PS 421-421L/521-521L - Soil Micro and Lab Credits: 4

<sup>†</sup>Modules must be different than those used to satisfy core curriculum.

### Science Emphasis

The Horticulture Major offers five areas of emphasis. Students with an interest in pursuing a graduate degree or laboratory science career should follow the Science Emphasis.

Science Electives: 15

- BIOL 202-202L - Genetics and Org.Biology and Lab Credits: 4
- BIOL 204-204L - Genetics and Cellular Bio&Lab Credits: 3, 1
- CHEM 114-114L - General Chemistry II &Lab \* Credits: 3, 1
- CHEM 326-326L - Organic Chemistry I and Lab Credits: 3, 1
- CHEM 464 - Biochemistry I Credits: 3
- CHEM 466 - Laboratory Methods- Biochemistry Credits: 1
- STAT 281 - Introduction to Statistics Credits: 3

\*Students wishing to pursue a graduate degree or laboratory science career should replace biology, math and chemistry in the core curriculum with the following courses.

- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- MATH 120 - Trigonometry \* Credits: 3
- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1

## Turfgrass Emphasis

The Horticulture Major offers five areas of emphasis. Students with an interest in a career in turf management should follow the Turfgrass Emphasis.

Turfgrass Electives: 15

- AM 381 - Professional Behavior at Work Credits: 3
- AST 213-213L Ag, Industrial & Outdoor Power & Lab Credits 3
- AST 434-434L - Landscape Irrigation and Lab Credits: 3
- BADM 334 - Small Business Management Credits: 3
- BADM 350 - Legal Environment of Business Credits: 3
- BADM 360 - Organization and Management Credits: 3
- BOT 405-405L Grasses and Grasslike Plants and Lab Credits: 3
- HO 327-327L - Golf Course Design & Mgmt and Lab Credits: 3
- HO 383-383L - Principles of Crop Imprvt and Lab Credits: 3
- HO 422 - Current Issues in Turfgrass Science Credits: 1
- HO 423-523 - Turfgrass Stress Physiology Credits: 3
- HO 491 - Independent Study Credits: 1-2
- HO 498 - Undergraduate Research/Scholarship Credits: 1-3
- HO 494 - Internship Credits 1-2 or HO 496 - Field Experience Credits: 1-3
- LA 201 - Introduction to Landscape Design Credits 3
- PS 323 - Soil Fertility and Plant Nutrient Management Credits: 3
- PS 343-343L - Weed Science and Lab Credits: 3

General Electives: 4-5

**Total Required Credits: 120**

### Curriculum Notes:

† Modules must be different than those used to satisfy core curriculum.

†† It is recommended that students take no more than 6 credits of HO/AST courses in developing a plan of study for the Business Emphasis.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Hospitality Management Major

### Program Contact/Coordinator

Kunsoon Park, Program Leader  
Department of Consumer Sciences  
Wagner Hall 229 Box: 2275A  
Brookings, SD 57007  
605-688-4795 5196  
E-mail: Kunsoon.Park@sdstate.edu

### Program Information

The Hospitality Management program creates visionary leaders through excellence in student-centered education, skill development, research, service, and collaboration with global hospitality and tourism industries. The curriculum exposes students to many aspects of the hospitality industry and instills in them the critical skills required for the modern workplace and the new management minor is built into program coursework. Students complete two professional practicum experiences while pursuing their degree, which provides important practical industry experience. Students will earn a Bachelor of Science degree with a major in Hospitality Management. The curriculum is designed to expose students to many aspects of the hospitality industry and to instill in them the critical skills required in today's workplace.

## Course Delivery Format

Practical learning experiences complement traditional academic settings. Internship and practicum courses prepare students for the real world and provide the industry with well-trained employees.

**Requirements for Hospitality Management Major: 120 Credits**  
Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity PSYC 101 and ECON 202 Credits 6
- Goal #4 Arts and Humanities/Diversity: Credits: 6  
Must be two different disciplines/prefixes or Modern Language sequence
- Goal #5 Mathematics: MATH 102 or higher Credits: 3
- Goal #6 Natural Sciences: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Experience EHS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Consumer Sciences Department Requirements: 6-7

- LEAD 210 - Foundations of Leadership\*\* Credits: 3  
or CS 230 - Consumer Behavior Credits: 3  
or CS 282 - Customer Service Credits: 2
- CS 377 - Professional Documents Credits: 1
- LMNO 435 - Organizational Leadership and Team Development Credits: 3

Major Requirements: 59

Hospitality Management Core Requirements: 41

- NFS 141-141L - Foods Principles and Lab Credits: 4
- HMGT 171 - Introduction to Hospitality Industry Credits: 3
- HMGT 251 - Foodservice Sanitation Credits: 1
- HMGT 295 - Practicum Credits: 2
- HMGT 361 - Hospitality Industry Law Credits: 3
- HMGT 370 - Lodging Operations & Purchasing Mgmt Credits 3
- HMGT 371-371L - Leisure Activities Mgmt & Lab Credits: 3
- HMGT 372 - Hospitality Facilities Mgmt and Design Credits: 3
- HMGT 380 Foodservice Operations & Purchasing Mgmt Credits: 3
- HMGT 381-381L Quantity Food Production & Service & Lab Credits: 4
- HMGT 455 - Meeting and Convention Management Credits: 3
- HMGT 465 - Hospitality Managerial Accounting Credits: 3
- HMGT 482 - Hospitality Marketing Credits: 3
- HMGT 495 - Practicum Credits: 2
- NFS 490/590 - Seminar (AW) Credits: (1-2)

Management Core Requirements: 18

- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- MGMT 310 - Business Finance Credits: 3
- MGMT 360 - Organization and Management Credits: 3
- MGMT 460 - Human Resource Management Credits: 3
- CSC 325 - Management Information Systems Credits: 3

Electives: 17-18

\*Consult with advisor for approved list.

**Total Required Credits: 120**

## Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Human Development & Family Studies Major

### Program Coordinator/Contact

Carla Anderson, Student Advisor

Department of Counseling and Human Development

E-mail: carla.anderson@sdstate.edu

### Program Information

The goal of the BS in Human Development and Family Studies is to provide an interdisciplinary approach to study and work with individuals and families. This program draws from theory and research that examines the process of human development across the lifespan and the dynamic interaction of family members. Students pursuing the BS in Human Development and Family Studies gain knowledge and experience in the science of human growth and development, human interaction, and family relationships. Graduates work in careers that promote healthy development and positive family functioning across the lifespan, such as: a Social Services Case Worker, Provider at Residential Treatment Center, Youth Organization Worker, Program Director for Youth, Family or Senior Citizen Center.

### Student Learning Outcomes

HDFS majors will share a common base of knowledge, skills, and experiences:

- Knowledge and understanding of
  - Developmental stages and processes across the lifespan
  - Family dynamic processes
  - The multi-directional influences of social contexts and the development of individuals, couples, and families
  - The interpersonal skills required for an effective helping relationship
- Skill and ability to
  - Interpret and evaluate current information regarding human and family development
  - Use human development and family theories to understand and explain individual growth and family interaction
  - Plan and evaluate intervention strategies designed to enhance the development of individuals, couples, and families
- Experiences in
  - The ranges of settings that human development and family studies professionals inhabit
  - Supervised work in a professional setting

### Additional Academic Requirements

A pre-graduation check is required by end of junior year. A Graduation Application must be completed at beginning of graduation semester. To effectively meet the wide range of professional interests of HDFS majors, students are required to develop a plan of study under the supervision of a faculty advisor. This plan should include the specification of courses within and outside of the department that are targeted to assist in the professional preparation of the student. Emphases might include a focus on areas such as: children's services, religious services, family organizations, youth development organizations, gerontology services, families with special needs, etc. A grade of "D" on courses in the major cannot be counted and course must be repeated. Any required course with a department/program prefix is considered a course in the major.

## Course Delivery Format

Courses are delivered face-to-face with Internet supplement, online, and through clinical experience. Some courses are also offered at the University Center in Sioux Falls and the Capital University Center in Pierre.

## Requirements for Human Development and Family Studies

### Major: 120 Credits

Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\*
- Goal #3 Social Sciences/Diversity: PSYC 101 and SOC 100 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: BIOL 101-101L Credits: 3

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: EHS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3 *Suggested (LEAD 210, NFS 111, or WMST 101)*

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Major Requirements: 45

- HDFS 150 - Early Experience Credits: 2
- HDFS 241 - Family Relations Credits: 3
- HDFS 227 - Human Development & Personality I: Childhood Credits: 3
- HDFS 250 - Development of Human Sexuality Credits: 3
- SPCM 201 - Interpersonal Comm. **or** SPCM 460 - Family Comm. **or** SPCM 470 - Intercultural Comm.(G) Credits: 3
- HDFS 337 - Human Development II: Adolescence Credits: 3
- HDFS 347 - Human Development III: Adulthood Credits: 3
- HDFS 441 - Professional Issues in Human Development and Family Studies Credits: 3
- HDFS 355 Program Design, Implementation and Eval. Credits 3
- HDFS 410/510 - Parenting Credits: 3
- HDFS 341 - Family Theories Credits: 3
- HDFS 487 - Preparation for Practicum Credits: 1
- HDFS 495 - Practicum Credits: 6
- HDFS 425-525 - Family Resiliency Credits: 3
- HDFS 435-535 - Family Policy Credits: 3

Supporting Coursework: 15

- SOC 307 - Research Methods I Credits: 3
- SOC 308 - Research Methods II Credits: 3
- **or** STAT 281 - Introduction to Statistics Credits: 3
- ENGL 379 - Technical Communication (AW) Credits: 3
- POLS 100 - American Government \* Credits: 3
- **or** ECON 201 - Principles of Microeconomics \* \*\* Credits: 3
- **or** ECON 202 - Principles of Macroeconomics \* (G) Credits: 3
- FCSE 421 - Adult Education Credits: 3

Electives: 23

**Total Required Credits: 120**

## Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Interdisciplinary Studies Major

### Program Contact/Coordinator

Kathie Erdman Becker, Coordinator and Advisor  
College of Arts and Sciences  
Wagner Hall 224  
605-688-6296  
E-mail: kathie.erdman@sdstate.edu

### Program Information

The Interdisciplinary Studies major is designed for those pursuing unique educational goals. Each student develops a goal-driven plan of study approved by the department. Career opportunities for graduates are vast, evolving from the knowledge, skills and abilities acquired through the individual's plan of study. Interdisciplinary studies graduates have been very successful in the job market and in gaining acceptance to graduate/professional schools. Most graduates pursue careers in broad industries or emerging fields. Intensive advising and career planning are critical elements to ensure the plan of study appropriately prepares students for their future goals.

### Additional Academic Requirements

Grade of C or higher is required for the IDL 262, 362 and 479.

### Student Learning Outcomes

Interdisciplinary Studies graduates will be able to:

- Define interdisciplinary studies using historical references and metaphorical models.
- Articulate the contributions of the disciplines to interdisciplinary research and problem solving.
- Apply interdisciplinary research methods through case study analysis and independent research.
- Express interdisciplinary understanding of a complex problem through the integration of disciplinary insights in an undergraduate research project.
- Illustrate how the knowledge, skills and abilities gained through the plan of study contribute to success in the workplace or graduate/professional school.

### Course Delivery Format

The four required courses (IDL 262, IDL 362, IDL 479, and UC 489) are delivered entirely online. Students may choose to take general education and remaining plan of study courses in any delivery format and/or at multiple locations as needed to meet their goals.

### Requirements for Interdisciplinary Studies Major: 120 Credits

Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101\* and ENGL 201\* Credits: 6
- Goal #2 Oral Communication Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34  
Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 40

- IDL 262 - Foundations of Interdisciplinary Studies Credits: 3
- IDL 362 - Interdisciplinary Inquiry and Integration Credits: 2
- UC 489 - Transition to Careers Credits: 1
- IDL 479 - Interdisciplinary Studies Capstone (AW) Credits: 2
- Plan of Study courses selected by student Credits: 32  
The plan of study includes four required courses and at least 32 credits of goal-specific coursework integrating two or more disciplines. Plans may not duplicate existing SDSU majors. At least 33 upper division credits are required, but many plans include over 40. Students are encouraged to pursue service learning, undergraduate research or study abroad opportunities to enhance the academic experience. Prior credit and experiences may be used in the plan of study, if relevant to the goal, or as elective credit for graduation.

Electives: 29

**Total Required Credits: 120**

### Curriculum Notes

\*The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Interior Design Major

### Program Contact/Coordinator

Angela Boersma, Program Leader  
Department of Consumer Sciences  
Wagner Hall 229 Box: 2275A  
Brookings, SD 57007  
605-688-5196  
E-mail: Angela.Boersma@sdstate.edu

### Program Information

The Interior Design program at SDSU seeks to promote the awareness and knowledge of the contributions of interior design to the health, safety, and well being of people in the built environment and to prepare graduates of the program to succeed in the profession throughout the region, nationally and internationally.

The Interior Design program prepares graduates for practice in the interior design profession by enriching their personal and professional lives through a student centered, studio-based learning environment. SU's program provides a broad-based education, opportunities for a variety of national and international travel, service learning experiences, opportunities for various minors, and collaboration among various disciplines. The curriculum infuses sustainable practices, develops and increases creativity through a process-driven conceptual framework, and offers various learning environments that use technologies appropriate to students' expanding skill levels and abilities.

### Additional Academic Requirements

Interior Design students must earn at least a C in studio courses to advance to subsequent studios.

### Course Delivery Format

The curriculum is interactive, haptic and performance based, offering problem solving experiences in all major areas of design practice (i.e. healthcare, retail, corporate, residential, etc.). A 7-week (280 hour) practicum compatible with career goals is a program requirement.

## Requirements for Interior Design Major: 120 Credits

Bachelor of Science

System General Education Requirements\*: 32

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101 or 222 Credits: 3
- Goal #3 Social Sciences/Diversity: PSYC 101 and SOC 100 Credits: 6
- Goal #4 Arts and Humanities/Diversity: ARTH 100 and HIST 122 Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences GEOG 131-131L and 132-132L Credits 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Experience: EHS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Consumer Sciences Department Requirements: 6-7

- LEAD 210 - Foundations of Leadership\*\* Credits: 3  
or CS 230 - Consumer Behavior Credits: 3  
or CS 282 - Customer Service Credits: 2
- CS 377 - Professional Documents Credits: 1
- CS 381 - Professional Behavior at Work Credits: 3

Major Requirements: 60-64

- ID 150-150L - Introduction to Interior Design I & Lab Credits: 4
- ID 151-151L Introduction to Interior Design II & Lab Credits: 4
- ID 215-215L - Materials and Lab Credits: 3
- ID 222 - Interior Design Studio I Credits: 4 \*
- ID 223 - Interior Design Studio II Credits: 4 \*
- ID 224 - History of Interior Design I Credits: 2
- ID 225 - History of Interior Design II Credits: 2
- ID 319-319L - Building Systems I and Studio Credits: 2
- ID 317 - Professional Practices in Interior Design Credits: 2
- ID 320-320L - Lighting and Acoustics and Lab Credits: 2
- ID 322 - Interior Design Studio III (AW) Credits: 4 \*
- ID 323 - Interior Design Studio IV Credits: 4 \*
- ID 329-329L - Building Codes & Regulations & Lab Credits: 2
- ID 377-377L - Portfolio and Lab Credits: 1
- ID 422 - Interior Design Studio V Credits: 4 \*
- ID 423 - Interior Design Studio VI Credits: 4
- ID 480 - Travel Studies Credits: 1-5
- ID 490-590 - Seminar Credits: 1-3
- ID 495 - Practicum Credits: 3
- ID 498 - Undergraduate Research/Scholarship Credits: 1

Supporting Coursework: 6

- AM 242-242L - Textiles I and Lab Credits: 3
- ART 122 - Design II Color Credits: 3

Electives: 10-15

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs).

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Journalism Major

### Program Contact/Coordinator

Mary Arnold, Head

Department of Journalism and Mass Communication

Yeager Hall 211

605-688-4171

E-mail: mary.arnold@sdstate.edu

<http://www.sdstate.edu/mcom/>

### Program Information

A degree in journalism prepares students with critical skills including: writing, speaking, critical thinking and technology. Graduates are well-positioned for a wide variety of careers, ranging from traditional media to business to non-profit organizations. MCOM students may pursue a B.A. or B.S. in Journalism.

### Emphases

Students may choose from departmental emphases: News-Editorial Journalism Emphasis or Broadcast Journalism Emphasis.

- News-Editorial Journalism Emphasis. Students who want to be reporters, editors or page designers for print and online media, photojournalists and those seeking employment in corporate or government communications take this emphasis.
- Broadcast Journalism Emphasis. Students who want to pursue careers in digital video storytelling for radio, television or online media and corporate environments take this emphasis.

### Academic Requirements

Journalism majors must have a "C" or better in Freshman Composition; must have a graduation average of 2.5 in journalism and mass communication courses; take a minimum of 80 credit hours outside of journalism and mass communication with a minimum of 65 credit hours in the liberal arts and sciences, and must have grades of "C" or better in all major courses.

### Equipment and Supplies

Students are also encouraged to purchase a Macintosh laptop and software appropriate for the discipline.

### Accreditation, Certification, and Licensure

The Department is accredited by the national accrediting body of journalism and mass communication, the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC).

### Course Delivery Format

The Journalism major is offered both at the main campus in Brookings and at the University Center in Sioux Falls. The department offers coursework in classroom, studio, online, and field-based settings.

### Requirements for Journalism Major: 120 Credits

Bachelor of Arts and Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication Credits: 6
- Goal #2 Oral Communication Credits: 3
- Goal #3 Social Sciences/Diversity: POLS 210 \* Credits: 6
- Goal #4 Arts and Humanities/Diversity: MCOM 151\* (Recommended) Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: (MCOM 109 Recommended) Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts and Sciences Requirements: 17-34  
Bachelor of Arts

- Modern Languages Credits: 3-14 (completion and competency in one language at the 202 level or a department-approved advanced upper division language course)
- Social Sciences Credits: 8
- Humanities Credits: 6

Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications .

Major Requirements: 36

- MCOM 155 - Information Gathering Credits: 2
- MCOM 210-210L - Basic Newswriting and Studio Credits: 3
- MCOM 220-220L - Intro to Digital Media and Lab Credits: 3
- MCOM 416 - Mass Media in Society (G) Credits: 3  
or MCOM 417 - History of Journalism (G) Credits: 3
- MCOM 430-530 - Media Law Credits: 3
- MCOM 494 Internship Credits: 1-12 *at least 2 credits required*

Emphasis: 20

Choose one of the following suggested emphases.

**Broadcast Journalism Emphasis**

- MCOM 332-332L Broadcast Writing & Reporting & Studio Credits 3
- MCOM 333-333L Television News Reporting & Studio Credits: 3
- MCOM 340-340L Broadcast Announcing & Performance & Lab Credits 3
- MCOM 433-433L Advanced TV News Reporting & Lab (AW) Credits 3
- MCOM Electives Credits: 8

**News-Editorial Emphasis**

- MCOM 265-265L - Basic Photography and Studio Credits: 2
- MCOM 311-311L - News Editing and Editing Lab Credits: 3
- MCOM 317 - News Gathering Credits: 3
- MCOM 490 - Seminar Credits: 1
- Take 2 of the 3 following courses.
  - MCOM 316 - Magazine Writing and Editing Credits: 3
  - MCOM 410 - Advanced Reporting Credits: 3
  - MCOM 438-438L - Public Affairs Reporting & Studio (AW) Credits 3
- MCOM Electives Credits: 5

General Electives: 15-44

**Total Required Credits: 120**

**Curriculum Notes**

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Landscape Architecture Major

**Program Coordinator/Contact Information**

Brent Turnipseed, Undergraduate Teaching Coordinator  
Department of Plant Science  
Agricultural Hall 219  
E-mail: [brent.turnipseed@sdstate.edu](mailto:brent.turnipseed@sdstate.edu)  
<http://www.sdstate.edu/ps/>

**Program Information**

Landscape Architecture is the art of design, planning, and management of outdoor spaces for human use and habitation. Cultural and scientific knowledge are applied to the use and arrangement of natural and man-made elements with concern for resource conservation, stewardship, and the environment. Graduates work in a wide variety of areas in the landscape industry, as designers and planners in public and private practice, and as environmental designers and managers.

**Accreditation, Certification, and Licensure**

Students seeking Certification and Licensure should contact their advisor and refer to <https://www.clarb.org/Pages/default.aspx>

**Course Delivery Format**

The program provides coursework through hands-on and face-to-face learning in lecture, laboratory, and field-based settings.

**Requirements for Landscape Architecture Major: 120 Credits**  
Bachelor of Science in Agriculture

System General Education Requirements\*: 30-31

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences CHEM 106-106L or 112-112L  
**AND** BIOL 101-101L or BIOL 151-151L Credits: 7-8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: PS or NRM 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: PS 213-213L - Soils and Lab Credits: 2,1

College Requirements: 9

- HO 111-111L - Introduction to Horticulture & Lab Credits: 2, 1
- LA 201 - Introduction to Landscape Design Credits: 3
- NRM 110 - Environmental Conservation \*(G) Credits: 3
- PS 213-213L - Soils and Lab \* \*\* Credits: 2, 1

Major Requirements: 50

- HO 250-250L - Woody Plants: Trees and Lab Credits: 3
- HO 260 - Woody Plants: Shrubs and Vines Credits: 2
- HO 311-311L - Herbaceous Plants and Lab Credits: 3
- LA 120 - Fundamentals of Landscape Graphics Credits: 2
- LA 231 - Computer Applications in Landscape Arch. Credits: 3
- LA 241 - History of Landscape Architecture Credits: 3
- LA 284 - Landscape Graphics and Theory of Design Credits: 4
- LA 314 - Landscape Design Studio Credits: 4
- LA 322 - Landscape Site Engineering Credits: 3
- LA 323 - Landscape Construction Credits: 3
- LA 324-324L - Planning Public Grounds and Lab Credits: 3
- LA 364 - Planting Design and Specifications Credits: 4
- LA 421-421L - City Planning and Lab Credits: 3
- LA 424-424L - Recreational Facilities Design & Lab Credits: 3
- LA 464 - Landscape Professional Practicum Studio Credits: 4
- LA 289 - Travel Studies in Landscape Architecture Credits: 2
- LA 289L - Travel Studies in Landscape Architecture Lab Credits: 1



Technical Emphasis Focus: 12  
Students select credits from one or both of the following focus areas<sup>1</sup>.

Design/Build Focus: 12

- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- BADM 280 - Personal Finance Credits: 3
- BADM 310 - Business Finance Credits: 3
- BADM 334 - Small Business Management Credits: 3
- BADM 350 - Legal Environment of Business Credits: 3
- BADM 360 - Organization and Management Credits: 3
- BADM 474 - Personal Selling Credits: 3
- ECON 201 - Principles of Microeconomics \* \*\* Credits: 3
- HO 222-222L - Fundamentals of Turf Mgmt& Lab Credits: 3
- HO 312-312L - Plant Propagation and Lab Credits: 3<sup>2</sup>
- HO 412-412L - Greenhouse Management and Lab Credits: 3<sup>2</sup>
- HO 350 - Environmental Stewardship in Horticulture Credits: 3
- LA 327-327L - Golf Course Design & Mgmt & Lab Credits: 3

Professional Practice Focus: 12

- ART 111 - Drawing I \* \*\* Credits: 3
- ART 121 - Design I 2D \* \*\* Credits: 3
- ART 123 - Three Dimensional Design \* \*\* Credits: 3
- BIOL 311-311L - Principles of Ecology and Lab Credits: 3, 1<sup>2</sup>
- BOT 419-419L - Plant Ecology and Lab (G) Credits: 3<sup>2</sup>
- GEOG 472 - Introduction to GIS Credits: 3
- GEOG 473-573 - GIS: Data Creation and Integration Credits: 3
- GEOG 474-574 - GIS: Vector and Raster Modeling Credits: 3
- LA 440-440L - Restoration Ecology and Lab Credits: 4<sup>2</sup>
- PHIL 220 - Introduction to Ethics \* Credits: 3
- PHIL 320 - Professional Ethics Credits: 3
- PLAN 471-571 - Principles of State, Regional and Community Planning Credits: 3
- PS 243 - Principles of Geology\* Credits: 3
- RANG 210-210L - Range Plant Identification & Lab Credits: 2
- SOC 240 - The Sociology of Rural America\* (G) Credits: 3
- SOC 440 - Urban Sociology (G) Credits: 3
- PSYC 244 - Environmental Psychology \*\* Credits: 3

Supporting Coursework: 13-14

- Elective Credits: 0-1
- AST 434-434L - Landscape Irrigation and Lab Credits: 3
- CM 210-210L - Construction Surveying and Lab Credits: 3
- GE 123 - Computer Aided Drawing Credits: 1
- ENGL 379 - Technical Communication (AW) Credits: 3
- MATH 120 - Trigonometry \* Credits: 3

**Total Required Credits: 120**

### Curriculum Notes

1 Students wishing to complete a Horticulture Minor should take an additional 12 credits of HO courses.

2 Course requires completion of one or more prerequisites.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Mathematics Major

### Program Contact/Coordinator

Kurt Cogswell, Head  
Department of Mathematics and Statistics  
Harding Hall 228  
605-688-6196  
E-mail: kurt.cogswell@sdstate.edu  
http://mathstat.sdstate.edu

### Program Information

The Mathematics degree program provides an outstanding educational experience to students interested in any of the wide range of excellent career or graduate school choices available in the mathematical sciences. The undergraduate mathematics curriculum is organized into three cores: the General Education Core, the Mathematics Core, and the Professional Core. Options for the Professional Core are the Computational Science Concentration, the Financial Engineering Curriculum, the Open Concentration, the Statistics Concentration, and the Mathematics Education Specialization. The flexible, specialized paths are available that lead to the best career options open to mathematicians and statisticians.

### Academic Requirements

A grade of "C" or above is required in all Math courses.

### Course Delivery Format

Program courses are delivered on campus, in classroom and laboratory settings, online, and at off campus attendance centers.

### Requirements for Mathematics Major: 120 Credits

Bachelor of Science

System General Education Requirements\*: 33

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 (G) Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 123 Credits: 4
- Goal #6 Natural Sciences: PHYS 211-211L and PHYS 213-213L, or CHEM 106-106L or 112-112L Credits: 8

Institutional Graduation Requirements:\*\* 5

- Goal #1 First Year Seminar: GE 109-109L\*\* Credits: 2
- Goal #2 Culture Awareness and Social and Environmental Responsibility Credits: 3

Major Requirements: 48

- CSC 150-150L - Computer Science I Credits: 3
- MATH 125 - Calculus II \* Credit: 4
- MATH 225 - Calculus III \* Credits: 4
- MATH 253 - Logic, Sets, and Proof Credits: 3
- MATH 315 - Linear Algebra Credits: 4
- MATH 321 - Differential Equations Credits: 3
- STAT 381 - Introduction to Probability and Statistics Credits: 3
- MATH 413 - Abstract Algebra I Credits: 3
- MATH 425 - Real Analysis I Credits: 3
- MATH 401 Senior Capstone & Advanced Writing (AW) Credits: 1
- MATH 401 Senior Capstone & Advanced Writing (AW) Credits: 1
- Mathematics or Statistics Electives\* (300 level or above) Credits: 16 \*Two sequences must be completed such as
  - MATH 413 - Abstract Algebra I and MATH 414 - Abstract Algebra II Credits: 6
  - MATH 425 - Real Analysis I and MATH 426 - Real Analysis II Credits: 6
  - MATH 253 - Logic, Sets, and Proof and MATH 316 - Discrete Mathematics Credits: 6
  - MATH 261 - Geometry for Teachers and MATH 361 - Modern Geometry Credits: 6

- STAT 381 - Introduction to Probability and Statistics and STAT 482-582 - Probability and Statistics II Credits: 6
- MATH 355-355L - Methods of Teaching Mathematics and Lab and MATH 433 - Capstone: Mathematics Education Credits: 6
- or other sequences approved by the department.

Electives: 34

- Students are encouraged to use elective credits to complete one or minors.

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents **System General Education Requirements (SGRs)** must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) **Globalization Requirement.**

(AW) **Advanced Writing Requirement.**

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Mathematics Major - Teaching Specialization

### Program Contact/Coordinator

Kurt Cogswell, Head

Department of Mathematics and Statistics

Harding Hall 228

605-688-6196

E-mail: kurt.cogswell@sdstate.edu

http://mathstat.sdstate.edu

### Program Information

Secondary school mathematics educators need to be mathematicians as well as skilled educators, so the Mathematics Education Specialists take the same challenging core upper level mathematics courses as those math majors pursuing other professional goals. In addition to this rigorous mathematics curriculum, Mathematics Education Specialists take the full block of education courses. This program allows graduates to find meaningful careers in secondary education, as well as preparing students for graduate study.

### Academic Requirements

A grade of "C" or above is required in all Math courses.

### Accreditation, Certification, and Licensure

Accreditation

National Association of the Education of Young Children

National Council for Accreditation of Teacher Education Programs

South Dakota Department of Education

Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Course Delivery Format

Program courses are delivered on campus, in classroom and laboratory settings, online, and at off campus attendance centers.

**Requirements for Mathematics Major - Teaching Specialization: 120 Credits**

Bachelor of Science in Engineering

System General Education Requirements\*: 33

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202(G) and SOC 100 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 123 Credits: 4
- Goal #6 Natural Sciences: PHYS 211-211L **AND** PHYS 213-213L or CHEM 106-106L or CHEM 112-112L Credits: 8

Institutional Graduation Requirements:\*\* 5

- Goal #1 First Year Seminar GE 109-109L\*\* Credits: 2
- Goal #2 Culture Awareness and Social and Environmental Responsibility (Recommended ANTH 421 or AIS/HIST 368) Credits: 3

Major Requirements: 48

- CSC 150-150L - Computer Science I Credits: 3
- MATH 125 - Calculus II \* Credits: 4
- MATH 225 - Calculus III \* Credits: 4
- MATH 253 - Logic, Sets, and Proof Credits: 3
- MATH 315 - Linear Algebra Credits: 4
- MATH 321 - Differential Equations Credits: 3
- MATH 413 - Abstract Algebra I Credits: 3
- MATH 425 - Real Analysis I Credits: 3
- MATH 401 Senior Capstone & Advanced Writing (AW) Credits: 1
- MATH 401 Senior Capstone & Advanced Writing (AW) Credits: 1
- MATH 316 - Discrete Mathematics Credits: 3
- MATH 261 - Geometry for Teachers Credits: 3
- MATH 371 - Technology for Mathematics Educators Credits: 3
- MATH 433 - Capstone: Mathematics Education Credits: 3
- MATH 355-355L Methods of Teaching Math & Lab Credits 3, 1
- STAT 381 - Introduction to Probability and Statistics Credits 3

Electives: 0-3

Teaching Specialization Requirements

Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0

Complete prior to entry into Professional Semester III

- MATH 355-355L - Methods of Teaching Mathematics and Lab Credits: 3, 1
- Native American Course Approved for Teacher Education Credits: 3  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
OR AIS/ANTH 421 - Indians of North America\*\*
- EDFN 365 - Computer-Based Technology and Learning Credits: 2
- EDFN 427 - Middle School: Philosophy and Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

Professional Semester III

- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 - Social Foundations, Management and Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching or SEED 488 - 7-12 Student Teaching Credits: 8

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED 488 and ELED 488

#### Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

#### Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Mechanical Engineering Major

#### Program Contact/Coordinator

Kurt Bassett, Department Head  
Department of Mechanical Engineering  
South Dakota State University  
CEH 216 Box 2219  
Brookings, SD 57007  
605-688-5426  
E-mail: kurt.bassett@sdstate.edu  
<http://www.sdstate.edu/me/index.cfm>

#### Program Information

Mechanical engineers design devices and systems that efficiently employ the materials and forces of nature for the benefit of society. Mechanical Engineering is an applied science profession based on mathematics, physics and chemistry. Expertise and sound judgment in application of the sciences are gained through a combination of study and practice.

Mechanical engineers have a remarkable range of career options from which to choose. Work is found in design and development of a wide range of machines and systems, in manufacturing and automation, in energy and power production, and in various related fields of research, management or business.

#### Program Educational Objectives

The Mechanical Engineering program provides a learning environment that prepares graduates to achieve the following career and professional accomplishments:

- Achieve positions of increasing responsibility or leadership with employers, professional organizations, or civic organizations in recognition of professional competence and the ability to function in team environments.
- Complete licensure, certification, short courses, workshops or advanced degrees in technical or professional subject areas as they adapt to contemporary engineering practice and the global business environment.

#### Student Learning Outcomes

Mechanical Engineering graduates will have:

- an ability to apply knowledge of mathematics, science, and engineering including multi-variable calculus, differential equations, statistics, and linear algebra
- an ability to design and conduct experiments, as well as to analyze and interpret data
- an ability to design a system, component, or process to meet desired needs

- an ability to function on multi-disciplinary teams
- an ability to identify, formulate, and solve engineering problems
- an understanding of professional and ethical responsibility
- an ability to communicate effectively
- the broad education necessary to understand the impact of engineering solutions in a global and social context
- a recognition of the need for, and an ability to engage in lifelong learning
- a knowledge of contemporary issues
- an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

#### Accreditation, Certification, and Licensure

The Mechanical Engineering program at SDSU is accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>. Upon reaching the final semester of the curriculum, Mechanical Engineering students are eligible and required to sit for the Fundamentals of Engineering (FE) Exam. This nationally administered exam is the first step in the process of becoming licensed to practice as a Professional Engineer. Each state sets its own standards for licensing. In South Dakota, after successfully completing a B.S. degree from an accredited program and passing the FE Exam, four years of engineering experience under a licensed engineer are required to be eligible to sit for the Principles and Practices of Engineering Exam. Successfully passing this exam is the final step in becoming licensed as a Professional Engineer. Information can be found at <http://www.ncees.org/>.

#### Course Delivery Format

Mechanical engineering is an occupation requiring both study and practice. Instruction occurs through a combination of traditional classroom methods, laboratory exercises using contemporary engineering technologies, and design project experiences.

#### Requirements for Mechanical Engineering Major: 130 Credits

Bachelor of Science

System General Education Requirements\*: 33

- Goal #1 Written Communication: ENGL 101 and 277 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 (G) Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 123 Credits: 4
- Goal #6 Natural Sciences CHEM 112-112L, PHYS 211-211L Credits 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 GE 109-109L - First Year Seminar & Lab Credits: 2
- Goal #2 Culture Awareness and Social and Environmental Responsibility Credits: 3

Major Requirements: 77

- EE 300-300L - Basic Electrical Engineering I and Lab Credits: 3
- EE 302-302L Basic Electrical Engineering II and Lab Credits: 3
- EM 214 - Statics Credits: 3
- EM 215 - Dynamics Credits: 3
- EM 321 - Mechanics of Materials Credits: 3
- EM 331 - Fluid Mechanics Credits: 3
- GE 101 - Introduction to Engineering and Technology Credits: 1
- GE 121 - Engineering Design Graphics I Credits: 1
- GE 123 - Computer Aided Drawing Credits: 1
- GE 225 - Survey of Machine Tool Applications Credits: 1
- MATH 125 - Calculus II \* Credits: 4
- MATH 225 - Calculus III \* Credits: 4
- MATH 321 - Differential Equations Credits: 3
- MATH 331 - Advanced Engineering Mathematics Credits: 3
- OR MATH 471-571 - Numerical Analysis I Credits: 3
- ME 240 - Introduction of Mechanical Design Credits: 3

- ME 241 - Engineering Materials Credits: 3
- ME 311 - Thermodynamics I Credits: 3
- ME 312 - Thermodynamics II Credits: 3
- ME 321 - Fundamentals of Machine Design Credits: 3
- ME 323 - Vibrations Credits: 3
- ME 376-376L - Measurements and Instrumentation and Lab Credits: 2
- ME 415 - Heat Transfer Credits: 3
- ME 421 - Design of Machine Elements Credits: 3
- ME 451 - Automatic Controls Credits: 3
- ME 452 - Dynamic Systems Lab Credits: 1
- ME 476 - Thermo-Fluids Lab Credits: 1
- ME 478 - Mechanical Systems Design I Credits: 2
- ME 479-479L - Mechanical Systems Design II and Lab (AW) Credits: 2
- PHYS 213-213L - University Physics II and Lab \* Credits: 4
- STAT 381 - Introduction to Probability and Statistics Credits: 3

#### Technical Electives: 15

The 15 credits of technical electives may be chosen from the following list. At least two courses must be in design, **identified by a (D)**. At least three of the electives must have the ME prefix. Courses not listed may qualify as technical electives with departmental approval.

- ABE 350-350L - Hydraulic & Pneumatic Systems & Lab Credits: 3
- CSC 130 - Visual Basic Programming Credits: 3  
OR CSC 150-150L - Computer Science I Credits: 3  
OR CSC 218 - Intro to C/C++/Unix for Engineers Credits: 3
- ME 315 - Analytical Thermodynamics Credits: 3
- ME 341-341L - Metallurgy and Lab Credits: 3
- ME 362 - Industrial Engineering Credits: 3
- ME 381 - Mechanical Equipment of Buildings Credits: 3
- ME 410 - Principles of HVAC Engineering Credits: 3
- ME 412 - Internal Combustion Engines Credits: 3 (D)
- ME 413 - Turbomachinery Credits: 3 (D)
- ME 414/514 - Air Pollution Control Credits: 3 (D)
- ME 417-417L - Computer-Aided Engineering & Lab Credits: 3 (D)
- ME 418 - Design of Thermal Systems Credits: 3 (D)
- ME 431 - Aerodynamics Credits: 3 (D)
- ME 437/537 - Gas Dynamics I Credits: 3
- ME 438-438L - Machine Design-Case Studies & Lab Credits: 3 (D)
- ME 439-439L - HVAC System Design and Lab Credits: 3 (D)
- ME 440/540 - Computer-Aided Design Credits: 3 (D)
- ME 461 - Analysis & Design of Industrial Systems Credits: 3 (D)
- ME 491 - Independent Study Credits: (1-5) (D) (1-3 Credits fulfill the Technical Elective requirement).
- ME 492/592 - Topics Credits: (1-5) (D)
- ME 494 - Internship Credits: (1-3) (D)
- ME 497 - Cooperative Education Credits: (1-3) (D)
- ME 498 - Undergraduate Scholarship/Research Credits: 1-3
- PHYS 331 - Introduction to Modern Physics Credits: 3
- NE 435 - Introduction to Nuclear Engineering Credits: 3

#### Total Required Credits: 130

#### Curriculum Notes

\* In general, The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits. The Mechanical Engineering program has been granted an exception to this requirement.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Medical Laboratory Science Major

### Program Contact

Patricia Tille, Program Director

Department of Chemistry and Biochemistry

Avera Hall

605-688-6016

E-mail: pat.tille@sdstate.edu

http://www.sdstate.edu/cee/degrees/mls.cfm

### Program Information

The Medical Laboratory Science program prepares its graduates for employment in hospital or medical laboratories. The curriculum emphasizes basic sciences, medical laboratory sciences, critical thinking skills and communication skills, including structured learning in the laboratories of clinical affiliated hospitals. During the first two years, students take the background science courses necessary for entrance into the professional clinical year. Upon completion of the sophomore year of college, students apply for entrance into the professional component of the major. The professional program consists of on-campus medical laboratory science courses and an off-campus experience at a clinical affiliate. The program provides the scientific background in hematology, immunohematology, urinalysis, phlebotomy, microbiology, immunology, molecular biology, clinical chemistry, and mathematics necessary for a laboratory career.

### Program Goals

- Provide an educational program within the framework of the University setting in accordance with the Standards of Accredited Programs for the Medical Laboratory Scientist as established by the National Accrediting Agency for Clinical Laboratory Science (NAACLS).
- Provide adequate numbers of entry-level medical laboratory scientists to meet the workforce needs of the state of South Dakota and surrounding areas.
- Provide the health care community with quality individuals who are competent to conduct laboratory procedures in large medical facilities and small rural laboratories and who demonstrate positive professional attitudes, ethics and practices.

### Enabling Objectives

- Provide a curriculum that includes a general or liberal education, content specific theory and applications, technical knowledge, professionalism and clinical competence to successfully complete a national registry exam
- Assist students in career placement by providing academic and occupational advisement.
- Instill in students a sense of professionalism, commitment to lifelong learning and academic excellence.
- Prepare students to successfully enter the health care field as competent entry-level professionals that communicate well, appreciate social diversity and possess a genuine compassion and concern for others.

### Program Admission

#### Professional Program Admission

The Medical Laboratory Science Program accepts up to twenty-four students into the on-campus program. Applicants will be notified of the decision regarding their application in writing. Upon receipt of notification the student will have ten days to notify the MLS Program Director of their intent to accept the position.

On-Campus Traditional Program (Application deadline for SDSU designated MLS majors, November 15th. All other applications including transfer students are due March 15th.

Consideration for admission to the professional component of the Medical Laboratory Science major is made in the fall of the sophomore year. Admission will be contingent upon the student successfully meeting all admission criteria listed.

- Minimum cumulative GPA of 2.8 on a 4.0 scale in all college work completed.
- Grade of “C” or “70%” minimum in all prerequisite courses.
- Completion of a minimum of 60 credit hours including prerequisite courses Chemistry 106/106L, 108/108L, Biology 221/221L, 325/325L, Stats 281 or equivalencies before the start of the fall semester of the professional program (Junior year).
- Successful completion of the SDSU Academic Proficiency exams.
- Ability to meet the non-academic Essential Functions of the program.
- A grade of “C” or better is required in all courses required for the major.

#### Medical Laboratory Science Upward Mobility Program

The Medical Laboratory Science Upward Mobility Program provides an educational experience for the development of responsible, competent entry-level professionals in medical laboratory science who want to further their training and education. The program accepts up to 24 in the on-line upward mobility program. Applicants will be notified of the decision regarding their application in writing. Upon receipt of notification the student will have ten days to notify the MLS Program Director of their intent to accept the position.

Admission into the on-line program is contingent upon the student meeting the following criteria:

1. Minimum cumulative GPA of 2.8 on a 4.0 scale,
2. Statement of support from the current employer,
3. Documentation of a minimum of 2 years work experience in a clinical laboratory,
4. Completion of a one or two year regionally or nationally accredited or certified program in medical laboratory science,
5. Successful completion of all SDSU General Education Requirements including the College of Arts and Sciences or an academic plan of completion approved by the MLS program director.

The MLS course, MLS 368 Medical Laboratory Science Technical Training, provides for the transcription of the completion of a laboratory science technical program, work experience and course reduction for laboratory courses and clinical internship reduction for employed laboratory professionals. Work experience in a clinical laboratory (two years minimum, equivalency credits of 10 credits granted provided the regionally or nationally accredited or certified program includes the minimum of credit equivalent to the scientific content equivalent course work as described below.) If the program does not contain the content described, or the student has not taken college level equivalent course work, the student may be required to complete additional scientific pre-requisite courses.

Completion of a one or two year regionally or nationally accredited or certified program in medical laboratory science equivalency credit of 30 credits may be applied towards pre-requisite course work for entry level MLS courses, laboratory courses, chemistry, anatomy and physiology, and reduction in clinical course work.

All upward mobility students that have completed a one or two year regionally or nationally accredited or certified program in laboratory science (consistent with Board of Certification requirements) may be granted an equivalency of 20 credits for the following laboratory and junior level SDSU MLS courses prior to beginning the on line MLS baccalaureate program: MLS201, MLS301/301L, MLS311, MLS341L, MLS402L, MLS403L, MLS411L, MLS412L, MLS441L, MLS431(431L), MLS 451L, MLS 471L The additional equivalency credit (10 credit hours) may be applied within the clinical practicum.

An additional 12 credits may be transcribed for MLT courses within the curriculum that do not meet the equivalency transfer but are recognized as natural science equivalencies to meet Chemistry 106/106L, 108/108L, Biol 221/221L and Biol 325/325L requirements for the MLS program online completion only to meet the maximum of 42 credit transfer into the MLS 398. This provides for the recognition of the completion of a NAACLS accredited MLT program, national certification and practicing professional knowledge.

In order to receive a bachelors of science (B.S.) degree in MLS – a student must successfully complete at least 120 semester credit hours. In addition, to all of the required courses for the program the student must complete all general education requirements and requirements of the College of Arts and Sciences.

#### Accreditation, Certification, and Licensure

##### Accreditation

The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 N. River Rd. Suite 720, Rosemont, IL 60018-5119.

##### Certification

Graduates will be eligible to take the certification examination as a medical laboratory scientist from the Board of Certification by the American Society of Clinical Pathologists.

##### Licensure

Licensure requirements will vary by state.

#### Course Delivery Format

MLS courses are delivered through lecture, discussion, laboratory, and clinical practice experiences. The on campus program consists of lectures and laboratory courses that provide hands-on skills and technical training. The MLS program is a technology and lap-top based program. Course materials are provided electronically utilizing the Desire 2 Learn course management system.

Clinical Practice courses will be completed at a clinical affiliate site. Placement at the clinical affiliate will be made by MLS program faculty. Current available sites are Brookings Health System, Avera Health System facilities, Mayo SW Regional Health Network, Allina Health System facilities, Army Hospital Fort Collins Colorado, VA Regional Medical Center Sioux Falls, Huron Regional Medical Center, Prairie Lakes Healthcare, VA Medical Center Black Hills of Hot Springs, Rapid City Regional Hospital, Sanford Health Network Affiliated Hospitals and Spearfish Regional Hospital

#### Requirements for Medical Laboratory Science Major: 120 Credits Bachelor of Science

System General Education Requirements\*: 33

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: CHEM 106-106L Credits: 4 and CHEM 108-108L Credits: 5

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: UC 109\*\* Credits: 2
- Goal #2 Cultural Awareness & Social & Environmental Responsibility Credits: 3 *Select A&S approved Social Science Course*

College of Arts & Sciences Bachelor of Science Requirements: 34 Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences: BIOL 221-221L and 325-325L  
With 8 credits of Physical Sciences: CHEM 106-106L and 108-108L
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 77

- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 325-325L - Physiology and Lab Credits: 4
- STAT 281 - Introduction to Statistics Credits: 3

- MLS 201 - Understanding Medical Laboratory Science Credits: 2
- MLS 301-301L - Hematology I and Lab Credits: 3
- MLS 311 - Clinical Chemistry I Credits: 4
- MLS 321 - Hemostasis Credits: 1
- MLS 341-341L - Diagnostic Microbiology I & Lab Credits: 3, 2
- MLS 401 - Hematology II Credits: 2
- MLS 402L - Advanced Hematology and Hemostasis Lab Credits: 1
- MLS 403-403L - Diagnostic Immunology Credits: 3, 1
- MLS 411-411L - Clinical Chemistry II and Lab Credits: 3, 1
- MLS 412-412L - Laboratory Methods and Lab Credits: 2, 1
- MLS 431-431L Principles of Immunohematology & Lab Credits 2,1
- MLS 441-441L - Diagnostic Microbiology II and Lab Credits: 3, 2
- MLS 451-451L - Immunohematology II and Lab Credits: 2, 1
- MLS 461 - Intro to Management and Education (AW) Credits: 2
- MLS 471-471L Advanced Medical Diagnostics & Lab Credits 2, 1
- MLS 480 - Molecular Diagnostics Clinical Practice Credits: 1
- MLS 481 - Chemistry, Urinalysis and Body Fluid Analysis Clinical Practice Credits: 4
- MLS 482 - Hematology and Hemostasis Clinical Practice Credits: 4
- MLS 483 - Senior Capstone Clinical Practice Credits: 2
- MLS 484 - Clinical Immunohematology Clinical Practice Credits: 4
- MLS 485 - Diagnostic Microbiology Clinical Practice Credits: 5
- MLS 489 - Phlebotomy Clinical Practice Credits: 1

#### MLS Upward Mobility Program Requirements

- MLS 321 - Hemostasis Credits: 1
- MLS 341 - Diagnostic Microbiology I Credits: 3
- MLS 401 - Hematology II Credits: 2
- MLS 403 - Diagnostic Immunology Credits: 3
- MLS 411 - Clinical Chemistry II Credits: 3
- MLS 412 - Laboratory Methods Credits: 2
- MLS 431 - Principles of Immunohematology Credits: 2
- MLS 441 - Diagnostic Microbiology II Credits: 3
- MLS 451 - Immunohematology II Credits: 2
- MLS 461 - Intro to Management and Education (AW) Credits: 2
- MLS 471 - Advanced Medical Diagnostics Credits: 2
- MLS 483 - Senior Capstone Clinical Practice Credits: 2
- MLS 468 Advanced Supervised Clinical Experience I Credits: 5
- MLS 469 Advanced Supervised Clinical Experience II Credits 5
- MLS 368 - Medical Laboratory Science Technical Training Credits: 20-42 Transfer credits only - Requirements for Upward Mobility may be satisfied under this course code

**Total Required Credits: 120**

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Microbiology Major

#### Program Contact/Coordinator

Volker Brözel, Department Head  
 Department of Biology and Microbiology  
 Alfred Dairy Science Hall 228  
 605-688-6141  
 E-mail: biomicro@abs.sdstate.edu  
 http://www.sdstate.edu/biomicro/

#### Program Information

The program provides students with a broad background in all facets of microbiology, preparing them to pursue careers in diagnostic and research laboratories, public health, agriculture, food industry,

pharmaceutical companies, academia, governmental agencies, and the private sector. With the recommended electives, the graduate is prepared to pursue health-related professional or graduate education for advanced training. The goal is to provide a sound but varied educational experience.

#### Academic Requirements

A minimum GPA of 2.0 must be maintained in the major courses.

#### Course Delivery Format

Program coursework is on-campus, in classrooms and laboratories, as well as field-based settings. Additional coursework is available at off-campus attendance centers. Limited coursework is available online.

#### Requirements for Microbiology Major: 120 Credits

Bachelor of Science in Biological Sciences

System General Education Requirements\*: 33-35

- Goal #1 Written Communication: ENGL 101 **and** 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: Choose A, B, C, or D Credits: 4-6
  - a. MATH 102 **and** MATH 120<sup>1</sup>
  - b. MATH 115
  - c. MATH 121-121L
  - d. MATH 123
- Goal #6 Natural Sciences: BIOL 151-151L **and** BIOL 153-153L Credits: 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: BIOL 109-109L\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

Major Requirements: 67-74

- BIOL 202-202L – Genetics & Organismal Biology & Lab Credits: 4
- BIOL 204-204L - Genetics and Cellular Biology & Lab Credits: 3, 1
- MICR 231-231L - General Microbiology and Lab Credits: 4
- BIOL 290 - Seminar **or** MICR 290 - Seminar Credits: 1
- MICR 332 - Microbial Physiology Credits: 2
- MICR 332L - Microbial Physiology Lab Credits: 2
- MICR 439-539 - Medical & Veterinary Immunology Credits: 3
- MICR 436 - Molecular and Microbial Genetics Credits: 4

Applied and Environmental Microbiology

Choose at least two courses from the following:

- MICR 414-414L- Anaerobic Microbiology & Lab Credits: 3
- MICR 450 - Applied Microbiology & Biotechnology Credits: 3
- MICR 421-421L Soil Microbiology and Lab Credits: 3
- MICR 310-310L Environmental Microbiology & Lab Credits: 4
- MICR 311-311L - Food Microbiology and Lab Credits: 4

Infectious Disease

Choose at least two courses from the following:

- BIOL 467-467L/567-567L - Parasitology and Lab Credits: 3
- MICR 424-524 - Medical and Veterinary Virology Credits: 3
- MICR 433-533 - Medical Microbiology Credits: 3
- MICR 440L - Infectious Disease Lab Credits: 3

Capstone and Advanced Writing

- MICR 490 - Seminar (AW) Credits: 1
- ENGL 379 - Technical Communication (AW) Credits: 3



## Chemistry

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1
- CHEM 114-114L - General Chemistry II and Lab \* Credits: (3, 1)
- CHEM 326-326L - Organic Chemistry I and Lab Credits: (3, 1)
- CHEM 328-328L - Organic Chemistry II and Lab Credits: (3, 1)
- CHEM 464 - Biochemistry I Credits: 3
- CHEM 466 - Laboratory Methods- Biochemistry Credits: 1

## Physics

- PHYS 111-111L - Intro to Physics I and Lab\* Credits: 4 and PHYS 113-113L - Intro to Physics II and Lab\* Credits: 4  
OR PHYS 101-101L - Survey of Physics\* and Lab Credits: 4<sup>2</sup>

## Mathematics

- MATH 125 - Calculus II \* Credits: 4<sup>3</sup>  
OR STAT 281 - Introduction to Statistics Credits: 3<sup>3</sup>

Electives: 6-15

## Total Required Credits: 120

### Curriculum Notes

1 Students selecting this option who plan to enter professional or graduate degree programs should also take MATH 121 or 123 and 125.

2 PHYS 101-101L is not sufficient for students planning to enter professional or graduate degree programs.

3 Pre-professional students should consult their advisor before selecting an option.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Music Education Major

### Program Contact/Coordinator

David Reynolds, Head  
Department of Music  
Lincoln Music Hall 205  
Box 2212

South Dakota State University  
Brookings, SD 57007  
605-688-5187

E-mail: Paul.Reynolds@sdstate.edu  
<http://www.sdstate.edu/mus>

### Program Information

This program is recommended for students interested in becoming certified to teach elementary and secondary school music. An emphasis in choral or instrumental teaching may be elected, or, by adding appropriate hours, students may prepare in both areas. Those preparing in both areas must complete both choral and instrumental music education sequences, including both sets of pedagogies.

### Music Program Application Requirements

1. Admission as a music major in any of the music degree programs requires the successful completion of an audition in the student's major area of applied instruction.
2. Music majors in all degree programs must choose one area of applied instruction in which to specialize. Further, students must meet the applied proficiency standards of the Department in that area. To that end, students must:

1. successfully complete a jury examination each semester.
  2. apply for and be granted approval to advance to upper level applied study (300-400 levels).
  3. complete a minimum of 6 hours of upper level (300-400) applied study
3. Piano proficiency is required of all majors. Several approaches to meeting the requirements are available. See the Student Handbook published and available from the Department for more specifics. The piano proficiency must be passed before the senior recital may be scheduled.
  4. Voice or instrumental proficiency is required of all keyboard majors.
  5. Ensemble Requirements:
    1. All music majors must participate in at least one major ensemble each semester they are enrolled as a regular university student (Internship and Student Teaching semesters excepted). See the Student Handbook for more details.
    2. Participation in small ensembles is strongly encouraged for all majors and minors.
  6. A minimum of five pedagogy courses is required for students in the B.M.E program, and while the required pedagogies develop proficiencies within the areas of specialization for B.M.E. students, a functional knowledge of instrumental or vocal techniques outside the specialty is also essential. For instrumental B.M.E. majors, this must include one semester each of string, woodwind, brass, and percussion pedagogies. Six semesters will assure the broadest preparation through multiple levels of woodwind and brass pedagogy. In addition, instrumental B.M.E. majors must take MUS 270/ 271 general voice for instrument majors. For vocal B.M.E. majors, the four required semesters of vocal pedagogy are augmented by MUS 270/271 general instrument for voice majors.
  7. Recommendations for enrolling in student teaching will be issued by the Music Education Coordinator following an interview with the student and his/her advisor.
  8. Recommendations for music entrepreneurship students wishing to enroll for the Internship experience must be issued by the program Coordinator.
  9. A senior recital is required of all music majors.
  10. Majors and minors must enroll for Recital Attendance (MUS 185) each semester they are enrolled for applied music lessons.

### Accreditation, Certification, and Licensure

#### Accreditation

National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

#### Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Course Delivery Format

The department offers coursework in classroom, studio, and performance settings. The program allows for internship experiences and independent studies.

### Requirements for Music Education Major: 126 Major

Bachelor of Music Education

#### System General Education Requirements\*: 32

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: PSYC 101, or SOC 100 Credits: 6
- Goal #4 Arts and Humanities/Diversity: MUS 130 and MUS 131 Credits: 8
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

#### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: MUS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: Credits: 3

#### Major Requirements: 63

- MUAP 100-155, Applied Music Credits: 2
- MUAP 200-255, Applied Music Credits: 2
- MUAP 300-355, Applied Music Credits: 4
- MUAP 400-455, Applied Music Credits: 2
- MUEN 100-122, Music Organization Credits: 4
- MUEN 300-322, Music Organization Credits: 3
- MUS 110 - Basic Music Theory I Credits: 4
- MUS 110L - Basic Music Theory I Lab Credits: 0
- MUS 111 - Basic Music Theory II Credits: 4
- MUS 111L - Basic Music Theory II Lab Credits: 0
- MUS 210 - Advanced Music Theory I Credits: 4
- MUS 210L - Advanced Music Theory I Lab Credits: 0
- MUS 211 - Advanced Music Theory II Credits: 4
- MUS 211L - Advanced Music Theory Lab II Credits: 0
- MUS 313 - Form and Analysis Credits: 3
- MUS 433 - Music Literature and History III (AW) Credits: 3
- MUS 185 - Recital Attendance Credits: 0<sup>1</sup>
- MUS 360-360L - Conducting Credits: 2, 0
- MUS 361-361L - Music Education II: Conducting and Lab Credits 2
- MUS 270 - Pedagogy I Credits: (1-2)
- MUS 271 - Pedagogy II Credits: (1-2)
- MUS 370 - Pedagogy III Credits: (1-2)
- MUS 371 - Pedagogy IV Credits: (1-2)
- MUS 420 - Orchestration and Arranging Credits: 3
- MUS 362-362L - Music Ed.III: Methods and Materials Credits 2
- MUS 365-365L - Music Education IV: Supervision and Administration of School Music and Lab Credits: 2
- MUS 465 - Music Education V: Practical Applications Credits 2
- MUS 351 - Elementary School Music Methods Credits: (2-3)
- EDFN 365 - Computer-Based Technology and Learning Credits: 2
- MUAP 483 - Public Recital Credits: 0
- EDFN 427- Middle School: Philosophy & Application Credits 2

#### Choral and Instrumental Emphasis:

Student may elect a Choral and/or Instrumental Emphasis by adding appropriate hours. Course sections vary based on emphasis.

- MUS 270 - Pedagogy I Credits: (1-2)
- MUS 271 - Pedagogy II Credits: (1-2)
- MUS 351 - Elementary School Music Methods Credits: 2-3
- MUS 360-360L - Conducting Credits: 2, 0
- MUS 361-361L Music Education II Conducting & Lab Credits 2

- MUS 362-362L Music Education III Methods & Materials Credits 2
- MUS 365-365L - Music Education IV: Supervision and Administration of School Music and Lab Credits: 2
- MUS 370 - Pedagogy III Credits: (1-2)
- MUS 371 - Pedagogy IV Credits: (1-2)

#### Education Program Requirements

The Secondary Teacher Education program is structured around the three components of General Studies (meeting university core requirements), Specialty Studies (meeting major content requirements), and Professional Studies. Professional Studies has three professional semesters which directly prepare students for the profession of teaching.

The Education curriculum below is unique to Music Education. Please contact the Department of Teaching, Learning, and Leadership for information about other education programs, or the program coordinators information on Agricultural Education, Family and Consumer Sciences Education, and Physical Education as these programs differ significantly from other content areas.

#### Professional Semester I

- EDFN 338 - Foundations of American Education Credits: (1-2)
- EPSY 302 - Educational Psychology Credits: 3

#### Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1

In addition, the following courses must be successfully completed prior to entry into Professional Semester III:

- Native American Course Approved for Teacher Education - HIST 368 - History and Culture of the American Indian \*\* Credits: 3
- MUS 355 - Computer Based Technology and Learning for Music Educators Credits: 2  
or EDFN 365 - Computer-Based Technology and Learning Credits: 2
- EDFN 427-527 - Middle School: Philosophy and Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

#### Professional Semester III

- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 - Social Foundations, Management & Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching  
or SEED 488 - 7-12 Student Teaching Credits: 8

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED 488 and ELED 488.

**Total Required Credits: 126**

#### Curriculum Notes

**Note One:** Concurrent enrollment with all MUAP courses

\* The 30 credit Board of Regents System General Education Requirements (SGRs).

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **Music Major - Music Entrepreneurship Specialization**

### **Program Contact/Coordinator**

David Reynolds, Head  
Department of Music  
Lincoln Music Hall 205  
Box 2212  
605-688-5187  
E-mail: Paul.Reynolds@sdsu.edu  
http://www.sdsu.edu/mus

### **Program Information**

This degree is designed for students who enjoy music but want a career option outside of performing or teaching music. The program prepares students for careers in music manufacturing, retail sales, music production, publishing, arts management, industry, and a variety of other fields. An on-the-job internship experience is included as part of the professional requirement for the degree.

### **Music Program Application Requirements**

1. Admission as a music major in any of the music degree programs requires the successful completion of an audition in the student's major area of applied instruction.
2. Music majors in all degree programs must choose one area of applied instruction in which to specialize. Further, students must meet the applied proficiency standards of the Department in that area. To that end, students must:
  1. successfully complete a jury examination each semester.
  2. apply for and be granted approval to advance to upper level applied study (300-400 levels).
  3. complete a minimum of 6 hours of upper level (300-400) applied study
3. Piano proficiency is required of all majors. Several approaches to meeting the requirements are available. See the Student Handbook published and available from the Department for more specifics. The piano proficiency must be passed before the senior recital may be scheduled.
4. Voice or instrumental proficiency is required of all keyboard majors.
5. Ensemble Requirements:
  1. All music majors must participate in at least one major ensemble each semester they are enrolled as a regular university student (Internship and Student Teaching semesters excepted). See the Student Handbook for more details.
  2. Participation in small ensembles is strongly encouraged for all majors and minors.
6. Recommendations for music entrepreneurship students wishing to enroll for the Internship experience must be issued by the program Coordinator.
7. A senior recital is required of all music majors.
8. Majors and minors must enroll for Recital Attendance (MUS 185) each semester they are enrolled for applied music lessons.

### **Course Delivery Format**

The department offers coursework in classroom, studio, and performance settings. The program allows for internship experiences and independent studies.

### **Requirements for Music Major - Music Entrepreneurship**

#### **Specialization: 120 Credits**

Bachelor of Arts

#### **System General Education Requirements\*: 30**

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

#### **Institutional Graduation Requirements\*\*: 5**

- Goal #1 First Year Seminar MUS 109\*\*Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

#### **College of Arts and Sciences Bachelor of Arts Requirements: 17-28 Bachelor of Arts**

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

#### **Major Requirements: 63-66**

#### **Music Core Requirements: 32**

- MUS 110 - Basic Music Theory I Credits: 4
- MUS 110L - Basic Music Theory I Lab Credits: 0
- MUS 111 - Basic Music Theory II Credits: 4
- MUS 111L - Basic Music Theory II Lab Credits: 0
- MUS 130 - Music Literature and History I \* Credits: 2
- MUS 201 - History of Country Music \* Credits: 3
- MUS 202 - The Music Industry Credits: 3
- MUS 203 - Blues, Jazz, and Rock \* Credits: 3
- MUS 210 - Advanced Music Theory I Credits: 4
- MUS 210L - Advanced Music Theory I Lab Credits: 0
- MUS 211 - Advanced Music Theory II Credits: 4
- MUS 211L - Advanced Music Theory Lab II Credits: 0
- MUS 302 - Introduction to Recording Industry Credits: 2
- MUS 433 - Music Literature and History III (AW) Credits: 3

#### **Music Organization Requirements: 7**

- MUEN 100-299 - Music Ensemble Credits: 4
- MUEN 300-499 - Music Ensemble Credits: 3

#### **Applied Music Requirements: 6**

- MUAP 115-116 - Class Instruction- Keyboard Credits: 2
- MUAP 100-299 - Applied Music Credits: 4
- MUS 185 - Recital Attendance Credits: 0

#### **Entrepreneurial Requirements: 18-21**

- ACCT 210 - Principles of Accounting I Credits: 3
- ENTR 236 - Innovation & Creativity Credits: 3
- ENTR 237 - ENTR II: Entrepreneurship Development Credits 3
- BADM/ECON 370 - Marketing Credits: 3
- MCOM 161-161L - Fundamentals of Desktop Publishing and Lab Credits: 3
- MUS 494 - Internship Credits: 3-6

#### **Electives: 3-17**

#### **Total Required Credits: 120**

#### **Curriculum Notes**

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Music Major - Music Studies Specialization

### Program Contact/Coordinator

David Reynolds, Head  
Department of Music  
Lincoln Music Hall 205  
Box 2212  
605-688-5187  
E-mail: Paul.Reynolds@sdstate.edu  
http://www.sdstate.edu/mus

### Program Information

This program takes advantage of the types of courses central to a liberal arts education. Although the degree is not tied to any specific career aspiration, students often use the degree as preparation for careers in musicology, composing, music librarianship, and private studio teaching. The flexibility of the curriculum is also used by students desiring a performance-based course of study and to prepare for graduate school.

### Music Program Application Requirements

1. Admission as a music major in any of the music degree programs requires the successful completion of an audition in the student's major area of applied instruction.
2. Music majors in all degree programs must choose one area of applied instruction in which to specialize. Further, students must meet the applied proficiency standards of the Department in that area. To that end, students must:
  1. successfully complete a jury examination each semester.
  2. apply for and be granted approval to advance to upper level applied study (300-400 levels).
  3. complete a minimum of 6 hours of upper level (300-400) applied study
3. Piano proficiency is required of all majors. Several approaches to meeting the requirements are available. See the Student Handbook published and available from the Department for more specifics. The piano proficiency must be passed before the senior recital may be scheduled.
4. Voice or instrumental proficiency is required of all keyboard majors.
5. Ensemble Requirements:
  1. All music majors must participate in at least one major ensemble each semester they are enrolled as a regular university student (Internship and Student Teaching semesters excepted). See the Student Handbook for more details.
  2. Participation in small ensembles is strongly encouraged for all majors and minors.
6. A senior recital is required of all music majors.
7. Majors and minors must enroll for Recital Attendance (MUS 185) each semester they are enrolled for applied music lessons.

### Course Delivery Format

The department offers coursework in classroom, studio, and performance settings. The program allows for internship experiences and independent studies.

### Requirements for Music Major - Music Studies Specialization: 120 Credits

Bachelor of Arts

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101, and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: Social Science courses only Credits: 6

- Goal #4 Arts and Humanities/Diversity: Humanities (no foreign language) Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: MUS 109\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts and Sciences Bachelor of Arts Requirements: 17-28  
Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 50

Music Studies Core: 30

- MUS 110-110L Basic Music Theory I & Lab Credits: 4
- MUS 111-111L - Basic Music Theory II & Lab Credits: 4
- MUS 130-Music Literature and History I\* Credits: 2
- MUS 131-Music Literature and History II\* Credits: 3
- MUS 210-210L - Advanced Music Theory I & Lab Credits: 4
- MUS 211 - Advanced Music Theory II ) Credits: 4
- MUS 270/370 - Pedagogy Credits: 1
- MUS 313 - Form and Analysis Credits: 3
- MUS 360-360L - Conducting Credits: 2, 0
- MUS 433 - Music Literature and History III (AW) Credits: 3
- MUAP 483 - Public Recital Credits: 0

Music Organization: 8

- MUEN 100-299 - Music Organization Credits: 4
- MUEN 300-499 - Music Organization Credits: 4

Applied Music Credits: 12

- MUAP 100-299 - Applied Music Credits: 4
- MUAP 300-499 - Applied Music Credits: 8
- MUS 185 - Recital Attendance Credits: 0<sup>1</sup>

Electives: 19-30

**Total Required Credits: 120**

### Notes

Students must earn at least a "C" in each course used to meet the departmental requirements of all majors, minors, and certificates.  
<sup>1</sup> Concurrent enrollment with all MUAP courses.

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs).

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

# Nursing Major

## Program Contacts

**Standard Option, Brookings**  
Linda M, Herrick, Association Dean,  
Ph.D., RN  
SDSU Wagner Hall 327  
Brookings, SD 57007  
605-688-6153 or 888-216-9806 ext. 2  
E-mail: mary.davenport@sdstate.edu

**Standard Option, Rapid City<sup>+</sup>**  
West River Department, SDSU  
1011 11th Street  
Rapid City, SD 57701  
605-394-5390 or 888-819-1725  
www.sdstate.edu/nurs/programs

**Standard Option, Sioux Falls**  
College of Nursing, SDSU  
2300 N. Career Avenue  
Sioux Falls, SD 57107  
605-367-8400  
E-mail: hillary.westerhuis@sdstate.edu

**RN Upward Mobility Option, Online**  
Coordinator, RN Upward Mobility,  
South Dakota State University  
605-688-6186  
888-216-9806 ext. 1  
susan.rosen@sdstate.edu

**Accelerated Option, Sioux Falls**  
College of Nursing, SDSU  
2300 N. Career Avenue  
Sioux Falls, SD 57107  
605-367-8400  
E-mail: hillary.westerhuis@sdstate.edu

**Accelerated Option, Aberdeen**  
Northern State University, SDSU  
1200 S. Jay Street  
Aberdeen, SD 57401  
605-626-2427  
ambra.warcken@northern.edu

## Program Information

The bachelors of science in nursing program prepares graduates to practice in both hospital and non-hospital settings and have the foundation for advanced study in nursing. Graduates of the RN Upward Mobility option, already registered nurses, are prepared to expand their practice in the areas of community health, health promotion, and leadership. They also have the foundation for advanced study in nursing. The curriculum includes university core requirements, major support courses in communication and the social, physical, and biological sciences, and nursing major courses.

## Nursing Program Delivery Options

Three types of undergraduate curricula lead to the Bachelor of Science with a major in nursing: one for standard students, one for RNs who are academically prepared at the associate degree or diploma level and now seek a bachelor's degree, and the accelerated option for students with non-nursing baccalaureate degrees who wish to obtain a degree in nursing.

The Standard Option is designed to meet the educational needs of persons who are not registered nurses and can be completed in two and a half years.

The RN Upward Mobility Option is designed as a degree completion for registered nurses who have completed a National League for Nursing Accrediting Commission (NLNAC) accredited academic diploma or associate degree nursing program.

The third option, the Accelerated Option, is for students who have completed a bachelor's or a master's degree in any field and wish to obtain a Bachelor of Science with Nursing major. The Accelerated Option is an intensive course of study that is delivered in a compressed format over 12 months.

## Nursing Program Admission

Any student eligible for regular admission to SDSU who plans to enroll in the College of Nursing and Department of Undergraduate Nursing is accepted into pre-nursing and has an academic adviser from the College of Nursing. During the semester in which students complete their final pre-nursing required courses, they apply for admission to the nursing major. Applicants with courses in progress at the time of application will be required to provide written documentation of their registration in those courses with the application form.

Fulfillment of course and application requirements does not ensure admission. The number of students accepted to enroll in the nursing

major may vary depending upon available clinical facilities, qualified faculty and funds. The admission process includes an interview with the Undergraduate Admission and Scholastic Standards Committee and/or additional undergraduate faculty. Students who want to enter the nursing major are required to submit an application for admission to the major. Prior to applying to any option, all students must apply for admission to SDSU.

## Standard Option

### Admission Application Dates

- September 25 is the admission application deadline to enter in the Spring Semester.
- January 25 is the admission application deadline to enter in the Fall Semester.
- The Brookings and Rapid City programs admit students to the nursing major for both the Fall and Spring semesters.
- The Sioux Falls program admits students in courses each Fall to begin courses each January.

### Admission Requirements

To be considered for admission to the Standard Option, students must have:

- a cumulative GPA of 2.7
- a pre-nursing GPA of 2.7 at time of admission
- a grade of "C" or higher in all completed courses required for graduation,
- completed the following core requirements
- System Graduation Requirement (SGR) #1: Written Communication - ENGL 101 Composition I
- One course from the System Graduation Requirement (SGR) #1: Oral Communication list
- One course from the System Graduation Requirement (SGR) #4: Humanities list
- System Graduation Requirement (SGR) #5: Mathematics (MATH 102 or higher)
- Institutional Graduation Requirement (IGR) #1: NURS 109 First-Year Seminar

## Accelerated Option

### Admission Application Deadline Dates

- Sioux Falls Accelerated Option, January 25.
- Aberdeen Accelerated Option, July 1.

### Admission Requirements

To be considered for admission to the Accelerated Option, students must have:

- a cumulative GPA of 2.8 or higher,
- a pre-nursing GPA of 3.0 or higher,
- a grade of "C" or higher in all completed nursing major support courses and courses meeting general education and institutional requirements.
- Students may apply when they have completed at least six of the pre-nursing courses AND have at least two of the remaining four pre-nursing courses in progress.

## RN Upward Mobility Option

### Admission Application Dates

- March 1 is the admission application deadline to enter in the Spring Semester.

### Admission Requirements

- To be considered for admission to the RN Upward Mobility option students must have:
- 2.5 GPA, "C" grades in all coursework applied to baccalaureate requirements
- RN's may apply to the nursing major with no more than 2 support courses, maximum of 7 credits, remaining
- Evidence of personal liability insurance, criminal background check, and evidence of licensure in state of nursing practice.

#### Notes:

- RN's interested in the RN Upward Mobility option are encouraged to contact the RN Upward Mobility office on the Brookings campus for individual advising. Eligibility requirements include:
- Application materials are provided to all eligible RN's by staff. Failure to meet submission requirements may disqualify an applicant for the annual admission cycle. Nursing major courses may be completed in one year.

#### Additional Coursework Policies

Students who have failed (earned a "D" or "F") in two or more of the pre-nursing science courses (CHEM 106/106L or 112/112L, or 108/108L or 114/114L; MICR 231/231L; BIOL 221/221L, 325/325L), repeated and passed them on the second attempt will not be admitted to the Nursing Major. Students who have failed one pre-nursing course (CHEM 106/106L or 112/112L, 108/108L or 114/114L; MICR 231/231L; BIOL 221/221L, 325/325L; PSYC 101; one of the following: SOC 100, 150, or 240; NFS 315; HDFS 210), repeated and failed the same course a second time will not be admitted to the Nursing Major. If the failure is over five years old, it does not count as a failure. Students who have taken Anatomy or Physiology more than seven years prior to their admission date will be required to update these courses.

#### Technical Standards

Students preparing for or seeking additional education in the field of professional nursing must demonstrate the ability to meet the demands of the professional nurse role. For admission to and progression in the nursing major courses, the student must meet Technical Standards for the nursing major. These standards are in the areas of general abilities, observational ability, communication, motor ability, intellectual/conceptual ability, and behavioral/social attributes. The Technical Standards are available on the Nursing website or through the academic advisors at each of the program sites.

#### Background Checks

All students seeking admission into a nursing program in the College of Nursing must submit federal and supplemental criminal background checks. Admission to a program is conditional based on the results of the background check. The required background check is based on requirements for licensure as a registered nurse in South Dakota (South Dakota Nurse Practice Act, SD Codified Law Chapter 36-9-97). If you have been convicted, pled guilty or no contest to, or received a suspended imposition of sentence for a felony or other criminal offense (excluding minor traffic violations), you are advised that it may not be possible for you to be accepted into the major at South Dakota State University. You may also be prevented from taking the required licensure exam for registered nurses, and you may be prevented from gaining employment in the field of nursing. If you have questions about this policy, please contact the Department Head, Nursing Student Services at 605-688-4106.

#### Transfer Students

Transfer students who have begun but not completed a nursing program at another college or university must submit a letter to the College of Nursing indicating their reason for transfer. They must also apply for admission to SDSU, as well as to the College of Nursing. Three letters of recommendation must also be submitted to the College of Nursing: one from the dean/director of their former program and two from faculty members.

#### Language proficiency

As the nurse is a professional who deals with human lives, it is mandatory that a higher level of English fluency be met in order to ensure the safety of clients and students. The English as a Second

Language requirement for the College of Nursing is higher than it is for other colleges in the University. The College of Nursing requires all students who meet the definition of student with English as a Second Language to complete the Test of English as a Foreign Language (TOEFL), International English Language Testing System (IELTS), or an accepted substitute. English as a Second Language is defined as a student who was instructed and spoke primarily in a language other than English in the K-12 grades or primary and secondary schooling. The minimum TOEFL score required for admission to the Nursing Major is 600 (paper-based), with no score below 56; 250 (computer-based), with a minimum reading score of 22, writing 23, and listening 22; or 100 (internet-based) (with a minimum reading score of 21, writing 19, listening 22, and speaking 26). The required IELTS band score for admission to the nursing major is 7.0. The TOEFL or IELTS is required for all students for whom English is a second language, regardless of residency status. These scores are required before the student will be accepted into the major. The student is responsible for all testing fees.

#### Nursing Program Additional Information

A GPA of 2.5 or higher is required for continuation in the nursing major. A grade of "C" or higher is required in all nursing courses. Students may repeat one failed nursing course with permission. Upon failing a second nursing course, the student is dismissed from the program. A student who needs to retake a failed course is re-enrolled in the course on a space available basis. A student who fails a course due to unsafe practice in a clinical experience will not be eligible for readmission to the nursing major, unless evidence is submitted that the unsafe behaviors have been corrected.

All undergraduate and graduate nursing students are expected to adhere to the principles of the Code of Ethics for Nurses (American Nurses Association, 2001). The Code of Ethics for Nurses communicates a standard of professional behavior expected throughout the total program and in each individual nursing course. Therefore, in addition to dismissal for academic failure, the faculty and administration of the Departments of Undergraduate Nursing and Graduate Nursing reserve the right to dismiss any student enrolled in either the undergraduate or graduate program for unethical, dishonest, illegal, or other conduct that is inconsistent with the Code of Ethics for Nurses.

#### Accreditation, Certification, and Licensure

##### Accreditation

The program is accredited by the National League for Nursing Accrediting Commission (NLNAC) and approved by the South Dakota Board of Nursing.

##### Certification

Graduates of the standard and the accelerated programs in nursing are eligible to write the National Council Licensure Examination to become registered nurses. Graduates of the RN Upward Mobility option, already registered nurses.

##### Licensure

Candidates for graduation in the standard and accelerated curriculum are eligible to write the National Council Licensure Examination-RN (NCLEX-RN) for licensure as registered nurses. Licensure as a registered nurse (RN) is required by law in every state in order to practice professional nursing.

#### Course Delivery Format

The Nursing program promotes a combination of lecture and hands-on experiences that teach students to practice nursing with expertise, professionalism, and a passion for helping others. The faculty engages students in classroom, online, simulation laboratory, and field based learning experiences.



## Requirements for Nursing Major: 120 Credits

Bachelor of Science

### Prerequisites

System General Education Requirements\* Credits: 26-27

- Goal #1 Written Communication: ENGL 101 Credits: 3
- Goal #2 Oral Communication Credits: 3
- Goal #3 Social Sciences/Diversity:
  - HDFS 210 Credits: 3
  - and SOC 100 or SOC 150 or SOC 240 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 3
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences:
  - CHEM 106-106L, or CHEM 112-112L Credits: 4
  - and CHEM 108-108L or CHEM 114-114L Credits: 5-4

Institutional Graduation Requirements\*\* Credits: 5

- Goal #1 First Seminar: NURS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: PSYC 101\*\* Credits: 3

### Pre-Nursing Requirements

- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- MICR 231-231L - General Microbiology and Lab Credits: 4
- NFS 315 - Human Nutrition Credits: 3
- BIOL 325-325L - Physiology and Lab Credits: 4

### Nursing Major Requirements

Must be accepted into Nursing program prior to taking major courses.

- System General Education Requirements\*:
- Goal #1 Written Communication: ENGL 201 Credits: 3
  - Goal #4 Arts and Humanities/Diversity Credits: 3

Major Requirements: 63-65

- NURS 323 - Introduction to Pathophysiology Credits: 3
- NURS 215 - Professional Nursing Credits: 2
- NURS 265-265L - Health Assessment and Interventions and Lab Credits: 4
- NURS 280-280L Professional Communication & Lab Credits 3
- NURS 310-310L - Introduction to Public Health and Population-based Nursing and Lab Credits: 4
- NURS 325-325L - Beginning Nursing Care of the Client with Health Problems and Lab Credits: 6
- PHA 321 - Pharmacology Credits: 3
- NURS 355 - Research: Appraisal and Utilization Credits: 2
- NURS 365-365L - Nursing Care of the Client with Health Problems and Lab Credits: 6
- NURS 380-380L - Nursing Care of the Childbearing Family and Lab Credits: 5
- NURS 410-410L - Advanced Nursing Care of the Client with Health Problems and Lab Credits: 6
- NURS 420-420L - Nursing Care of the Client with Mental Health Problems and Lab Credits: 5
- HSC 445 - Epidemiology Credits: 3
- OR STAT 281 - Introduction to Statistics Credits: 3
- NURS 425 - Nursing Leadership Credits: 3
- NURS 480-480L - Advanced Population based Nursing Practice and Lab (G) Credits: 4
- NURS 495-495L - Practicum and Clinical Lab (AW) Credits: 6

Elective Credits: 2

**Total Required Credits: 120**

## Curriculum Notes

+West River pre-nursing courses may not be offered in exactly the same semester as they are on the main campus in Brookings. However, this is a recommended sequence for courses.

- Required pre-nursing major courses: CHEM 106-106L or 112-112L, 108-108L or 114-114L; HDFS 210; MICR 231-231L; NFS 315; PSYC 101; (one of the following) SOC 100, 150, 240; BIOL 221-221L, 325-325L.
- MAJOR: NURS 215, 265, 280, 310-310L, 323, 325-325L, 355, 365-365L, 380-380L, 410-410L, 420-420L, 425, 480-480L, 495-495L.
- Other required support courses: PHA 321; STAT 281 or HSC 445. (E) Elective

\* The 30 credit Board of Regents System General Education Requirements (SGRs).

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits, English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Nutrition and Food Science Major

### Program Coordinators

Elizabeth Droke, Nutrition

Emphasis Coordinator

605-688-5150

Wagner Hall 433

elizabeth.droke@sdstate.edu

Padu Krishnan, Food Science

Emphasis Coordinator

605-688-4040

Wagner Hall 415

Padmanaban.Krishnan@sdstate.edu

### Program Information

The Nutrition and Food Science major is a dynamic field based in science and focuses on the chemical, physiological and biological aspects of foods and nutrients. The program has two emphasis and the curriculum can be designed to meet the student's interest in food science or nutritional sciences.

The Nutritional Sciences emphasis prepares students for entry into either graduate school or a professional school such as medical, chiropractic or physician assistant. Nutritional Sciences is the discipline in which the biological, physiological and chemical sciences are used to study the nature of how the body digests food, absorbs and metabolizes nutrients, and the and the impact on health and well-being. Students will develop knowledge in the basic biological, chemical and physiological sciences for application in a health profession or in research and development. This emphasis does not meet the requirements to become a Registered Dietitian, but prepares students for entry into professional schools or for graduate study in Nutritional Sciences.

The Food Science emphasis prepares students for professional positions in the food manufacturing industry or for graduate study in Food Science. Food Science is the study of the science of production, processing, preservation, packaging and distribution of safe, wholesome and nutritious foods. Students will develop knowledge in the basic physical, chemical and engineering sciences. These sciences are used to study the nature of foods, the causes of food deterioration, and principles of food preservation. Creative approaches are employed to develop new food products for the rapidly changing consumer who desires good taste and good nutrition at a good price.

### Student Learning Outcomes

Graduates will be able to:

- Upon completion of the Nutrition and Food Science major, students should demonstrate the following:
- The ability to gain factual knowledge and learn fundamental principles of nutrition or food science.
- The development of specific skills, competencies, and points of view needed by professionals in nutrition or food sciences.
- The ability to apply critical thinking skills in the context of distinguishing fact.

- The application of scientific principles to nutrition or food and food products.
- Awareness of and appreciation of ethical practice and diversity within the student's respective profession.
- Ability to use oral and written communication skills effectively in a group or team environment.
- Competence in quantitative skills.
- Experience with computers and other emerging information technologies and their application to nutrition or food science.

### Accreditation, Certification, and Licensure

The Food Science emphasis follows curricula guidelines prescribed by the Institute of Food Technologists. The Nutritional Sciences emphasis has curricula similar to other nutrition programs across the nation. Additionally, students graduating with the Food Science emphasis can seek the Certified Food Scientist credential through the Institute of Food Technologists. The Nutritional Sciences emphasis *does not* meet the requirements to become a registered dietitian.

### Course Delivery Format

The program offers instruction through lecture, discussion, laboratory exercises, and practical training.

### Requirements for Nutrition and Food Science Major: 120 Credits

System General Education Requirements\*: 32

- Goal #1 Written Communication: ENGL 101, and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: PSYC 101, and ECON 202 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: CHEM 112-112L, and CHEM 114-114L Credits: 8

### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Experience: UC 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: NFS 111\*\* Credits: 3

### College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

### Major Requirements: 38

- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- NFS 141-141L - Foods Principles and Lab Credits: 4
- NFS 251 - Food Safety and Technology Credits: 3
- NFS 315 - Human Nutrition Credits: 3
- BIOL 383 - Bioethics \*\* (G) Credits: 4
- NFS 490/590 - Seminar (AW) Credits: (1-2)
- PHYS 111-111L - Introduction to Physics I and Lab\* Credits: 4
- STAT 281 - Introduction to Statistics Credits: 3
- CHEM 326-326L - Organic Chemistry I and Lab Credits: (3, 1)
- CHEM 328-328L - Organic Chemistry II and Lab Credits: (3, 1)
- CHEM 464 - Biochemistry I Credits: 3
- CHEM 466 - Laboratory Methods- Biochemistry Credits: 1

### Electives: 43

### Total Required Credits: 120

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Operations Management Major

### Program Contact/Coordinator

Byron Garry, Undergraduate Program Coordinator  
Engineering Technology & Management Department  
Solberg Hall 116, Box 2223  
605- 688-6229  
E-mail: Byron.Garry@sdstate.edu  
http://www.sdstate.edu/etm/programs

### Program Information

The Operations Management (OM) program has been designed to prepare students to manage operations and resources including people, equipment, facilities, finances, and processes. The OM program is an applied management program tailored to entry-level positions of responsibility in manufacturing, technical services companies, suppliers to manufacturers, and/or industrial sales.

There are two emphases for the OM program. The Manufacturing emphasis includes Lean, quality management systems, process development, workplace safety, supply chain management, and industrial controls. Students may elect to pursue an applied quality management credential from the American Society for Quality (ASQ) at graduation. The Electronics emphasis prepares students to work as supervisors or project team leaders in industries that manufacture, service, or develop electronic devices or distributed systems. Courses include circuits, digital & analog devices, networks, microcontrollers, PCBs, industrial controls, and PLCs.

### Course Delivery Format

Operations Management is a hands-on, technically-oriented program, creating engaging learning experiences in lecture, laboratory, and field-based settings.

### Requirements for Operations Management Major: 120 Credits

Bachelor of Science

### System General Education Requirements\*: 32

- Goal #1 Written Communication: ENGL 101, and 277 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences: CHEM 106-106L, and PHYS 101-101L Credits: 8

### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: GE 109-109L\*\* Credits: 1, 1
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: GE 231\*\* Credits: 3

### Major Requirements: 63

- ET 210-210L - Introduction to Electronic Systems Credits: 4
- ET 451-451L - Industrial Controls and PLCs and Lab Credits: 3
- GE 425-525 - Occupational Safety and Health Mgmt Credits: 3
- MGMT 310 - Business Finance Credits: 3
- MGMT 325 - Management Information Systems Credits: 3
- MGMT 460 - Human Resource Management Credits: 3
- MGMT 360 - Organization and Management Credits: 3
- MNET 367-367L - Production Strategy and Lab Credits: 3
- MNET 460-560 - Manufacturing Cost Analysis Credits: 3
- OM 462-562 - Quality Management Credits: 3
- OM 463-563 - Supply Chain Management Credits: 3
- OM 469-569 - Project Management Credits: 2
- OM 471-471L - Capstone Experience and Lab (CI) Credits: 1
- OM 494 - Internship (AW) Credits: 1-3

### Supporting Coursework: 22

- GE 121 - Engineering Design Graphics I Credits: 1
- GE 123 - Computer Aided Drawing Credits: 1
- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3

- CSC 105 - Introduction to Computers Credits: 3
- MATH 121-121L - Survey of Calculus and Lab\* Credits: 5
- STAT 281 - Introduction to Statistics Credits: 3
- STAT 441-541 - Statistical Methods II Credits: 3

Emphasis: 20-21  
*Select One Emphasis*

#### **Electronics Emphasis: 21**

- ET 232-232L - Digital Electronics and Microprocessors and Lab Credits: 3
- ET 320-320L - Analog Electronics and Lab Credits: 3
- ET 330-330L Microcontrollers and Networks and Lab Credits 3
- ET 380-380L - Circuit Boards and Design and Lab Credits: 3
- OM 425 - Production/Operations Management Credits: 3 or OM 465 - Quality Control Applications Credits: 3
- Technical Electives Credits: 6

#### **Manufacturing Emphasis: 20**

- GE 241 - Applied Mechanics Credits: 3
- GE 310 - Geometric Dimensioning and Tolerancing Credits: 2
- MNET 231-231L Manufacturing Processes I and Lab Credits: 3
- OM 425 - Production/Operations Management Credits: 3
- OM 465 - Quality Control Applications Credits: 3
- Technical Electives Credits: 6

#### **Total Required Credits: 120**

#### **Curriculum Notes**

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## **Pharmacy Major**

#### **Program Contact/Coordinator**

Dennis D. Hedge, Dean

SAV 133, 605-688-6197

Jane Mort, Associate Dean for Academic Programs

SAV 133

605-688-4237

E-mail: college.pharmacy@sdstate.edu

www.sdstate.edu/pha/index.cfm

#### **Program Information**

The College of Pharmacy offers a six-year course of study (2-year pre-pharmacy and 4-year professional program phase) leading to an entry level Doctor of Pharmacy degree. The Pharm.D. is a professional degree which enables graduates to pursue diverse career opportunities and ensures that their pharmacy education prepares them for future changes in the profession. The program provides unique opportunities for students who want to make a significant contribution to the health care needs of in today's society.

#### **Admission Information**

Preparation for the Major

In high school the student should take an academic curriculum in preparation for entrance to college. A sound basic education in science and mathematics courses is an essential part of preparation for the study of pharmacy. Good written and verbal communication skills are important. Students planning to transfer from another college or university should consult with the College of Pharmacy early in their academic careers to plan coursework that will transfer to the College of Pharmacy

#### **Application Process**

All students seeking admission to the 4-year professional program leading to the Doctor of Pharmacy degree must submit an application for the professional program. Applications are available from the College of Pharmacy web site. The deadline for applying for

admission for the fall semester is February 1. Limitations in the size of the physical facilities, the number of faculty and the number of advanced pharmacy practice experience sites make it necessary to limit the class size in the professional program. Each student admitted into the professional program is required to authorize and pay for a criminal background check. The background check report is automatically sent to the student and to the College and must be approved by the Admissions Committee.

Selection is competitive and based upon several factors including pre-pharmacy coursework, ACT or PCAT scores, written and oral communication skills, knowledge of the profession, residency status and other factors. Any student who anticipates successful completion of the pre-pharmacy mathematics, science and communication requirements prior to fall semester is eligible to apply.

Notification of acceptance into the professional program will be made by the end of the spring semester. Students admitted to the professional program must submit a non-refundable pharmacy major fee to secure their position for the fall semester.

#### **Curriculum Format**

The curriculum is divided into a 2-year pre-pharmacy and a 4-year professional program phase. The pre-pharmacy courses provide a solid knowledge base and ability to use critical thought processes in the biological and physical sciences.

The four years of the professional program incorporate a solid foundation of pharmaceutical science courses as well as a comprehensive sequence of therapeutics and professional practice courses. Students earn a B.S. in Pharmaceutical Sciences after successful completion of the first two years of the professional program. The application of drug knowledge, basic science, and critical thinking to resolve problems of drug distribution and patient care are emphasized throughout the curriculum. In their first three years of the program, students gain initial practice experience through introductory pharmacy practice experiences in settings such as community and hospital pharmacies.

In the final year of the program, students have an opportunity to apply knowledge and pharmacy care principles to pharmacy practice situations in a series of advanced pharmacy practice experiences in a variety of patient care settings which include patient care areas of hospitals, nursing homes, community pharmacies, hospital pharmacies, Indian Health Service facilities and clinic pharmacies.

#### **Additional Information**

##### **Curriculum Notes**

1. Eligible for B.S. in Pharmaceutical Sciences after completion of all general education requirements, 300 and 400-level required PHA courses, and general elective credits for a total of 138 credits.
2. Successful completion of the capstone activities are required as part of the degree requirements for both the BS in Pharmaceutical Science and the Doctor of Pharmacy degrees.
3. PHA 410 must be completed during the summer between the P1 and P2 years.
4. P3 year courses are taught at the University Center North in Sioux Falls. Advanced Pharmacy Practice Experiences (APPEs) are completed during Summer Sessions, Fall, and Spring Semesters.
5. PHA 610 must be completed during the summer between the P2 and P3 years.
6. General Electives: 6 credits required prior to beginning P3 Year. Credits in excess of System General Education Requirements or IGR Goals may apply toward General Elective requirement.

#### **Pharmacy Regulations**

Students in the College of Pharmacy are governed by the regulations which apply to all students at SDSU but are also governed by requirements established by the College. These requirements are presented in detail in the Pharmacy Student Handbook and include:

1. Pharmacy GPA Calculation – Pharmacy GPA is calculated using all pharmacy PHA prefix courses, excluding 201 & 321.
  - A. For pharmacy courses repeated at SDSU, only the repeated grade will be used to calculate the pharmacy GPA.

- B. For pharmacy courses repeated at another college of pharmacy, a grade of “C” will be used to calculate the pharmacy GPA in place of the grade received for the corresponding course at SDSU (grades of “D” or “F” for pharmacy courses from other pharmacy programs do not satisfy the course requirement).
2. Probation - A student will be placed on “pharmacy probation” when the student’s pharmacy GPA for a semester falls below 2.0. Each subsequent semester while on “pharmacy probation” the student must earn a pharmacy GPA of 2.0 or better or the student will be placed on “refused status”. The student will be on probation for a minimum of one semester while taking pharmacy courses (PHA prefix, excluding 201, & 321) and will remain on “pharmacy probation” until the student’s cumulative Pharmacy GPA is 2.0 or greater.
  3. Graduation - A student must earn a minimum 2.0 grade point average for all pharmacy courses (excluding Pha 201, & 321) to qualify for graduation with a B.S. in Pharmaceutical Sciences or to progress to the P3 year.
  4. Progression –
    - A. To progress to the P3 year a student cannot have more than 9 credits of “D” and/or “F” grades in PHA prefix courses.
    - B. The Exit Exam is a capstone activity that each student must take for completion of the P2 year and progression into the P3 year; it is administered during the spring semester of the P2 year. The exam is intended to determine competency in the general and professional curricular outcomes that are pertinent through the P2 year (see *Outcome Statements for Pharmacy Curriculum* in this Student Handbook). If a student does not pass the P2 exam (passing determined by Assessment Committee based on College and National results), the student will carry out remediation according to instructions provided to the student. The student will also be required to take the exam in the spring of the P3 year, pay for the exam, and achieve a passing score. If a passing score is not achieved in the P3 year, the student will be required to take the exam in the spring of the P4 year, pay for the exam, and achieve a passing score (see *Outcome Statements for Pharmacy Curriculum in this Student Handbook*).
    - C. Standing - Some pharmacy courses have prerequisites such as “P1 Year Standing”, etc. These are defined as follows (*note: “completion” means a passing grade in each pharmacy course and maintaining semester and cumulative PHA GPA requirements*):
 

*P1 Year Standing* - The student must have been admitted into the professional program.

*P2 Year Standing* - Completion of all PHA 300 level required courses and PHA 109.

*P3 Year Standing* - Completion of all PHA 400 level required courses and PHA 610, a bachelor’s degree, and all capstone activities are required to begin the fall semester. Completion of all required PHA 700, non-advanced practice experience courses are required to progress to the subsequent semester.

*P4 Year Standing* - completion of all PHA 600-700 level required, non-advanced practice courses.
    - D. Students must have a C or better (or “S” where applicable) for completion of each 700 level course taken in the Doctor of Pharmacy program.
    - E. If completion of an Advanced Pharmacy Practice Experience (APPE) is not achieved by a student, the student may repeat that APPE the following summer according to availability after the next class has selected their APPEs. If completion of an elective APPE is not achieved, the student may select another elective APPE rather than repeating the same elective APPE. If a student fails completion of more than one APPE, the student will not be allowed to progress to another semester of the program.
2. Evaluate decisions by integrating factors such as, scientific, social, cultural, economic, and ethical issues in decision making.
  3. Take responsibility for the outcomes of each decision made.
- B. Communication Abilities and Skills - Use appropriate and effective communication in all situations.
    1. Demonstrate appropriate comprehension and interpretation in reading, listening, and use of data.
    2. Demonstrate effective writing, speaking, reading, listening, and interpersonal skills.
    3. Demonstrate effective communication skills that apply aspects of cultural competency.
  - C. Self-Assessment and Life-Long Learning Skills - Demonstrate the ability and take responsibility for self-assessment and learning.
    1. Demonstrate the ability to accurately self-assess strengths and areas needing improvement.
    2. Take responsibility for maintaining professional competency through life-long learning.
  - D. Appreciation and Understanding of the Social Sciences, Humanities, Aesthetics (i.e., Fine Arts) and International and Multicultural experiences - Demonstrate an understanding and the ability to effectively use ideas and skills from social sciences, humanities, fine arts, and international and multicultural experiences.
    1. Demonstrate an understanding of concepts from areas such as, music, art, literature, political science, foreign cultures, psychology, religion, sociology, history, and philosophy.
    2. Appreciate the impact that these areas have on society and one’s own personal and professional life.
  - E. Knowledge of the Principles and Application of the Scientific Method - Articulate and apply the principles of science and mathematics in experimental design, analysis of data, and evaluation of the scientific validity of investigational studies.
  - F. Leadership and Social Responsibility - Demonstrate an understanding of the concepts of leadership and social responsibility and apply these concepts to personal and professional life.

### Professional Outcomes

- A. Medication therapy management: Patient-centered - Apply knowledge of the biomedical sciences, pharmaceutical sciences, and medication therapy management principles to provide patient-centered care.
  1. Demonstrate a thorough understanding and ability to use critical thought processes in the following areas: Biomedical Sciences, Pharmaceutical Sciences, Behavioral, Administrative and Social Sciences, Clinical Sciences
  2. Demonstrate professional competency in the provision of patient-centered medication therapy management which includes: Preparation, dispensing and administration of medications in multiple practice settings, Design, implement, monitor, and evaluate safe and effective evidence-based medication therapy regimens to optimize patient outcomes Communicate and collaborate with other health-care, professionals to provide patient-centered care
- B. Medication therapy management: Population-based - Apply knowledge of the biomedical sciences, pharmaceutical sciences, and medication therapy management principles to promote health, wellness and prevent disease with a population-based focus.
  1. Develop and implement population-specific, evidence-based programs and protocols to resolve public health problems.
  2. Communicate and collaborate with other health-care professionals and policy makers to promote public health and wellness.
- C. Acquisition, Use and Communication of Professional Information - Obtain, evaluate, and effectively communicate information in professional settings.
  1. Demonstrate the ability to effectively counsel patients regarding medication therapy and to clearly and concisely document pharmacy practice activities in the patient medical records.
  2. Use current technology to retrieve, analyze, and correctly interpret the professional, lay and scientific literature to effectively communicate medical information and therapeutic recommendations to patients, families, health care providers and the community at large.
  3. Demonstrate the ability to effectively communicate through professional writing.
  4. Demonstrate effective intra- and/or inter-disciplinary skills.
- D. Management Skills - Demonstrate appropriate knowledge and behaviors to effectively manage professional practices.

### Student Learning Outcomes

- A. General Outcomes
 

Critical Thinking and Decision Making Abilities - Demonstrate critical thinking skills in making informed, rational, and responsible decisions.

  1. Demonstrate the use of critical thinking skills to identify problems, goals, and alternatives to assess, prioritize, and solve problems.

1. Apply the laws, regulations, and standards of pharmacy practice in professional settings.
  2. Apply management concepts to effectively manage professional resources.
  3. Demonstrate an understanding of U.S. health care systems and their effect on management, decision-making and operations.
- E. Professional Development and Professional Contributions - Demonstrate the ability for continuous professional development and understand the importance of contributions to the profession.
1. Demonstrate the ability for continuous professional development, and contribute to the profession.
  2. Understand the role and value of professional organizations, and the importance of individual participation.
- F. Values, Ethical Principles, & Professionalism - Demonstrate values & ethical principles & maintain professionalism in all situations.
1. Integrate ethical principles and theories, with the thoughts and values of self and others, to make decisions in personal, societal, and professional situations.
  2. Conduct personal behavior in a professional manner.

### Accreditation, Certification, and Licensure

The PharmD program is accredited by the Accreditation Council for Pharmacy Education, 135 S. LaSalle Street, Suite 4100, Chicago, IL 60603-4810

#### Certification and Licensure

Graduates with a Doctor of Pharmacy degree are eligible to apply for licensure in any state. Licensure as a pharmacist requires graduation with the Pharm.D. degree from an accredited pharmacy program, a certified period of supervised internship experience and successful completion of the North American Pharmacist Licensure Examination and the Multistate Pharmacy Jurisprudence Examination in order to practice as a pharmacist.

These requirements vary slightly from state to state. Students interested in practicing in a particular state should contact the Board of Pharmacy of that state for information concerning requirements.

### Requirements for Doctor of Pharmacy Degree: 218 Credits

System General Education Requirements\*: 34

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: ECON 202\* Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 121-121L\* Credits: 5
- Goal #6 Natural Sciences: CHEM 112-112L, and 114-114L Credits: 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: PHA 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

Major Requirement Credits: 1791,2

- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- CHEM 328-328L - Organic Chemistry II and Lab Credits: (3, 1)
- BIOL 325-325L - Physiology and Lab Credits: 4
- CHEM 326-326L - Organic Chemistry I and Lab Credits: (3, 1)
- MICR 231-231L - General Microbiology and Lab Credits: 4
- STAT 281 - Introduction to Statistics Credits: 3
- PHA 109 - First Year Seminar - Pharmacy\*\* Credits: 2
- PHA 320 - Introduction to Pathophysiology Credits: 3
- PHA 323 - Pharmaceutical Biochemistry Credits: 4
- PHA 324 - Biomedical Science I Credits: 4
- PHA 331 - Pharmaceutics I Credits: 3
- PHA 332-332L - Pharmaceutics II and Lab Credits: 4
- PHA 340-340L - Medicinal Chemistry I and Lab Credits: 4
- PHA 341-341L - Medicinal Chemistry II and Lab Credits: 4
- PHA 367-367L - Pharmacy Practice I and Lab Credits: 2
- PHA 368-368L - Pharmacy Practice II and Lab Credits: 3
- PHA 410 - Introductory Practice Experience I Credits: 3<sup>3</sup>
- PHA 415 - Biopharmaceutics and Pharmacokinetics Credits: 4
- PHA 425 - Biomedical Science II Credits: 3

- PHA 430 - Pharmacy Practice Law Credits: 3
- PHA 442 - Pharmacology I Credits: 5
- PHA 443 - Pharmacology II Credits: 4
- PHA 444 - Toxicology Credits: 2
- PHA 445 - Pharmacotherapeutics I Credits: 2
- PHA 446 - Pharmacotherapeutics II Credits: 3
- PHA 467-467L - Pharmacy Practice III and Lab (AW) Credits: 3
- PHA 468-468L - Pharmacy Practice IV a& Lab (AW) Credits: 3

Must have a bachelor's degree to begin the P3, 600-700 level courses<sup>4</sup>

- PHA 610 - Introductory Practice Experience II Credits: 3<sup>5</sup>
- PHA 714 - Community Pharmacy Practice Experience Credits: 5
- PHA 716 Hospital/Institutional Pharmacy Practice Exp Credits 5
- PHA 723 - Ethics in Healthcare Practice Credits: 2
- PHA 727 - Professional Resource Management Credits: 3
- PHA 741-741L - Public Health and Wellness and Lab Credits: 2
- PHA 742-742L Patient Assessment & Self Care & Lab Credits 2
- PHA 756 - Pharmacotherapeutics III Credits: 4
- PHA 757 - Pharmacotherapeutics IV Credits: 4
- PHA 761 - Pharmacotherapeutics V Credits: 5
- PHA 762 - Pharmacotherapeutics VI Credits: 5
- PHA 767-767L - Pharmacy Practice V and Lab Credits: 3
- PHA 768-768L - Pharmacy Practice VI and Lab Credits: 3
- PHA 772 - Internal Medicine I Practice Experience Credits: 5
- PHA 774 - Ambulatory Care Practice Experience Credits: 5

Assigned Advanced Pharmacy Practice Experiences

Choose 10 credits from the following:

- PHA 700 - Directed Studies Practice Experience Credits: 5
- PHA 706 - Critical Care Practice Experience Credits: 5
- PHA 707 - Infectious Disease Practice Experience Credits: 5
- PHA 717 - Community Health and Patient Monitoring Practice Experience Credits: 5
- PHA 770 - Pediatrics Practice Experience Credits: 5
- PHA 771 - Geriatrics Practice Experience Credits: 5
- PHA 773 - Internal Medicine II Practice Experience Credits: 5
- PHA 775 - Psychiatry Practice Experience Credits: 5
- Advanced Pharmacy Practice Experiences (APPEs) are completed during Summer sessions, Fall, and Spring semesters.

Elective Advanced Pharmacy Practice Experiences

Choose 10 credits from the following:

- PHA 700 - Directed Studies Practice Experience Credits: 5
- PHA 701 - Home Health/Hospice Practice Experience Credits: 5
- PHA 702 - Indian Health Services Practice Experience Credits: 5
- PHA 703 - Pharmacy Administration Practice Experience Credits: 5
- PHA 704 - Nutrition Support Practice Experience Credits: 5
- PHA 705 - Clinical Research Practice Experience Credits: 5
- PHA 708 - Surgery Practice Experience Credits: 5
- PHA 709 - Nephrology Practice Experience Credits: 5
- PHA 710 - Pharmacokinetics Practice Experience Credits: 5
- PHA 711 - Oncology Practice Experience Credits: 5
- PHA 712 - Nuclear Pharmacy Practice Experience Credits: 5
- PHA 713 - Managed Care Practice Experience Credits: 5
- PHA 780 - International Pharmacy Practice Experience Credits: 5
- APPEs not utilized from list of Assigned APPEs

Elective Credits: 10

- General Electives<sup>6</sup> Credits: 6
- Pharmacy Electives, PHA 700 level, nonAPPE Credits: 4

**Total Required Credits: 218**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

# **Physical Education Teacher Education Major**

## **Program Contact/Coordinator**

Patty Hacker, Coordinator  
Department of Health and Nutritional Sciences  
605-688-5218  
E-mail: patty.hacker@sdstate.edu  
http://www.sdstate.edu/hns/

## **Program Information**

A major in Physical Education Teacher Education (PETE) is intended to prepare teacher candidates for entry into public and private PK-12 education settings. Upon completion of the PETE curriculum, the successful completion of student teaching, and the requisite Praxis II content and licensure exams, teacher candidates are eligible to apply for teacher licensure in South Dakota and other states. In addition to completing the courses required of the curriculum, teacher candidates will complete field and clinical experiences related to their coursework, beginning with the first semester they are officially admitted to the PETE program. These experiences are in addition to those field experiences that are part of the Teacher Ed. program.

## **Program Application**

Admission to the PETE program requires completion and submission of an official PETE program application. The application is due to the PETE Coordinator no later than February 1, and can be obtained from the PETE Coordinator or the HNS Department Professional Advisor. Students interested in PETE should complete coursework to meet system and institutional general education requirements. Prior to admission to the program they must also complete PE 170 Fundamental Movement and PE 180 Foundations of HPER/A (and make a minimum grade of C in both PE classes, and in ENG 101, SPCM 101 and MATH 102)

Specific requirements for admission include a minimum cumulative GPA of 2.6, minimum grade of C in ENG 101, SPCM 101, completion of (with a minimum C) PE 170 and PE 180. Application decisions are determined in time for early registration for the following fall semester. Students will either be fully accepted or accepted pending receipt of spring grades. If you have questions about this policy, please contact the PETE Coordinator.

## **Program Assessment**

Technical standards and elements from the National Association of Sport and Physical Education aid in development of assessments used throughout the PETE program. Teacher candidates are assessed frequently on performance as well as teaching and Professional Dispositions. These assessments are kept on file as part of the PETE program. Additionally, the PETE Coordinator monitors semester and cumulative GPA and communicates with teacher candidates.

## **Accreditation, Certification, and Licensure**

### **Student Learning Outcomes**

Upon completion of the physical education teacher education major, teacher candidates:

- know and apply discipline specific concepts critical to the development of physically educated individuals.
- will be physically educated individuals with the knowledge and skills necessary to demonstrate competent movement performance and health-enhancing fitness as delineated in NASPE K-12 Standards.
- will plan and implement developmentally appropriate learning experiences aligned with local, state and national standards to address the diverse needs of all students.
- will use effective communication and pedagogical skills and strategies to enhance student engagement and learning.
- will use assessments and reflection to foster student learning and inform decisions about instruction.
- will demonstrate dispositions that are essential to becoming effective professionals. (*NASPE Standards & Guidelines for Physical Education Teacher Education*, 3rd Ed.; 2009)

## **Course Delivery Format**

The program provides instruction through traditional classroom settings, hybrid and distance learning (on-line) settings, as well as classes that mix of classroom, lab and field/clinical experiences.

## **Requirements for Physical Education Teacher Education Major: 120 Credits**

Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: PSYC 101 and/or SOC 100 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: UC 109\*\* Credits: 2
- Goal #2 Cultural Awareness & Social & Environmental Responsibility Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes

Major Requirements: 51

- PE 170 - Fundamental Movement Credits: 1
- PE 180 - Foundations of HPER/A Credits: 2
- PE 252-252L - Fundamentals of Motor Learning and Development and Lab Credits: 2
- PE 300 - Applied Sport and Exercise Science or PE 350 - Exercise Physiology Credits: 3
- PE 354-354L Prevention & Care of Athletic Injuries & Lab Credits: 2
- PE 454-454L - Biomechanics and Lab Credits: 3
- PE 490 - Seminar (AW) Credits: 2-3
- DANC 130 - Dance Fundamentals Credits: 1
- HLTH 120 - Community Health Credits: 2 or HLTH 212 - Contemporary Health Problems Credits: 2
- RECR 342 - Recreational Sports Programs and Admin Credits: 3
- PE 200 - Professional Preparation: Fitness Credits: 1
- PE 201 - Professional Preparation: Gymnastics Credits: 1
- PE 202 Professional Prep: Individual & Dual Activities Credits: 1
- PE 203 - Professional Preparation: Team Activities Credits: 1
- PE 204 - Professional Preparation: Rhythm & Dance Credits: 1
- PE 341 - Curriculum Development and Evaluation Credits: 2
- PE 335 - Assisting Teaching Credits: 1
- PE 352 - Adapted Physical Education Credits: 2
- PE 360-360L - K-8 Physical Ed. Methods and Lab Credits: 2
- PE 440 - Organization and Admin. of HPER/Athletics Credits: 2
- PE 451-451L - Tests and Measurements and Lab Credits: 2
- PE 480-480L - 7-12 Methods of Teaching PE Credits: 3
- RECR 260 - Fundamentals of Recreation Leadership Credits: 3
- DANC 241-241L Creative Movement for Children & Lab Credits: 2-3
- HLTH 420/520 - Methods of Health Instruction Credits: 2
- HDFS 227 - Human Development and Personality I: Childhood or HDFS 337 - Human Development II: Adolescence Credit: 3

Teacher Education Coursework: 30

Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 1-2
- EPSY 302 - Educational Psychology Credits: 3

Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1

In addition, the following courses must be successfully completed prior to entry into Professional Semester III

- EDFN 365 - Computer-Based Technology and Learning Credits: 2
- HIST 368 - History and Culture of the American Indian Credits: 3
- EDFN 427- Middle School: Philosophy and Application Credits: 2
- EDFN 475 - Human Relations Credits: 3



### Professional Semester III

- ELED 488 - K-8 Student Teaching Credits: 6
- SEED 488 - 7-12 Student Teaching Credits: 6

Electives: 2

### Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Physics Major

### Program Contact/Coordinator

Joel Rauber, Head

Department of Physics

Daktronics Engineering Hall 255

605-688-5428

E-mail: joel.rauber@sdstate.edu

http://www.sdstate.edu/phys

### Program Information

Physics is the foundation of almost all of the science and engineering disciplines. The curriculum in Physics has the flexibility to accommodate a wide range of student interests including engineering, physical science, mathematics, biological science, or health sciences. Graduates find careers in physics research, education, engineering, medicine, nuclear medicine, law, science journalism or alternatively many other choices.

### Program Outcomes

Graduates will be productively employed and will compare favorably in their theoretical and technical knowledge with students completing similar programs nationally. Physics students will have learned to apply technical knowledge; to design an experiment and analyze and interpret the data; to communicate effectively in a team environment; and to use appropriate scientific tools in solving problems. They will have a basic understanding of contemporary issues and professional/ethical responsibilities in a local and global context. Physics graduates will have enhanced learning skills that prepare them to be lifelong learners.

### Additional Academic Requirements

The program requires a Cumulative GPA of 2.0 or above for all physics courses and a GPA 2.0 or above in PHYS 211-213 (or PHYS 111-113) and PHYS 331.

### Course Delivery Format

Physics students learn through hands-on and face to face learning in lecture, laboratory, and field based experiences.

### Requirements for Physics Major: 120 Credits

Bachelor of Science

System General Education Requirements\*: 33

- Goal #1 Written Communication: ENGL 101, and ENGL 201 or ENGL 277<sup>1</sup> Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 123 Credits: 4
- Goal #6 Natural Sciences: PHYS 111-111L and PHYS 113-113L Credits: 8  
or PHYS 211-211L and PHYS 213-213L Credits: 8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: PHYS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34  
Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8 including PHIL 200 or 331 Credits: 3

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 36

- PHYS 316-316L - Measurement Theory and Experiment Design and Lab (AW) Credits: 2
- PHYS 331 - Introduction to Modern Physics Credits: 3
- PHYS 490-590 - Seminar Credits: 1
- MATH 125 - Calculus II \* Credits: 4
- MATH 225 - Calculus III \* Credits: 4
- MATH 321 - Differential Equations Credits: 3
- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1  
OR CHEM 106-106L - Chemistry Survey and Lab\* Credits: 3,1
- CHEM 114-114L - General Chemistry II and Lab \* Credits: 3, 1  
OR CHEM 120-120L - Elementary Organic Chemistry and Lab\* Credits: 3, 1
- CSC 150-150L - Computer Science I Credits: 3
- PHYS 421-521 - Electromagnetism Credits: 4
- PHYS 341 - Thermodynamics Credits: 2 and PHYS 343 - Statistical Physics Credits: 2  
OR PHYS 451-551 - Classical Mechanics Credits: 4  
OR PHYS 471-571 - Quantum Mechanics Credits: 4

Electives: 34

Select one elective group based on career objectives

- Group 1: Professional Physics
- Group 2: Health/Medical Physics
- Group 3: Applied Physics
- Group 4: Flexible Emphasis

Electives: 34

Select one elective group based on career objectives

#### Group 1: Professional Physics

This group prepares students for a career as a professional physicist or a research scientist in a large number of physics-based fields. It is an excellent choice for those intending to pursue graduate study in the sciences and/or engineering.

- PHYS 318 - Advanced Laboratory I Credits: 1
- PHYS 341 - Thermodynamics Credits: 2
- PHYS 343 - Statistical Physics Credits: 2
- PHYS 361 - Optics Credits: 3
- PHYS 418 - Advanced Lab II Credits: 1
- PHYS 451-551 - Classical Mechanics \* Credits: 4
- PHYS 471-571 - Quantum Mechanics \* Credits: 4
- EE 220-220L - Circuits I and Lab Credits: 4
- GE 121 - Engineering Design Graphics I Credits: 1
- GE 123 - Computer Aided Drawing Credits: 1
- NE 435 - Introduction to Nuclear Engineering Credits: 3  
or PHYS 433-533 - Nuclear and Elementary Particle Physics Credits: 3  
or PHYS 439-539 - Solid State Physics Credits: 4
- MATH 331 - Advanced Engineering Mathematics Credits: 3  
or PHYS 481-581 - Mathematical Physics Credits: 4
- Other Electives Credits: 7-9

\*One of these 2 courses is used to fulfill 4 credits of major requirements.

#### Group 2: Health/Medical Physics

This group prepares students who have career objectives in health physics, medical physics, or other areas of physics applications in the

biological sciences. This is the preferred choice for pre-medicine students. Pre-medicine students may desire additional coursework.

- PHYS 318 - Advanced Laboratory I Credits: 1
- PHYS 418 - Advanced Lab II Credits: 1
- NE 337 - Foundations of Health Physics Credits: 3
- PHYS 361 - Optics Credits: 3  
or PHYS 433 - Nuclear & Elementary Particle Physics Credits 3  
or NE 435 - Introduction to Nuclear Engineering Credits: 3
- EE 220-220L - Circuits I and Lab Credits: 4
- STAT 381 - Introduction to Probability and Statistics Credits: 3
- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- BIOL 153-153L - General Biology II and Lab\*Credits: 4
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 290 - Seminar Credits: 1
- BIOL 325-325L - Physiology and Lab Credits: 4
- CHEM 326-326L - Organic Chemistry I and Lab Credits: 3, 1
- CHEM 328-328L - Organic Chemistry II and Lab Credits: 3, 1

\*Six of the credits for these courses are used to fulfill the College of Arts and Sciences biological science requirement.

### Group 3: Applied Physics

This group prepares students for careers in applied physics. Students choosing this group will find opportunities in the many diverse areas of applied physics such as nuclear energy, industrial research and development, and many other areas of interest.

- PHYS 318 - Advanced Laboratory I Credits: 1
- PHYS 341 - Thermodynamics Credits: 2
- PHYS 343 - Statistical Physics Credits: 2
- PHYS 418 - Advanced Lab II Credits: 1
- NE 337 - Foundations of Health Physics Credits: 3  
or PHYS 361 - Optics Credits: 3
- NE 435 - Introduction to Nuclear Engineering Credits: 3  
or PHYS 433- Nuclear & Elementary Particle Physics Credits 3  
or PHYS 439-539 - Solid State Physics Credits: 4
- MATH 331 - Advanced Engineering Mathematics Credits: 3  
or PHYS 481-581 - Mathematical Physics Credits: 4
- EE 220-220L - Circuits I and Lab Credits: 4
- EM 214 - Statics Credits: 3
- EM 321 - Mechanics of Materials Credits: 3
- EM 331 - Fluid Mechanics Credits: 3
- GE 225 - Survey of Machine Tool Applications Credits: 1
- ME 241 - Engineering Materials Credits: 3
- ME 415 - Heat Transfer Credits: 3
- ENGL 277 - Technical Writing in Engineering\* \* Credits: 3
- ECON 202 - Principles of Macroeconomics (G)\*\* Credits: 3
- Other Electives Credit: 1-3

\*These courses are used to fulfill 4 credits of the major requirements.

\*\*These courses are used to fulfill 3 credits of SGR #1 & SGR #3.

### Group 4: Flexible Emphasis

This group prepares students for a non-traditional emphasis area. All plans for Group 4 require working closely with an academic advisor to create a coherent plan of study that must be approved by the Head of the Physics Department. Many non-traditional emphasis areas are possible; examples include Science Journalism, Biophysics, Pre-Law, Chemical Physics, Digital Electronics, Financial Physics, Materials Science, etc. Electives for this option must conform to the follow categories.

- Physics Electives Credits: 7
- Technical Electives\* Credits: 3
- Directed Electives Credits: 24

\*Technical electives will be selected with the assistance of the student's advisor from courses offered by the Electrical Engineering, Physics, Computer Science, Chemistry, Biology, and Mathematics Departments. A complete list of departmentally approved technical electives is available in the Physics Department office. Any departures from this list must be approved by the Head of the Physics Department.

### Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Physics Major - Science Teaching Specialization

### Program Contact/Coordinator

Joel Rauber, Head  
Department of Physics  
Daktronics Engineering Hall 255  
605-688-5428  
E-mail: joel.rauber@sdstate.edu  
http://www.sdstate.edu/phys

### Program Information

Physics is the foundation of almost all of the science and engineering disciplines. The curriculum in Physics has the flexibility to accommodate a wide range of student interests including engineering, physical science, mathematics, biological science, or health sciences. Graduates find careers in physics research, education, engineering, medicine, nuclear medicine, law, science journalism or alternatively many other choices.

### Program Outcomes

Graduates will be productively employed and will compare favorably in their theoretical and technical knowledge with students completing similar programs nationally. Physics students will have learned to apply technical knowledge; to design an experiment and analyze and interpret the data; to communicate effectively in a team environment; and to use appropriate scientific tools in solving problems. They will have a basic understanding of contemporary issues and professional/ethical responsibilities in a local and global context. Physics graduates will have enhanced learning skills that prepare them to be lifelong learners.

### Additional Academic Requirements

The program requires a Cumulative GPA of 2.0 or above for all physics courses and a GPA 2.0 or above in PHYS 211-213 (or PHYS 111-113) and PHYS 331.

### Accreditation, Certification and Licensure

#### Accreditation

National Council for Accreditation of Teacher Education Programs  
South Dakota Department of Education

#### Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Course Delivery Format

Physics students learn through hands-on and face to face learning in lecture, laboratory, and field based experiences.

### Requirements for Physics Major - Science Teaching Specialization: 120 Credits

Bachelor of Science

System General Education Requirements\*: 33

- Goal #1 Written Communication: ENGL 101 and ENGL 201 or ENGL 277 Credits: 6
- Goal #2 Oral Communication: SPCM 101 Credits: 3
- Goal #3 Social Sciences/Diversity: SOC 100 and/or PSYC 101 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 123 Credits: 4
- Goal #6 Natural Sciences: PHYS 211-211L and 213-213L Credits: 8

#### Institutional Graduation Requirements\*\*:

- Goal #1 First Year Seminar: PHYS 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: ANTH 421\*\* Credits: 3

#### College of Arts & Sciences Bachelor of Science Requirements: 34 Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences: BIOL 101-101L and BIOL 103-103L Credits: 6  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12 including EPSY 302 Credits: 3
- Humanities Credits: 8 including PHIL 200 or PHIL 331 Credits:3

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

#### Major Requirements: 39

- PHYS 316-316L - Measurement Theory and Experiment Design and Lab (AW) Credits: 2
- PHYS 331 - Introduction to Modern Physics Credits: 3
- PHYS 421-521 - Electromagnetism Credits: 4
- PHYS 341 - Thermodynamics **and** PHYS 343 - Statistical Physics Credits: 4  
**OR** PHYS 451-551 - Classical Mechanics Credits: 4  
**OR** PHYS 471-571 - Quantum Mechanics Credits: 4
- PHYS 490-590 - Seminar Credits: 1
- PHYS 337 - Foundations of Health Physics Credits: 3
- PHYS 185-185L – Intro to Astronomy I and Lab\* Credits: 3  
**OR** PHYS 187-187L - Intro to Astronomy II & Lab\* Credits: 3
- MATH 125 - Calculus II \* Credits: 4
- MATH 225 - Calculus III \* Credits: 4
- MATH 321 - Differential Equations Credits: 3
- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1  
**OR** CHEM 106-106L - Chemistry Survey and Lab\* Credits: 3,1
- CHEM 114-114L - General Chemistry II and Lab \* Credits: 3, 1  
**OR** CHEM 120-120L Elementary Organic Chem.& Lab Credits 3, 1

#### Teaching Specialization Requirements

##### Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

##### Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0

##### Complete prior to entry into Professional Semester III

- SEED 413 - 7-12 Science Methods (COM) Credits: 3
- Native American Course Approved for Teacher Education Credits: 3 (if not already completed above)  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
**OR** AIS/ANTH 421 - Indians of North America\*\*
- EDFN 365 - Computer-Based Technology & Learning Credits: 2
- EDFN 427-Middle School: Philosophy & Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

##### Professional Semester III

- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 Social Foundations, Management and Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching or SEED 488 - 7-12 Student Teaching Credits: 8
- \*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED 488 and ELED 488

#### Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

#### Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Political Science Major

#### Program Coordinator/Contact

April Brooks, Head  
Department of History, Political Science, Philosophy, and Religion  
Box 0510 West Hall  
605-688-4311  
E-mail: april.brooks@sdstate.edu

#### Program Information

The study of Political Science examines politics, governments, and political processes. The Bachelor of Science and Bachelor of Arts degrees in Political Science prepare graduates for work in government agencies, party headquarters, political consulting firms, advocacy organizations, business, or non-profit agencies. The flexibility of the major also positions students for law school and other professional or graduate degree programs.

#### Program Emphases

##### Criminal Justice Emphasis

Consult advisor to develop a plan of study with the Criminal Justice Minor to prepare for career opportunities in law enforcement, justice administration or various justice system agencies.

##### General Political Science Emphasis

Students choose to take a very flexible program in Political Science. Such a program might be designed to lead to graduate work in Political Science, or employment in both the public & private sectors.

##### Pre-law Emphasis

Although a particular major is not specified, Political Science is a common choice because of its flexibility. Consult advisor to develop a plan of study in conjunction with law school entrance requirements. Review the (Pre-) Law information for further suggested curriculum.

##### Public Administration Emphasis

Students interested in working in government, non-profit organizations, or advocacy groups at the local, state, or national level should plan to take several courses related to public administration and American politics. Students are encouraged to take the practicum or an internship with a government agency or non-profit organization. Students with this focus might pursue the Leadership and Management of Nonprofit Organizations minor.

##### Research/Graduate School Emphasis

Students wishing to pursue graduate studies in political science or careers in political opinion research should consider the research oriented alternative courses which may be applied toward the major.

##### Teaching Emphasis

Students preparing to teach secondary school, take education block prerequisite courses in the sophomore and junior years. Consult with the department head of the Teaching, Learning, and Leadership Department prior to the junior year. Set aside one semester for the education block and off-campus teaching assignment during the senior year

## Curriculum Objectives

Political science courses are designed to achieve the following objectives:

- convey the values and traditions of our democratic governmental institutions and processes and encourage students to assert their talents in preserving and nurturing those values and traditions through participation in the body politic;
- promote global awareness and understanding;
- engender critical thinking and a high proficiency in communication skills;
- serve the other social sciences as a cognate field;
- provide the student majoring in political science with foundation and advanced courses in the many sub-disciplines of political science which, in turn, will contribute to the student's intellectual growth and occupational pursuits.

## Course Delivery Format

The program provides courses online and face to face on campus and at various off-campus attendance centers.

## Requirements for Political Science Major: 120 Credits

Bachelor of Arts and Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication: Credits: 6
- Goal #2 Oral Communication: Credits: 3
- Goal #3 Social Sciences/Diversity Credits: (except POLS) 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\* Credits: 5

- Goal #1 First Year Seminar UC 109 Credits: 2
- Goal #2 Culture Awareness and Social and Environmental Responsibility (POLS 210 or 253 suggested) Credits: 3

College Requirements: 28-34

Bachelor of Arts

- Modern Languages\* (completion and competency in one language at the 202 level or a department-approved advanced upper division language course) Credits: 3-14
- Humanities Credits: 8
- Social Sciences (except POLS) Credits: 12

Bachelor of Science

- Natural Sciences Credits: 14
  - With 6 credits of Biological Sciences
  - With 8 credits of Physical Sciences
- Humanities Credits: 6
- Social Sciences (except POLS) Credits: 8

SGRs, IGRs, and/or Major coursework may satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 36

- POLS 100 - American Government \*
- POLS 280 - Political Inquiry
- POLS 461 - Early Political Philosophy (AW)  
OR POLS 462 - Modern Political Philosophy (AW)
- International or Comparative Political Science Courses Credits 6
- POLS 300-400 Level Elective Credits: 21
- Electives: 32-35
  - POLS 253 - Current World Problems \* \*\* (G) or other Globalization Requirement Credits: 3
- General Elective Credits: 32

**Total Required Credits: 120**

## Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Psychology Major

### Program Contact/Coordinator

Brad Woldt, Head

Department of Psychology

Scobey Hall 336

605-688-4322

E-mail: [bradley.woldt@sdstate.edu](mailto:bradley.woldt@sdstate.edu)

<http://www.sdstate.edu/psych/index.cfm>

### Program Information

Psychology is the discipline concerned with the study of behavior and mental processes. It is a tremendously broad field spanning subject matter from the biological to social sciences. The study of psychology prepares students for work in fields like health care, counseling, education, social work, human resources, statistics, probation and corrections, business, politics, public relations, and more. Psychologists are commonly found working in conjunction with other professionals to contribute to every area of society. Students interested in a major in psychology may pursue the major with one of two emphases, graduate school preparation and psychological services. Advisors assist students to personalize curriculum plans to meet career and educational goals.

### Psychology Emphases

Students interested in preparation for a specific area may pursue the major with one of two emphases.

### Graduate School Preparation Emphasis

The Graduate School Preparation Emphasis is designed to provide preparation for continued training in psychology at the graduate level. It establishes a strong foundation in principles of psychology, techniques for analyzing behavior and mental processes, the history of psychology and contemporary research. Students engage in hands-on research training and complete an undergraduate research project.

### Psychological Services Emphasis

The Psychological Services emphasis is designed to provide preparation for employment working as a diagnostic and therapeutic aide or case manager in human service and/or nonprofit agencies with a Bachelor of Science degree. The program for this emphasis includes familiarization with standard assessment protocols and techniques of therapy, as well as a supervised senior internship.

### Student Learning Outcomes

- Identify and explain the scientific foundation of psychology; use and evaluate scientific evidence for psychological claims.
- Recognize the existence of universal and culture-bound psychological principles; exhibit sensitivity, appreciation, and respect for all dimensions of human diversity.
- Demonstrate ethical knowledge and skills appropriate to level of experience and education.
- Demonstrate knowledge of theory and research central to the four basic content domains of psychology: biological, learning and cognition, life-span developmental; and sociocultural approaches.
- Gain an appreciation of the application of psychological knowledge through experiences applied settings, such as internships, student research, or service learning.

### Course Delivery Format

Psychology courses are delivered at multiple locations (Brookings Main Campus and the University Center in Sioux Falls), and in multiple formats including face-to-face lecture, discussion, and laboratory courses, as well as online courses.

**Requirements for Psychology Major: 120 Credits**

## Bachelor of Science

### System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101, and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: PSYC and elective (3 credits not PSYC) Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences Credits: 6

### Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

### College of Arts & Sciences Bachelor of Science Requirements: 34 Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences (non PSYC) Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

### Major Requirements: 39

- PSYC 101 - General Psychology \* \*\* Credits: 3
- PSYC 202 - The Psychology Major Credits: 3
- PSYC 210 - Introduction to Biopsychology Credits: 3
- PSYC 375-375L Research Methods in Psychology & Lab Credits: 4
- PSYC 376-376L Research Methods II and Lab (AW) Credits: 4
- PSYC 409 History & Systems of Psychology (AW)(G)Credits 3

#### Domain I- Choose one from the following:

- PSYC 244 - Environmental Psychology \*\* Credits: 3
- PSYC 287 - Controversial Issues in Psychology Credits: 3
- PSYC 289 - Pseudoscience and Psychology Credits: 3

#### Domain II- Choose two from the following:

- PSYC 301 - Sensation and Perception Credits: 3
- PSYC 305 - Learning and Conditioning Credits: 3<sup>+</sup>
- PSYC 406 - Cognitive Psychology Credits: 3<sup>+</sup>
- PSYC 411 - Physiological Psychology Credits: 3<sup>+</sup>
- PSYC 414 - Drugs and Behavior Credits: 3

#### Domain III- Choose one from the following:

- PSYC 324 - Psychology of Aging Credits: 3
- PSYC 327 - Child Psychology \*\* Credits: 3<sup>+</sup>
- PSYC 364 - Cross Cultural Psychology\*\* Credits: 3
- PSYC 367 - Psychological Gender Issues Credits: 3<sup>+</sup>

#### Domain IV- Choose one from the following:

- PSYC 417 - Health Psychology \*\* Credits: 3
- PSYC 441 - Social Psychology \*\* Credits: 3<sup>+</sup>
- PSYC 451 - Psychology of Abnormal Behavior \*\* Credits: 3<sup>+</sup>
- PSYC 461 - Theories of Personality Credits: 3

#### Domain V- Choose one from the following:

- PSYC 331 -Industrial and Organizational Psychology Credits: 3
- PSYC 357 - Psychological Therapies Credits: 3
- PSYC 358 - Behavior Modification Credits: 3
- PSYC 427 - Child Psychopathology Credits: 3
- PSYC 440-540 - Forensic Psychology Credits: 3
- PSYC 477 - Psychology Testing and Measurement Credits: 3

#### Domain VI- Choose one from the following:

Lab courses must be taken concurrently with the corresponding lecture course.

- PSYC 301L - Sensation and Perception Lab Credits: 1

- PSYC 305L - Learning and Conditioning Lab Credits: 1
- PSYC 367L - Psychological Gender Issues Laboratory Credits 1
- PSYC 406L - Cognitive Psychology Laboratory Credits: 1
- PSYC 441L - Social Psychology Laboratory Credits: 1
- PSYC 477L - Psychology Testing & Measurement Lab Credits 1

Electives: 33-34

**Total Required Credits: 120**

### Curriculum Notes

Courses used for the major require a minimum grade of C.

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Psychology Major - Teaching Specialization

### Program Contact/Coordinator

Brad Woldt, Head

Department of Psychology

Scobey Hall 336

605-688-4322

E-mail: [bradley.woldt@sdstate.edu](mailto:bradley.woldt@sdstate.edu)

<http://www.sdstate.edu/psych/index.cfm>

### Program Information

Psychology is the discipline concerned with the study of behavior and mental processes. The teaching specialization prepares students to qualify for certification to teach psychology in one of thousands of schools nationwide. Students pursuing this specialization should contact the College of Education and Human Sciences before their junior year.

### Accreditation, Certification and Licensure

Accreditation

National Council for Accreditation of Teacher Education Programs

South Dakota Department of Education

Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Student Learning Outcomes

- Identify and explain the scientific foundation of psychology; use and evaluate scientific evidence for psychological claims.
- Recognize the existence of universal and culture-bound psychological principles; exhibit sensitivity, appreciation, and respect for all dimensions of human diversity.
- Demonstrate ethical knowledge and skills appropriate to level of experience and education.
- Demonstrate knowledge of theory and research central to the four basic content domains of psychology: biological, learning and cognition, life-span developmental; and sociocultural approaches.
- Gain an appreciation of the application of psychological knowledge through experiences applied settings, such as internships, student research, or service learning.

### Course Delivery Format

Psychology courses are delivered at multiple locations (Brookings Main Campus and the University Center in Sioux Falls), and in multiple formats including face-to-face lecture, discussion, and laboratory courses, as well as online courses.

## Requirements for Psychology Major - Teaching Specialization: 120 Credits

Bachelor of Science

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: PSYC 101 and 3 credits not PSYC Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34

Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences (non PSYC) Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 45

- PSYC 101 - General Psychology \* \*\* Credits: 3
  - PSYC 202 - The Psychology Major Credits: 3
  - PSYC 210 - Introduction to Biopsychology Credits: 3
  - PSYC 375-375L - Research Methods in Psych. & Lab Credits: 4
  - PSYC 376-376L - Research Methods II & Lab (AW) Credits: 4
  - PSYC 409 History & Systems of Psychology (AW) (G) Credits: 3
- Domain I- Complete one of the following: 3
- PSYC 244 - Environmental Psychology \*\* Credits: 3
  - PSYC 287 - Controversial Issues in Psychology Credits: 3
  - PSYC 289 - Pseudoscience and Psychology Credits: 3
- Domain II- Complete both of the following: 6
- PSYC 305 - Learning and Conditioning Credits: 3
  - PSYC 406 - Cognitive Psychology Credits: 3
- Domain III- Complete both of the following: 6
- PSYC 327 - Child Psychology \*\* Credits: 3
  - PSYC 367 - Psychological Gender Issues Credits: 3
- Domain IV- Complete one of the following: 6
- PSYC 441 - Social Psychology \*\* Credits: 3
  - PSYC 451 - Psychology of Abnormal Behavior \*\* Credits: 3
- Domain V- Complete one of the following: 3
- PSYC 331 - Industrial and Organizational Psychology Credits: 3
  - PSYC 357 - Psychological Therapies Credits: 3
  - PSYC 358 - Behavior Modification Credits: 3
  - PSYC 427 - Child Psychopathology Credits: 3
  - PSYC 440-540 - Forensic Psychology Credits: 3
  - PSYC 477 - Psychology Testing and Measurement Credits: 3
- Domain VI- Complete one of the following: 1
- Lab course must be taken concurrently with the corresponding lecture course.*
- PSYC 301L - Sensation and Perception Lab Credits: 1
  - PSYC 305L - Learning and Conditioning Lab Credits: 1
  - PSYC 367L - Psychological Gender Issues Laboratory Credits: 1
  - PSYC 406L - Cognitive Psychology Laboratory Credits: 1
  - PSYC 441L - Social Psychology Laboratory Credits: 1
  - PSYC 477L Psychology Testing & Measurement Lab Credits: 1

Teaching Specialization Requirements

Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0

Complete prior to entry into Professional Semester III

- SEED 415 - 7-12 Social Science Methods (COM) Credits: 3
- Native American Course Approved for Teacher Education Credits: 3
- AIS/HIST 368 - History and Culture of the American Indian\*\* Credits: 3  
OR AIS/ANTH 421 - Indians of North America\*\* Credits: 3
- EDFN 365 - Computer-Based Technology and Learning Credits: 2
- EDFN 427-527 - Middle School: Philosophy and Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

Professional Semester III

- SPED 405 - Educating Secondary Students with Disabilities Credits: 2
- SEED 410 - Social Foundations, Mgmt and Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching or SEED 488 - 7-12 Student Teaching Credits: 8

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED 488 and ELED 488

Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

**Total Required Credits: 120**

### Curriculum Notes

Courses used for the major require a minimum grade of C.\*

The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Range Science Major

### Program Contact/Coordinator

Alexander (Sandy) Smart, Professor  
Department of Natural Resource Management  
Animal Science Building, Room 219  
605-688-4017  
E-mail: Alexander.Smart@sdstate.edu  
www.sdstate.edu/nrm/

### Program Information

Range Science focuses on the scientific study of rangelands, arid regions, grasslands, as well as resource management for maximum benefit and environmental balance. Graduates are well prepared for careers in a variety of fields including ranching and other agricultural pursuits, as well as agency and private sector positions. Students can choose one of two emphases.



- The Rangeland Ecology and Management emphasis is available for students who wish to find employment opportunities with agencies such as the Natural Resource Conservation Service.
- The Ranch Management emphasis is for those with an interest in careers focused on grasslands, grazing, and cattle management.

### Accreditation, Certification, and Licensure

The Range Science major is accredited by the Society for Range Management.

### Course Delivery Format

The Range Science program is on campus and engages students in experiential learning in lecture, laboratory, and field based settings.

### Requirements for Range Science Major: 120 Credits

Bachelor of Science in Agriculture

System General Education Requirements\*: 31-32

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 3
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity SOC 100 (G) or SOC 150 (G) or SOC 240 (G) or ANTH 210 (G) and ECON 201 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 (or higher) Credits: 3
- Goal #6 Natural Sciences: BIOL 153-153L or BOT 201-201L and CHEM 106-106L or CHEM 112-112L Credits: 7-8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: NRM 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

Major Requirement Credits: 34

- AS 101-101L - Intro to Animal Science and Lab Credits: 3
- AS 233-233L - Applied Animal Nutrition and Lab Credits: 4
- AS 474-474L - Cow/Calf Management and Lab Credits: 3 or AS 477-477L - Sheep and Wool Production & Lab Credits: 3
- RANG 105-105L - Introduction to Range Management and Lab Credits: 3
- RANG 210-210L - Range Plant Identification & Lab Credits: 2
- RANG 215 - Introduction to Integrated Ranch Management Credits: 3
- RANG 321 - Wildland Ecosystems Credits: 3
- RANG 425-425L/525-525L - Rangeland Assessment and Monitoring Lab Credits: 3
- RANG 415-415L - Range Improvements and Grazing Management and Lab Credits: 4
- RANG 421-421L - Grassland Fire Ecology Credits: 3

Capstone Course: 3

Select one of the following

- ABS 475-475L - Integrated Natural Resource Management and Lab (AW) Credits: 3
- RANG 485-485L - Advanced Integrated Ranch Management and Lab Credits: 3

Required Support Course Credits: 38

- PS 310-310L - Soil Geography and Land Use Interpretation and Lab\*\* (G) Credits: 3  
OR PS 362-362L - Environmental Soil Management and Lab\*\* Credits: 3
- ENGL 379 - Technical Communication (AW) Credits: 3  
OR SPCM 215 - Public Speaking \* Credits: 3
- PS 313 - Forage Crop and Pasture Management Credits: 3  
OR HO/BOT 303-303L - Forest Ecology and Management and Lab Credits: 3  
OR WL 220 - Introduction to Wildlife and Fisheries Management Credits: 3

- BOT 419-419L - Plant Ecology and Lab (G) Credits: 3  
OR EES 425-425L/525-525L - Disturbance Ecology and Lab Credits: 4  
OR NRM 440-440L - Restoration Ecology and Lab Credits: 4
- PS 213-213L - Soils and Lab \* \*\* Credits: 3
- AGECE 271-271L - Farm and Ranch Management and Lab Credits: 4
- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- BOT 301-301L - Plant Systematics Credits: 4
- BOT 327-327L - Plant Physiology and Lab Credits: 4
- GEOG 472 - Introduction to GIS Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3

Emphasis: 13-15

Choose among the following courses in one of the two emphases.

### Rangeland Ecology and Management Emphasis: 13-15

- BOT 405-405L/505-505L - Grasses and Grasslike Plants and Lab Credits: 3
- BIOL 311-311L - Principles of Ecology and Lab Credits: 3, 1
- HO 303-303L - Forest Ecology and Mgmt and Lab Credits: 3
- PS 313 - Forage Crop and Pasture Management Credits: 3
- RANG 400 - Judging Teams Credits: 1-4
- WL 220 - Introduction to Wildlife & Fisheries Mgmt Credits: 3
- WL 411-411L - Principles of Wildlife Mgmt & Lab Credits: 3

### Ranch Management Emphasis: 13-15

- RANG 400 - Judging Teams Credits: 1-3
- ACCT 210 - Principles of Accounting I Credits: 3
- AGECE 354 - Agricultural Marketing and Prices Credits: 3
- AGECE 430/530 - Advanced Ag. Marketing and Prices Credits: 3
- AS 285-285L Livestock Evaluation & Marketing & Lab Credits 4
- AS 332 - Livestock Breeding and Genetics Credits: 4
- PS 313 - Forage Crop and Pasture Management Credits: 3

### Total Required Credits: 120

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Sociology Major

### Program Contact/Coordinator

Mary Emery, Head

Department of Sociology and Rural Studies

Scobey Hall 224

605-688-4132

E-mail: [Mary.Emery@sdstate.edu](mailto:Mary.Emery@sdstate.edu)

<http://www.sdstate.edu/soc/>

### Program Information

The world awaits all who have a major in sociology. Students receive a broad liberal arts education that will qualify them for many different kinds of occupations, such as group work with youth or the elderly, community development, business, college admissions, family planning, criminal justice, and other government jobs. Most match their sociology major with a major or a minor in economics, psychology, human development and family studies, leadership and management of nonprofit organizations, and political science.

### Additional Academic Requirements

A minimum GPA of 2.2 and at least a C in all major courses is required.

### Course Delivery Format

The program offers coursework on campus, on-line, and at attendance centers around the state.

### Requirements for Sociology Major: 120 Credits

Bachelor of Science and Bachelor of Arts in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication Credits: 6
- Goal #2 Oral Communication Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Requirements: 17-34

Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 33

- SOC 100 - Introduction to Sociology \* (G) Credits: 3
- SOC 307 - Research Methods I Credits: 3
- SOC 308 - Research Methods II Credits: 3
- SOC 403 - Sociological Theory Credits: 3
- SOC/ANTH Elective Credits: 21

Electives: 38-55

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Sociology Major - Human Resources Specialization

### Program Contact/Coordinator

Mary Emery, Head  
Department of Sociology and Rural Studies  
Scobey Hall 224  
605-688-4132  
E-mail: Mary.Emery@sdstate.edu  
<http://www.sdstate.edu/soc/>

### Program Information

Graduates who go into human resources work in employee recruitment, personnel management, customer relations, marketing, and sales. Students are required to take Business, Economics, and Accounting electives. An internship is strongly encouraged.

### Additional Academic Requirements

A minimum GPA of 2.2 and at least a C in all major courses is required.

### Course Delivery Format

The program offers coursework on campus, on-line, and at attendance centers around the state.

### Requirements for Sociology Major - Human Resources Specialization: 120 Credits

Bachelor of Science in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication Credits: 6
- Goal #2 Oral Communication Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34

Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 38

Specialization Core: 21

- SOC 100 - Introduction to Sociology \* (G) Credits: 3
- SOC 307 - Research Methods I Credits: 3
- SOC 308 - Research Methods II Credits: 3
- SOC 403 - Sociological Theory Credits: 3
- SOC 353 - Sociology of Work Credits: 3
- SOC 453 - Industrial Sociology Credits: 3
- ACCT 210 - Principles of Accounting I Credits: 3

Specialization Electives: 17

Directed Electives Courses: 12

*\*Strongly Recommended Courses for the Human Resources Specialization*

- BADM 350 - Legal Environment of Business Credits: 3
- BADM/MGMT 360 - Organization and Management Credit: 3
- BADM/MGMT 460 - Human Resource Management Credits 3\*
- BADM/ECON 370 - Marketing Credits: 3
- CA 289 - Consumers in the Market Credits: 3
- CSC 105 - Introduction to Computers Credits: 3
- CSC 205 - Advanced Computer Applications Credits: 3
- CSC 325 - Management Information Systems Credits: 3
- ECON 101 - Global Economy \* (G) Credits: 3
- ECON 201 - Principles of Microeconomics \* \*\* Credits: 3
- ECON 433 - Public Finance (AW) Credits: 3
- ECON 467 - Labor Law and Economics Credits: 3
- ECON 431-531 - Managerial Economics Credits: 3
- ECON 450-550 - Industrial Organization Credits: 3
- ENGL 379 - Technical Communication (AW) Credits: 3\*
- POLS 320 - Public Administration Credits: 3
- POLS 454 - International Law and Organization Credits: 3
- PSYC 331 - Industrial and Organizational Psychology Credits: 3
- PSYC 477 - Psychology Testing and Measurement Credits: 3
- PSYC 331 - Industrial and Organizational Psychology Credits: 3
- SOC 330 - Self and Society Credits: 3
- SOC 350 - Race and Ethnic Relations (G) Credits: 3
- SOC 433-533 - Leadership and Organizations Credits: 3\*
- SPAN 350 - Spanish for Business Communication Credits: 3
- SPCM 215 - Public Speaking \* Credits: 3\*

Department Electives Courses: 5

- SOC 494 - Internship Credits: 1-12 *Strongly Recommended*
- ANTH 210 - Cultural Anthropology \* Credits: 3
- ANTH 220 - Physical Anthropology \* Credits: 3
- ANTH 421-521 - Indians of North America Credits: 3
- ANTH 491-591 - Independent Study Credits: (1-3)
- ANTH 492-592 - Topics Credits: 1-3
- ANTH 494 - Internship Credits: 1-12
- ANTH 496 - Field Experience Credits: 1-12
- SOC 150 - Social Problems \* (G) Credits: 3
- SOC 240 - The Sociology of Rural America\* (G) Credits: 3
- SOC 250 - Courtship and Marriage \* Credits: 3
- SOC 270 - Introduction to Social Work Credits: 3
- SOC 271 - Social Work Skills and Methods I Credits: 3
- SOC 325 - Domestic and Intimate Violence Credits: 3
- SOC 351 - Criminology Credits: 3
- SOC 354 - Victimology Credits: 3
- SOC 382 - The Family Credits: 3
- SOC 400 - Social Policy Credits: 3
- SOC 402-502 - Social Deviance Credits: 3
- SOC 440 - Urban Sociology (G) Credits: 3
- SOC 455-555 - Juvenile Delinquency Credits: 3
- SOC 456-556 - Community Corrections Credits: 3
- SOC 460-560 - Advanced Criminology Credits: 3
- SOC 462-562 - Population Studies \*\* Credits: 3
- SOC 483 - Sociology of Gender Roles (G) Credits: 3
- SOC 490 - Seminar Credits: 1-3
- SOC 491 - Independent Study Credits: 1-3
- SOC 492 - Topics Credits: 1-3

General Electives: 31-37

**Total Required Credits: 120**

## Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Sociology Major - Human Services Specialization

### Program Contact/Coordinator

Mary Emery, Head

Department of Sociology and Rural Studies

Scobey Hall 224

South Dakota State University

605-688-4132

E-mail: [Mary.Emery@sdstate.edu](mailto:Mary.Emery@sdstate.edu)

<http://www.sdstate.edu/soc/>

### Program Information

The specialization designed for those interested in "working with people" in a variety of social service type agencies. Graduates find jobs working with the elderly, youths, families at risk, victims of domestic violence, substance abusers, and the poor. Students in this program must take classes in social work and service learning. They must also complete an internship. Coursework in criminal justice and human development complements this specialization.

### Additional Academic Requirements

A minimum GPA of 2.2 and at least a C in all major courses is required.

### Course Delivery Format

The program offers coursework on campus, on-line, and at attendance centers around the state.

### Requirements for Sociology Major - Human Services

#### Specialization: 120 Credits

Bachelor of Science in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication Credits: 6
- Goal #2 Oral Communication Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34

Bachelor of Science

- Natural Science Credits: 14

With 6 credits of Biological Sciences

With 8 credits of Physical Sciences

- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Specialization Requirements: 45

- SOC 100 - Introduction to Sociology \* (G) Credits: 3
- SOC 270 - Introduction to Social Work Credits: 3
- SOC 271 - Social Work Skills and Methods I Credits: 3
- SOC 286 - Service Learning Credits: 1-3
- SOC 307 - Research Methods I Credits: 3
- SOC 308 - Research Methods II Credits: 3
- SOC 400 - Social Policy Credits: 3
- SOC 403 - Sociological Theory Credits: 3
- SOC 494 - Internship Credits: 12
- SOC/ANTH Elective Credits: 9

Electives: 30

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Sociology Major - Teaching Specialization

### Program Contact/Coordinator

Mary Emery, Head

Department of Sociology and Rural Studies

Scobey Hall 224

605-688-4132

E-mail: [Mary.Emery@sdstate.edu](mailto:Mary.Emery@sdstate.edu)

<http://www.sdstate.edu/soc/>

### Program Information

Sociology majors often make strong teachers because of their understanding of how people behave and interact. Students in this specialization gain mastery of sociology by studying and applying contemporary sociological theory and research to social issues such as globalization, social inequality, diversity, family, religion, or population. Additionally, students complete pedagogy courses to prepare for employment in middle school or senior high level teaching.

### Accreditation, Certification, and Licensure

Accreditation

National Council for Accreditation of Teacher Education Programs

South Dakota Department of Education

Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Additional Academic Requirements

A minimum GPA of 2.6 and at least a C in all major courses is required.

### Course Delivery Format

The program offers coursework on campus, on-line, and at attendance centers around the state.

## Requirements for Sociology Major - Teaching Specialization: 120 Credits

Bachelor of Science in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication Credits: 6
- Goal #2 Oral Communication Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility: SOC 462\*\* Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34

Bachelor of Science

- Natural Science Credits: 14

With 6 credits of Biological Sciences

With 8 credits of Physical Sciences

- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 33

- SOC 100 - Introduction to Sociology \* (G) Credits: 3
- SOC 307 - Research Methods I Credits: 3
- SOC 308 - Research Methods II Credits: 3
- SOC 403 - Sociological Theory Credits: 3
- SOC/ANTH Elective Credits: 21

Electives: 0-17

Teaching Specialization Requirements

Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0

Complete prior to entry into Professional Semester III

- SEED 415 - 7-12 Social Science Methods (COM) Credits: 3
- Native American Course Approved for Teacher Education Credits: 3  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
OR AIS/ANTH 421 - Indians of North America\*\*
- EDFN 365 - Computer-Based Technology & Learning Credits 2
- EDFN 427-527 - Middle School: Philosophy and Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

Professional Semester III

- SPED 405 - Educating Secondary Students with Disabilities Credits: 2
- SEED 410 - Social Foundations, Management & Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching or SEED 488 - 7-12 Student Teaching Credits: 8

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED 488 and ELED 488

#### Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

#### Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Spanish Major

#### Program Contacts/Coordinator

Maria T. Ramos-Garcia, Head  
Christine Garst-Santos, Spanish Program Coordinator  
Department of Modern Languages and Global Studies  
SWG 121 605-688-5101  
<http://www.sdstate.edu/mfl/index.cfm>

#### Program Information

The Spanish major at SDSU consists of language, culture, literature and professional courses to prepare students for careers in which they will use Spanish as a language for communication. The major offers flexibility and can easily be added to another major.

#### Student Learning Outcomes

Graduates with a Spanish major should be able to:

- Speak, read and write Spanish at the intermediate-high or advanced level
- Demonstrate knowledge and understanding of the cultures and communication cultures of the Spanish-speaking world
- Demonstrate knowledge of the Spanish civilizations and its cultural products, such as literature, art, government, etc.

#### Additional Academic Requirements

Major Coursework: A minimum grade of "C" is required for a Spanish course to count towards the major or minor. Major courses used to fulfill the Institutional requirements (IGRs) must be different from those taken to fulfill the General Education requirements (SGRs).

Placement: Students who have a background in modern language study before entering the University should take the Placement Examination to determine the appropriate course in which to enroll. Credit may be obtained for courses exempted upon completion of one course in the department, with a grade of "C" or better, and the payment of the established fee to the Academic Evaluation and

Assessment Office. Please refer to Modern Language Credit under Academic Evaluation in the catalog for more detailed information.

Oral Proficiency Interview: An official Oral Proficiency Interview (OPI) certified by the American Council in the Teaching of Foreign Languages (ACTFL) is required of all students majoring in Spanish. A minimum ranking of Intermediate Mid is required for all Spanish Majors and Intermediate High for majors with a teaching specialization.

#### Course Delivery Format

Most courses in the Spanish major are offered face-to-face on campus. Some upper-division courses are offered online, normally during the summer term.

#### Requirements for Spanish Major: 120 Credits

Bachelor of Arts in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101, and ENGL 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts and Sciences Bachelor of Arts Requirements: 17-28  
Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 36

Required Courses: 12

- SPAN 201 - Intermediate Spanish I \* \*\* Credits: 3
- SPAN 202 - Intermediate Spanish II \* \*\* Credits: 3
- SPAN 310 - Practical Language Skills Credits: 3
- SPAN 330 - Reading and Writing for Communication Credits: 3

Upper Division Electives: 24

- Specific distribution according to emphasis
- Must include at least 16 additional upper-division electives, for a minimum of at least 20 upper-division electives in the major
- May include up to 4 credits of 200-level classes.  
*The following is a suggested sequence for the non-specified 24 major credits.*

Advanced Language/Linguistics Electives: 3-6\*

- SPAN 308 - Spanish for the Health Professions Credits: 3
  - SPAN 340 - Phonetics Credits: 3 Credits: 3
  - SPAN 350 - Spanish for Business Communication Credits: 3
  - SPAN 443 - Linguistics Credits: 3
  - SPAN 444 - Introduction to Translation Credits: 3
  - SPAN 492 - Topics (if linguistics) Credits: 3
- \*1 or more courses are required for the Humanities Emphasis  
\*2 or more courses are required for the Professional Emphasis

Literature and Culture Electives: 6-9\*

- SPAN 355 - Intro to Latin-American Literature I Credits: 3
- SPAN 353 - Introduction to Spanish Literature I Credits: 3
- SPAN 433 - Spanish Civilization and Culture (AW) Credits: 3
- SPAN 435 - Latin American Civ. & Culture (AW) Credits: 3

- SPAN 437 - Topics in Film Studies Credits: 3
- SPAN 476 - 19th and 20th Century Spain Credits: 3
- SPAN 484 - 19th and 20th Century Latin America Credits: 3
- SPAN 486 - Early Modern Spain Credits: 3
- SPAN 492 - Topics (if literature or culture) Credits: 3  
\*3 or more courses are required for the Humanities Emphasis  
\*2 or more courses are required for the Professional Emphasis

Basic and Advanced Electives: 12\* *In addition to the courses above:*

- SPAN 211 - Intermediate Oral Practice I Credits: 2
- SPAN 212 - Intermediate Oral Practice II Credits: 2
- SPAN 296/396/496 - Field Experience Credits: 1-6
- SPAN 386 - Service Learning Credits: 3
- SPAN 415 - Extensive Reading in Spanish Credits: 3
- SPAN 491 - Independent Study Credits: 3  
\*12 or more credits from this section OR approved courses not already used to satisfy major requirements

General Electives: 44

**Required Total Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Spanish Major - Teaching Specialization

### Program Contacts/Coordinator

Maria T. Ramos-Garcia, Head

Christine Garst-Santos, Spanish Program Coordinator

Department of Modern Languages and Global Studies

SWG 121 605-688-5101

### Program Information

The Spanish major - teaching specialization at SDSU consists of language, culture, literature and professional courses to prepare students for teaching careers in primary, middle or secondary schools or for further graduate study.

### Student Learning Outcomes

Graduates with a Spanish major should be able to:

- Speak, read and write Spanish at the intermediate-high or advanced level
- Demonstrate knowledge and understanding of the cultures and communication cultures of the Spanish-speaking world
- Demonstrate knowledge of the Spanish civilizations and its cultural products, such as literature, art, government, etc.

### Additional Academic Requirements

Major Coursework: A minimum grade of "C" is required for a Spanish course to count towards the major. Major courses used to fulfill the Institutional requirements (IGRs) must be different from those taken to fulfill the General Education requirements (SGRs). Students must earn a minimum of 4 credits of Spanish in a study abroad experience.

Placement: Students who have a background in modern language study before entering the University should take the Placement Examination to determine the appropriate course in which to enroll. Credit may be obtained for courses exempted upon completion of one course in the department, with a grade of "C" or better, and the payment of the established fee to the Academic Evaluation and

Assessment Office. Please refer to Modern Language Credit under Academic Evaluation in the catalog for more detailed information.

Oral Proficiency Interview: An official Oral Proficiency Interview (OPI) certified by the American Council in the Teaching of Foreign Languages (ACTFL) is required of all students majoring in Spanish. A minimum ranking of Intermediate Mid is required for all Spanish Majors and Intermediate High for majors with a teaching specialization.

### Accreditation, Certification, and Licensure

Accreditation

National Council for Accreditation of Teacher Education Programs

South Dakota Department of Education

Certification and Licensure

With this major and the accompanying teacher education coursework required for teaching licensure, candidates are eligible to take the Praxis content tests, and apply for a teaching license in South Dakota. Students are required to take the PRAXIS II content test, as well as the PRAXIS II Principles of Learning and Teaching test. The minimum score for the Praxis II PLT must be obtained for teaching licensure and varies by state.

### Course Delivery Format

Most courses in the Spanish major are offered face-to-face on campus. Some upper-division courses are offered online, normally during the summer term.

### Requirements for Spanish Major - Teacher Education

**Specialization: 120 Credits**

Bachelor of Arts in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101, and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: PSYC 101 and/or SOC 100 Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\* Credits: 5

- Goal #1 First Year Experience Credits: 2
- Goal #2 Culture Awareness and Social and Environmental Responsibility Credits: 3

College of Arts and Sciences Bachelor of Arts Requirements: 17-28  
Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 36

Required Courses: 12

- SPAN 201 - Intermediate Spanish I \* \*\* Credits: 3
- SPAN 202 - Intermediate Spanish II \* \*\* Credits: 3
- SPAN 310 - Practical Language Skills Credits: 3
- SPAN 330 - Reading and Writing for Communication Credits: 3



## Upper Division Courses Credits: 24

### Linguistics: 3\*

- SPAN 340 - Phonetics Credits: 3 Credits: 3
- SPAN 443 - Linguistics Credits: 3
- SPAN 444 - Introduction to Translation Credits: 3
- SPAN 492 - Topics (if linguistics) Credits:  
\*1 or more courses are required

### Literature and Culture Electives: 12

- SPAN 353 - Introduction to Spanish Literature I Credits: 3
- SPAN 355 - Intro. to Latin-American Literature I Credits: 3
- SPAN 433 - Spanish Civilization and Culture (AW) Credits: 3
- SPAN 435 - Latin American Civ. & Culture (AW) Credits: 3

### Advanced Electives: 9

- SPAN 308 - Spanish for the Health Professions Credits: 3
- SPAN 350 - Spanish for Business Communication Credits: 3
- SPAN 386 - Service Learning Credits: 3
- SPAN 396/496 - Field Experience Credits: 1-6
- SPAN 415 - Extensive Reading in Spanish Credits: 1 (may be repeated for up to 3 credits)
- SPAN 437 - Topics in Film Studies Credits: 3
- SPAN 476 - 19th and 20th Century Spain Credits: 3
- SPAN 484 - 19th and 20th Century Latin America Credits: 3
- SPAN 486 - Early Modern Spain Credits: 3
- SPAN 491 - Independent Study Credits: 1-3
- SPAN 492 - Topics Credits: 1-3
- SPAN 496 - Field Experience Credits: 1-6  
Students must earn a minimum of 4 credits of Spanish in a study abroad experience.

### Electives: 13

#### Teaching Specialization Requirements

##### Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

##### Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0

##### Complete prior to entry into Professional Semester III

- Special Methods (varies by content area) Credits: 1-4
- Native American Course Approved for Teacher Education Credits: 3  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
OR AIS/ANTH 421 - Indians of North America\*\*
- EDFN 365 - Computer-Based Technology and Learning Credits: 2
- EDFN 427-527 - Middle School: Philosophy and Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

##### Professional Semester III

- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 - Social Foundations, Management & Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching or SEED 488 - 7-12 Student Teaching Credits: 8

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED 488 and ELED 488

## Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

## Required Total Credits: 120

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Speech Communication Major

### Program Contact/Coordinator

Laurie Haleta, Head

Department of Communication Studies & Theatre

Pugsley Center 115, Box 2218

South Dakota State University

Brookings, SD 57007

### Program Information

A major in Speech Communication prepares students to understand the central role that communication plays in people's lives. Graduates of this program will receive the training, expertise and background that will promote professional success in a wide variety of career areas where communication is a critical requirement.

### Student Learning Outcomes

Graduates in Speech Communication will be able to:

- Appropriately analyze and adapt oral and written messages that are effective, clear, persuasive, given the audience and occasion.
- Demonstrate the communication skills necessary to engage in personal, professional, civic and social relationships.
- Critically evaluate verbal and nonverbal messages in differing social and cultural contexts in order to assess their effectiveness and ethical implications.
- Demonstrate comprehension of concepts relative to the theory and criticism of human communication.
- Demonstrate the ability to effectively gather information, research and analyze issues from a variety of perspectives.

### Course Delivery Format

A wide range of course formats are available in this major including, lectures, laboratory, small group, seminar, interactive and collaborative partnerships.

### Requirements for Speech Communication Major: 120 Credits

Bachelor of Science in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101, and 201 Credits: 6
- Goal #2 Oral Communication: Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Experience: SPCM 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34  
Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 36

- SPCM 201 - Interpersonal Communication Credits: 3
- SPCM 215 - Public Speaking \* Credits: 3
- SPCM 222 - Argumentation and Debate \* Credits: 3
- SPCM 305 - Communication Research (AW) Credits: 3
- SPCM 405 - Theories of Communication Credits: 3
- SPCM 410-510 - Organizational Communication(AW) Credits 3
- SPCM 434 - Small Group Communication Credits: 3
- SPCM 465 Capstone Course in Speech Communication Credits 3
- SPCM 470 - Intercultural Communication (G) Credits: 3

Choose 9 credits from the following:

- SPCM 281 - Speech and Debate Activities Credits: 1-4
- SPCM 320 - Communication in Interviewing Credits: 3
- SPCM 340 - Oral Interpretation of Literature Credits: 3
- SPCM 415 - Communication and Gender Credits: 3
- SPCM 416-516 - Rhetorical Criticism Credits: 3
- SPCM 417 - Political Communication Credits: 3
- SPCM 460 - Family Communication Credits: 3

Electives: 15-30

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Speech Communication Major - Speech Education specialization

### Program Contact/Coordinator

Laurie Haleta, Head

Department of Communication Studies & Theatre

Pugsley Center 115, Box 2218

South Dakota State University

Brookings, SD 57007

E-mail: laurie.haleta@sdstate.edu

### Program Information

This area of specialization is designed for the person who plans to become a communication educator. While the emphasis is primarily on secondary education, the area can serve as a specialization for teaching higher education as well.

### Student Learning Outcomes

Graduates in Speech Education will be prepared to

- Teach classroom Speech;
- Direct Drama activities;
- Coach individual speech events, Debate and Oral Interpretation

### Course Delivery Format

Courses utilize lecture, laboratory, small group, collaborative and integrative techniques.

### Requirements for Speech Communication Major - Speech Education specialization: 120 Credits

Bachelor of Science in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: Credits: 3
- Goal #3 Social Sciences/Diversity (SOC 100\* and/or PSYC 101\* \*\*) Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\* Credits: 5

- Goal #1 First Year Seminar: SPCM 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3  
AIS/HIST 368 or AIS/ANTH 421 Recommended

College of Arts & Sciences Bachelor of Science Requirements: 34  
Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirement Credits: 36

- SPCM 201 - Interpersonal Communication Credits: 3
- SPCM 215 - Public Speaking \* Credits: 3
- SPCM 222 - Argumentation and Debate \* Credits: 3
- SPCM 305 - Communication Research (AW) Credits: 3
- THEA 131 - Introduction to Acting \* Credits: 3
- THEA 241-241L - Stagecraft and Lab Credits: 3
- SPCM 340 - Oral Interpretation of Literature Credits: 3
- SPCM 281 - Speech and Debate Activities Credits: 1
- SPCM 476 - 7-12 Speech Methods Credits: 3
- THEA 351 - Directing Credits: 3  
or THEA 355 - Children's Theatre Credits: 3
- At least 8 credits of electives from SPCM and/or THEA

Electives: 0-5

Teaching Specialization Requirements

Professional Semester I

- EDFN 338 - Foundations of American Education Credits: 2
- EPSY 302 - Educational Psychology Credits: 3

Professional Semester II

- SEED 450 - 7-12 Reading and Content Literacy Credits: 2
- SEED 314 - Supervised Clinical/Field Experience Credits: 1
- SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0

Complete prior to entry into Professional Semester III

- Special Methods (varies by content area) Credits: 1-4
- Native American Course Approved for Teacher Education Credits: 3  
AIS/HIST 368 - History and Culture of the American Indian\*\*  
OR AIS/ANTH 421 - Indians of North America\*\*
- EDFN 365 Computer-Based Technology & Learning Credits: 2
- EDFN 427-527 - Middle School: Philosophy and Application Credits: 2
- EDFN 475 - Human Relations Credits: 3

Professional Semester III

- SPED 405 Educating Secondary Students with Disabilities Credits 2
- SEED 410 - Social Foundations, Management & Law Credits: 2
- EDER 415 - Educational Assessment Credits: 2
- ELED 488 - K-8 Student Teaching or SEED 488 - 7-12 Student Teaching Credits: 8

\*Candidates in K-12 areas such as Physical Education Teacher Education, Art, Modern Language, and Music split their student teaching credits, enrolling in both SEED 488 and ELED 488

Additional Requirements

- Prior to enrolling in PSI, students complete SOC 100 or PSYC 101 as part of the University General Education Core.
- Students must also receive a "C" grade or better in SPCM 101, ENGL 101, and Math 102 or higher.
- There are GPA requirements for entry into and continuation within the teacher education program. For additional information please consult the Secondary Education Handbook.

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits, English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Sport, Recreation & Park Management Major

### Program Coordinator/Contact

Paul Fokken, Associate Professor  
Department of Health and Nutritional Sciences  
Intramural Building 116  
605-688-6163  
E-mail: paul.fokken@sdstate.edu

### Program Information

Sport, Recreation and Park Management (SRPM) professionals are needed to meet recreation demands resulting from expanding populations, increased leisure time, greater mobility and changing social attitudes. The curriculum in SRPM designed to prepare students for professional positions in sport, recreation, parks and outdoor recreation programming and administration.

Students interested in parks and outdoor recreation, and employment with federal, state, county and municipal parks agencies and with private outdoor and tourism enterprises, can tailor their program of study using elective courses offered through the Plant Science department. Students interested in municipal and county recreation agencies, YMCA/YWCAs, Boys and Girls Clubs, college/professional organizations, fitness/facility management organizations, and therapeutic recreation in clinical as well as community settings, can focus their interests using additional recreation, management, entrepreneur, and leadership elective courses. This major is based on

an interdisciplinary approach providing a broad, comprehensive background for leadership and administrative roles in sport, recreation and park industries

### Student Learning Outcomes

Upon completion of the Sport, Recreation, and Park Management major students will:

- Demonstrate the following entry-level knowledge: a) the nature and scope of the relevant sport, recreation, park and related professions and their associated industries; b) techniques and processes used by professionals and workers in these industries; and c) the foundation of the profession in history, science and philosophy.
- Demonstrate the ability to design, implement and evaluate services that facilitate targeted human experiences and that embrace personal and cultural dimensions of diversity.
- Demonstrate entry level knowledge about operations and strategic management/administration in sport, parks, recreation and/or related professions.
- Demonstrate, through a comprehensive practicum and/or field experience of not less than 400 hours the potential to succeed as professionals at supervisory or higher levels in sport, recreation, park or related organizations.
- Demonstrate personal character and qualities of professionalism that are necessary for individuals working in the sport, recreation and park sectors.
- Demonstrate the ability to use diverse, structured ways of thinking to solve problems related to different facets of professional practice, engage in advocacy, and stimulate innovation.

### Academic Requirements

A minimum GPA of 2.0 is also required in all courses taught in the major. All students transferring into the program must have a 2.0 GPA to be accepted. Transfer students with less than a 2.0 GPA may petition for approval. If accepted, the transfer student will enter on probation for one semester. A student in the major must have a 2.4 cumulative GPA to be recommended for the required internship experience. A minimum final grade of "C" is required in all courses taught in the major.

### Accreditation, Certification, and Licensure

Upon successful completion of the degree, students who are in the field working under a certified professional may apply to become a Certified Park and Recreation Professional.

### Course delivery format

The program offers coursework through classroom (face to face, hybrid and/or online), service learning and lab experiences (indoor and outdoor), sport, recreation and park site visits, practicum and/or field experience/s

### Requirements Sport, Recreation and Park Management Major: 120 Credits

Bachelor of Science in Education and Human Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity: Credits: 6 ECON 201 Credits: 3 AND POLS 210 OR HDFS 210 Credits: 3
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics: MATH 102 Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: UC 109\*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College Requirements: 2

- EHS 309 - Interdisciplinary Group Processes Credits: 2

Major Requirements: 49-50

- PRM 101 - Parks and Society Credits: 3  
or PE 180 - Foundations of HPER/A Credits: 3
- SPCM 215 - Public Speaking \* Credits: 3  
or SPCM 201 - Interpersonal Communication Credits: 3  
or SPCM 434 - Small Group Communication Credits: 3
- RECR 260 - Fundamentals of Recreation Leadership Credits: 3
- PRM 202-202L - Outdoor Recreation Resource Management  
and Lab Credits: 3
- RECR 410 - Current Issues in Recreation (AW) Credits: 3
- RECR 415 - Recreation & Sport Facility Management Credits: 3
- PRM 302 - Commercial Recreation and Tourism Credits: 3
- PRM 360 - Recreation and Outdoor Programming Credits: 3
- RECR 440 - Administration of Leisure Services Credits: 3
- PRM 496 - Field Experience Credits: 1-12 (2 credits required)
- ENGL 379 - Technical Communication (AW) Credits: 3
- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- MGMT 310 - Business Finance Credits: 3
- MGMT 360 - Organization and Management Credits: 3
- MGMT 325 - Management Information Systems Credits: 3
- MGMT 460 - Human Resource Management Credits: 3

Electives: 33-34

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Studio Arts Major

### Program Contact/Coordinator

Michael (Tim) Steele, Head  
Department of Visual Arts  
South Dakota State University  
Brookings, SD 57007  
605-688-4103  
E-mail: sdsu.artdept@sdsu.edu  
<http://www.sdsu.edu/art/index.cfm>

### Program Information

A degree in Studio Art prepares majors for careers as fine artists, graduate study in fine arts, and entry-level positions in art and graphic design. The degree focuses on the breadth of general studies combined with visual arts studies where majors receive certificates in one or more of the following areas: Animation, Art history, Ceramics, Graphic design, Painting, Printmaking, Sculpture. A 30-hour visual arts core supports the degree and creates a foundation of success.

### Student Learning Outcomes

The study of studio art is both a body of knowledge and a series of activities. Upon completion of the Studio Art major, as defined by the National Association of Schools of Art and Design (NASAD), students demonstrate through advanced writing and senior exhibition the following outcomes:

- Developed visual sensitivity.
- Technical skills, perceptual development, and understanding of principles of visual organization to achieve basic artistic expression in one or more media.

- Ability to make workable connections between concept and media.
- Familiarity with the works and intentions of major artists and movements of the past and the present, both in the Western and non-Western worlds.
- Understand the nature of contemporary thinking on art, and have gained a discernment of quality in their own art and the work of others.
- Ability to work independently while learning and applying new knowledge, expressions and technologies.

### Additional Academic Requirements

Visual Arts students must maintain at least a major GPA of 2.6 and an overall GPA of 2.5 on a 4.0 scale for the duration of the program.

### Course Delivery Format

Course content is delivered through hands-on studio work combined with lectures, demonstrations and critiques.

### Requirements for Studio Arts Major: 120 Credits

Bachelor of Science or Bachelor of Arts

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101, and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6 Students must complete a course from another subject if they are using one from either ART or ARTH
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Requirements: 17-34

Bachelor of Arts

- Modern Languages Credits: 3-14 (*completion and competency in one language at the 202 level or a department-approved advanced upper division language course*)
- Social Sciences Credits: 8
- Humanities Credits: 6

Bachelor of Science

- Natural Science Credits: 14  
With 6 credits of Biological Sciences  
With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 46.5

- Art History Advanced Writing Course Credits: 3
- ARTH 310 - History of US Art and Architecture (AW)
- ARTH 320 - Modern Art and Architecture Survey (AW)
- ARTH 490 - Seminar (AW)
- ART 110 - First Review Credits: 0.5
- ART 111 - Drawing I \* \*\* Credits: 3
- ART 112 - Drawing II \* \*\* Credits: 3
- ART 121 - Design I 2D \* \*\* Credits: 3
- ART 122 - Design II Color Credits: 3
- ART 123 - Three Dimensional Design \* \*\* Credits: 3
- ART 200 Portfolio Review Jury on Student Progress Credits: 0.5

- ART 211 - Drawing III-Figurative \*\* Credits: 3
- ART 400 - Senior Review Credits: 0.5
- ARTH 100 - Art Appreciation \* \*\* (G) Credits: 3
- ARTH 211 - History of World Art I \* \*\* (G) Credits: 3
- ARTH 212 - History of World Art II \* \*\* (G) Credits: 3
- ART 231 - Painting I \*\* Credits: 3
- ART 241 - Sculpture I \*\* Credits: 3
- ART 251 - Ceramics I \*\* Credits: 3
- ART 281 - Printmaking I \*\* Credits: 3
- ARTD 202 - Computer Graphics I Credits: 3

Electives: 22.5-30.5

Elective credits will be completed through the choice of one or more certificates or the general art emphasis.

- Animation Certificate
- Art History Certificate
- Ceramics Certificate
- Painting Certificate
- Printmaking Certificate
- Sculpture Certificate
- General Art emphasis:
  - ARTD/ART-Area of Specialization Credits: 9
  - Art Electives Credits: 15

Total Required Credits: 120

#### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Theatre Major

#### Program Contact/Coordinator

Laurie Haleta, Head

Department of Communication Studies & Theatre

Pugsley Center 115, Box 2218

South Dakota State University

Brookings, SD 57007

E-mail: laurie.haleta@sdstate.edu

#### Program Information

Students in this major are exposed and participate in all aspects of theatre, through a broad-based education. Students will gain practical experience with the newest techniques and technology of theatre. In this major, the hands-on education involves participation in State University Theatre and Prairie Repertory Theatre.

#### Student Learning Outcomes

Upon completion of their degree, students will be able to:

- understand and/or participate in the basic production process in all areas of theatre.
- demonstrate familiarity with historical and cultural dimensions of theatre.
- possess an understanding and appreciation of the concept of collaboration required for successful theatrical productions.
- make informed assessments of quality in theatrical performances and activities
- communicate effectively relative to the student's specific area of particular interest and focus, if that is the case for the individual student.
- understand the expectations and demands of the field, whether in an educational setting or the profession.

If applicable, students will be prepared to:

- gain entry level positions in the profession in the areas of design, technology, or stage management, or gain entrance to graduate programs for additional training prior to entering the profession.
- gain entry level positions as performers or gain acceptance to graduate programs for additional training or to enter the profession.
- gain entry level positions in theatre management, promotions/business or gain acceptance to graduate programs for additional training or to enter the profession.

#### Course Delivery Format

A variety of methods are used in the curriculum, including student engagement and interactive learning, lecture, laboratory, small group, seminar and collaborative activities.

#### Requirements for Theatre Major: 120 Credits

Bachelor of Science in Arts and Sciences

System General Education Requirements\*: 30

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity: (Non THEA) Credits: 6
- Goal #5 Mathematics Credits: 3
- Goal #6 Natural Sciences Credits: 6

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: SPCM 109 Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

College of Arts & Sciences Bachelor of Science Requirements: 34

Bachelor of Science

- Natural Science Credits: 14
  - With 6 credits of Biological Sciences
  - With 8 credits of Physical Sciences
- Social Sciences Credits: 12
- Humanities (Non THEA) Credits: 8

SGRs, IGRs, and/or Major coursework *may* satisfy some or all of the above requirements. Consult program advisor for details. See the College of Arts and Sciences for additional information about Bachelor of Arts Specifications and Bachelor of Science Specifications.

Major Requirements: 39

- THEA 131 - Introduction to Acting \* Credits: 3
- THEA 135 - Theatre Activities-Acting<sup>+</sup> Credits: 1
- THEA 145 - Theatre Activities-Technical<sup>+</sup> Credits: 1 + Maximum Activities Credit toward major - 8 hours (THEA 135, THEA 145, THEA 195, and THEA 480)
- THEA 240 - Stage Costuming Credits: 3
- THEA 241-241L - Stagecraft and Lab Credits: 3
- THEA 243 - Make-Up Credits: 3
- THEA 250 - Play Analysis Credits: 3
- THEA 351 - Directing Credits: 3
- THEA 410-510 - Dramatic Literature (AW) Credits: 3
- THEA 460-560 - History of Theatre Credits: 3
- THEA 470 - Portfolio and Resume Building Credits: 3
- THEA 480 - Summer Theatre<sup>+</sup> Credits: 5
- THEA 375 - Theatre Arts Management Credits: 3
  - or THEA 441 - Scene Design Credits: 3
  - or THEA 445-445L - Lighting and Lab Credits: 3
  - or THEA 443 - Costume Design Credits: 3
- THEA Elective Credits: 2

Electives: 32

**Total Required Credits: 120**

## Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits. English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Wildlife and Fisheries Sciences Major

### Program Contact/Coordinator

David Willis, Department Head  
Department of Natural Resource Management  
Northern Plains Biostress Laboratory 138C  
605-688-6121  
E-mail: david.willis@sdstate.edu  
www.sdstate.edu/nrm/

### Program Information

Wildlife and Fisheries Sciences major requirements are specifically directed at preparing undergraduates in the area of wildlife and fisheries conservation and management. This coursework primarily revolves around educational aspects addressing organisms, their habitat and their human users. Imbedded in these courses are additional skills that students need to be competitive in the natural resources disciplines. These skills include communications, teamwork, leadership, ethics, statistics, computers, global competence, critical thinking, and problem solving. Most employment is with state and federal natural resource agencies. Each state has a fish and wildlife agency that hires students with wildlife and fisheries sciences degrees and multiple federal agencies hire graduates from the program. In addition, employment opportunities exist with local and tribal governments, non-governmental organizations, and private industry. Many undergraduates continue their education by seeking advanced degrees.

### Accreditation, Certification, and Licensure

Program requirements for Wildlife and Fisheries Sciences are based on certification programs of the American Fisheries Society and The Wildlife Society.

### Course delivery format

The Wildlife and Fisheries Sciences major is primarily an on-campus program. However, a 2+2 undergraduate program is also available where coursework is taken either online or at another institution of higher education, supplemented with two online courses provided by the Department of Natural Resource Management, for the first two years of study. The B.S. degree is then completed with two years in residence at SDSU in Brookings.

### Requirements for Wildlife & Fisheries Sciences Major: 120 Credits

Bachelor of Science in Biological Sciences

System General Education Requirements\*: 30-34

- Goal #1 Written Communication: ENGL 101 and 201 Credits: 6
- Goal #2 Oral Communication: SPCM 101\* Credits: 3
- Goal #3 Social Sciences/Diversity Credits: 6
- Goal #4 Arts and Humanities/Diversity Credits: 6
- Goal #5 Mathematics Credits: 3-5
- Goal #6 Natural Sciences: BIOL 101-101L or BIOL 151-151L and BIOL 103-103L or BIOL 153-153L Credits: 6-8

Institutional Graduation Requirements\*\*: 5

- Goal #1 First Year Seminar: NRM 109-109L \*\* Credits: 2
- Goal #2 Cultural Awareness and Social and Environmental Responsibility Credits: 3

Major Requirements: 69-78

- ENGL 379 - Technical Communication (AW) Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3
- CHEM 106-106L Credits: 4 and CHEM 108-108L Credits 5  
OR CHEM 112-112L Credits: 4 and CHEM 120-120L Credits 4  
OR CHEM 112-112L Credits 4 and CHEM 326-326L Credits 4
- PHYS 101-101L - Survey of Physics \* and Lab Credits: 4  
OR PHYS 111-111L - Intro to Physics I and Lab\* Credits: 4
- CEE 434/534 - Hydrology Credits: 3  
OR CHEM 328-328L - Organic Chemistry II and Lab Credits: 4  
OR PS 213-213L - Soils and Lab \* \*\* Credits: 3  
OR PS 243 - Principles of Geology\* Credits: 3
- NRM/BIOL 311-311L - Principles of Ecology & Lab Credits: 4
- BIOL 371 - Genetics Credits: 3
- WL 220 - Intro to Wildlife and Fisheries Management Credits: 3
- WL 230 - Wildlife and Fisheries Techniques Credits: 3

Oral Communication Requirement: 3

Select one of the following courses.

- SPCM 201 - Interpersonal Communication Credits: 3
- SPCM 215 - Public Speaking \* Credits: 3
- SPCM 222 - Argumentation and Debate \* Credits: 3
- SPCM 434 - Small Group Communication Credits: 3

Botany Requirement: 3-4

Select one of the following courses.

- BOT 201-201L - General Botany and Lab\* Credits: 3
- BOT 301-301L - Plant Systematics Credits: 4
- BOT 303-303L - Forest Ecology and Management and Lab Credits: 3
- BOT 405-405L/505-505L - Grasses and Grasslike Plants and Lab Credits: 3
- BOT 415-415L/515-515L - Aquatic Plants and Lab Credits: 3
- BOT 419-419L - Plant Ecology and Lab (G) Credits: 3

Take three of the following: 8-11

- WL 361 - Survey of Amphibians and Reptiles Credits: 2
- WL 363-363L - Ornithology and Lab Credits: 4
- WL 367-367L - Ichthyology and Lab Credits: 3
- WL 427-427L/527-527L - Limnology of Lakes & Streams and Lab Credits: 4
- WL 355-355L - Mammalogy and Lab Credits: 3, 0

Take three of the following: 8-9

- WL 400-400L - Habitat Conservation and Restoration/Lab Credits: 3
- WL 411-411L - Principles of Wildlife Mgmt & Lab Credits: 3
- WL 412-412L - Principles of Fisheries Mgmt and Lab Credits: 3
- WL 429-429L/529-529L - Fish Ecology and Lab Credits: 2

Take three of the following: 7-10

- EES 425-425L - Disturbance Ecology and Lab Credits: 4
- NRM 457-557 - Ecological Modeling Credits: 3
- NRM 464-564 - Ecosystem Ecology Credits: 3
- RANG 321 - Wildland Ecosystems Credits: 3
- WL 415-415L Upland Game Ecology and Mgmt & Lab Credits 3
- WL 417-417L Large Mammal Ecology and Mgmt & Lab Credits 3
- WL 419-419L - Waterfowl Ecology and Mgmt & Lab Credits: 3
- WL 421/521 - Grassland Fire Ecology Credits: 3
- WL 425-425L - Wildlife Nutrition and Disease & Lab Credits: 3
- WL 431-431L - Advanced Fisheries Management & Lab Credits: 2
- WL 440-440L - Fisheries and Wildlife Biometrics and Lab Credits: 2



Human Dimensions Requirement: 6

Complete two classes, one required and one elective, from the following courses.

- *Required* - WL 430-430L - Human Dimensions in Wildlife and Fisheries and Lab (G) Credits: 3
- ABS 475-475L - Integrated Natural Resource Management and Lab (AW) Credits: 3
- ECON 372 - Introduction to Resource and Environmental Economics Credits: 3
- ECON 472 - Resource and Environmental Economics Credits: 3
- HIST 379 - Environmental History of the U.S. Credits: 3
- PHIL 454-554 - Environmental Ethics \*\* Credits: 3
- PR 301 - Park Interpretation Credits: 3

- REL 454-554 - Environmental Ethics Credits: 3
- WL 420-420L - Wildlife Law & Enforcement & Lab Credits: 3

Electives: 3-16

**Total Required Credits: 120**

### Curriculum Notes

\* The 30 credit Board of Regents System General Education Requirements (SGRs) must be completed as part of a student's first 64 credits.

\*\* SDSU has a 5 credit Institutional Graduation Requirement (IGRs).

(G) Globalization Requirement.

(AW) Advanced Writing Requirement.

Students must take the proficiency examination after completing 48 credits, English 101, and a course in each of the General Education areas of social science, mathematics, natural science, and humanities and arts must be taken prior to taking this exam.

## Academic Programs – Minors

### Accounting Minor

#### Program Contact/Coordinator

Jason Zimmerman, Assistant Department Head  
Department of Economics  
Scobey Hall 142  
605-688-4845  
E-mail: jason.zimmerman@sdstate.edu  
<http://www.sdstate.edu/econ/>

#### Program Information

The Accounting minor provides students with advanced training in accounting, including managerial, financial, cost and income tax accounting. It is recommended for students with career interests in fields such as accounting, finance, business administration, and entrepreneurship. It provides excellent preparation for graduate programs in accounting, business, and law.

#### Student Learning Outcomes

Graduates with a minor in Accounting will be able to:

- Compose financial statements
- Complete basic components of a master budget
- Evaluate an organization's basic financial performance

#### Program Requirements

A minimum GPA of 2.0 is required for the courses in the minor.

#### Course Delivery Format

The program offers courses on campus, with limited online coursework, usually during the summer.

#### Requirements for Accounting Minor: 21 Credits

- ACCT 210 - Principles of Accounting I Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- ACCT 310 - Intermediate Accounting I Credits: 3
- ACCT 311 - Intermediate Accounting II Credits: 3
- ACCT 320 - Cost Accounting Credits: 3
- ACCT 430 - Income Tax Accounting Credits: 3
- ECON 201 - Principles of Microeconomics \* \*\* Credits: 3 **OR**  
ECON 202 - Principles of Macroeconomics \* (G) Credits: 3

### Advertising Minor

#### Program Coordinator/Contact

Mary Arnold, Head  
Department of Journalism and Mass Communication  
Yeager Hall 211 605-688-4171  
E-mail: mary.arnold@sdstate.edu  
<http://www.sdstate.edu/mcom/>

#### Program Information

The Advertising minor program is open to students majoring in all fields. The program prepares students with effective written and visual communication, critical thinking, design, and research skills.

#### Academic Requirements

Advertising minors must have grades of "C" or better in the program's courses.

#### Equipment and Supplies

Students are also encouraged to purchase a Macintosh laptop and software appropriate for the discipline.

#### Accreditation, Certification, and Licensure

The Department is accredited by the national accrediting body of journalism and mass communication, the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC).

#### Course Delivery Format

The department offers coursework in classroom, studio, online, and field-based settings.

#### Requirements for Advertising Minor: 18 credits

- ADV 370 - Advertising Principles Credits: 3
- ADV 371-371L Advertising Copy & Layout & Studio (AW) Credits 3
- ADV 372-372L - Advertising Media Strategies & Lab Credits: 3
- ADV 476 - International and Ethnic Advertising Credits: 3

Choose 6 credits from the following:

- MCOM 243 - Public Relations Principles Credits: 3
- ADV 314 - Sales, Promotion and Marketing Credits: 3
- ADV 442-442L - Integrated Marketing Communication and Campaigns Studio Credits: 3, 0
- ADV 472 - Media Research and Planning Credits: 3
- ADV 489 - Portfolio Production & Design Credits: 1-3

## Aerospace Studies Minor

### **Program Contact/Coordinator**

Lieutenant Colonel William C. Pleasants  
AFROTC / Aerospace Studies  
Box 2236 DePuy Military Hall  
South Dakota State University  
Brookings, SD 57007  
E-mail: Bonnie.Luecke@sdstate.edu  
E-mail: Det780@maxwell.af.mil

### **Program Information**

Satisfactory completion of the four-year Air Force ROTC program, 16 credits, constitutes a minor in Aerospace Studies in the College of Arts and Sciences.

### **Additional Academic Requirements**

Students entering AFROTC must have a minimum 2.0 GPA, maintain 2.0 GPA until their sophomore year and then maintain a minimum 2.5 GPA in AFROTC courses to earn this minor. Students must be a sole US citizen, either by birth or by naturalization.

### **Course Delivery Format**

The Aerospace Studies curriculum is divided into two courses of instruction. The General Military Course (GMC) is a one-credit academic course and laboratory taken each semester during the freshman and sophomore years. The Professional Officer Course (POC) is a three-credit academic course and laboratory taken each semester during the junior and senior years. Additional curriculum options are available to accommodate freshman students pursuing undergraduate degrees that normally require five years to complete and to accommodate undergraduate students who have three years remaining to complete their degrees.

The laboratory includes a mandatory physical fitness program in which all students must have a physical exam certified by competent medical authority. These physicals are available through SDSU Student Health for a nominal fee. All students pursuing a commission will also attend field training at a designated Air Force base during a summer, normally between their sophomore and junior years.

### **Commission**

Upon graduation and completion of the AFROTC curriculum, each student is commissioned a second lieutenant in the United States Air Force. The initial Air Force assignment options for second lieutenants include the following:

- Enter the Air Force and complete the designated technical training prerequisite to the lieutenant's assigned specialty; e.g., flight training, research and development, management, support functions, etc.
- Apply for a delay in entering active duty for the purpose of pursuing an advanced degree.
- Enroll in one of several Air Force-sponsored graduate study programs while serving with full pay as a commissioned officer.

Upon entering the Air Force, newly commissioned second lieutenants incur an active duty commitment of four years. Those competing and selected for navigator and air battle management specialties incur a six year commitment; those selected for pilot training incur a ten year commitment.

### **Requirements for Aerospace Studies Minor: 16 Credits**

- AIR 101-101L - The Foundations of the US Air Force and Lab Credits: 1
- AIR 102-102L - The Foundations of the US Air Force and Lab Credits: 1
- AIR 201-201L - The Evolution of USAF Air and Space Power and Lab Credits: 1
- AIR 202-202L - The Evolution of USAF Air and Space Power and Lab Credits: 1
- AIR 301-301L - Air Force Leadership Studies & Lab Credits: 3
- AIR 302-302L - Air Force Leadership Studies & Lab Credits: 3

- AIR 401-401L - National Security Affairs/Preparation for Active Duty and Lab Credits: 3
- AIR 402-402L - National Security Affairs/Preparation for Active Duty and Lab Credits: 3

## Agricultural Business Minor

### **Program Coordinator/Contacts**

Eluned Jones, Head  
Jason Zimmerman, Assistant Department Head  
Department of Economics  
Scobey Hall 142  
605-688-4845  
E-mail: jason.zimmerman@sdstate.edu

### **Program Information**

The Agricultural Business minor builds on a foundation of economic theory as it applies to the agricultural sector. Students have broad latitude to tailor their coursework to their personal areas of interest. This minor will benefit students pursuing careers in production agriculture, agribusiness, rural banking, and other fields. Students interested in pursuing a graduate degree in economics, business, or related fields are well prepared for advanced studies.

### **Program Requirements**

A minimum GPA of 2.0 is required for the courses in the minor.

### **Course Delivery Format**

The program offers courses on campus, with limited online coursework, usually during the summer.

### **Requirements for Agricultural Business Minor: 21-22 Credits**

- ECON 201 - Principles of Microeconomics \* \*\* Credits: 3
- ECON 202 - Principles of Macroeconomics \* (G) Credits: 3
- AGECE 300-level or above Credits: 9

Two of the following:

- ACCT 210 - Principles of Accounting I Credits: 3
- AGECE 271-271L - Farm and Ranch Mgmt and Lab Credits: 4
- AGECE 354 - Agricultural Marketing and Prices Credits: 3
- BADM 310 - Business Finance Credits: 3
- BADM 350 - Legal Environment of Business Credits: 3
- BADM 360 - Organization and Management Credits: 3
- BADM/ECON 370 - Marketing Credits: 3

## Agricultural Marketing Minor

### **Program Contact/Coordinator**

Jason Zimmerman, Assistant Department Head  
Department of Economics  
Scobey Hall 142  
605-688-4845  
E-mail: jason.zimmerman@sdstate.edu  
<http://www.sdstate.edu/econ/>

### **Program Information**

The Agricultural Marketing minor exposes students to the details of agricultural commodity market and provides training in both the theory and practice of pricing tools such as futures and options. This minor will benefit students pursuing careers in production agriculture, agribusiness, rural banking, and other fields. Additionally, students interested in pursuing a graduate degree in economics, marketing, business, or related fields are well prepared for advanced studies.

### **Program Requirements**

A minimum GPA of 2.0 is required for the courses in the minor.

### **Course Delivery Format**

The program offers courses on campus, with limited online coursework, usually during the summer.

### **Requirements for Agricultural Marketing Minor: 21-22 Credits**

- BADM/ECON 370 - Marketing Credits: 3
- AGECE 354 - Agricultural Marketing and Prices Credits: 3
- AGECE 454 - Economics of Grain and Livestock Marketing Credits: 3
- ECON 201 - Principles of Microeconomics \* \*\* Credits: 3
- Electives: 9-10  
Select at least three courses from the following list.
  - AGECE 430/530 - Advanced Ag. Marketing & Prices Credits 3
  - AGECE 479 - Agricultural Policy (AW) (G) Credits: 3
  - AGECE 484 - Trading in Ag. Futures and Options Credits: 3
  - AS 285-285L Livestock Eval. & Marketing & Lab Credits: 4
  - BADM 474 - Personal Selling Credits: 3
  - ECON 440-540 - Economics of International Sector Credits: 3
  - ECON 476-576 - Marketing Research Credits: 3

### **Agronomy Minor**

#### **Program Contact/Coordinator**

David Wright, Department Head  
Brent Turnipseed, Undergraduate Teaching Coordinator  
Department of Plant Science  
Agricultural Hall 219  
605-688-5123  
E-mail: David.Wright@sdstate.edu  
E-mail: Brent.Turnipseed@sdstate.edu  
<http://www.sdstate.edu/ps/>

#### **Program Information**

The Agronomy minor provides training in plant, soil, and pest management. This program can complement a variety of majors, enhancing agricultural related career opportunities in numerous sectors of the economy. Employment possibilities include careers in crop consulting, crop/plant research, and with private industry managing agricultural inputs such as pesticides and fertilizers; developing improved seed traits, plant sciences, genomics, and producing seed; and for work with government agencies, such as the Extension Service, Farm Service Agency, Agricultural Research Service, and Natural Resources Conservation Service.

#### **Additional Academic Requirements**

Students must have a 2.5 GPA or higher and a grade of C or higher in the courses used to satisfy the Agronomy Minor.

#### **Accreditation, Certification, and Licensure**

- Students seeking Soil Science Certification should contact their advisor & refer to <https://www.soils.org/certifications/cpsc-cpsc>
- Students seeking Certification as a professional agronomist should contact their advisor and refer to <https://www.agronomy.org/certifications/cpag>

#### **Course Delivery Format**

The program coursework is available on campus, in classroom and laboratory settings, as well as field-based settings.

#### **Requirements for Agronomy Minor: 18 Credits**

- PS 103-103L - Crop Production and Lab Credits: 3
- PS 213-213L - Soils and Lab \* \*\* Credits: 2, 1
- PS 223-223L - Principles of Plant Pathology and Lab Credits: 3
- PS 305-305L - Insect Biology and Lab Credits: 3  
or PS 307-307L - Insect Pest Management and Lab Credits: 3
- PS 323 - Soil Fertility and Plant Nutrient Management Credits: 3
- PS 343-343L - Weed Science and Lab Credits: 3

### **American Indian Studies Minor**

#### **Program Contact/Coordinator**

Richard Meyers, Coordinator  
American Indian Studies  
605-688-6416  
E-mail: richard.meyers@sdstate.edu

#### **Program Information**

This is an inter-college program of American Indian culture studies. Coursework in various departments of the University provides a broad base for understanding the past, present, and possible futures of American Indian people. The program recognizes the historical and contemporary significance of American Indian experiences. Study of these experiences promotes understanding of the pluralist nature of the United States and responds to the growing need for multicultural sensitivity and awareness.

#### **Course Delivery Format**

Program courses are taught on campus, online, and in field based settings.

#### **Requirements for American Indian Studies Minor: 20 Credits**

- AIS/LAKL 101 - Introductory Lakota I \* \*\* Credits: 4
- AIS/ENGL 445 - American Indian Literature Credits: 3
- AIS 421/ANTH 421-521 - Indians of North America Credits: 3  
OR AIS/HIST 368 - History and Culture of the American Indian\*\* Credits: 3
- Elective Credits: 10
  - AIS 100 - Introduction to American Indian Studies Credits: 3
  - AIS/ANTH 421 - Indians of North America \*\* Credits: 3
  - AIS/LAKL 102 - Introductory Lakota II \* Credits: 4
  - AIS/LAKL 201 - Intermediate Lakota I Credits: 3
  - AIS/LAKL 202 - Intermediate Lakota II Credits: 3
  - AIS/ENGL 256 - Literature of the American West Credits: 3
  - AIS/ENGL 447 American Indian Lit of Present Credits: 3
  - AIS/GEOG 467 Geography of the American Indian Credits 3
  - AIS/HIST 368 History & Culture of American Indian Credits 3
  - AIS/POLS 417 - American Indian Govt & Politics Credits: 3
  - AIS/REL 238 - Native American Religions \* Credits: 3
  - ANTH 210 - Cultural Anthropology \* Credits: 3
  - SOC 350 - Race and Ethnic Relations (G) Credits: 3

### **Animal Health Minor**

#### **Program Contact/Coordinator**

David Knudsen, Professor  
Department of Veterinary & Biomedical Sciences  
SAR 121, Box 2175  
605-688-5171  
E-mail: david.knudsen@sdstate.edu  
<http://www.sdstate.edu/vs/index.cfm>

#### **Program Information**

The Animal Health Minor provides students with coursework in veterinary and biomedical sciences in order to enhance their preparation for several different animal health related career paths. The coursework will augment pre-veterinary students' preparation for enrollment in colleges of veterinary medicine, and will enable students to enhance their knowledge of valuable animal health concepts that they can put to use in careers involving animal care, animal production, and animal health product research, development, and marketing.

#### **Student Learning Outcomes**

Graduates with a minor in Animal Health will:

- Gain an understanding of the scope, activities, and nomenclature of the veterinary profession as the pivotal field of study for animal health.

- Achieve general skills and knowledge in the normal anatomy and physiology of common domestic animals, including cattle, sheep, horses, pigs, dogs, and cats.
- Achieve general skills and knowledge in the spectrum of diseases that affect the health of domestic animals, together with prevention and control strategies used in minimizing the impact of animal disease.
- Gain specialized understanding and knowledge in animal health through the completion of three (3) elective courses that focus on infectious disease and/or basic biomedical sciences.

#### Program Requirements

A minimum GPA of 2.0 is required for the courses in the minor.

#### Course Delivery Format

Coursework for the program is delivered on campus in classroom and laboratory-based settings.

#### Requirements for Animal Health Minor: 18 Credits

- VET 103 - Introduction to Veterinary Medicine Credits: 1
- VET 183 - Veterinary Medical Terminology Credits: 1
- VET 223-223L - Anatomy and Physiology of Domestic Animals and Lab Credits: 4
- VET 403-503 - Animal Diseases and Their Control Credits: 3
- Elective Credits: 9  
Select three courses from the following:
  - BIOL 467-467L/567-567L - Parasitology and Lab Credits: 3
  - HSC 445 - Epidemiology Credits: 3
  - MICR 433-533 - Medical Microbiology Credits: 3
  - MICR 439 - Medical and Veterinary Immunology Credits: 3
  - MICR 440L - Infectious Disease Lab Credits: 3
  - VET 424-524 - Medical and Veterinary Virology Credits: 3
  - VET 476-576 - Advanced Mammalian Physiology Credits: 4
  - WL 425-425L - Wildlife Nutrition & Disease & Lab Credits 3

## Animal Science Minor

#### Program Coordinator/Contact

Joseph Cassady, Head  
Department of Animal Science  
Animal Science Complex 103A  
605-688-5166  
E-mail: cheryl.beste@sdstate.edu  
<http://www.sdstate.edu/ars/index.cfm>

#### Program Information

A minor in Animal Science will supplement any major and provide students exposure to the technology of breeding, feeding, producing, managing, evaluating, and marketing beef cattle, sheep, hogs, horses, and poultry, as well as the processing of their products—meat, eggs, and wool.

#### Course Delivery Format

The Animal Science program provides hands-on experiences in the classroom, laboratories, field trips, and at the livestock teaching units.

#### Requirements for Animal Science Minor: 20-21 Credits

- AS 101-101L - Introduction to Animal Science & Lab Credits: 3
- AS 233-233L - Applied Animal Nutrition and Lab Credits: 4
- AS 285-285L - Livestock Eval. & Marketing and Lab Credits: 4
- Electives: 3-4  
Select at least one course from the following list.
  - AS 323 - Advanced Animal Nutrition Credits: 3
  - AS 332 - Livestock Breeding and Genetics Credits: 4
  - AS 433-433L - Livestock Reproduction and Lab Credits: 3
- Electives: 6  
Select at least two courses, including one of the required courses \* from the following list.
  - AS 241-241L - Introduction to Meat Science & Lab Credits: 3
  - AS 365-365L - Horse Production and Lab Credits: 3

- AS 474-474L - Cow/Calf Management and Lab Credits: 3\*
- AS 477-477L - Sheep and Wool Production & Lab Credits 3\*
- AS 478-478L - Swine Production and Lab Credits: 3\*

## Aviation Minor

#### Program Contact/Coordinator

Cody Christensen, Assistant Professor  
Department of Consumer Sciences  
Box: 2275A Wagner Hall 229  
Brookings, SD 57007  
E-mail: cody.christensen@sdstate.edu  
<http://www.sdstate.edu/cs/undergraduate-programs/aviation.cfm>

#### Program Information

The Aviation program offers students across campus a unique opportunity for exposure to the aviation field through completion of a minor. If a student in any field wants to work in the aviation industry as a finance manager, scheduler, operations manager, or airport planner, a minor in aviation is highly recommended.

#### Course Delivery Formats

Aviation students learning in lecture, laboratory, and field-based flight training.

#### Requirements for Aviation Minor: 17 Credits

- AVIA 170 - Fundamentals of Flight Theory Credits: 3
- AVIA 171 - Introductory Flight I Credits: 2
- AVIA 180 - Attitude Instrument Theory Credits: 2
- AVIA 181 - Introductory Flight II Credits: 2
- AVIA 200 - Aviation Safety Credits: 3
- AVIA 370 - Professional Pilot Theory I Credits: 3
- AVIA 372 - Professional Flight I Credits: 2

## Biology Minor

#### Program Coordinator/Contact

Volker Brözel, Department Head  
Department of Biology and Microbiology  
Alfred Dairy Science Hall 228  
605-688-6141  
E-mail: biomicro@abs.sdstate.edu  
<http://www.sdstate.edu/biomicro/>

#### Program Information

The Biology minor is open to all majors and provides exposure to fundamental areas of biology. Students select from microbiology, botany and animal based classes based on their desired career path. The curriculum appeals to majors in agricultural and biological sciences, as well as those in the social sciences and humanities who seek an understanding of the significance of biological changes and want to apply this knowledge in their chosen field.

#### Academic Requirements

A minimum GPA of 2.0 must be maintained in the major courses.

#### Course Delivery Format

Program coursework is on-campus, in classroom and laboratories, as well as field-based settings. Additional coursework is available at off-campus attendance centers. Limited coursework is available online.

#### Requirements for Biology Minor: 18 Credits

- BIOL 101-101L - Biology Survey I and Lab Credits: 3 or BIOL 151-151L - General Biology I and Lab\* Credits: 4
- Departmental Elective Credits: 14-15
- Two courses must be at the 300 level or above.
- No more than 3 credits can come from courses numbered 491, 492, 494, 496, 497 and 498.

## **Biomedical Engineering Minor**

### **Program Contact/Coordinator**

Lewis Brown, Dean  
College of Engineering  
Crothers Engineering Hall 201  
605-688-4161  
E-mail: lewis.brown@sdstate.edu  
<http://www.sdstate.edu/engr/>

### **Program Information**

Students interested in both engineering and the life sciences, especially medicine, should strongly consider a career in biomedical engineering. Biomedical engineering is defined as the application of the concepts and methods of engineering and the physical sciences to medicine and biology. The biomedical engineering field covers a very broad range of topics from formalized mathematical theory through experimental science and technological development to practical clinical applications. It is a broad multidisciplinary field that offers rewarding careers related to computer science, electrical engineering, engineering physics, mathematics and statistics, mechanical engineering, software engineering and agricultural & biosystems engineering. SDSU has long prepared students for careers in biomedical engineering by tailoring their engineering degrees for this specialty. Engineering students who complete the 18 credit minor will be well prepared for engineering careers in industry or for entering graduate programs for advanced degrees related to biomedical engineering or medicine. The institution has placed graduates in the top M.D. and biomedical engineering graduate schools in the country.

The minor is intended for engineering majors only and includes courses and experience in three categories: (1) engineering core, (2) life science core, and (3) biomedical engineering core. Before graduation, the student must complete a two-semester capstone design project related to biomedical engineering. Students are also encouraged to seek practical experience by completing an internship in biomedical engineering. The College can provide assistance to students who desire an internship with a biomedical company or research institute.

### **Student Learning Outcomes:**

Students will be able to:

- demonstrate an ability to apply knowledge of mathematics, engineering and the life sciences by completing a major capstone design project in the field of biomedical engineering;
- demonstrate an ability to independently conduct literature research on a current biomedical engineering topic and its application/impact on society and his/her engineering major; and
- demonstrate an ability to communicate biomedical engineering related technical information in high quality written and oral presentation forms.

### **Requirements for Biomedical Engineering Minor: 18**

- EE 454-554 Biomedical Instrumentation & Electrical Safety Credits: 3 or EE 450-550 - Biomedical Signal Processing Credits: 3
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 325-325L - Physiology and Lab Credits: 4
- EE 464-464L Senior Design I & Lab Credits: 2 See note one below
- EE 465-465L Senior Design II & Lab (AW) Credits 2 See note one below
- EE 491 - Independent Study Credits: (1-3)\*\*

### **Notes:**

\* or equivalent course from ABE, ME, or PHYS. The capstone design project must focus on biomedical engineering and be approved by the Coordinator.  
\*\* must be biomedical engineering project approved by the Coordinator

## **Biotechnology Minor**

### **Program Contact/Coordinator**

Volker Brözel, Department Head  
Department of Biology and Microbiology  
Alfred Dairy Science Hall 228  
605-688-6141  
E-mail: biomicro@abs.sdstate.edu  
<http://www.sdstate.edu/biomicro/>

### **Program Information**

This interdisciplinary minor helps prepare students in fundamental sciences so that they may successfully compete for career opportunities in the growing life sciences industries. Graduates with expertise in biotechnology will help fill the increasing demand from employers utilizing technologies such as molecular biology, genetic engineering, tissue culture, reproductive intervention, and biomass conversion in a variety of applications, such as vaccine and pharmaceutical development, agronomic seed production, livestock breeding, genetic diagnostic testing, identity and parentage verification, criminal forensics, biorenewable product development, or biomedical research.

### **Course Delivery Format**

Program coursework is delivered on campus in lecture, discussion, and laboratory settings.

### **Requirements for Biotechnology Minor: 18 Credits**

Required Credits: 13

- ABS 205 - Biotechnology in Agriculture & Medicine Credits: 2
- BIOL 202-202L Genetics & Organismal Biology& LabCredits 4
- MICR 436 - Molecular and Microbial Genetics Credits: 4
- CHEM 464 - Biochemistry I Credits: 3

Elective Credits: 5

Complete remaining credits from the following course list.

Internship or Undergraduate Research credits may be substituted for electives if approved by the biotechnology program coordinator

- AS 332 - Livestock Breeding and Genetics Credits: 4
- AS 433-433L - Livestock Reproduction and Lab Credits: 3
- BIOL 373 - Evolution Credits: 3
- BIOL 383 - Bioethics \*\* (G) Credits: 4
- BIOL 453-553 - Advanced Genetics Credits: 3
- CHEM 466 - Laboratory Methods- Biochemistry Credits: 1
- DS 301-301L - Dairy Microbiology and Lab Credits: 3
- DS 411-411L - Dairy Breeds and Breeding and Lab Credits: 3
- HO 312-312L - Plant Propagation and Lab Credits: 3
- HO 383-383L - Principles of Crop Improv. and Lab Credits: 2, 1
- MICR 332L - Microbial Physiology Lab Credits: 2
- MICR 424-524 - Medical and Veterinary Virology Credits: 3
- PS 383-383L - Principles of Crop Improv & Lab (AW) Credits 3
- PS 453-553 - Advanced Genetics Credits: 3
- VET 424-524 - Medical and Veterinary Virology Credits: 3
- ZOOL 483-483L - Developmental Biology and Lab Credits: 4

## **Botany Minor**

### **Program Coordinator/Contact**

Gary Larson, Professor  
Department of Natural Resource Management  
Berg Agricultural Hall, Room 322  
605-688-4552  
E-mail: Gary.Larson@sdstate.edu  
[www.sdstate.edu/nrm/](http://www.sdstate.edu/nrm/)

### **Program Information**

The Botany minor crosses many disciplines, as plants are the base of the energy web within the natural environment. The program's flexible curriculum is adaptable for all students in the natural

sciences, and is especially useful to students with interests in ecology, range science, and wildlife and fisheries sciences.

### Academic Requirements

A minimum GPA of 2.0 is required for all courses in the minor.

### Course Delivery Format

The program's courses are offered on campus in lecture, laboratory, and field-based settings.

### Requirements for Botany Minor: 18 Credits

Required Biology Course: 3-4

- BIOL 103-103L - Biology Survey II and Lab\* Credits: 3  
or BIOL 153-153L - General Biology II and Lab\* Credits: 4

Selective Electives: 14-15

At least two botany courses must be upper-division, 300 level or above

- BOT 127 - Ethnobotany Credits: 3
- BOT 201-201L - General Botany and Lab\* Credits: 3
- BOT 301-301L - Plant Systematics Credits: 4
- BOT 303-303L - Forest Ecology and Mgmt and Lab Credits: 3
- BOT 327-327L - Plant Physiology and Lab Credits: 4
- BOT 405-405L/505-505L Grasses & Grasslike Plants & Lab Credits 3
- BOT 415-415L/515-515L - Aquatic Plants and Lab Credits: 3
- BOT 419-419L - Plant Ecology and Lab (G) Credits: 4
- BOT 492-592 - Topics Credits: 1-5

*No more than 3 credits of may come from the following upper-division botany courses*

- BOT 491 - Independent Study Credits: 1-4
- BOT 494 - Internship Credits: 1-12
- BOT 496 - Field Experience Credits: 1-12
- BOT 498 - Undergraduate Research/Scholarship Credits: 1-4

*Additional elective credits may come from the following range courses*

- RANG 210-210L - Range Plant Identification & Lab Credits: 2
- RANG 400 - Judging Teams (Sec 1.) Credits: 1-3

## Chemistry Minor

### Program Coordinator/Contact

James Rice, Professor and Head  
Department of Chemistry & Biochemistry  
South Dakota State University  
131 Avera Health Sciences Building  
Box 2202 Brookings SD 57007  
E-mail: James.Rice@sdstate.edu  
<http://www.sdstate.edu/chem/index.cfm>

### Program Information

The Department of Chemistry and Biochemistry offers the chemistry minor for students who desire significant training in the chemical sciences without pursuing a degree in the discipline. The minor is particularly suitable for students in other majors whose career trajectories will require a thorough understanding of chemistry. Such careers may include secondary science teaching majors, biomedical engineers, biologists, dairy scientists, soil scientists, forensic psychologists, physicists, and many others.

### Additional Academic Requirements

All courses must be completed with a grade of "C" or higher.

### Course Delivery Format

Courses offered in the Chemistry minor curriculum are taught in a variety of formats to ensure competence in the chemical sciences: Didactic (lecture) methods ensure the development of foundational knowledge of chemistry; Practical (laboratory) methods ensure the development of laboratory skills and training

Requirements for Chemistry Minor: 20 Credits

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 4  
and CHEM 114-114L - General Chemistry II & Lab\* Credits: 4  
OR

- CHEM 115-115L - Atomic and Molecular Structure and Lab\* Credits: 4 and CHEM 127-127L - Structure and Function of Organic Molecules and Lab\* Credits: 4
- Twelve or more credits of upper division chemistry (CHEM 3XX or CHEM 4XX) should be chosen from courses beyond general chemistry: Analytical, Biochemistry, Inorganic, Organic, Physical and Environmental. This should include laboratory experiences in at least two different areas beyond general chemistry.

## Communication Studies & Theatre Minor

### Program Coordinator/Contact

Laurie Haleta, Head  
Department of Communication Studies & Theatre  
Pugsley Center 115, Box 2218  
South Dakota State University  
Brookings, SD 57007

### Program Information

A minor in Speech Communication prepares students to understand the central role that communication plays in people's lives. Graduates of this program will receive the training, expertise and background that will promote professional success in a wide variety of career areas where communication is a critical requirement.

### Student Learning Outcomes

Graduates with a minor in Speech Communication will be able to:

- Appropriately analyze and adapt oral and written messages that are effective, clear, persuasive, given the audience and occasion.
- Demonstrate the communication skills necessary to engage in personal, professional, civic and social relationships.
- Critically evaluate verbal and nonverbal messages in differing social and cultural contexts in order to assess their effectiveness and ethical implications.
- Demonstrate comprehension of concepts relative to the theory and criticism of human communication.
- Demonstrate the ability to effectively gather information, research and analyze issues from a variety of perspectives.

### Course Delivery Format

A wide range of course formats are available in this major including, lectures, laboratory, small group, seminar, interactive and collaborative partnerships.

### Requirements for Communication Studies and Theatre Minor: 20 Credits

Students complete at least 20 SPCM and THEA credits

- SPCM 101\* - Fundamentals of Speech *must be approved by the department head.*
- Not more than 8 credits chosen from activity courses may be counted.
  - SPCM 281 - Speech and Debate Activities
  - SPCM 491-591 - Independent Study
  - THEA 135 - Theatre Activities-Acting
  - THEA 145 - Theatre Activities-Technical
  - THEA 491 - Independent Study

## Computer Science Minor

### Program Contact/Coordinator

George Hamer, Assistant Department Head  
Department of Electrical Engineering and Computer Science  
Daktronics Engineering Hall 214  
605-688-4526  
E-mail: [sdsu.eecs@sdstate.edu](mailto:sdsu.eecs@sdstate.edu)  
website: <http://www.sdstate.edu/eecs/>

### Program Information

The Computer Science minor offers students a flexible program that is well suited to enhance any major curricular and increase a graduate's marketability. CS related jobs are among the ten fastest



growing careers that show a lot of promise and opportunity for growth.

#### **Additional Academic Requirements**

Computer Science students must pass all minors courses with a grade of C or better.

#### **Course Delivery Format**

A majority of the courses are taught on campus in smart classrooms. The smart classrooms allow for a variety of methods for student engagement and faculty are able to record and post their lectures on-line.

#### **Requirements for Computer Science Minor: 18 Credits**

- CSC 150-150L - Computer Science I Credits: 3
- CSC 250 - Computer Science II Credits: 3
- CSC 300 - Data Structures Credits: 3
- Applied Electives Credits: 9  
Select courses numbered 300 or above with at least 9 credits from CSC and SE courses.

## **Criminal Justice Minor**

#### **Program Contact/Coordinator**

Mary Emery, Head  
Department of Sociology and Rural Studies  
Scobey Hall 224  
605-688-4132  
E-mail: Mary.Emery@sdstate.edu  
<http://www.sdstate.edu/soc/>

#### **Program Information**

The minor in Criminal Justice is designed for students seeking careers in probation, parole, court services, pre-law, private security, or general law enforcement. This inter-college program is administered by the Department of Sociology and Rural Studies is available to students majoring in any field at SDSU. The purposes of this program are 1) to provide qualified personnel for all segments of the Criminal Justice system; and 2) to help improve the competence and professional status of existing Criminal Justice personnel. An internship is strongly recommended. Students desiring more information or interested in minoring in Criminal Justice should consult with the coordinator of the program no later than the beginning of their junior year.

#### **Additional Academic Requirements**

Students must have a cumulative GPA of 2.2 to enter the program and a minimum GPA of 2.2 in the minor to complete. Students may select any major, but (\*) courses may not be used for both a Criminal Justice Minor and Sociology Major or Minor. Students will need to earn a C grade or better in courses taken for the minor.

#### **Course Delivery Format**

The program offers coursework on campus, on-line, and at attendance centers around the state.

#### **Requirements for Criminal Justice Minor: 18 Credits**

- CJUS 201 - Introduction to Criminal Justice \* Credits: 3
- SOC 351 - Criminology Credits: 3 \*
- Electives: 12
  - CJUS 203 - Policing in a Free Society Credits: 3
  - CJUS 330 - Civil Rights and Liberties Credits: 3
  - CJUS 412 - Criminal Prosecution and Defense Credits: 3
  - CJUS 431 - Criminal Law Credits: 3
  - CJUS 433 - Criminal Procedure Credits: 3
  - CJUS 436 - Juvenile Justice Credits: 3
  - CJUS 491-591 - Independent Study Credits: (1-3)
  - SOC 325 - Domestic and Intimate Violence Credits: 3 \*
  - SOC 354 - Victimology Credits: 3 \*
  - SOC 455-555 - Juvenile Delinquency Credits: 3 \*
  - SOC 456-556 - Community Corrections Credits: 3 \*
  - SOC 460-560 - Advanced Criminology Credits: 3 \*
  - SOC 492 - Topics Credits: (1-3)

## **Dance Minor**

#### **Program Contact/Coordinator**

Melissa Hauschild-Mork, Coordinator  
Department of Communication Studies & Theatre  
115 Pugsley Continuing Education Center  
605-688-6131  
E-mail: Melissa.Mork@sdstate.edu  
<http://www.sdstate.edu/cst/programs/dance-minor.cfm>

#### **Program Information**

The dance minor at SDSU was created as a holistic and inclusive minor. Holistic in the nature that the minor embraces many genres of dance to include: social, multi-cultural, creative movement, dance for the musical theatre and jazz, tap, ballet and modern dance techniques. The minor has a strong theory, compositional and improvisational base. The minor is inclusive from the perspective that all students no matter their history or training will find opportunities for growth and transformation in the program.

#### **Course Delivery Format**

The dance curriculum is delivered in studio, laboratory, discussion, and lecture-based settings.

#### **Requirements for Dance Minor: 18 Credits**

Required Credits: 14

- DANC 130 - Dance Fundamentals Credits: 1
- DANC 131 - Movement 1 Credits: 2
- DANC 135 - Dance Activities Credits: 1 (x2)<sup>take two semesters</sup>
- DANC 240 - Multicultural Dance Activities Credits: 1
- DANC 241-241L - Creative Movement for Children and Lab Credits: 2
- DANC 420 - Techniques of Teaching Dance Credits: 2
- DANC 430 - Composition and Choreography Credits: 2
- DANC 431 - Dance for the Musical Theatre Credits: 2

Elective Credits: 4

- DANC 230 - Technique 1 Credits: 2
- DANC 231 - Technique 2 Credits: 2
- DANC 330 - Technique 3 Credits: 2
- DANC 331 - Technique 4 Credits: 2

## **Economics Minor**

#### **Program Contact/Coordinator**

Jason Zimmerman, Assistant Department Head  
Department of Economics  
Scobey Hall 142  
605-688-4845  
E-mail: jason.zimmerman@sdstate.edu

#### **Program Information**

The Economics minor provides a rigorous exploration of modern economic theory. Students can select courses from a large number of department electives based on their interests. This minor will appeal to students pursuing careers in fields such as economics, finance, policy analysis, business, agricultural business, or for future graduate study in economics, business, or related fields.

#### **Program Requirements**

A minimum GPA of 2.0 is required for the courses in the minor.

#### **Course Delivery Format**

The program offers courses on campus, with limited online coursework, usually during the summer.

### **Requirements for Economics Minor: 21-24 Credits**

- ECON 201 - Principles of Microeconomics \* \*\* Credits: 3
- ECON 202 - Principles of Macroeconomics \* (G) Credits: 3
- ECON 301 - Intermediate Microeconomics Credits: 3  
or ECON 302 - Intermediate Macroeconomics Credits: 3
- Two courses selected from courses prefixed: AGECE or ECON  
Credits: 6-7
- STAT 281 - Introduction to Statistics Credits: 3
- Courses prefixed ACCT, AGECE, BADM, ECON, or ENTR  
Credits: 3-4

## **English Minor**

### **Program Coordinator/Contact**

Jason McEntee, Head  
Department of English  
Scobey Hall 014  
605-688-5191  
E-mail: jason.mcentee@sdstate.edu

### **Program Information**

The English minor allows students to develop skills in communication, research, critical thinking, and focused creativity. Students can improve their understanding of people and cultural knowledge. Students learn how language works and how to use it effectively in a variety of contexts.

The program is open to students in any major, and can help prepare students for a career in law, public relations, education, politics, advertising, journalism, web marketing, publishing - or any career that requires critical thinking and persuasive writing.

### **Additional Academic Requirements**

To count toward the minor, courses must be passed with a minimum grade of "C."

### **Course Delivery Format**

The department offers coursework on campus, online, and at attendance centers around the state.

### **Requirements for English Minor: 20 Credits**

- Three courses in British Literature Credits: 9
- Two courses in American Literature Credits: 6
- Elective Credits: 2-3 *ENGL 101 and 201 do not apply*

One of the following courses:

- ENGL 379 - Technical Communication (AW) Credits: 3
- ENGL 383 - Creative Writing Credits: 3
- LING 203 - English Grammar Credits: 3
- LING 420 - The New English Credits: 3
- LING 443 - Development of the English Language Credits: 3

## **Entrepreneurial Studies Minor**

### **Program Contact/Coordinator**

Jason Zimmerman, Assistant Department Head  
Department of Economics  
Scobey Hall 142  
605-688-4845  
E-mail: jason.zimmerman@sdstate.edu  
<http://www.sdstate.edu/econ/>

### **Program Information**

Students selecting any academic major will have the opportunity to increase their knowledge of the skills needed to start, own, and/or operate a business, become a community leader, transfer technology

to a merchandisable product, and assist others in entrepreneurial efforts. This minor is designed to give all students the opportunity to earn a better living and to contribute to society via their chosen field (major) by becoming an entrepreneur.

### **Program Requirements**

A minimum GPA of 2.0 is required for the courses in the minor.

### **Student Learning Outcomes**

Entrepreneurial Studies graduates will be able to demonstrate:

- the fundamental knowledge, skills, and experience to think entrepreneurially
- leadership by adopting an innovative and creative thought processes
- research, analysis, and presentation skills
- the capacity to evaluate ethical matters within the context of the discipline.

### **Course Delivery Format**

The program offers courses on campus, with limited online coursework, usually during the summer.

### **Requirements for Entrepreneurial Studies Minor: 18 Credits**

- BADM 370 - Marketing Credits: 3
- ACCT 211 - Principles of Accounting II Credits: 3
- ENTR 236 - Innovation & Creativity Credits: 3
- ENTR 237 - ENTR II: Entrepreneurship Development Credits: 3
- ENTR 338 - ENTR III: New Venture Creation Credits: 3

Elective Credits

Select three credits from the following:

- ACCT 430 - Income Tax Accounting Credits: 3
- BADM 334 - Small Business Management Credits: 3
- BADM 460 - Human Resource Management Credits: 3
- BADM 474 - Personal Selling Credits: 3

## **Equine Studies Minor**

### **Program Contact/Coordinator**

Rebecca C. Bott, Assistant Professor and Extension Equine Specialist  
Department of Animal Science  
Animal Science Complex 103A  
605-688-5412  
E-mail: Rebecca.Bott@sdstate.edu

### **Program Information**

The Equine Studies Minor is designed for students from all majors who wish to supplement their academic major with studies in equine science, management, and industry trends.

### **Student Learning Outcomes**

Upon completion of the Equine Studies Minor, students will:

- develop the fundamental knowledge of the anatomy, physiology, nutrition, health and functional structure of a horse necessary to successfully own or manage horses for pleasure and/or business,
- demonstrate the ability to identify early signs of disease and lameness,
- determine and manage appropriate diets for various classes of horses,
- manage a herd of broodmares during the breeding season,
- exhibit business knowledge of an equine facility, and
- horsemanship skills

### **Course Delivery Format**

Program faculty program engage students in a variety of scholastic settings, including the SDSU Horse Unit, incorporating experiential learning to supplement classroom topics.

### **Requirements for Equine Studies Minor: 18-20 Credits**

- AS 104-104L - Introduction to Horse Mgmt & Lab Credits: 2
- AS 105-105L - Western Horsemanship and Lab Credits: 1
- AS 213-213L - Equine Health and Diseases and Lab Credits: 3
- AS 220 - Equine Nutrition Credits: 3
- AS 365-365L - Horse Production and Lab Credits: 3
- AS 494 - Internship Credits: 1-12
- AS 370 - Stable Management Credits: 2  
OR AS 420-420L - Equine Reproductive Mgmt & Lab Credits 3
- AGECE 271-271L - Farm and Ranch Mgmt & Lab Credits: 4  
OR BADM 334 - Small Business Management Credits: 3  
OR BADM/ENTR 336 - Entrepreneurship I Credits: 3

### **Food Safety Minor**

#### **Program Coordinator**

Matthew Vukovich, PhD

605-688-4668

E-mail: matt.vukovich@sdstate.edu

#### **Program Information**

A minor in food safety is for students interested in the principles underlying keeping food safe and will be especially helpful for those students interested in working in this aspect of the food industry. Topics covered focus upon microbiology and safety of food as it is manufactured and distributed.

#### **Student Learning Outcomes**

Students who successfully complete the requirements for the Food Safety minor will:

- demonstrate practical skills in the development of HACCP plans for food production and processing institutions
- identify current issues in food safety
- demonstrate a functional knowledge of foods
- identify food pathogens
- demonstrate an understanding of the use of statistics in the study and understanding of food safety issues
- demonstrate skills in the science of risk communication

#### **Course Delivery Format**

Courses in the minor are delivered through lecture, laboratory, and field-based learning experiences.

#### **Requirements for Food Safety Minor: 18 Credits**

Required Credits: 10

- MICR 311-311L - Food Microbiology and Lab Credits: 4
- NFS 251 - Food Safety and Technology Credits: 3
- AS 350 - Meat Product Safety and HACCP Credits: 3  
OR DS 301-301L - Dairy Microbiology and Lab Credits: 3

Elective Credits: 8

- AS 241-241L - Introduction to Meat Science and Lab Credits: 3
- AS 345-345L - Value-Added Meat Products and Lab Credits: 3
- AST 443-443L - Food Processing and Engineering Fundamentals and Lab Credits: 3
- DS 321-321L - Dairy Product Processing I and Lab Credits: 5
- HMG 251 - Foodservice Sanitation Credits: 1
- HSC 445 - Epidemiology Credits: 3
- NFS 351-351L - Principles of Food Processing & Lab Credits: 3
- NFS 451-451L/551-551L - New Food Product Development and Lab Credits: 4
- NFS 495 - Practicum Credits: 2
- STAT 281 - Introduction to Statistics Credits: 3

### **French Studies Minor**

#### **Program Coordinator/Contact Information**

Maria T. Ramos-Garcia, Head

Marie-Pierre Baggett, French Program Coordinator

Department of Modern Languages and Global Studies

SWG 121 Box 2203

South Dakota State University

605-688-5101

E-mail: Marie-Pierre.Baggett@sdstate.edu

<http://www.sdstate.edu/mfl/index.cfm>

#### **Program Information**

The French Studies minor at SDSU consists of language, culture, literature and professional courses to prepare students for careers in which they will use French as a language for communication. The minor offers flexibility and can easily be added to any major.

#### **Student Learning Outcomes**

Upon the completion of the French Studies minor students should be able to:

- Speak, read and write French at the intermediate-high or advanced level
- Demonstrate knowledge and understanding of the cultures and communication cultures of the Francophone world
- Demonstrate knowledge of the French civilizations and its cultural products, such as literature, art, government, etc.

#### **Additional Academic Requirements**

There are no application requirements to enroll in the French Studies minor. However, students with previous knowledge of the language must take the placement test and register for an appropriate course. Additionally, all the courses for the major must be passed with a grade of "C" or better.

#### **Course Delivery Format**

Most courses in the French Studies minor are offered face-to-face on campus. Some upper-division courses are offered as part of the French cooperative program with NSU and USD and they use different types of distance delivery, including simultaneous television (DDN) and online delivery.

#### **Requirements for French Studies Minor: 22 Credits**

- FREN 102 - Introductory French II \* (G) Credits: 4
- FREN 201 - Intermediate French I \* \*\* Credits: 4
- FREN 202 - Intermediate French II \* \*\* Credits: 4
- French elective Credits: 4
- Upper division French elective Credits: 6

### **Geographic Information Sciences Minor**

#### **Program Coordinator/Contact Information**

George White, Head

Department of Geography

109 Wecota Hall

605-688-4511

E-mail: george.white@sdstate.edu

#### **Program Information**

The minor in Geographic Information Sciences allows students to gain hands-on experience with computerized Geographic Information System (GIS) that integrate hardware, software, and data for capturing, managing, analyzing, and displaying all forms of geographically referenced information. GIS allows researchers to work with data in many ways that reveal relationships, patterns, and trends in the form of maps, globes, reports, and charts. With GIS's capability to enhance geo-spatial data analysis, there is a demand for GIS trained college graduates by many local, state, and federal governmental agencies, including the US Geologic Survey.

## Academic Requirements

Students must earn at least a "C" in each course used to meet the minor requirements.

## Course Delivery Format

The Geographic Information Sciences program includes lecture, discussion, laboratory research, fieldwork, and travel, with limited online coursework.

## Requirements for Geographic Information Sciences Minor: 18 Credits

Core Requirements: 12

Select four from the following courses.

- CEE 304 - Land Surveying Credits: 3
- GEOG 472 - Introduction to GIS Credits: 3
- GEOG 473-573 - GIS: Data Creation and Integration Credits: 3
- GEOG 474-574 - GIS: Vector and Raster Modeling Credits: 3 or GEOG 475/575 - GIS Applications
- GEOG 483-483L - Air Photo Interpretation and Lab Credits: 3
- GEOG 484-484L - Remote Sensing and Lab Credits: 3

Electives: 6

- Select two of the following courses.
- GEOG 365 - Land Use and Planning\*\* Credits: 3
- GEOG 383-383L - Cartography and Lab Credits: 3
- GEOG 384-384L - Advanced Cartography and Lab Credits: 3
- GEOG 415-515 - Environmental Geography\*\* Credits: 3
- GEOG 485-485L - Quantitative Remote Sensing and Lab Credits: 3
- CSC 300 - Data Structures Credits: 3
- CEE 225 - Principles of Environmental Science and Engineering\*\* Credits: 3
- LA 421-421L - City Planning and Lab Credits: 3
- PS 446-546 - Agroecology (G) Credits: 3
- RANG 321 - Wildland Ecosystems Credits: 3
- WL 400-400L - Habitat Conservation and Restoration/Lab Credits: 3

## Geography Minor

### Program Coordinator/Contact Information

George White, Head  
Department of Geography  
109 Wecota Hall  
South Dakota State University  
Brookings, SD 57007  
605-688-4511  
E-mail: george.white@sdstate.edu

### Program Information

The study of geography is of vital concern to all citizens and provides graduates with numerous career opportunities in business, education, and government. The minor in Geography is designed to be flexible, including general education courses as well as electives to compliment a student's major field of study. The faculty recommends that students take several courses in disciplines closely related to their specific area of interest in geography.

### Academic Requirements

Students must earn at least a "C" in each course used to meet the minor requirements.

## Course Delivery Format

Geography is not only a classroom subject but one that also includes laboratory research, fieldwork, and travel, as well limited online coursework.

## Requirements for Geography Minor: 20 Credits

- Upper-division courses or substitutions approved by the Department Credits: 6
- GEOG 131-131L - Physical Geography: Weather and Climate and Lab\* Credits: 4
- GEOG 132-132L - Physical Geography: Natural Landscapes and Lab\* Credits: 4
- GEOG 200 - Introduction to Human Geography \* \*\* (G) Credits: 3
- GEOG 210 - World Regional Geography \* \*\* (G) Credits: 3

## German Minor

### Program Coordinator/Contact Information

Eckhard Rolz, German Program Coordinator  
Department of Modern Languages and Global Studies  
Wagner Hall 121  
South Dakota State University  
Brookings, SD 57007  
605-688-5101  
E-mail: Eckhard.Rolz@sdstate.edu  
<http://www.sdstate.edu/mfl/index.cfm>

### Program Information

The German minor at SDSU consists of language, culture, literature and professional courses to prepare students for careers in which they will use German as a language for communication. The minor offers flexibility and can easily be added to another major.

### Student Learning Outcomes

Upon the completion of the German minor, students will be able to:

- Speak, read and write German
- Demonstrate knowledge and understanding of the cultures and communication cultures of the German-speaking world
- Demonstrate knowledge of the German civilizations and its cultural products, such as literature, art, government, etc.

### Application Requirements

There are no application requirements to enroll in the German minor. However, students with previous knowledge of the language must take the placement test and register for an appropriate course. Additionally, all the courses for the minor must be passed with a grade of "C" or better.

### Course Delivery Format

Most courses in the German program are offered face-to-face on campus. Some upper-division courses are offered as part of the German cooperative program with NSU and USD and they use different types of distance delivery, including simultaneous television (DDN) and online delivery.

### Requirements for German Minor: 20 Credits

- GER 101 - Introductory German I \* (G) Credits: 4
- GER 102 - Introductory German II \* (G) Credits: 4
- GER 201 - Intermediate German I \* \*\* Credits: 3
- GER 202 - Intermediate German II \* \*\* Credits: 3
- GER 300-400 level Electives Credits: 6

## Gerontology Minor

### **Program Coordinator/Contact**

Renee Oscarson, Renee Oscarson, Associate Professor  
Department of Counseling and Human Development  
Wagner Hall 403 605-688-5954  
E-mail: renee.oscarson@sdstate.edu

### **Program Information**

The minor in gerontology prepares graduates to work directly with or on behalf of older adults by drawing on coursework from multiple disciplines and collaborating with practitioners in aging-related professions. It may accompany any major, but is especially recommended for students in health science majors and/or students with an interest in human service and medical professions.

### **Student Learning Outcomes**

Students will be able to

- Interpret and apply gerontological theories
- Demonstrate effective intergenerational communication skills
- Evaluate and assess environmental demands and individual needs of older adult populations

### **Additional Program Requirements**

A grade of "C" or better is required in all courses in the minor. To count for the minor, all Seminar, Topics, or Independent Study coursework must be approved by the Gerontology Coordinator. The topics and credits vary by semester.

### **Course Delivery Format**

Program coursework is completed on campus and online.

### **Requirements for Gerontology Minor: 18 Credits**

Level One: 11

Select 11 credits from the following Level One Aging courses.

- BIOL 439-539 - Biology of Aging Credits: 3
- CA 442 - Family ResProgram Informationource Management Lab Credits: 3
- GERO 201 - Introduction to Gerontology Credits: 3
- GERO 491/591 - Independent Study Credits: (1-3)
- GERO 492/592 - Topics Credits: (1-3)
- HDFS 347 - Human Development III: Adulthood Credits: 3
- NURS 201 - Medical Terminology Credits: 1
- PSYC 324 - Psychology of Aging Credits: 3
- SOC 490 - Seminar Credits: (1-3)

Levels Two and Three: 7

Select 7 credits from Level Two and Three approved courses with the program coordinator.

- A portion of Level Two courses is aging-related.
- Level Three courses cover the study of biological, psychological, or social aspects of humans.

## Global Studies Minor

### **Program Contact/Coordinator**

Maria T. Ramos-Garcia, Head  
Eckhard Rolz, Program Coordinator  
Department of Modern Languages and Global Studies  
SWG 121 Campus Box 2275  
605-688-5101

### **Program Information**

A minor in Global studies is intended to prepare students for entry into various fields from business to government service. The Global Studies major integrates content and theory from a number of disciplines leading to an understanding of the interrelated processes of globalization in an increasingly interdependent world. The major

provides a wide variety of courses allowing students to tailor the program to their interests and future career plans while maintaining the interdisciplinary requirements to reflect the major's intended purpose: intercultural competence and authentic global citizenship.

### **Student Learning Outcomes**

Global Studies students will:

- express a broad understanding of global society and the societies of diverse foreign countries and cultures through the social sciences, natural sciences, and humanities
- apply analytical and philosophical tools for interpretation of and critical thinking about global issues and data;
- demonstrate global literacy and cross-cultural competencies;
- utilize the training, tools, and experiences to become authentic global citizens; and
- engage the international resources of SDSU to benefit the citizens of South Dakota, the United States, and the world.

### **Course Delivery Format**

Courses with the prefix GLST are offered face-to-face, with lecture, discussion, and applied learning. Other courses required for the major may also be available via internet.

### **Requirements for Global Studies Minor: 18 Credits**

- GLST 201 - Global Studies I \* \*\* (G) Credits: 3
- HIST 112 - World Civilizations II \* \*\* (G) Credits: 3
- REL 250 - World Religions \* (G) Credits: 3
- ECON 202 - Principles of Macroeconomics \* (G) Credits: 3
- GEOG 210 - World Regional Geography \* \*\* (G) Credits: 3
- Travel/Cross Cultural Experience outside of the US Credits: 3
- The study of a second language is strongly recommended.

## Health Education Minor

### **Program Contact/Coordinator**

September Kirby, Program Coordinator  
Intramural Building 116  
South Dakota State University  
Brookings, SD 57007  
605-688-5387  
E-mail: september.kirby@sdstate.edu

### **Program Information**

A Health Education minor is an interdisciplinary minor offered to any student at South Dakota State University; it may be of particular interest to those pursuing a teaching degree. The minor can be obtained by completing a required core and set of elective courses offered across several disciplines. This minor is strongly suggested for those individuals pursuing the Physical Education Teacher Education major. Having a Health Education minor can lead to teaching health in public schools in the region.

### **Additional Academic Requirements**

A minimum final grade of "C" is required in each course taken in the minor. All students interested in obtaining this minor must obtain written approval from the Coordinator.

### **Certification and Licensure**

For Minnesota certification in Health, additional coursework will be required. Please check with the Coordinator for these details and to help plan for this certification.

### **Course Delivery Format**

Instruction for the health education minor occurs through face to face and online course delivery methods.

### Requirements for Health Education Minor: 21 Credits

Required Courses: 18

- HDFS 210 - Lifespan Development \* Credits: 3
- HDFS 250 - Development of Human Sexuality Credits: 3
- HSC 420/520 - Methods of Health Instruction Credits: 2
- NFS 221 - Survey of Nutrition Credits: 3
- HLTH 120 - Community Health Credits: 2  
OR HLTH 212 - Contemporary Health Problems Credits: 2
- HLTH 250-250L - Pre-Professional First Aid and CPR and Lab Credits: 2  
OR HLTH 251 - First Aid and CPR Credits: 1
- EPSY 302 - Educational Psychology Credits: 3  
OR PSYC 324 - Psychology of Aging Credits: 3  
OR PSYC 327 - Child Psychology \*\* Credits: 3

Electives: 3-5

- CA 289 - Consumers in the Market Credits: 3
- HDFS 141 - Individual and the Family \* Credits: 3
- HDFS 241 - Family Relations Credits: 3
- HLTH 445 - Epidemiology Credits: 3
- HSC 302 - Wellness and the Family Credits: 2
- NURS 201 - Medical Terminology Credits: 1
- PE 354-354L - Prevention and Care of Athletic Injuries & Lab Credits: 2
- PHA 201 - Medications and Wellness Credits: 2
- PSYC 417 - Health Psychology \*\* Credits: 3
- SOC 250 - Courtship and Marriage \* Credits: 3

## Health Science Minor

### Program Contact

Linda M, Herrick, Associate Dean  
Department of Undergraduate Nursing  
South Dakota State University  
Wagner Hall 327  
605-688-6153 or 888-216-9806 ext. 2  
E-mail Secretary: mary.davenport@sdstate.edu

### Program Information

A Health Science minor is an interdisciplinary concentration offered to any undergraduate student at South Dakota State University who completes a minimum of 24 semester hours across disciplines with a required core of course offerings. The purpose of the Health Science minor is to provide an opportunity for students to learn more about health and health care and to become competent in health knowledge, application of public health principles and healthful environments while pursuing other majors in the University.

### Student Learning Outcomes

The outcomes for graduates of the Health Science minor are:

- Apply public health principles, to selected disciplines.
- Implement public health science methods and strategies through work with populations that incorporates principles from the fields of sociology, psychology, and human growth and development.
- Apply basic human health concepts from selected sciences including biology, physiology, behavioral, and mental health.
- Demonstrate an understanding of how environment and ecology affect aggregates and communities by advocating for the needs of people served by public health systems

### Course Delivery Format

Program coursework is delivered in classrooms, laboratories, online, and in field-based learning experiences.

### Requirements for Health Science Minor: 24 Credits

Required Core: 12

- HDFS 210 - Lifespan Development \* Credits: 3
- HSC 212 - Contemporary Health Problems Credits: 2
- HSC 445 - Epidemiology Credits: 3
- NURS 201 - Medical Terminology Credits: 1
- HSC 443 - Public Health Science (G) Credits: 3  
or NURS 310-310L - Introduction to Public Health and Population-based Nursing Credits: 4  
and NURS 480-480L - Advanced Population based Nursing Practice (G) Credits: 4

Biological Science Requirements: 6

- Select from courses prefixed BIOL, MICR, ZOOL

Electives: 6

Any changes/additions to elective credits must receive prior approval from the Associate Dean of Undergraduate Nursing.

- HLTH 250-250L - Pre-Professional First Aid & CPR & Lab Credits: 2  
or HLTH 251 - First Aid and CPR Credits: 1  
or HSC/HLTH 364-364L - Emergency Medical Technician and Lab Credits: 4
- HDFS 227 - Human Development & Personality I: Childhood Credits: 3
- HDFS 241 - Family Relations Credits: 3
- HDFS 250 - Development of Human Sexuality Credits: 3
- HDFS 337 - Human Development II: Adolescence Credits: 3
- HDFS 347 - Human Development III: Adulthood Credits: 3
- HSC 120 - Community Health Credits: 2
- HSC 200 - Complementary & Alternative Health Care Credits: 3
- HSC 230 - Stress Management for Life Credits: 3
- HSC 260 - Women's Health Issues Credits: 3
- HSC 302 - Wellness and the Family Credits: 2
- HSC 420/520 - Methods of Health Instruction Credits: 2
- HSC 433-533 \*\* - Occupational Health Credits: 3
- PSYC 414 - Drugs and Behavior Credits: 3
- SOC 250 - Courtship and Marriage \* Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3

## History Minor

### Program Coordinator/Contact

April Brooks, Head  
Department of History, Political Science, Philosophy, and Religion  
Box 0510 West Hall  
South Dakota State University  
605-688-4311  
E-mail: april.brooks@sdstate.edu

### Program Information

Students will find that a History Minor can enhance a major program and provide intellectual and technical skills needed for today's workplace. It is also flexible enough so that students can follow their own particular interests. The courses offered prepare students for careers in various professional occupations, and provide a necessary background for graduate work or other specialized training.

### Student Learning Outcomes

History graduates will be able to effectively communicate, research, analyze, interpret, and apply information in various professional contexts.

### Course Delivery Format

The program provides courses online and face to face on campus and at various off-campus attendance centers.

### Requirements for History Minor: 18 Credits

- HIST 111 - World Civilizations I \* \*\* Credits: 3  
or HIST 121 - Western Civilization I \* \*\* Credits: 3
- HIST 112 - World Civilizations II \* \*\* (G) Credits: 3  
or HIST 122 - Western Civilization II \* \*\* (G) Credits: 3
- HIST 151 - United States History I \* \*\* Credits: 3
- HIST 152 - United States History II \* \*\* Credits: 3
- 300-400 level History Elective Credits: 6

## Horticulture Minor

### Program Contact

David Graper, Coordinator  
Department of Plant Science  
Northern Plains Biostress Laboratory 254A  
South Dakota State University  
Brookings, SD 57007  
605-688-6253  
E-mail: David.Graper@sdstate.edu

### Program Information

The Horticulture minor is open to students of any major who desire the knowledge and skills for managing fruits, vegetables and landscape plants. Greenhouse facilities and extensive field plots in woody and herbaceous ornamentals, turf, fruit, and vegetables provide students with the opportunity to experience all aspects of plant production and management. This flexible program allows students to plan of study based on career interests and goals.

### Academic Requirements

The minor requires a 2.0 GPA or better in the program's courses.

### Course Delivery Format

Students learn through hands-on and face-to-face learning in lecture, laboratory, and field-based experiences.

### Requirements for Horticulture Minor: 18 Credits

Core Requirements: 6

- HO 111-111L - Introduction to Horticulture and Lab Credits: 3
- HO 250-250L - Woody Plants: Trees and Lab Credits: 3  
or HO 311-311L - Herbaceous Plants and Lab Credits: 3

Electives Credits: 12

Select from the following courses.

- HO 200-200L - Weed Mgmt for Horticulture and Lab Credits: 2
- HO 222-222L - Fundamentals of Turf Mgmt and Lab Credits: 3
- HO 250-250L - Woody Plants: Trees and Lab Credits: 3
- HO 260 - Woody Plants: Shrubs and Vines Credits: 2
- HO 311-311L - Herbaceous Plants and Lab Credits: 3
- HO 312-312L - Plant Propagation and Lab Credits: 3
- HO 324 - Horticulture Pests I: Entomology Credits: 2
- HO 325 - Horticulture Pests II: Diseases Credits: 2
- HO 330 - Arboriculture Credits: 2
- HO 331 - Arboricultural Operations Credits: 1
- HO 350 - Environmental Stewardship in Horticulture Credits: 3
- HO 411-511 - Fruit Crop Systems Credits: 1-6  
or HO 440-540 - Vegetable Crop Systems Credits: 1-6
- HO 412-412L - Greenhouse Management and Lab Credits: 3
- HO 415 - Nursery Management Credits: 3
- HO 422 - Current Issues in Turfgrass Science Credits: 1
- HO 423-523 - Turfgrass Stress Physiology Credits: 3
- HO 434 - Local Food Production Credits: 2

## Human Development & Family Studies Minor

### Program Coordinator/Contact

Jay Trenhaile, Head  
Department of Counseling and Human Development  
Wenona Hall 312/ Wagner Hall 369  
South Dakota State University  
605-688-4190 or 605-688-4367  
E-mail: jay.trenhaile@sdstate.edu

### Program Information

The minor in Human Development and Family Studies offers students a collection of courses examining the fundamentals of human development through courses exploring family dynamics and relationships. Students pursuing Human Development and Family Studies may choose from a variety of HDFS courses based on their major, interest, and focus. In doing so, they gain knowledge and experience in the science of human growth and development, human interaction, and family relationships. Graduates work in careers that promote healthy development and positive family functioning across the lifespan, such as: a Social Services Case Worker, Provider at Residential Treatment Center, Youth Organization Worker, Program Director for Youth, Family or Senior Citizen Center.

### Student Learning Outcomes

HDFS students will share a common base of knowledge, skills, and experiences:

- Knowledge and understanding of
- Developmental stages and processes across the lifespan
- Family dynamic processes
- The multi-directional influences of social contexts and the development of individuals, couples, and families
- The interpersonal skills required for an effective helping relationship
- Skill and ability to
- Interpret and evaluate current information regarding human and family development
- Use human development and family theories to understand and explain individual growth and family interaction
- Plan and evaluate intervention strategies designed to enhance the development of individuals, couples, and families
- Experiences in
- The ranges of settings that human development and family studies professionals inhabit
- Supervised work in a professional setting

### Additional Program Requirements

All the minor courses must be approved by the department head no later than the beginning of the junior year. Students must earn at least a C in all courses for the minor.

### Requirements for Human Development and Family Studies Minor: 18 Credits

Any HDFS courses may be used to complete the minor. Suggested courses include (but are not limited to):

- HDFS 141 - Individual and the Family \* Credits: 3
- HDFS 210 - Lifespan Development \* Credits: 3
- HDFS 227 - Human Dvlpt & Personality I: Childhood Credits: 3
- HDFS 241 - Family Relations Credits: 3
- HDFS 250 - Development of Human Sexuality Credits: 3
- HDFS 337 - Human Development II: Adolescence Credits: 3
- HDFS 347 - Human Development III: Adulthood Credits: 3
- HDFS 410/510 - Parenting Credits: 3



## **Informatics Minor**

### **Program Coordinator/Contact**

Kurt Cogswell, Head  
Department of Mathematics and Statistics  
Harding Hall 228  
South Dakota State University  
605-688-6196  
E-mail: kurt.cogswell@sdstate.edu  
<http://mathstat.sdstate.edu>

### **Program Information**

The Minor provides students with a strong background in general informatics combined with advanced application coursework in their specific major. Earning the Minor will prepare graduates for data warehousing and quantitative data interpretation through mathematical/statistical model and algorithm development in a variety of business, non-profit, and governmental sectors.

### **Student Learning Outcomes**

Graduates with an Informatics Minor will be able to demonstrate knowledge of:

- basic informatics and programming skills;
- the social and ethical aspects of informatics; and
- applied informatics specific to the student's major.

### **Course Delivery Format**

Program courses are delivered on campus, in classroom and laboratory settings.

### **Requirements for Informatics Minor: 18 Credits**

Required Credits: 9

- INFO 101 - Introduction to Informatics\* Credits: 3
- INFO 102 - Social and Ethical Aspects of Informatics\* Credits 3
- MATH 202 - Applied Informatics Credits: 3

Elective Credits: 9

Select from the following list of courses.

- NRM 457-557 - Ecological Modeling Credits: 3
- CSC 447/547 - Artificial Intelligence Credits: 3
- CSC 484 - Database Management Systems Credits: 3
- CSC 492/592 - Topics Credits: (1-3) (Data Mining)
- ECON 428 - Mathematical Economics Credits: 3
- GEOG 484-484L - Remote Sensing and Lab Credits: 3
- GEOG 472 - Introduction to GIS Credits: 3
- GEOG 473-573 - GIS: Data Creation & Integration Credits: 3
- SOC 462-562 - Population Studies \*\* Credits: 3
- STAT 460-560 - Time Series Analysis Credits: 3

## **Interior Design Minor**

### **Program Contact/Coordinator**

Angela Boersma, Program Leader  
Department of Consumer Sciences  
Wagner Hall 229 Box: 2275A  
Brookings, SD 57007  
605-688-5196  
E-mail: Angela.Boersma@sdstate.edu

### **Program Information**

Interior Design is a challenging and rewarding minor, expanding students' skill sets to think strategically and creatively in multiple professional contexts. The program complements majors in many other disciplines, from entrepreneurial studies to the arts. The minor prepares students with a curriculum that promotes an awareness and knowledge of the contributions of interior design to the health, safety, and well being of people in the built environment.

### **Additional Academic Requirements**

Interior Design students must earn at least a C in studio courses to advance to subsequent studios.

### **Course Delivery Format**

The curriculum is interactive, haptic and performance based, offering problem solving experiences in all major areas of design practice (i.e. healthcare, retail, corporate, residential, etc.).

### **Requirements for Interior Design Minor: 18 Credits**

- Interior Design Electives Credits: 10
- ID 150-150L – Intro to Interior Design I and Lab Credits: 4
- ID 151-151L – Intro to Interior Design II and Lab Credits: 4

## **Journalism Minor**

### **Program Contact/Coordinator**

Mary Arnold, Head  
Department of Journalism and Mass Communication  
Yeager Hall 211  
605-688-4171  
E-mail: mary.arnold@sdstate.edu  
<http://www.sdstate.edu/mcom/>

### **Program Information**

A minor in journalism prepares students with critical skills including: writing, speaking, critical thinking and technology. Graduates are well-positioned for a wide variety of careers, ranging from traditional media to business to non-profit organizations.

### **Academic Requirements**

Journalism minors must have grades of "C" or better in the program's courses.

### **Equipment and Supplies**

Students are also encouraged to purchase a Macintosh laptop and software appropriate for the discipline.

### **Accreditation, Certification, and Licensure**

The Department is accredited by the national accrediting body of journalism and mass communication, the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC).

### **Course Delivery Format**

The department offers coursework in classroom, studio, online, and field-based settings.

### **Requirements for Journalism Minor: 16 Credits**

- MCOM 210-210L - Basic Newswriting and Studio Credits: 3
- MCOM Courses Credits: 13

## **Leadership and Management of Nonprofit Organizations Minor**

### **Program Contact/Coordinator**

Jane E. Hegland, Head  
Department of Consumer Sciences  
Wagner Hall 229  
South Dakota State University  
605-688-5196  
E-mail: jane.hegland@sdstate.edu  
<http://www.sdstate.edu/cs/>

### **Program Information**

The Leadership and Management of Nonprofit Organizations minor prepares students with opportunities to increase their abilities and skills in the work of leadership to enhance nonprofit organizations.

### **Accreditation, Certification, and Licensure**

National Certification through the Nonprofit Leadership Alliance.

### Course Delivery Format

Certification requirements are met through course work, co-curricular involvement, and an internship. National Certification through the Nonprofit Leadership Alliance in nonprofit management requires an additional 300-hour internship with a nonprofit organization.

### Requirements for Leadership and Management of Nonprofit Organizations Minor: 18 Credits

- Leadership and Management of Nonprofit Organizations Core Requirements: 9
- LMNO 201 - Introduction to Leadership and Management of Nonprofit Organizations Credits: 3
- LMNO 435 - Organizational Leadership and Team Development Credits: 3
- LEAD 410 - Leadership: Senior Seminar Credits: 1
- LEAD 496 - Field Experience: Leadership in Action Credits: 2
- Electives: 9
  - Consult LMNO program coordinator and academic advisor to create the plan of study for the minor.
  - Students will take 9 credits from courses relevant to the program.

## Leadership Minor

### Program Contact/Coordinator

Jane E. Hegland, Head  
Department of Consumer Sciences  
Wagner Hall 229  
South Dakota State University  
Brookings, SD 57007  
605-688-5196  
E-mail: jane.hegland@sdstate.edu  
<http://www.sdstate.edu/cs/>

### Program Information

The undergraduate leadership minor is an interdisciplinary and multi-dimensional program that allows students to explore and experience multiple frameworks of leadership. The minor prepares students for real-life leadership experiences, both on-campus and in larger global communities. Leadership development will relate to student aspirations as they transition from the on-campus extracurricular services to professions, communities, and public and private organizations. By completing the minor, students will acquire skills and abilities to serve as competent leaders as they transition to life after graduation.

### Course Delivery Format

The on-campus program involves lecture, discussion, group work, and applied learning experiences.

### Requirements for Leadership Minor: 18 Credits

Leadership Core Requirements: 9

- LEAD 210 - Foundations of Leadership\*\* Credits: 3
- LEAD 310 - Leadership in Context \*\* Credits: 3
- LEAD 410 - Leadership: Senior Seminar Credits: 1
- LEAD 496 - Field Experience: Leadership in Action Credits: 2
- LEAD 435 - Organizational Leadership and Team Development Credits: 3

Electives: 9

- Consult with the LEAD program coordinator and academic advisor to create the plan of study.
- Students will take 9 credits from courses relevant to the program.

## Management Minor

### Program Contact

Jason Zimmerman, Assistant Department Head  
Department of Economics  
Scobey Hall 142  
South Dakota State University  
Brookings, SD 57007  
605-688-4845  
E-mail: jason.zimmerman@sdstate.edu  
<http://www.sdstate.edu/econ/emi/mgmt-science.cfm>

### Program Information

The Management minor is designed to produce professionals who are able to manage resources in organizations. The minor provides core competencies in management, business finance, management information systems, and human resources management with additional discipline-specific applied management courses.

### Program Requirements

A minimum GPA of 2.0 is required for the courses in the minor.

### Course Delivery Format

The program offers courses on campus, with limited online coursework, usually during the summer.

### Requirements for Management Minor: 18 Credits

Management Core: 12

- MGMT/BADM 310 - Business Finance Credits: 3
- MGMT/BADM 325 - Mgmt Information Systems Credits: 3
- MGMT/BADM 360 - Organization & Management Credits: 3
- MGMT/BADM 460 - Human Resource Management Credits: 3

Electives: 6

Select 6 credits from at least 2 different topic areas

Analytics

- BADM 424 - Operations Research Credits: 3
- CS 430 - Consumer Decision Making Credits: 3
- ECON 431-531 - Managerial Economics Credits: 3
- ECON 453-553 - Risk Mgmt-Personal & Business Credits: 3
- MNET/OM 462 - Quality Management Credits: 3

Cost Accounting

- ACCT 320 - Cost Accounting Credits: 3
- HMG 465 Hospitality Managerial Accounting Credits: 3
- MNET 460-560 - Manufacturing Cost Analysis Credits: 3

Organizational Behavior

- MGMT 464 - Organizational Behavior Credits: 3
- LMNO 435 - Org. Leadership & Team Dvptmt Credits: 3

Business Law

- AGE 352 - Agricultural Law Credits: 3
- AVIA 302 - Aviation Law Credits: 2
- BADM 350 - Legal Environment of Business Credits: 3
- CM 473 Construction Law & Accounting Credits: 3
- HMG 361 - Hospitality Industry Law Credits: 3

Applications

- ABS 475-475L Integrated Nat. Resource Mgmt & Lab Credits: 3
- BADM 482 - Business Policy and Strategy Credits: 3
- BADM/ENTR - 483 Small Business Consulting Credits: 1-3
- CM 410 Construction Project Mgmt & Supervision Credits: 3
- ENTR 489 - Business Plan Writing & Competition Credits: 1

## Marketing Minor

### **Program Contacts/Coordinators**

Jason Zimmerman, Assistant  
Department Head  
Department of Economics  
Scobey Hall 142  
605-688-4845  
E-mail: jason.zimmerman@sdstate.edu  
http://www.sdstate.edu/econ/

Mary Arnold, Head  
Department of Journalism and  
Mass Communication  
Yeager Hall 211  
605-688-4171  
mary.arnold@sdstate.edu  
http://www.sdstate.edu/mcom

### **Program Information**

The Marketing minor represents a multi-department collaborative effort to provide students with supplementary training in both the qualitative and quantitative aspects of marketing. The minor will benefit students pursuing careers in marketing, business, sales, journalism, hospitality management, and advertising, among other fields.

### **Academic Requirements**

A minimum GPA of 2.0 is required in the minor.

### **Student Learning Outcomes**

Graduates will:

- understand the importance of a consumer orientation
- establish, develop, and maintain effective business relationships
- demonstrate a knowledge of technological and global factors affecting marketing practices

### **Course Delivery Format**

The program offers courses on campus, with limited online coursework, usually during the summer.

### **Requirements for Marketing Minor: 18 Credits**

Required Credits: 9

- ECON/BADM 370 - Marketing Credits: 3
- ADV 370 - Advertising Principles Credits: 3
- ECON/BADM 476-576 - Marketing Research Credits: 3  
or MCOM/ADV 472 - Media Research and Planning Credits: 3

Elective Credits: 9

Select from the following courses.

- AM 462 - Retail Management Credits: 3
- BADM 334 - Small Business Management Credits: 3
- BADM 474 - Personal Selling Credits: 3
- HMG 482 - Hospitality Marketing Credits: 3
- ADV 314 - Sales, Promotion and Marketing Credits: 3
- MCOM 474-574 - Media Administration and Mgmt Credits: 3
- ADV 476 - International and Ethnic Advertising Credits: 3
- ADV/MCOM 243 - Public Relations Principles Credits: 3
- CA 230 - Consumer Behavior Credits: 3

## Mathematics Minor

### **Program Contact/Coordinator**

Kurt Cogswell, Head  
Department of Mathematics and Statistics  
Harding Hall 228  
605-688-6196  
E-mail: kurt.cogswell@sdstate.edu  
http://mathstat.sdstate.edu

### **Program Information**

The Mathematics minor provides an outstanding educational experience to students from any major who are interested in the wide range of excellent career or graduate school choices available in the mathematical sciences. The flexible, specialized paths are available lead to many exciting and challenging career options.

### **Academic Requirements**

- STAT 281 may not be used for the Mathematics Minor.
- A grade of "C" or better is required in each course.

### **Course Delivery Format**

Program courses are delivered on campus, in classroom and laboratory settings, online, and at off campus attendance centers.

### **Requirements for Mathematics Minor: 18 Credits**

- MATH 125 - Calculus II \* Credits: 4
- MATH 225 - Calculus III \* Credits: 4
- MATH 253 - Logic, Sets, and Proof Credits: 3  
or MATH 361 - Modern Geometry Credits: 3  
or MATH 411-511 - Theory of Numbers Credits: 3  
or MATH 450 - History of Mathematics Credits: 3
- Elective Credits: 7
- Mathematics courses at the 200 level or above  
or Statistics course at the 300 level credits or above

## Microbiology Minor

### **Program Contact/Coordinator**

Volker Brözel, Department Head  
Department of Biology and Microbiology  
Alfred Dairy Science Hall 228  
South Dakota State University  
Brookings, SD 57007  
605-688-6141  
E-mail: biomicro@abs.sdstate.edu  
http://www.sdstate.edu/biomicro/

### **Program Information**

The Microbiology minor is open to all majors and is especially appropriate for students majoring in the biological or agricultural sciences, physical sciences or science education. The minor provides students with a broad background in all facets of microbiology, preparing them to pursue careers in diagnostic and research laboratories, public health, agriculture, food industry, pharmaceutical companies, academia, governmental agencies, and the private sector. The goal is to provide a sound but varied educational experience.

### **Academic Requirements**

A minimum GPA of 2.0 must be maintained in the major courses.

### **Course Delivery Format**

Program coursework is on-campus, in classrooms and laboratories, as well as field-based settings. Additional coursework is available at off-campus attendance centers. Limited coursework is available online.

### **Requirements for Microbiology Minor: 18 Credits**

- MICR 231-231L - General Microbiology and Lab Credits: 4
- Elective Credits: 14  
Select additional courses prefixed MICR
- Two courses must be at the 300 level or above.
- No more than 3 credits can come from MICR 494, 497, and 498.
- DS 301-301L - Dairy Microbiology and Lab may also be included.

## Military Science Minor

### **Program Contact/Coordinator**

LTC Aaron Schultz, Head  
Department of Military Science; Army ROTC  
DePuy Military Hall 200  
605-688-6151  
E-mail: garnet.wosje@sdstate.edu  
<http://www.sdstate.edu/msl/index.cfm>

### **Program Information**

A minor in Military Science is compatible with all majors. The program offers instruction and practical experience in leadership and management, the development of selected military skills and problem solving techniques, the role of the Army in modern society, the customs and traditions of the Army, marksmanship, military law, administration and professional ethics. Military Science training prepares qualified students seeking a baccalaureate or master's degree to serve as commissioned officers in the active Army, the Army National Guard or the Army Reserve.

### **Course Delivery Format**

MSL courses are delivered through lecture, discussion, laboratory, and field-based learning experiences.

### **Requirements for Military Science Minor: 20 Credits**

- MSL 301-301L - Adaptive Team Leadership and Lab Credits: 4
- MSL 302-302 Leadership in Changing Envt & Lab Credits: 4
- MSL 401-401L - Developing Adaptive Leaders and Lab Credits: 4
- MSL 402-402L - Leadership in a Complex World and Lab Credits 4
- MSL 494 - Leader Development and Assessment Course Credits: 4

## Music Minor

### **Program Contact/Coordinator**

David Reynolds, Head  
Department of Music  
Lincoln Music Hall 205  
605-688-5187  
Paul.Reynolds@sdstate.edu  
<http://www.sdstate.edu/mus/>

### **Program Information**

The Music Minor is for students wishing to undertake an in-depth study of music without majoring in it. The program requires eighteen hours of specialized coursework plus major ensemble participation.

### **Additional Academic Requirements**

MUS 185 required for each semester enrolled for applied lessons. In addition, minors must participate in Major Ensembles each semester in which they are enrolled in Applied Music lessons. Participation in small ensembles is strongly encouraged.

### **Course Delivery Format**

The department offers coursework in classroom, studio, and performance settings. The program allows for internship experiences and independent studies.

### **Requirements for Music Minor: 18 Credits**

Core Requirements: 15

- MUAP/MUEN Ensemble and Applied Music (applied music not to exceed the 200-level) (see note below) Credits: 6
- MUS/MUAP/MUEN Electives Credits: 3
- MUS 110 - Basic Music Theory I Credits: 4
- MUS 110L - Basic Music Theory I Lab Credits: 0
- MUS 130 - Music Literature and History I \* Credits: 2

Select one of the following courses: 3

- MUS 100 - Music Appreciation \* \*\* Credits: 3
- MUS 131 - Music Literature and History II \* Credits: 3
- MUS 201 - History of Country Music \* Credits: 3
- MUS 203 - Blues, Jazz, and Rock \* Credits: 3
- MUS 433 - Music Literature and History III (AW) Credits: 3

## Nuclear Engineering Minor

### **Program Contact/Coordinator**

Robert McTaggart, Coordinator  
Department of Physics  
255 Daktronics Engineering Hall  
South Dakota State University  
Brookings, SD 57007  
605-688-5428  
E-mail: Robert.McTaggart@sdstate.edu  
<http://www.sdstate.edu/phys/>

### **Program Information**

A minor in Nuclear Engineering can be beneficial to individuals who are pursuing an undergraduate degree in engineering, physical sciences, and health related fields or pre-professional programs. Nuclear power plants want to hire many different engineering majors (e.g. EE, ME, CE, etc.) that have a background that this minor provides. Nuclear Engineering is a broad multidisciplinary field that offers rewarding careers related to nuclear power, health physics, medical physics, nuclear and particle physics, and industrial applications such as sterilization of medical products or food irradiation. Students who complete the minor in nuclear engineering at SDSU will be well prepared for engineering/science careers or for graduate programs for advanced degrees related to nuclear engineering, health physics, medical physics, or physics.

### **Student Learning Outcomes**

Graduates with a Minor in Nuclear Engineering will be able to:

- Apply advanced mathematics, science, and/or engineering science to nuclear and/or radiological systems.
- Measure nuclear and radiological processes.
- Understand the biological effects of radiation and standard radiation safety practices.
- Demonstrate competency in contemporary issues regarding nuclear power.
- Demonstrate the ability to work effectively in an area of nuclear science.

### **Additional Program Requirements**

Students planning a nuclear engineering minor must declare the minor and receive departmental approval for how they intend to fulfill the internship/research experience requirement of the degree. Contact the program coordinator if you are planning to graduate with this minor.

### **Course Delivery Format**

Instruction is mostly didactic (classroom) along with a field experience accomplished through the required internship/research experience. Students who are majoring in a field that requires a capstone/research design experience can often use that experience to fulfill the experiential requirement of the Minor. Contact the program coordinator for details.

### **Requirements for Nuclear Engineering Minor: 18 Credits**

Nuclear Engineering Core: 9

- PHYS 331 - Introduction to Modern Physics Credits: 3
- NE 435 - Introduction to Nuclear Engineering Credits: 3
- NE 337 - Foundations of Health Physics Credits: 3

Internship/Research Requirement: 2-3

The internship/research experience must be related to nuclear science or operations in the nuclear industry. Student must obtain prior approval for the experience from the Coordinator.

- NE 494 - Internship Credits: 1-3
- OR NE 498 - Undergraduate Research/Scholarship Credits: 1-3

Electives: 6-7

Select six or more credits from the following list of courses.

- CHEM 332-332L - Analytical Chemistry and Lab Credits: 3, 1
- EE 430-430L - Electromechanical Systems and Lab Credits: 4
- EE 434-434L - Power Systems and Lab Credits: 4
- ME 341-341L - Metallurgy and Lab Credits: 3
- ME 410 - Principles of HVAC Engineering Credits: 3
- ME 413 - Turbomachinery Credits: 3
- ME 418 - Design of Thermal Systems Credits: 3
- ME 433-433L- Non-Destructive Testing and Evaluation and Lab Credits: 3
- ME 437/537 - Gas Dynamics I Credits: 3
- ME 439-439L - HVAC System Design and Lab Credits: 3
- PHYS 418 - Advanced Lab II Credits: 1
- PHYS 433-533 - Nuclear and Elementary Particle Physics Credits: 3

## Nutrition Minor

### **Program Coordinator/Contact**

Matthew Vukovich, Head  
Department of Health and Nutritional Sciences  
Intramural Building 116  
South Dakota State University  
Brookings, SD 57007  
605-688-6580  
E-mail: matt.vukovich@sdstate.edu

### **Program Information**

A minor in Nutrition can be beneficial to individuals who are pursuing an undergraduate degree in many health related fields and pre-professional programs. It may also assist students who are interested in attending graduate or medical school by providing a strong science knowledge base. The minor would benefit students in the hospitality and/or food service industries. The minor does not allow students to become a registered dietitian, but it provides a strong fundamental knowledge of metabolism and the complex interaction between foods and body systems.

### **Academic Requirements**

Students planning a minor must receive departmental approval. Some courses in the curriculum have prerequisites; higher level mathematics or chemistry courses *may* be accepted, with department approval.

### **Course Delivery Format**

Program coursework is presented in lecture, laboratory, and field-based learning experiences.

### **Requirements for Nutrition Minor: 20 Credits**

- NFS 111 - Food, People and the Environment\*\* Credits: 3
- NFS 141-141L - Foods Principles and Lab Credits: 4
- NFS 251 - Food Safety and Technology Credits: 3
- NFS 315 - Human Nutrition Credits: 3
- NFS 323 - Nutrition Across the Life Cycle Credits: 3
- NFS 422-522 - Advanced Human Nutrition Credits: 4

## Peace and Conflict Studies Minor

### **Program Contact/Coordinator**

Charles Woodard, Ph.D.  
Department of English  
Scobey Hall 014 Box: 504  
605.688.5191  
E-mail: Charles.Woodard@sdstate.edu  
<http://www.sdstate.edu/engl/>

### **Program Information**

The Peace and Conflict Studies minor provides robust learning experiences in and beyond the classroom designed to increase students' willingness to be civically engaged and socially responsible contributors to a more caring and humane society and world, fostering informed citizenship and enhancing SDSU's ability to graduate students who are committed to lifelong learning and service. The minor presents historical and contemporary conflicts through an interdisciplinary lens because the causes of conflicts can usually be attributed to multiple and interwoven cultural, economic, political and historical factors. The program includes in various subjects as English, Speech Communication, Political Science, History, Global Studies, and Philosophy and Religion, but it is open to students of all majors. The minor will be invaluable in ensuring that graduates have come to understand the overriding importance of what SDSU refers to as "the fellowship of many."

### **Student Learning Outcomes**

Students will:

- learn non-violent approaches to conflict resolution on the personal, local, state, national, and global levels.
- to balance theoretical, descriptive, and normative approaches to conflict resolution with practical skills and experiential learning via the minor's service learning component.
- to test and clarify theoretical and scholarly conceptions of the causes of conflict through field experiences and writing assignments which require them to imagine workable conflict resolutions to real world problems.
- acquire additional research methods skills through library and internet searches and qualitative and ethnographic methods.
- acquire additional skills in planning and managing projects and in working collaboratively with peers and with working professionals.
- acquire additional skills in effectively and persuasively presenting their ideas in oral and written presentations.

### **Course Delivery Format**

Coursework for the Minor in Peace and Conflict Studies is delivered through face to face instruction.

### **Minor Requirements: 18 Credits**

- ENGL 125 - Introduction to Peace and Conflict Studies\*\* Credits: 3
- ENGL 470 - Capstone in Peace and Conflict Studies Credits: 3
- SPCM 470 - Intercultural Communication (G) Credits: 3
- Electives: 9  
Select at least three courses from the following list.
- POLS 253 - Current World Problems \* \*\* (G) Credits: 3
- POLS 350 - International Relations Credits: 3
- POLS 454 - International Law and Organization Credits: 3
- HIST 469 - American Foreign Relations Credits: 3
- HIST 460 - American Military History Credits: 3
- PHIL 215 - Intro to Social-Political Philosophy \* Credits: 3
- GLST 201 - Global Studies I \* \*\* (G) Credits: 3
- GLST 480 - Ethics of Globalization Credits: 3
- ENGL 380 - Futuristic Communications Credits: 3

## Pest Management Minor

### **Program Contact/Coordinator**

David Wright, Department Head  
Brent Turnipseed, Undergraduate Teaching Coordinator  
Department of Plant Science  
Agricultural Hall 219  
605-688-5123 or 605-688-4450  
E-mail: david.wright@sdstate.edu  
E-mail: brent.turnipseed@sdstate.edu  
<http://www.sdstate.edu/ps/>

### **Program Information**

The Pest Management minor provides students with knowledge of the general principles of managing insect, disease and weed pests in a variety of situations, and a firm understanding of the environmental consequences of pest control decisions. Individuals who complete this curriculum will be prepared for careers that require an understanding of the management of pests as an important aspect of their responsibilities.

### **Academic Requirements**

The program requires a 2.5 GPA or higher and a grade of C or higher in all coursework for the minor. Additionally some noted <sup>1</sup>courses may only be used to meet requirements in one section below, and other <sup>2</sup>courses require collaboration with pest management faculty.

### **Course Delivery Format**

The program provides curriculum in lecture, laboratory, and field-based learning environments.

### **Requirements for Pest Management Minor: 18 Credits**

- PS 223-223L - Principles of Plant Pathology and Lab Credits: 3
- PS 305-305L - Insect Biology and Lab Credits: 3 <sup>1</sup>  
or PS 307-307L - Insect Pest Management and Lab Credits: 3 <sup>1</sup>
- PS 343-343L - Weed Science and Lab Credits: 3
- Electives: 8  
Select at least eight credits from the following list of courses.
- PS 305-305L - Insect Biology and Lab Credits: 3 <sup>1</sup>  
or PS 307-307L - Insect Pest Mgmt & Lab Credits: 3 <sup>1</sup>
- PS 333-333L - Diseases of Field Crops and Lab Credits: 3
- PS 415-415L/515-515L - Mycology and Lab Credits: 3
- PS 431-531 - Insect Ecology & Biological Control Credit 3
- PS 450-450L/550-550L - Field Study of Plant Disease Diagnosis and Lab Credits: 2
- PS 491 - Independent Study Credits: (1-5) <sup>2</sup>
- PS 492-592 - Topics Credits: 1-3 <sup>2</sup>

## Philosophy Minor

### **Program Contact/Coordinator**

April Brooks, Head  
Department of History, Political Science, Philosophy, and Religion  
Box 510 West Hall  
605-688-4311  
E-mail: April.Brooks@sdstate.edu

### **Program Information**

Philosophy deals with the fundamental questions of life, including the nature of knowledge, the basis of morality and politics, and the rational analysis of religious beliefs. A philosophical perspective emphasizes clear thinking about what is truly important to live well. Student may earn a minor in Philosophy with a B.A. or a B.S. degree in another academic discipline. Students may also pursue an Interdisciplinary Studies Major with an emphasis on philosophy. The curriculum provides excellent preparation for graduate work in law, ethics, religion, philosophy and other fields in which reasoning and argumentation skills or ability to work at a high level of abstraction are important.

### **Student Learning Outcomes**

Graduates will be able to demonstrate effective

- Critical Thinking
- Problem Solving
- Analytical Reasoning
- Written Communication
- Understanding of the major figures in philosophy

### **Course Delivery Format**

The program provides courses online and face to face on campus and at various off-campus attendance centers.

### **Requirements for Philosophy Minor: 15 Credits**

- PHIL 100 - Introduction to Philosophy \* Credits: 3
- 300-400 Level Philosophy Elective Credits: 6
- Additional Philosophy Elective Credits: 6

## Physics Minor

### **Program Contact/Coordinator**

Joel Rauber, Head  
Department of Physics  
Daktronics Engineering Hall 255  
South Dakota State University  
Brookings, SD 57007  
605-688-5428  
E-mail: joel.rauber@sdstate.edu  
<http://www.sdstate.edu/phys>

### **Program Information**

Students desiring to add additional valuable physics background and experience to their major should consider the minor in Physics. Physics is the foundation of almost all of the science and engineering disciplines. The minor in physics provides the flexibility to accommodate a wide range of student majors and interests including engineering, physical science, mathematics, biological science, or health sciences. Graduates find careers in physics research, education, engineering, medicine, nuclear medicine, law, science journalism or alternatively many other choices.

### **Program Outcomes**

Graduates will be productively employed and will compare favorably in their theoretical and technical knowledge with students completing similar programs nationally. Physics students will have learned to apply technical knowledge; to design an experiment and analyze and interpret the data; to communicate effectively in a team environment; and to use appropriate scientific tools in solving problems. They will have a basic understanding of contemporary issues and professional/ethical responsibilities in a local and global context. Physics graduates will have enhanced learning skills that prepare them to be lifelong learners.

### **Course Delivery Format**

Physics students learn through hands-on and face to face learning in lecture, laboratory, and field based experiences.

### **Requirements for Physics Minor: 17 Credits**

- PHYS 111-111L - Intro to Physics I and Lab\* Credits: 4  
or PHYS 211-211L - University Physics I and Lab\* Credits: 4
- PHYS 113-113L - Introduction to Physics II and Lab\* Credits: 4  
or PHYS 213-213L - University Physics II and Lab \* Credits: 4
- PHYS 331 - Introduction to Modern Physics Credits: 3
- Physics Elective Credits: 3
- 300 level or higher Physics Elective Credits: 3

## **Political Science Minor**

### **Program Coordinator/Contact**

April Brooks, Head  
Department of History, Political Science, Philosophy, and Religion  
Box 0510 West Hall  
605-688-4311  
E-mail: april.brooks@sdstate.edu

### **Program Information**

The study of Political Science examines politics, governments, and political processes. The Political Science program prepare graduates for work in government agencies, party headquarters, political consulting firms, advocacy organizations, business, or non-profit agencies. The flexibility of the program also positions students for law school and other professional or graduate degree programs. Students may focus their minor by selecting courses that concentrate on American or comparative/international politics.

### **Curriculum Objectives**

Political science courses are designed to achieve the following objectives:

- convey the values and traditions of our democratic governmental institutions and processes and encourage students to assert their talents in preserving and nurturing those values and traditions through participation in the body politic;
- promote global awareness and understanding;
- engender critical thinking and a high proficiency in communication skills;
- serve the other social sciences as a cognate field;
- provide the student majoring in political science with foundation and advanced courses in the many sub-disciplines of political science which, in turn, will contribute to the student's intellectual growth and occupational pursuits.

### **Course Delivery Format**

The program provides courses online and face to face on campus and at various off-campus attendance centers.

### **Requirements for Political Science Minor: 18 Credits**

- POLS 100 - American Government \* Credits: 3
- 300-400 Level Political Science Elective Credits: 9
- Additional Political Science Elective Credits: 6

## **Professional Writing Minor**

### **Program Coordinator/Contact**

Jason McEntee, Head  
Department of English  
South Dakota State University  
Scobey Hall 014 Box: 504  
605-688-5191  
<http://www.sdstate.edu/engl/>  
E-mail: Jason.McEntee@sdstate.edu

### **Program Information**

Professional Writing minor will prepare students from all disciplines to write persuasively, clearly, and effectively in professional settings, thereby contributing to the economic growth of the State and region. English majors who have professional writing backgrounds find

careers as editors, publishers, copywriters, website designers, writers and free-lance writers, and grant writers in business, government, academia, and the non-profit sector. Non-English majors may also elect to complete the proposed minor in Professional Writing. Combining the Professional Writing minor with majors in areas such as Biology, Chemistry or Plant Science will provide more intense writing skill development for students. This combination will make them more marketable for positions in their specific discipline which require higher level writing skills.

### **Student Learning Outcomes**

Students will

- learn research methods (library and Internet searches, qualitative and ethnographic methods).
- learn the components of audience, rhetorical, contextual, and ethical analysis.
- plan and manage projects.
- collaborate with peers and clients on projects.
- effectively and persuasively present their ideas in oral and written presentations.
- utilize appropriate technology in completing projects and presenting them to an audience (software, hardware, multimedia).
- demonstrate an understanding of document and web-site design.
- edit and design documents for various audiences and purposes.

### **Additional Academic Requirements**

Courses must be passed with a minimum grade of "C" for the minor.

### **Course Delivery Format**

The interdisciplinary nature ensures that students will develop expertise in writing, grammar, linguistics, editing, digital media, computer graphics, visual rhetoric, and desk-top publishing in standard and smart classrooms, computer labs, and field-based settings. Students will also be strongly encouraged to undertake an internship to gain expertise in "real world" professional writing. The internship should focus on professional writing and be in addition to an internship required by programs to develop specific job-related skills.

### **Requirements for Professional Writing Minor: 18 Credits**

- ENGL 492-592 - Topics Credits: (1-5)
- LING 203 - English Grammar Credits: 3
- MCOM 161-161L - Fundamentals of Desktop Publishing & Lab Credits: 3
- ENGL 277 - Technical Writing in Engineering\* Credits: 3 (Engineering majors) OR ENGL 379 - Technical Communication (AW) Credits: 3 (All other majors)
- Electives: 6
  - ENGL 380 - Futuristic Communications Credits: 3
  - ARTD 202 - Computer Graphics I Credits: 3
  - ENGL 383 - Creative Writing Credits: 3
  - ENGL 492-Topics: Professional Writing - Writing for Professions in the Sciences and Humanities Credits: (1-5)
  - ENGL 494 - Internship Credits: (1-12)
  - LING 420-520 - The New English Credits: 3
  - MCOM 220-220L - Intro to Digital Media and Lab Credits: 3
  - MCOM 225-225L Intro to Digital Production & Lab Credits 2



## **Psychology Minor**

### **Program Contact/Coordinator**

Brad Woldt, Head  
Department of Psychology  
Scobey Hall 336  
605-688-4322  
E-mail: bradley.woldt@sdstate.edu  
<http://www.sdstate.edu/psych/index.cfm>

### **Program Information**

Students who have an interest in psychology but would prefer to adapt their study as a complement to another major may choose to minor in Psychology. The curriculum allows flexibility in course selection. Thus, students with majors in a wide variety of disciplines will find it possible to design a psychology minor that is relevant to their career goals.

### **Course Delivery Format**

Psychology courses are delivered at multiple locations (Brookings Main Campus and the University Center in Sioux Falls), and in multiple formats including face-to-face lecture, discussion, and laboratory courses, as well as online courses.

### **Requirements for Psychology Minor: 18 Credits**

- PSYC 101 - General Psychology \* \*\* Credits: 3
- PSYC 210 - Introduction to Biopsychology Credits: 3 (pre-requisite PSYC 101 with a C or better)
- 300-400 level Psychology courses Credits: 12

## **Range Science Minor**

### **Program Contact/Coordinator**

Alexander (Sandy) Smart, Professor  
Department of Natural Resource Management  
Animal Science Building, Room 219  
605-688-4017  
E-mail: Alexander.Smart@sdstate.edu  
[www.sdstate.edu/nrm/](http://www.sdstate.edu/nrm/)

### **Program Information**

Range Science focuses on the scientific study of rangelands, arid regions, grasslands, as well as resource management for maximum benefit and environmental balance. Students from a variety of majors select a minor in Range Science to enhance their baccalaureate education and increase their career possibilities.

### **Accreditation, Certification, and Licensure**

The Range Science program is accredited by the Society for Range Management.

### **Course Delivery Format**

The Range Science program is on campus and engages students in experiential learning in lecture, laboratory, and field based settings.

### **Requirements for Range Science Minor: 18 Credits**

- RANG 105-105L - Intro to Range Management & Lab Credits 3
- RANG 415-415L Range Improvements & Grazing Mgmt & Lab Credits: 4
- RANG Courses Credits: 5
- Electives: 6  
Additional credits selected from the following list and outside of the students major field of study.
  - RANG Courses Credits: 6
  - PS 213-213L - Soils and Lab \* \*\* Credits: 3
  - AS 233-233L - Applied Animal Nutrition & Lab Credits: 4

- AS 474-474L - Cow/Calf Management and Lab Credits: 3
- AS 477-477L - Sheep & Wool Production & Lab Credits: 3
- BIOL 311-311L - Principles of Ecology & Lab Credits 3, 1
- BIOL 440-440L - Restoration Ecology Credits: 4
- BOT 301-301L - Plant Systematics Credits: 4
- GEOG 365 - Land Use and Planning\*\* Credits: 3
- NRM 110 - Environmental Conservation \*(G) Credits: 3
- PS 313 - Forage Crop and Pasture Management Credits: 3
- WL 220 - Intro to Wildlife & Fisheries Management Credits 3
- WL 411-411L - Principles of Wildlife Mgmt & Lab Credits: 3

## **Recreation Administration Minor**

### **Program Coordinator/Contact**

Paul Fokken, Coordinator  
Department of Health and Nutritional Science  
South Dakota State University  
Brookings, SD 57007  
605-688-6163  
E-mail: paul.fokken@sdstate.edu

### **Program Information**

A Recreation Administration minor is an interdisciplinary minor offered to any student and is strongly suggested for individuals pursuing studies in related areas of physical education or health. This minor may also be of particular interest to those pursuing summer/seasonal opportunities with municipal park and recreation agencies, state and national park agencies, Boys and Girls Clubs, and YMCA or YWCA's. Contact the Recreation Administration Coordinator for details and to plan for this minor.

### **Course Delivery Format**

The program coursework is delivered through lecture, laboratory, and field-based learning experiences.

### **Requirements for Recreation Administration Minor: 21-22 Credits**

- PE 180 - Foundations of HPER/A (COM) Credits: 2  
or PRM 100 - Introduction to Park and Recreation Credits: 1
- PRM 360 - Recreation and Outdoor Programming Credits: 3
- RECR 260 - Fundamentals of Recreation Leadership Credits: 3
- RECR 440 - Administration of Leisure Services Credits: 3
- RECR 342 - Recreational Sports Programs & Admin. Credits: 3
- RECR 362 - Recreation Across the Lifespan Credits: 3
- Electives: 5  
Select from the following list of courses.
  - BADM 350 - Legal Environment of Business Credits: 3
  - BADM 360 - Organization and Management Credits: 3
  - DANC 130 - Dance Fundamentals Credits: 1
  - HDFS 141 - Individual and the Family \* Credits: 3
  - HLTH 250-250L Pre-Professional First Aid & CPR & Lab Credits: 2
  - PE 320-320L - Lifeguard Training and Lab Credits: 1-2
  - PE 321-321L - Water Safety Instructor and Lab Credits: (1-2)
  - POLS 210 - State and Local Government Credits: 3
  - PR 301 - Park Interpretation Credits: 3
  - PRM 101 - Parks and Society Credits: 3
  - PRM 302 - Commercial Recreation and Tourism Credits: 3
  - RECR 330 - Therapeutic Recreation (COM) Credits: 3
  - RECR 395 - Practicum (COM) Credits: (1-3)
  - RECR 410 - Current Issues in Recreation (AW) Credits: 3
  - NRM 110 - Environmental Conservation \*(G) Credits: 3
  - NFS 221 - Survey of Nutrition Credits: 3

## Rehabilitation Services Minor

### **Program Contact/Coordinator**

Alan Davis, Professor  
Department of Counseling and Human Development  
605-688-4715  
E-mail: Alan.Davis@sdstate.edu  
<http://www.sdstate.edu/chd/index.cfm>

### **Program Information**

A minor in rehabilitation services fits well with majors such as Human Development, Psychology, Sociology, etc. Rehabilitation counselors provide services that assist people with physical or psychiatric disabilities to become or remain self-sufficient, productive citizens. They help people with disabilities accept themselves and lead satisfying and productive lives.

Their knowledge of specific disabilities as well as related knowledge and skills, distinguish rehabilitation counselors. Rehabilitation counselors address the environmental and social obstacles facing people with disabilities; facilitate connections between people with disabilities and their families, communities, and employers; and utilize knowledge from several fields, including psychology, medicine, psychiatry, sociology, education, and law.

### **Student Learning Outcomes**

Each student will develop an employment portfolio that includes a project from each class. The projects will include evidence of the competencies and dispositions relevant to the work position being sought. Students will demonstrate the ability to:

- monitor and facilitate client progress toward goals and objectives;
- maintain records and case files;
- recognize and understand community referral sources;
- develop job placement sites;
- recognize client strengths and weaknesses from both a personal and employment standpoint;
- identify various cultural characteristics; and
- recall and apply ethical guidelines

### **Course Delivery Format**

The courses for the minor in rehabilitation services are prepared for Internet delivery only.

### **Requirements for Rehabilitation Services Minor: 18 Credits**

- CHRD 301 - Introduction to Rehabilitation Credits: 3
- CHRD 351 - Medical & Vocational Case Management Credits 3
- CHRD 352 - Counseling Special Populations Credits: 3
- CHRD 353 - Ethics and the Helping Professions Credits: 3
- CHRD 451 - Individual and Group Counseling Credits: 3
- Electives: 3 - CHRD 452 - Addictions Rehabilitation Credits: 3 or CHRD 453 - Family Therapy Credits: 3

## Religion Minor

### **Program Contact/Coordinator**

April Brooks, Head  
Department of History, Political Science, Philosophy, and Religion  
Box 510 West Hall 605-688-4311  
E-mail: April.Brooks@sdstate.edu

### **Program Information**

The Religion Minor introduces students to the various historical and contemporary expressions of diverse religious traditions as a dimension of the human experience. Religion scholars seek to understand how believers understand their own of traditions, as well as examining contributing historical, psychological, and social factors of religious of systems and movements.

230

Students pursuing religion minors may go on to church-related careers through graduate degrees in theology or religious studies. These students may also select the pre-ministerial interest area. However, the minor pairs well with a variety of majors that support students career choices requiring global perspectives, critical thinking, and strong communication skills. Students also select an Interdisciplinary Studies Major with an emphasis on religion.

### **Student Learning Outcomes**

Graduates will demonstrate skills in

- critical thinking, analytical reasoning, problem solving, and written communication
- religious literacy
- articulating the nature and role of symbols to express societal values and the interpretive issues involved in Religion
- comparing and contrasting the historical developments, practices, and beliefs of diverse religious traditions

### **Course Delivery Format**

The program provides courses online and face to face on campus and at various off-campus attendance centers.

### **Requirements for Religion Minor: 15 Credits**

- REL 213 - Introduction to Religion\* Credits: 3
- Additional Religion Credits: 12

## Sociology Minor

### **Program Contact/Coordinator**

Mary Emery, Head  
Department of Sociology and Rural Studies  
South Dakota State University  
Brookings, SD 57007  
Scobey Hall 224  
605-688-4132  
E-mail: Mary.Emery@sdstate.edu  
<http://www.sdstate.edu/soc/>

### **Program Information**

Students whose career goals involve extensive contact with the public, including majors in business, communications, engineering, human development and family studies, nursing, and psychology would benefit from a Minor in Sociology. It is a means toward greater understanding of the complex social and cultural world that shapes their future clients' and customers' life experiences, needs, and concerns.

### **Additional Academic Requirements**

Students must have a cumulative GPA of 2.2 to enter the program, a minimum GPA of 2.2 in the minor, and a C or better in each course for the minor. Courses may not be used for both a Sociology Major or Minor and a Criminal Justice Minor.

### **Course Delivery Format**

The program offers coursework on campus, on-line, and at attendance centers around the state.

### **Requirements for Sociology Minor: 18 Credits**

- SOC 100 - Introduction to Sociology \* (G) Credits: 3
- 300 level or above SOC or ANTH Elective Credits: 6
- Additional SOC or ANTH Elective Credits: 9

## Software Engineering Minor

### Program Contact/Coordinator

George Hamer, Assistant Department Head  
Department of Electrical Engineering and Computer Science  
Daktronics Engineering Hall 214  
605-688-4526  
E-mail: [sdsu.eecs@sdstate.edu](mailto:sdsu.eecs@sdstate.edu)  
website: <http://www.sdstate.edu/eecs/>

### Program Information

Minor in Software Engineering provides both depth and breadth in software engineering. The minor is open to any major, but may be of special interest for students majoring computer science, electrical engineering or mechanical engineering. The minor includes foundational courses in Software Engineering, practical hands-on team design experience, and advanced coursework.

### Student Learning Outcomes

Graduates will be able to:

- Identify, formulate, and solve engineering problems that can be resolved by developing software systems.
- Use the techniques, skills, and modern software tools for the software engineering practice.
- Function on a design team and complete a major software engineering design project based on the knowledge and skills acquired in earlier course work and incorporating appropriate engineering standards and multiple realistic constraints.

### Course Delivery Format

Standard contemporary classroom and laboratory technologies are used, as well as hands-on, project based learning.

### Requirements for Software Engineering Minor: 18 Credits

- SE 305 - Foundation of Software Engineering Credits: 3
- SE 330 - Human Factors and User Interface (G) Credits: 3
- SE 340 - Software Architecture Credits: 3
- SE 464 - Senior Design I Credits: 2
- SE 465 - Senior Design II Credits: 2
- Electives: 6  
Choose 6 credits from the following.
  - SE 320 - Software Requirements and Formal Specifications (AW) Credits: 3
  - SE 410 - Software Test and Quality Assurance Credits: 3
  - SE 420 - Software Project Management Credits: 3
  - SE 440 - Embedded Systems Credits: 3
  - EE 347-347L - Microcontroller Systems Design & Lab Credits: 3
  - CSC 317 - Computer Organization and Architecture Credits: 3

## Soil Science Minor

### Program Contact

David Wright, Department Head  
Brent Turnipseed, Undergraduate Teaching Coordinator  
Department of Plant Science  
South Dakota State University  
Agricultural Hall 219  
605-688-5123  
E-mail: [David.Wright@sdstate.edu](mailto:David.Wright@sdstate.edu)  
[brent.turnipseed@sdstate.edu](mailto:brent.turnipseed@sdstate.edu)

### Program Information

The soil science minor is open to students of all majors and provides a strong background in basic soil sciences, covering such topics as soil biology, chemistry, conservation, contaminants, and land management. Students completing this minor may seek employment in areas of agricultural production, marketing, management, and conservation, i.e., areas in which decision-making requires a basic understanding of soils.

### Academic Requirements

Students must have a 2.5 GPA or higher and a grade of C or higher in the program's coursework.

### Accreditation, Certification, and Licensure

- Students seeking Soil Science Certification should contact their advisor and refer to <https://www.soils.org/certifications/cpss-cpsc>

### Course Delivery Format

The program coursework is available on campus, in classrooms and laboratories, as well as field-based settings.

### Requirements for Soil Science Minor: 18 Credits

- PS 213-213L - Soils and Lab \* \*\* Credits: 2, 1
- PS 310-310L - Soil Geography and Land Use Interpretation and Lab\*\* (G) Credits: 3
- PS 323 - Soil Fertility and Plant Nutrient Management Credits: 3
- PS 362-362L - Environmental Soil Mgmt and Lab \*\* Credits: 3
- PS 412-512 - Environmental Soil Chemistry Credits: 3
- PS 421-421L/521-521L - Soil Microbiology and Lab Credits: 3

## Spanish Minor

### Program Contacts/Coordinator

Maria T. Ramos-Garcia, Head  
Christine Garst-Santos, Spanish Program Coordinator  
Department of Modern Languages and Global Studies  
SWG 121 605-688-5101  
<http://www.sdstate.edu/mfl/index.cfm>

### Program Information

The Spanish minor at SDSU consists of language, culture, and literature courses to prepare students for careers in which they will use Spanish as a language for communication. The minor offers flexibility and can easily be added to any major.

### Student Learning Outcomes

Upon the completion of the Spanish minor, students will be able to:

- Speak, read and write Spanish at the intermediate-high or advanced level
- Demonstrate knowledge and understanding of the cultures and communication cultures of the Spanish-speaking world
- Demonstrate knowledge of the Spanish civilizations and its cultural products, such as literature, art, government, etc.

### Additional Academic Requirements

Minor Coursework: A minimum grade of "C" is required for a Spanish course to count towards the minor.

Placement: Students who have a background in modern language study before entering the University should take the Placement Examination to determine the appropriate course in which to enroll. Credit may be obtained for courses exempted upon completion of one course in the department, with a grade of "C" or better, and the payment of the established fee to the Academic Evaluation and Assessment Office. Please refer to Modern Language Credit under Academic Evaluation in the catalog for more detailed information.

### Course Delivery Format

Most courses in the Spanish minor are offered face-to-face on campus. Some upper-division courses are offered online, normally during the summer term.

### Requirements for Spanish Minor: 20 Credits

- SPAN 201 - Intermediate Spanish I \* \*\* Credits: 3
- SPAN 202 - Intermediate Spanish II \* \*\* Credits: 3
- SPAN 310 - Practical Language Skills Credits: 3
- SPAN 330 - Reading and Writing for Communication Credits: 3
- Spanish Electives (may include 211-212) Credits: 8

## Statistics Minor

### **Program Contact/Coordinator**

Kurt Cogswell, Head  
Department of Mathematics and Statistics  
Harding Hall 228  
605-688-6196  
E-mail: kurt.cogswell@sdstate.edu  
http://mathstat.sdstate.edu

### **Program Information**

The Statistics minor provides a background in statistics for students majoring in a variety of disciplines. Statistical methods and theory have become increasingly important in many disciplines such as the life sciences, physical sciences, social sciences, engineering, and business. As more and more data are collected, stored and analyzed, students are finding it increasingly beneficial to gain expertise in statistics to bolster their research skills and enhance their career opportunities.

### **Academic Requirements**

A grade of "C" or better is required in each course used for the major.

### **Course Delivery Format**

Program courses are delivered on campus, in classroom and laboratory settings, online, and at off campus attendance centers.

### **Requirements for Statistics Minor: 18 Credits**

- STAT 381 - Introduction to Probability & Statistics Credits: 3
- STAT 410-510 - SAS Programming I Credits: 3
- STAT 482-582 - Probability and Statistics II Credits: 3
- Select Three Courses from the Following:
- STAT 412-512 - SAS Programming II Credits: 3
- STAT 445-545 - Nonparametric Statistics Credits: 3
- STAT 451-551 - Predictive Analytics I Credits: 3
- STAT 460-560 - Time Series Analysis Credits: 3
- MATH 441-541 - Applied Probability Theory Credits: 3
- MATH 475-575 - Operations Research Credits: 3

## Studio Arts Minor

### **Program Contact/Coordinator**

Michael (Tim) Steele, MFA  
Department of Visual Arts  
South Dakota State University  
Brookings, SD 57007  
E-mail: sdsu.artdept@sdstate.edu  
http://www.sdstate.edu/art/index.cfm

### **Program Information**

The minor in studio art may be taken by all SDSU students regardless of major and may be also selected by specific majors such as: architecture, interior design, landscape design, and others to support their major concentration and assist in their preparation for employment and/or graduate study.

### **Student Learning Outcomes**

Upon completion of the minor, students are able to demonstrate the following outcomes through studio projects and classroom experiences:

- Understanding of basic design principles, concepts, media and formats in selected art and design disciplines.
- Ability to apply basic principles of design and color, and competencies in drawing to work in selected art and design disciplines.
- The ability to conceive, design and create works in at least one studio art or design field.
- Working knowledge of basic aesthetic issues, process and media and their relationship to the conceptualization, development and completion of a work of art or design.
- Understanding of the basic similarities, differences, and relationship among various art and design areas.

### **Additional Academic Requirements**

Visual Arts students must maintain at least a program GPA of 2.6 and an overall GPA of 2.5 on a 4.0 scale for the duration of the program.

### **Course Delivery Format**

Course content is delivered through hands-on studio work combined with lectures, demonstrations and critiques.

### **Requirements for Studio Arts Minor: 18 Credits**

- Select courses with the following prefixes: Art (ART), Graphic Design (ARTD), and Art Education (ARTE)
- Required Art History coursework (ARTH) Credits: 3

## Sustainable Energy Systems Minor

### **Program Coordinator/Contact**

Kurt Bassett, Head  
Department of Mechanical Engineering  
South Dakota State University  
CEH 216 Box 2219  
Brookings, SD 57007  
605-688-5426  
E-mail: kurt.bassett@sdstate.edu  
http://www.sdstate.edu/me/index.cfm

### **Program Information**

The Sustainable Energy Systems Minor is appropriate for students interested in gaining a background in sustainability, energy efficiency, and renewable energy technologies. The minor helps to prepare graduates with training that distinguishes them from their peers and supports immediate entry into careers in energy resource development, energy production, and efficient end-use technologies.

### **Student Learning Outcomes**

Students completing the minor must understand how energy is produced, the fundamentals of energy conversion and efficiency, and demonstrate technical expertise in some area of sustainable energy systems. Upon completion of the minor, the student will be able to:

- Apply mathematics and engineering science to the analysis of energy conversion systems.
- Understand and apply the concept of sustainability to the design of energy conversion systems.
- Demonstrate competency in analysis and design of a particular type of energy converting device or system.
- Demonstrate the ability to work effectively in an area of sustainable energy systems.

### **Course Delivery Format**

Competence in Sustainable Energy Systems requires both study and practice. Instruction occurs through a combination of traditional classroom methods, laboratory exercises using contemporary engineering technologies, internship/research experiences and focused design projects.

### **Requirements for Sustainable Energy Systems Minor: 18 Credits**

- ME 311 - Thermodynamics I Credits: 3  
or ME 314 - Thermodynamics Credits: 3  
or PHYS 341 - Thermodynamics Credits: 2
- ME 478 - Mechanical Systems Design I Credits: 2<sup>1</sup>
- ME 479-479L - Mechanical Systems Design II & Lab (AW)Credits 2<sup>1</sup>
- ME 492/592 - Topics Credits: (1-5)
- Topics Course: Renewable Energy Systems Credits: 3

Select one course (3 credits minimum):

The internship or Undergraduate Research/Scholarship experience must be a sustainable energy systems application approved by the Coordinator of the Minor.

- ABE 494 - Internship Credits: (1-6)
- EE 494 - Internship Credits: (1-3)
- ME 494 - Internship Credits: (1-3)

- PHYS 494 - Internship Credits: (1-4)
- ABE 498 - Undergraduate Research/Scholarship Credits: 1-3
- EE 498 - Undergraduate Research/Scholarship Credits: 1-3
- ME 498 - Undergraduate Scholarship/Research Credits: 1-3
- PHYS 498 - Undergraduate Research/Scholarship Credits: 1-12

Electives: 6

- ABE 444-444L - Unit Operations of Biological Materials Processing and Lab Credits: 4
- ABE 455-455L - Principles of Biological Separation Processing and Lab Credits: 3
- EE 430-430L - Electromechanical Systems and Lab Credits: 4
- EE 434-434L - Power Systems and Lab Credits: 4
- EE 436-436L Photovoltaic Systems Engineering & Lab Credits 3, 1
- ME 410 - Principles of HVAC Engineering Credits: 3
- ME 412 - Internal Combustion Engines Credits: 3
- ME 413 - Turbomachinery Credits: 3
- ME 414/514 - Air Pollution Control Credits: 3
- ME 415 - Heat Transfer Credits: 3
- ME 418 - Design of Thermal Systems Credits: 3
- ME 431 - Aerodynamics Credits: 3
- ME 439-439L - HVAC System Design and Lab Credits: 3
- PHYS 331 - Introduction to Modern Physics Credits: 3
- NE 435 - Introduction to Nuclear Engineering Credits: 3

#### Note: 1

Project or experience must focus on sustainable energy systems and must be approved by the program coordinator. Senior capstone design projects with ABE, EE, or PHYS prefix will also satisfy the capstone project requirement.

## Theatre Minor

#### Program Coordinator/Contact

Laurie Haleta, Head  
Department of Communication Studies & Theatre  
Pugsley Center 115  
Box 2218  
South Dakota State University  
Brookings, SD 57007

#### Program Information

Students in this major are exposed and participate in all aspects of theatre, through a broad-based education. Students will gain practical experience with the newest techniques and technology of theatre. In this major, the hands-on education involves participation in State University Theatre and Prairie Repertory Theatre.

#### Student Learning Outcomes

Upon completion of their degree, students will be able to:

- understand and/or participate in the basic production process in all areas of theatre.
- demonstrate familiarity with historical and cultural dimensions of theatre.
- possess an understanding and appreciation of the concept of collaboration required for successful theatrical productions.
- make informed assessments of quality in theatrical performances and activities
- communicate effectively relative to the student's specific area of particular interest and focus, if that is the case for the individual student.
- understand the expectations and demands of the field, whether in an educational setting or the profession.

If applicable, students will be prepared to:

- gain entry level positions in the profession in the areas of design, technology, or stage management, or gain entrance to graduate programs for additional training prior to entering the profession.

- gain entry level positions as performers or gain acceptance to graduate programs for additional training or to enter the profession.
- gain entry level positions in theatre management, promotions/business or gain acceptance to graduate programs for additional training or to enter the profession.

#### Course Delivery Format

A variety of methods are used in our curriculum, including student engagement and interactive learning, lecture, laboratory, small group, seminar and collaborative activities.

#### Requirements for Theatre Minor: 20 Credits

- THEA 100 - Introduction to Theatre \* Credits:3
- THEA 131 - Introduction to Acting \* Credits:3
- THEA 241-241L - Stagecraft and Lab Credits: 3
- THEA 351 - Directing Credits:3
- THEA 480 - Summer Theatre Credits:1-5
- Elective Credits: 3  
Select at least one additional course from the following list.
- THEA 243 - Make-Up Credits:3
- THEA 355 - Children's Theatre Credits: 3
- THEA 375 - Theatre Arts Management Credits:3
- THEA 441 - Scene Design Credits: 3
- THEA 445-445L - Lighting and Lab Credits:3

## Women's Studies Minor

#### Program Contact/Coordinator

Elizabeth Tolman, Program Coordinator  
College of Arts and Sciences  
Pugsley 115  
South Dakota State University  
Brookings, SD 57007  
605-688-6664  
E-mail: elizabeth.tolman@sdstate.edu

#### Program Description

Women's Studies in an interdisciplinary minor program enabling the student to select courses dealing directly or indirectly with women and their changing roles in history, the family, the labor force, politics, literature and other venues. The minor is particularly useful for students expecting to work with women in social work, counseling, nursing, business, or education. Contact the Women's Studies Program Coordinator to develop a plan of study.

#### Program Goals

- to develop students' understanding of gender as a social construct informed by race, ethnicity, class, sexuality and nationality;
- to strengthen students' knowledge of women's experiences and contributions to a pluralistic nation and international world; and
- to empower students as change-agents for a more just and equitable society.

#### Additional Academic Requirements

Eighteen hours with a "C" or better in each course are required for the minor. Various departments periodically offer courses related to the roles of women in society and may be used as electives with approval by the Program Coordinator.

#### Student Engagement Opportunities

The program seeks to provide enriching opportunities in classroom, campus, and community spaces, bringing exciting speakers to campus, especially during Women's History Month in March, co-sponsoring films, creative readings, science panels, and facilitating opportunities for activism. The program also sponsors the Campus

Women's Coalition, the Women of Distinction Awards, and the Women's Studies Conference.

### Course Delivery Format

Program courses are taught on campus, online, and in field based settings.

### Requirements for Women's Studies Minor: 18 Credits

- WMST 101 - Introduction to Women's Studies \* \*\* Credits: 3
- WMST/ENGL 248 - Women in Literature Credits: 3<sup>+</sup>
- WMST 491 - Independent Study Credits: 1-4
- Electives: 3  
Select one course from the following list.
  - HIST 349 - Women in American History Credits: 3
  - HIST 350 - Women in World History Credits: 3
  - POLS 305 - Women and Politics Credits: 3
  - PSYC 367 - Psychological Gender Issues Credits: 3
  - SOC 483 - Sociology of Gender Roles (G) Credits: 3
  - WMST 305 - Women and Politics Credits: 3
  - WMST 349 - Women in American History Credits: 3

- WMST 350 - Women in World History Credits: 3
- WMST 367 - Psychological Gender Issues \*\* Credits: 3
- WMST 483 - Sociology of Gender Roles Credits: 3
- Electives: 6  
Courses can be selected from the required list above and from the following courses.
  - AM 253 - Socio-Psychological Aspects of Dress Credits: 3
  - CA 340 - Work Family Interface (AW) Credits: 3
  - HDFS 250 - Development of Human Sexuality Credits: 3
  - MCOM 419 - Women in Media Credits: 3
  - REL 331 - Women and Religion Credits: 3
  - SOC 325 - Domestic and Intimate Violence Credits: 3
  - WMST 250 - Development of Human Sexuality Credits: 3
  - WMST 325 - Domestic and Intimate Violence Credits: 3
  - WMST 331 - Women and Religion Credits: 3
  - WMST 419 - Women in Media Credits: 3
  - WMST 253 - Socio-Psychological Aspects of Dress Credits: 3
  - WMST 492 - Topics Credits: 3

## Academic Programs – Pre-Professional Programs

### Pre-Chiropractic

#### Program Contact/Coordinator

Greg Heiberger, Coordinator and Advisor  
Biology and Microbiology  
South Dakota State University  
Dairy-Microbiology 225C Box 2104A  
E-mail: greg.heiberger@sdstate.edu

#### Pre-Professional Interest Area Information

The pre-chiropractic curriculum is compatible with many majors and includes all of the prerequisites for chiropractic college admission. Students who apply to a chiropractic college must demonstrate a strong science background as well as a basic understanding of communications, social sciences and humanities. Chiropractic colleges require a minimum of 90 semester credits in general biology, general and organic chemistry, physics, communication, social sciences and humanities. Additionally, all science courses must be taken with the associated labs. Chiropractic colleges will not accept survey science courses such as BIOL 101, CHEM 106, or CHEM 108. Students must earn a grade of C or better in all specified courses and must maintain a cumulative GPA of 2.5 to be considered for chiropractic college admission. No standardized entrance examination is required. Contact the pre-chiropractic advisor for assistance coordinating major requirements with the Chiropractic college entrance requirements

#### Suggested Coursework

##### Biology

- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- BIOL 153-153L - General Biology II and Lab\* Credits: 4
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 290 - Seminar Credits: 1
- BIOL 325-325L - Physiology and Lab Credits: 4
- MICR 231-231L - General Microbiology and Lab Credits: 4

##### Chemistry and Biochemistry

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1
- CHEM 114-114L - General Chemistry II and Lab\* Credits: 3, 1
- CHEM 326-326L - Organic Chemistry I and Lab Credits: (3, 1)
- CHEM 328-328L - Organic Chemistry II and Lab Credits: (3, 1)
- CHEM 464 - Biochemistry I Credits: 3
- CHEM 466 - Laboratory Methods- Biochemistry Credits: 1

##### Physics

- PHYS 111-111L - Introduction to Physics I and Lab\* Credits: 4
  - PHYS 113-113L - Introduction to Physics II and Lab\* Credits 4
- Psychology
- PSYC 101 - General Psychology \* \*\* Credits: 3
- Electives
- Select at least one of the following courses.
- PE 350 - Exercise Physiology Credits: (2-3)
  - PE 454-454L - Biomechanics and Lab Credits: 3
  - STAT 281 - Introduction to Statistics Credits: 3

### Pre-Dental

#### Program Contacts/Coordinators

Greg Heiberger, Coordinator and Advisor Biology and Microbiology Dairy-Microbiology 225C Box 2104A 605-688-4294 E-mail: greg.heiberger@sdstate.edu	Scott Pedersen, Advisor Biology & Microbiology Agricultural Hall 329 605-688-5529 scott.pedersen@sdstate.edu
--	--

#### Pre-Professional Interest Area Information

Dental schools look for bright, articulate students in a variety of majors who have a well-rounded education and can relate to a range of personalities. Dental schools require at least three years of college, but most now require that applicants have their baccalaureate degree before they enter dental school.

Because the requirements of each dental school vary considerably, it is difficult to provide a complete listing of the necessary coursework that would satisfy every institution. Instead, the SDSU pre-dental program challenges the pre-dental student with a heavy emphasis on science courses (two years of chemistry, one year of physics, and at least three years of biology) in order to prepare the student for the Dental Admission Test (DAT). These courses do not restrict a student's ability to shift into other programs at SDSU and provide excellent career alternatives for those students who are not immediately accepted into a dental school. The Pre-professionals advisors can assist students to develop plans of study for the dental program(s) of interest.

#### Dental School Admission

Admission to dental schools is extremely selective, and students who are serious about being accepted into a dental school should strive to substantially exceed the minimum requirements. Acceptance into dental school is based primarily on four criteria: 1) absolute

minimum of a 3.5 GPA on the 4.0 scale, 2) Dental Admission Test (DAT) scores, 3) recommendation letters from faculty and employers, and 4) a personal statement describing the students' motivation for this career choice.

### **Suggested Coursework**

#### **Biology**

- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- BIOL 153-153L - General Biology II and Lab\* Credits: 4
- BIOL 202-202L - Genetics & Organismal Biology & Lab Credits: 4
- BIOL 204-204L - Genetics & Cellular Biology & Lab Credits: 3, 1
- BIOL 290 - Seminar Credits: 1
- BIOL 325-325L - Physiology and Lab Credits: 4
- MICR 231-231L - General Microbiology and Lab Credits: 4

#### **Chemistry**

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1
- CHEM 114-114L - General Chemistry II and Lab \* Credits: 3, 1
- CHEM 326-326L - Organic Chemistry I and Lab Credits: 3, 1
- CHEM 328-328L - Organic Chemistry II and Lab Credits: 3, 1
- CHEM 464 - Biochemistry I Credits: 3
- CHEM 466 - Laboratory Methods- Biochemistry Credits: 1

#### **Mathematics**

- MATH 121-121L - Survey of Calculus and Lab\* Credits: 5  
OR MATH 123 - Calculus I \* Credits: 4
- MATH 123L - Calculus I Lab Credits: 1
- STAT 281 - Introduction to Statistics Credits: 3

#### **Physics**

- PHYS 111-111L - Introduction to Physics I and Lab\* Credits: 4
- PHYS 113-113L - Introduction to Physics II and Lab\* Credits 4

## **Pre-Law**

### **Program Contact/Coordinator**

Department of History, Political Science, Philosophy, and Religion  
PO Box 0510 West Hall  
605-688-4311  
E-mail: [diane.molengraaf@sdstate.edu](mailto:diane.molengraaf@sdstate.edu)  
<http://www.sdstate.edu/hist/index.cfm>

### **Pre-Professional Interest Area Information**

The formal academic training for law includes, with few exceptions, a bachelor's degree and three years of study in law school to earn a Juris Doctorate. Law schools welcome and encourage a variety of educational backgrounds among their students. Breadth and intellectual maturity are more important than study of particular subject matter. However, law schools do recommend that the pre-law curriculum be carefully selected.

No specific subjects are prescribed for law school admission, and thus any undergraduate major available at SDSU can prepare a student to study the law. The pre-law student should be involved in an undergraduate program that is intellectually challenging and requires rigorous academic discipline. Individuals who have chosen a field of study work with their major advisor as well as the pre-law advisor to select courses and create a plan of study.

### **Suggested Coursework**

An attorney must be a well-rounded individual. Reading and writing abilities are fundamental, and thus undergraduate courses that develop these skills should be stressed. A reasonable exposure to such subject areas as English composition, economics, history, literature, philosophy, political science, and sociology are typically considered foundational for the full appreciation of the law. Electives such as drama and theatre arts, debate, creative writing, and speech will sharpen those skills needed by a member of the legal profession. Additionally, courses in business, finance, and accounting are generally considered an asset to attorneys' professional practice, and many law schools expect the student to have completed at least one

accounting course. Furthermore, knowledge of the physical and biological sciences will often help in the cases the lawyer pleads. In particular, certain areas of the law are only open to those with an educational training in the sciences and engineering fields.

### **Law School Admissions Test**

All law schools require the Law School Admissions Test, and most pre-law students take it in June between the junior and senior year or during the senior year. It is a nationwide, half-day test of general aptitude for undertaking law studies and for writing ability. Students are encouraged to contact the pre-law advisor for more information on the LSAT and law schools early in their academic career.

## **Pre-Medicine**

### **Program Contact/Coordinator**

Greg Heiberger, Coordinator and Advisor  
Biology and Microbiology  
Dairy-Microbiology 225C Box 2104A  
605-688-4294  
E-mail: [greg.heiberger@sdstate.edu](mailto:greg.heiberger@sdstate.edu)

### **Advisors**

Dr. Don Auger, Dr. Michael Hildreth, Dr. Scott Pedersen, Mr. Greg Heiberger.

### **Pre-Professional Interest Area Information**

The pre-medicine curriculum is designed to be compatible with many different majors. No particular major is required; No area of study is given preference in the selection process. Students preparing for medical careers should have a broad education and the basic understanding of the natural sciences, including mathematics, chemistry, biology, and physics. Additionally, highly developed communication skills as well as a basic understanding of the social sciences and the humanities are necessary. Advisors can assist in creating a plan of study designed for the school(s) of choice.

### **Medical school minimum admission requirements**

One year each of biology and physics with laboratory; mathematics, including a course in calculus; two years of chemistry with laboratory including one year of general chemistry and one year of organic chemistry or a combination of organic and biochemistry; communications (English, literature, speech); social sciences and humanities as needed to complete the baccalaureate degree. The pre-professional advisor will have knowledge of requirements for medical schools in the U.S. Pre-medicine students are encouraged to prepare to meet the entrance requirement for several medical schools of their choice.

### **Medical College Admission Test**

Advisors can also assist in preparing for the Medical College Admission Test (MCAT), and in the application process as handled by the American Medical College Application Service (AMCAS). Refer to the Association of American Medical School Web site at <http://www.aamc.org> for more specific information on the application process as well as information on specific medical schools.

### **Suggested Coursework**

#### **Biology**

- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- BIOL 153-153L - General Biology II and Lab\* Credits: 4
- BIOL 202-202L -Genetics & Organismal Biology & Lab Credits: 4
- BIOL 204-204L Genetics & Cellular Biology & Lab Credits 3, 1
- BIOL 325-325L - Physiology and Lab Credits: 4
- MICR 231-231L - General Microbiology and Lab Credits: 4

#### **Chemistry**

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1
- CHEM 114-114L - General Chemistry II and Lab \* Credits: 3, 1

#### **Mathematics**



- MATH 121-121L Survey of Calculus & Lab Credits 5  
Or MATH 123-123L Calculus I and Lab Credits, 4, 1
- STAT 281 - Introduction to Statistics Credits: 3

#### Physics

- PHYS 111-111L - Intro to Physics I and Lab\* Credits: 4
- PHYS 113-113L - Intro to Physics II and Lab\* Credits: 4

## Pre-Ministerial

### Program Contact/Coordinator

Department of History, Political Science, Philosophy, and Religion  
PO Box 0510 West Hall  
South Dakota State University  
Brookings, SD 57007  
605-688-4311  
E-mail: [diane.molengraaf@sdstate.edu](mailto:diane.molengraaf@sdstate.edu)  
<http://www.sdstate.edu/hist/index.cfm>

### Pre-Professional Interest Area Information

Almost all theological seminaries require some undergraduate education; most require a college degree. The best preparation for ministerial study is a thorough and broad exposure to culture—ancient and modern—literature and language, the arts and the history of ideas. Students also need to develop solid analytic abilities, facility in developing logically rigorous and sound arguments, and skills in written and oral expression. To do so, they may choose majors in the humanities or social sciences, focusing electives in religion and philosophy or select an Interdisciplinary Studies Major with cores in religion and philosophy. Consult the pre-ministerial and major advisor to create an individualized plan of study based on the entry requirements of the ministerial program of choice.

### Suggested Coursework

- REL 213 - Introduction to Religion \* Credits: 3
- REL 224 - Old Testament \* Credits: 3
- REL 225 - New Testament \* Credits: 3
- REL 237 - Religion in American Culture \* Credits: 3
- REL 238 - Native American Religions Credits: 3
- REL 250 - World Religions \* (G) Credits: 3
- REL 331 - Women and Religion Credits: 3
- REL 454-554 - Environmental Ethics Credits: 3
- REL 353 - Geography of Religion Credits: 3
- REL 360 Moral & Ethical Perspectives on Death & Dying Credits 3
- REL 370 - Philosophy of Religion Credits: 3
- REL 402 - History of Western Religious Thought II Credits: 3
- REL 401 - History of Western Religious Thought I Credits: 3
- PHIL 100 - Introduction to Philosophy \* Credits: 3
- PHIL 200 - Introduction to Logic \* Credits: 3
- PHIL 215 - Intro to Social-Political Philosophy \* Credits: 3
- PHIL 220 - Introduction to Ethics \* Credits: 3
- PHIL 313 - Great Philosophers Credits: 2-3
- PHIL 320 - Professional Ethics Credits: 3
- PHIL 383 - Bioethics \*\* (G) Credits: 4
- PHIL 480 - Ethics of Globalization\*\* Credits: 3
- SPCM 215 - Public Speaking \* Credits: 3
- SPCM 201 - Interpersonal Communication Credits: 3

## Pre-Mortuary

### Program Contact/Coordinator

Greg Heiberger, Coordinator and Advisor  
Department of Biology and Microbiology  
Alfred Dairy Science Hall 225C, Box 2104A  
South Dakota State University  
Brookings, SD 57007  
605-688-4294  
E-mail: [greg.heiberger@sdstate.edu](mailto:greg.heiberger@sdstate.edu)

### Pre-Professional Interest Area Information

To meet the requirements as a mortician, funeral directors need specialized training. All states require those who embalm to be licensed. This field may require from one to four years of study with students earning a diploma, Associate of Applied Science (AAS) or Bachelor of Science (BS) degree at one of 50 accredited schools which offer programs in mortuary science. One or possibly two years of study may be taken at SDSU. Certification includes passing required board exams and an apprenticeship in an approved funeral home. Leaders of the funeral service field are rapidly recognizing the need for education of the total person. Because the funeral director's work is diverse, he/she must draw upon knowledge of the social and economic fields as well as the scientific and artistic areas which the technical needs of the profession require.

### Suggested Coursework

#### Freshman Year

- Social Science Elective Credits: 3
- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- CHEM 106-106L - Chemistry Survey and Lab\* Credits: (3,1)
- ENGL 101 - Composition I \* Credits: 3
- MATH 102 - College Algebra \* Credits: 3
- PSYC 101 - General Psychology \* \*\* Credits: 3
- REL 360 Moral & Ethical Perspectives on Death & Dying Credits 3
- SOC 100 - Introduction to Sociology \* (G) Credits: 3
- SPCM 101\* - Fundamentals of Speech Credits: 3

#### Sophomore Year

- Social Science Elective Credits: 3
- Electives Credits: 9 *Suggested:*
- REL 213 - Introduction to Religion \*
- ENGL 201 - Composition II \*
- ACCT 210 - Principles of Accounting I Credits: 3
- BADM 350 - Legal Environment of Business Credits: 3
- BADM 360 - Organization and Management Credits: 3
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- HLTH 443 - Public Health Science (G) Credits: 3
- MICR 231-231L - General Microbiology and Lab Credits: 4
- SPCM 201 - Interpersonal Communication Credits: 3

## Pre-Occupational Therapy

### Program Contact/Coordinator

Carla Anderson, Advisor  
College of Education and Human Sciences  
Wagner Hall 243  
Phone: 605-688-6145  
E-mail: [carla.anderson@sdstate.edu](mailto:carla.anderson@sdstate.edu)  
<http://www.sdstate.edu/hns/undergrad-program/pre-pt-pre-ot.cfm>

### Pre-Professional Interest Area Information

The pre-occupational therapy program is a pre-professional curriculum whereby all the necessary prerequisites can be completed in preparation for applying to a school of occupational therapy. The department provides advising to assist each student. A strong undergraduate academic record is important. Schools of occupational therapy offer a master's degree or doctoral degree. Students must complete a bachelor's degree and certain number of required courses before applying to a professional occupational therapy program.

### Suggested Coursework

#### Commonly Required Courses

- NURS 201 - Medical Terminology Credits: 1
- STAT 281 - Introduction to Statistics Credits: 3
- PSYC 451 - Psychology of Abnormal Behavior \*\* Credits: 3

#### Required Courses

- PHIL 220 - Introduction to Ethics \* Credits: 3  
or PHIL 383 - Bioethics \*\* (G) Credits: 4

- PSYC 101 - General Psychology \* \*\* Credits: 3
- HDFS 210 - Lifespan Development \* Credits: 3
- SOC 100 - Introduction to Sociology \* (G) Credits: 3  
or SOC 150 - Social Problems \* (G) Credits: 3
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 325-325L - Physiology and Lab Credits: 4

#### Recommended Courses

- PHTH 142 - Intro to Physical Therapy & Occupational Therapy Credits: 1
- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- BIOL 153-153L - General Biology II and Lab\* Credits: 4
- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1
- CHEM 114-114L - General Chemistry II and Lab\* Credits: 3, 1

## Pre-Optometry

### Program Contact/Coordinator

Greg Heiberger, Coordinator and Advisor  
Biology and Microbiology  
Dairy-Microbiology 225C Box 2104A  
Brookings, SD 57007  
605-688-4294  
E-mail: greg.heiberger@sdstate.edu

### Pre-Professional Interest Area Information

The American Optometric Association has 21 accredited member schools and colleges of optometry listed by ASCO (Association of Schools and Colleges of Optometry). Students graduating from SDSU with above average grades and competitive Optometry Admissions Test (OAT) scores have been successful in the admissions process. The average GPA for successful applicants is often 3.0 to 3.5 for colleges of optometry. Students usually have completed three years of college work. The majority of students entering professional schools of optometry have completed work for the bachelor's degree. Students are encouraged to complete a bachelor's degree.

The prospective optometric student should begin as early as possible to acquire an education in the fundamental sciences with the proper selection of pre-professional courses. Required courses include physics, mathematics, English, biological science, anatomy, chemistry and psychology. A program incorporating these courses should be selected to meet the requirements of professional schools of optometry and provide a good background for the Optometry Admissions Test. Certain optometry colleges may also require additional specific classes. For additional information and specific requirements of each college of optometry, please refer to the website for ASCO (Association of Schools and Colleges of Optometry), <http://www.opted.org>.

It is strongly recommended that pre-optometry students contact the pre-optometry advisor as soon as possible to express an interest in optometry and create a plan of study.

### Suggested Coursework

#### Biology

- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- BIOL 153-153L - General Biology II and Lab\* Credits: 4
- BIOL 202-202L Genetics & Organismal Biology & Lab Credits 4
- BIOL 204-204L Genetics & Cellular Biology & Lab Credits 3, 1
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 290 - Seminar Credits: 1
- BIOL 325-325L - Physiology and Lab Credits: 4
- MICR 231-231L - General Microbiology and Lab Credits: 4

#### Chemistry

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1
- CHEM 114-114L - General Chemistry II and Lab Credits: 3, 1
- CHEM 326-326L - Organic Chemistry I and Lab Credits: (3, 1)

- CHEM 328-328L - Organic Chemistry II and Lab Credits: (3, 1)
  - CHEM 464 - Biochemistry I Credits: 3
  - CHEM 465 - Biochemistry II Credits: 3
- Mathematics: Calculus and Statistics
- MATH 123 - Calculus I \* Credits: 4
  - STAT 281 - Introduction to Statistics Credits: 3
  - NURS 201 - Medical Terminology Credits: 1

## Pre-Physical Therapy

### Program Contact/Coordinator

Chanda Walter, Advisor  
College of Education and Human Sciences  
Intramural Building 116  
605-688-6103  
E-mail: Chanda.Walter@sdstate.edu  
<http://www.sdstate.edu/hns/undergrad-program/pre-pt-pre-ot.cfm>

### Pre-Professional Interest Area Information

The pre-physical therapy program is a pre-professional curriculum whereby all the necessary prerequisites can be completed in preparation for applying to a school of physical therapy. The department provides advising to assist each student in developing a plan best suited to his/her needs. Acceptance by physical therapy schools is on a competitive basis, therefore, a strong undergraduate academic record is essential. Students must declare a undergraduate major along with the Pre-Professional curriculum. Schools of physical therapy now offer a doctorate degree program. Students must earn a bachelor's degree, have a basic science background and complete a certain number of required courses before applying to a professional physical therapy program.

### Suggested Coursework

#### Biology

- BIOL 151-151L - General Biology I and Lab\* (COM) Credits: 4
- BIOL 153-153L - General Biology II and Lab\* Credits: 4
- BIOL 221-221L - Human Anatomy and Lab (COM) Credits: 4
- BIOL 325-325L - Physiology and Lab (COM) Credits: 4

#### Chemistry

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1
- CHEM 114-114L - General Chemistry II and Lab \*Credits: 3, 1

#### Mathematics

- STAT 281 - Introduction to Statistics (COM) Credits: 3

#### Physics

- PHYS 111-111L - Introduction to Physics I and Lab\*Credits: 4
- PHYS 113-113L - Introduction to Physics II and Lab\*Credits: 4

#### Psychology

- PSYC 101 - General Psychology \* \*\* (COM) Credits: 3
- HDFS 210 - Lifespan Development \* Credits: 3
- PSYC 451 - Psychology of Abnormal Behavior \*\*Credits: 3

#### Additional Coursework

- PHTH 142 - Introduction to Physical Therapy and Occupational Therapy Credits: 1
- NURS 201 - Medical Terminology Credits: 1

## Pre-Physician Assistant

### Program Contact/Coordinator

Greg Heiberger, Coordinator and Advisor  
Biology and Microbiology  
Dairy-Microbiology 225C Box 2104A  
South Dakota State University  
Brookings, SD 57007  
605-688-4294  
E-mail: greg.heiberger@sdstate.edu

### Pre-Professional Interest Area Information

SDSU offers pre-requisite courses to students interested in gaining admission to one of the more than 120 accredited physician assistant (PA) programs in the United States. Accredited PA programs have their own distinctive features, prerequisites, and missions designed to prepare students to become effective members of a health care delivery team.

All PA programs are expected to become master's degree programs in the near future, thus earning a baccalaureate degree while completing prerequisites for the PA school(s) of your choice is strongly recommended. The general Graduate Record Exam (GRE) is a requirement for many programs.

Generally, all PA programs require one year each of general biology and general chemistry, one course each in human or animal anatomy and physiology, microbiology, biochemistry, general developmental and abnormal psychology, and statistics. All science courses need to have an accompanying laboratory. Additionally, courses required by many PA programs include medical terminology, organic chemistry (a prerequisite for biochemistry), and statistics.

A broad, general education including courses in communication, humanities, and social science is strongly recommended. Many PA schools also require a minimum of three months health care experience. An excellent source of information about accredited PA schools is the online Physician Assistant Programs Directory.

### Suggested Coursework

#### Biology

- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- BIOL 153-153L - General Biology II and Lab\* Credits: 4
- BIOL 202-202L Genetics & Organismal Biology & lab Credits 4
- BIOL 221-221L - Human Anatomy and Lab Credits: 4
- BIOL 290 - Seminar Credits: 1
- BIOL 325-325L - Physiology and Lab Credits: 4

#### Chemistry

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 3, 1
- CHEM 114-114L - General Chemistry II and Lab Credits: 3, 1
- CHEM 326-326L - Organic Chemistry I and Lab Credits: (3, 1)
- CHEM 328-328L - Organic Chemistry II and Lab Credits: (3, 1)
- CHEM 464 - Biochemistry I Credits: 3
- CHEM 466 - Laboratory Methods- Biochemistry Credits: 1

#### Microbiology

- MICR 231-231L - General Microbiology and Lab Credits: 4
- MICR 439 - Medical and Veterinary Immunology Credits: 3

#### Psychology

- PSYC 101 - General Psychology \* \*\* Credits: 3
- PSYC 451 - Psychology of Abnormal Behavior \*\* Credits: 3

#### Statistics

- STAT 281 - Introduction to Statistics Credits: 3

#### Additional Coursework

- HDFS 210 - Lifespan Development \* Credits: 3
- NURS 201 - Medical Terminology Credits: 1
- NURS 323 - Introduction to Pathophysiology Credits: 3
- PHA 321 - Pharmacology Credits: 3

## Pre-Veterinary Medicine

### Program Contact/Coordinator

David Knudsen, Professor  
Department of Veterinary & Biomedical Sciences  
Veterinary Science (SAR) 121, Box 2175  
605-688-5171  
E-mail: david.knudsen@sdstate.edu

### Pre-Professional Interest Area Information

The SDSU Pre-Veterinary Medicine program combines academic preparation, professional veterinary advising, and opportunities for gaining experience in animal health laboratories. Each Pre-Veterinary student in the program is assigned an advisor who is a veterinarian from the SDSU Department of Veterinary & Biomedical Sciences. Along with academic advising, this veterinary advisor will assist the student in the planning and preparation of an effective veterinary college application.

The Pre-Veterinary Medicine program is not an academic degree. While in the program, students also pursue a bachelor's degree in a related field. In addition to veterinary advising from the Pre-Veterinary Medicine program, the student is also assigned an advisor in the home department for their selected major.

Admission to colleges of veterinary medicine (CVM) is both competitive and selective. A solid foundation in the sciences is basic to success in the veterinary profession, as are less tangible skills gained during Pre-Veterinary Medicine preparation, such as effective leadership and teamwork skills, time management, and priority setting. Scholastic performance in science prerequisite coursework, scores on aptitude tests such as the Graduate Record Exam (GRE), and general achievement in campus and community activities are all used in the selection process for admission to a CVM. During the Pre-Veterinary preparatory period, animal health and veterinary experiences are important to the Pre-Veterinary Medicine student and highly valued by CVM admission committees. Opportunities for this experience can be gained by volunteering or working at veterinary practices throughout the region, or through available part-time employment at the SDSU Animal Disease Research and Diagnostic Laboratory.

SDSU also offers an academic Animal Health Minor designed to benefit Pre-Veterinary Medicine program students by encouraging them to complete electives in biomedical sciences and infectious disease while here at SDSU. These courses foreshadow much of the professional curriculum at any CVM. By making at least some areas of study easier at the professional school level, the student's eventual success in that curriculum, and as veterinarians, can be enhanced.

### Suggested Coursework

#### Biology

- BIOL 151-151L - General Biology I and Lab\* Credits: 4
- BIOL 153-153L - General Biology II and Lab\* Credits: 4
- AS 332 - Livestock Breeding and Genetics Credits: 4
- VET 223-223L - Anatomy and Physiology of Domestic Animals and Lab Credits: 4
- AS 332 - Livestock Breeding and Genetics Credits: 4

#### Chemistry

- CHEM 112-112L - General Chemistry I and Lab\* Credits: 4
- CHEM 114-114L - General Chemistry II and Lab \* Credits: 4
- CHEM 326-326L - Organic Chemistry I and Lab Credits: 4
- CHEM 328-328L - Organic Chemistry II and Lab Credits: 4
- CHEM 464 - Biochemistry I Credits: 3

#### Mathematics

- MATH 102 - College Algebra \* Credits: 3
- STAT 281 - Introduction to Statistics Credits: 3

#### Physics

- PHYS 111-111L - Introduction to Physics I and Lab\* Credits: 4
- PHYS 113-113L - Introduction to Physics II and Lab\* Credits: 4

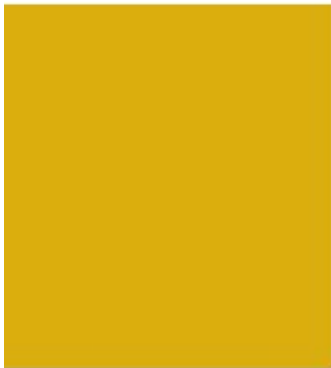
#### Humanities and Social Sciences

- Written Communication and Oral Communication: Credits: 9
- Social Sciences: Credits: 6 (including courses from two of the following disciplines: Anthropology, Economics, Geography, History, Psychology, or Sociology)
- Arts and Humanities: Credits: 6 (including courses from two of the following disciplines: Art, Drama, Literature, Music History, Music Theory, or Philosophy (NOTE: music performance or foreign language credits are generally not accepted for CV admission))



# Course Descriptions

- *Curriculum Entries* 240
- *Colleges, Departments, & Program Abbreviations* 242
- *Miscellaneous Abbreviations* 242
- *Course Types and Instructional Methods* 243
- *x9x Common Course Descriptions* 243
- *Course Descriptions* 244



# Curriculum Entries

## Course Descriptions

BIOL<sup>1</sup> 101<sup>2</sup> Biology Survey I<sup>3</sup> (COM)<sup>4</sup> . . . . . 3<sup>5</sup>

Study of the nature, diversity, and classification of life; ecology; cells and cell cycles, Mendelian and modern Genetics. Intended for those not majoring in Biology<sup>6</sup>

1. Course prefix.
2. Course number. The first digit of the three-digit number indicates the level of instruction, as follows:
  - 0 Pre-college, non-degree, remedial
  - 1 Freshman
  - 2 Sophomore
  - 3 Junior
  - 4 Senior
3. Name of the course.
4. COM signifies a common course within the Regental system.
5. Number of credits assigned to the course. One credit is usually interpreted as one hour of class work per week or as two to four hours of lab work per week.
6. A brief description of the course. This section will also include other information affecting your enrollment in the course. A course description might include, for instance: "P, MATH 102." This means that MATH 102 is a prerequisite and must be taken before enrollment in this course. Other information included in various course descriptions would be: "Alternate years," "Not open to majors," "May be repeated for a total of six credits," etc.

## Course Numbering

### Undergraduate Courses

- 001-099** Pre-college, remedial skills, special improvement (non-degree credit)
- 100-199** Freshman level
- 200-299** Sophomore level
- 300-399** Junior level
- 400-499** Senior level (may be dual listed with 500 level graduate course)

### Graduate Courses

- 500-599** Entry level graduate (may be dual listed with a 400 level undergraduate course and may include limited enrollment by undergraduates)
- 600-699** Graduate level (undergraduate enrollment only by exception) Also open to senior students for graduate credit under the following conditions: Within 15 credits of completing Bachelor's degree; Have an overall grade point average of 2.5 or higher, or a Junior-Senior grade point average of 3.0 or higher; Enroll for no more than 18 credits (9 credits during Summer Term); The course or courses are not required for the Bachelor's degree.
- 700-799** Graduate level (graduate students only)
- 800-899** Doctoral and post-doctoral level (doctoral and post-doctoral students only)

### Experimental Courses

A course at the 100-600 levels ending in 99 is experimental and may be offered no more than twice within two academic years before it must be submitted as a New Course Request.





# Colleges, Departments, and Program Abbreviations

---

<b>A&amp;S</b> , Arts and Sciences	<b>EDFN</b> , Educational Foundations	<b>ME</b> , Mechanical Engineering
<b>ABE</b> , Agricultural and Biosystems Engineering	<b>EE</b> , Electrical Engineering	<b>MEPR</b> , Media Production
<b>ABS</b> , Agriculture and Biological Sciences	<b>EES</b> , Ecology and Environmental Science	<b>MICR</b> , Microbiology
<b>ACCT</b> , Accounting	<b>EET</b> , Electronics Engineering Technology	<b>MFL</b> , Modern Foreign Languages
<b>ADV</b> , Advertising	<b>EHS</b> , Education and Human Sciences	<b>MLED</b> , Middle Level Education
<b>AGEC</b> , Agricultural and Resource Economics	<b>ELED</b> , Elementary Education	<b>MLGS</b> , Modern Language and Global Studies
<b>AGED</b> , Agricultural Education	<b>EM</b> , Engineering Mechanics	<b>MLS</b> , Medical and Laboratory Science
<b>AHED</b> , Adult Higher Education	<b>ENGL</b> , English	<b>MGMT</b> , Management
<b>AIR</b> , Aerospace Studies	<b>ENT</b> , Entomology	<b>MNET</b> , Manufacturing Engineering Technology
<b>AIS</b> , American Indian Studies	<b>ENTR</b> , Entrepreneurial Studies	<b>MRCH</b> , Merchandising
<b>AM</b> , Apparel Merchandising	<b>ENVM</b> , Environmental Management	<b>MSL</b> , Military Science Leadership
<b>ANAT</b> , Anatomy	<b>EPSY</b> , Educational Psychology	<b>MUAP</b> , Music Applied
<b>ANTH</b> , Anthropology	<b>ET</b> , Electronics Technology	<b>MUEN</b> , Music Ensemble
<b>ARAB</b> , Arabic	<b>ETM</b> , Engineering Technology and Management	<b>MUS</b> , Music
<b>ARCH</b> , Architecture	<b>EURS</b> , European Studies	<b>NE</b> , Nuclear Engineering
<b>ART</b> , Art	<b>EXCH</b> , Exchange Programs	<b>NFSH</b> , Nutrition, Food Science and Hospitality
<b>ARTD</b> , Art Design	<b>EXPL</b> , Experiential Learning	<b>NFS</b> , Nutrition and Food Science
<b>ARTE</b> , Art Education	<b>FBME</b> , Food and Biomaterials Engineering	<b>NRM</b> , Natural Resources Management
<b>ARTH</b> , Art History	<b>FCS</b> , Family and Consumer Sciences	<b>NURS</b> , Nursing
<b>AS</b> , Animal Science	<b>FCSE</b> , Family and Consumer Sciences Education	<b>OM</b> , Operations Management
<b>AST</b> , Agricultural Systems Technology	<b>FREN</b> , French	<b>PE</b> , Physical Education
<b>AT</b> , Athletic Training	<b>GCOM</b> , General Communication	<b>PHA</b> , Pharmacy
<b>AVIA</b> , Aviation	<b>GE</b> , General Engineering	<b>PHIL</b> , Philosophy
<b>BADM</b> , Business Administration	<b>GEOG</b> , Geography	<b>PHST</b> , Physics Topics for Educators
<b>BIOL</b> , Biology	<b>GER</b> , German	<b>PHTH</b> , Physical Therapy
<b>BIOS</b> , Biological Sciences	<b>GERO</b> , Gerontology	<b>PHYS</b> , Physics
<b>BOT</b> , Botany	<b>GIS</b> , Geographic Information Sciences	<b>PLAN</b> , Planning
<b>CA</b> , Consumer Affairs	<b>GLST</b> , Global Studies	<b>POLS</b> , Political Science
<b>CD</b> , Community Development	<b>GS</b> , General Studies	<b>PR</b> , Park Management
<b>CEE</b> , Civil and Environmental Engineering	<b>HD</b> , Human Development	<b>PRM</b> , Park and Recreation Management
<b>CEX</b> , Center of Excellence	<b>HDFS</b> , Human Development and Family Studies	<b>PS</b> , Plant Science
<b>CHEM</b> , Chemistry	<b>HFM</b> , Hotel and Foodservice Management	<b>PSYC</b> , Psychology
<b>CHIN</b> , Chinese	<b>HIST</b> , History	<b>RANG</b> , Range Science
<b>CHD</b> , Counseling and Human Development	<b>HLTH</b> , Health	<b>RECR</b> , Recreation
<b>CHRD</b> , Counseling and Human Resource Development	<b>HMGMT</b> , Hospitality Management	<b>REL</b> , Religion
<b>CJUS</b> , Criminal Justice	<b>HNS</b> , Health and Nutritional Sciences	<b>RUSS</b> , Russian
<b>CM</b> , Construction Management	<b>HO</b> , Horticulture	<b>SE</b> , Software Engineering
<b>CS</b> , Consumer Science	<b>HON</b> , Honors	<b>SEED</b> , Secondary Education
<b>CSC</b> , Computer Science	<b>HPER</b> , Health, Physical Education and Recreation	<b>SM</b> , Safety Management
<b>CSCA</b> , Computer Science Applications	<b>HSC</b> , Health Science	<b>SOC</b> , Sociology
<b>CSS</b> , Computational Science and Statistics	<b>HSPS</b> , History and Political Science	<b>SPAN</b> , Spanish
<b>CST</b> , Communication Studies and Theatre	<b>ID</b> , Interior Design	<b>SPCM</b> , Speech Communication
<b>CTE</b> , Career and Technical Education	<b>IDL</b> , Interdisciplinary Studies	<b>STAT</b> , Statistics
<b>DANC</b> , Dance	<b>IM</b> , Industrial Management	<b>THEA</b> , Theatre
<b>DCOM</b> , Communication Disorders	<b>JAPN</b> , Japanese	<b>TLL</b> , Teaching, Learning, and Leadership
<b>DMCS</b> , Design, Merchandising and Consumer Sciences	<b>LA</b> , Landscape Design	<b>UC</b> , University College
<b>DS</b> , Dairy Science	<b>LAS</b> , Latin American Studies Minor	<b>VET</b> , Veterinary Science
<b>ECE</b> , Early Childhood Education	<b>LAKL</b> , Lakota	<b>WEL</b> , Wellness
<b>ECON</b> , Economics	<b>LEAD</b> , Leadership	<b>WL</b> , Wildlife and Fisheries Sciences
<b>ED</b> , Education	<b>LING</b> , Linguistics	<b>WMST</b> , Women's Studies
<b>EDAD</b> , Educational Administration	<b>LMNO</b> , Leadership and Management of Nonprofit Organizations	<b>ZOOL</b> , Zoology
<b>EDER</b> , Education Evaluation and Research	<b>MATH</b> , Mathematics	
	<b>MCOM</b> , Mass Communication	

# Abbreviations and Instructional Methods

## Miscellaneous Abbreviations

<b>admin</b> , administration	<b>conc</b> , Concurrent	<b>jr</b> , junior
<b>adv</b> , advanced	<b>cr</b> , credit	<b>prin</b> , principles
<b>Ag</b> , Agriculture	<b>CRN</b> , 5 digit	<b>L</b> , or lab, laboratory
<b>Am</b> , American	course reference	<b>P</b> , prerequisite
<b>AV</b> , Audio-Visual	number	<b>R</b> , recitation (lecture)
<b>AY</b> , alternate years	<b>dev</b> , development	<b>S</b> , spring semester
<b>&amp;</b> , and	<b>econ</b> , economics	<b>Schd</b> , Schedule Type
<b>CAI</b> , Computer Assisted	<b>ed</b> , educational	<b>Sec</b> , Section
Instruction	<b>F</b> , fall semester	<b>S.D.</b> , or <b>SD</b> , South Dakota
<b>chem</b> , chemistry	<b>fr</b> , freshman	<b>soph</b> , sophomore
<b>CITO</b> , Chief	<b>fund</b> ,	<b>sr</b> , senior
Information Technology	fundamentals	<b>Su</b> , summer term
Office	<b>gen</b> , general	<b>TBA</b> , time and/or credit to
<b>COM</b> , Common Course	<b>Hum</b> , Humanities	be arranged
<b>comp</b> , composition	<b>intro</b> , introduction	<b>U.S.</b> , United States

## Course Types/Instructional Methods

### Clinical Experience

Students participate in client and client related services that are an integral part of an educational program. Clinical instruction occurs in or outside an institutional setting and involves work with clients who receive professional services from students serving under direct or indirect supervision by a faculty member and/or an approved member of the agency staff. Instructional Method: G.

### Clinical Laboratory

The course takes place in a clinical laboratory setting. This includes practice labs, hospitals, or other agencies. Students apply methods and principles of a clinical discipline. Course size varies depending upon accreditation standards, clinical space limitations, level of offering, availability of client experiences, the nature of the clients, and equipment limitations. Faculty members control the assignments and maintain direct and close supervision of the students. Instructional Method: C.

### Competency-Based/Self-Paced Study

Students proceed through a course of study at their own rate, or as directed often assisted by computer or other technology. Mastery is based on achieving competencies and benchmarks, rather than attaining a schedule of assignments. An instructor monitors student progress. May be supplemented by individual or group tutorial sessions. Includes self-paced Internet courses. Instructional Method: B.

### Design/Research

Courses focusing on design research and do not entail a dissertation or thesis. The plan of study is negotiated by the faculty member and the students. Contact between the two may be extensive and intensive. May be used as a research/design requirement for a degree. Research/Research Problems are included in this course type. Instructional Method: J.

### Discussion/Recitation

A course, or a section of a larger course, designed for group discussion or student recitation. Instructional Method: D.

### Ensemble

Large group musical performance courses, meaning group of more than 10 performers. Includes: orchestra, bands, and choruses. Instructional Method: H.

### Graduate Thesis

A formal treatise presenting the results of study submitted in partial fulfillment of the requirements of an advanced degree. The process requires intensive interaction between the candidate and the thesis

director. Masters degrees, Specialist degrees, and Doctorates are included in this course type. Instructional Method: T.

### Independent Study

Students complete individualized plans of study. The faculty member and students negotiate the details of the study plans. Meeting depending upon the requirements of the topic. This course type is not for completion of a thesis or dissertation or for meeting the research requirement for a degree. Directed Studies, Special Projects, Mentored, and Special Problems are examples of this course type. Instructional Method: I.

### Internship/Practicum

Applied, monitored and supervised, field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and/or directed plan of study. Includes field work/ experience, supervision courses, student teaching, and cooperative education. Instructional Method: S.

### Laboratory

Courses meeting in a defined physical setting (i.e. laboratory) for the purpose of the application of methods and principles of a discipline. Instructional Method: L.

### Lecture

Faculty members give oral presentations of facts, principles, context, or interpretation. Instruction takes place in a traditional classroom setting. Instructional Method: R.

### Modified Physical Education Activity

A course type limited to accommodate students with physical disabilities where numbers are very limited. Instructional Method: O.

### Physical Education Activity

A course devoted to participation in or the performance of some form of physical activity. Knowledge associated with the proper performance of the activity is presented. Instructional Method: P.

### Private Instruction

The courses involve individual instruction. One-to-one demonstration, performance critique, music, fine arts or performing arts, or flight instruction are examples. Instructional Method: M.

### Seminar

A highly focused, and topical course. The format includes student presentations and discussions of reports based on literature, practices, problems, or research. Seminars may be conducted over electronic media such as Internet and are at the upper division or graduate levels. Instructional Method: E.

### Special Topics

A course devoted to a particular issue in a specified field. Course content is not wholly included in the regular curriculum. Guest artists or experts may serve as instructors.

### Studio Course/Small Group Instruction/Small Ensemble

Course involves the demonstration and application of design and theory in a defined physical setting (i.e., studio). The Studio Course is characterized by significant one on-one student/instructor interaction. Students explore and experiment under the guidance of an instructor. Instructional Method: A.

### Thesis/Research Sustaining

This is a zero credit hour course type used to track students who are not currently working with faculty on thesis or research activities. Universities may require students to register under this course type to remain active degree candidates. Instructional Method: U.

### Tracking Courses

This course type is used to track students for zero credit hours. Instructional Method: Q.



# Definitions and x9x Common Course Descriptions

## Undergraduate Thesis

A formal treatise presenting the results of study submitted in partial fulfillment of the requirements for an undergraduate degree. The process requires extensive and intensive one-on-one interaction between the candidate and professor with more limited interaction between and among the candidate and the other members of the committee. Instructional Method: T.

## Workshop

Special sessions in specific topic areas. Approximately 45 hours of work is required for each hour of credit. Workshops may vary in time range. They may include lectures, conferences, committee work, and group activity. Instructional Method: W.

## Other Important Definitions

### Advanced Writing

A BOR Requirement, courses chosen by departments to meet this requirement are tagged with (AW).

### Common Course Numbering

The South Dakota Regental institutions utilize common course numbering, meaning that a course designated as a common course (COM) is automatically transferable between institutions. Any courses on the following pages without the COM designation are considered to be unique to SDSU.

### Crosslisted Courses

A crosslisted course is a course which carries more than one course prefix (i.e., HIST, POLS, GEOG) with credit being offered under any one of the listed prefixes at the same time. Students choose to take the course under the prefix that is more beneficial to their course of study. All students meet at the same time in the same place, with the same instructor(s). A crosslisted course may also be multi-numbered.

### Dual Numbered Courses

A multiple-numbered course is a single course specifically designed for simultaneous delivery at two or more levels with the two or more numbers taught simultaneously. In some instances, the course may be offered for credit at different levels (i.e., courses may be offered for upper/lower division credit or for undergraduate/graduate credit). The dual-numbered course may also be crosslisted.

### Globalization

A BOR Requirement, courses chosen by departments to meet this requirement are tagged with (G).

## x9x Common Course Descriptions

The following middle digit 9 course numbering scheme is used in the South Dakota public university system. These courses may have multiple sections. A section's title may or may not reflect the material covered in that section. See the academic department for section information, e.g., description, prerequisites such as instructor or department consent, GPA required, junior or senior standing, etc.

x90 Seminar	x91 Independent Study
x92 Topics	x93 Workshop
x94 Internship	x95 Practicum
x96 Field Experience	x97 Cooperative Education
498 Undergraduate Research/Scholarship	

### x90 Seminar

A highly focused, and topical course. The format includes student presentations and discussions of reports based on literature, practices, problems, and research. Seminars may be conducted over electronic media such as Internet and are at the upper division or graduate levels. Enrollment is generally limited to fewer than 20 students. Instructional method: E.

### x91 Independent Study

Includes Directed Study, Problems, Readings, Directed Readings, Special Problems, and Special Projects. Students complete individualized plans of study which include significant one-on-one student-teacher involvement. The faculty member and students negotiate the details of the study plans. Enrollments are usually 10 or fewer students. Meeting depending upon the requirements of the topic. Instructional method: I.

### x92 Topics

Includes Current Topics, Advanced Topics and Special Topics. A course devoted to a particular issue in a specified field. Course content is not wholly included in the regular curriculum. Guest artists or experts may serve as instructors. Enrollments are usually of 10 or fewer students with significant one-on-one student/teacher involvement.

### x93 Workshop

Special, intense sessions in specific topic areas. Approximately 45 hours of work is required for each hour of credit. Workshops may vary in time range but typically use a compressed time period for delivery. They may include lectures, conferences, committee work, and group activity. Instructional method: W.

### x94 Internship

Applied, monitored and supervised, field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and or directed plan of study. A higher level of supervision is provided by the instructor in these courses than is the case with Field Experience courses. Instructional method: S.

### x95 Practicum

Applied, monitored and supervised, field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and or directed plan of study. A higher level of supervision is provided by the instructor in these courses than is the case with Field Experience courses. Instructional method: S.

### x96 Field Experience

Applied, monitored and supervised, field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and or directed plan of study established between the student, instructor and field experience supervisor. Due to the presence of a field experience supervisor, a lower level of supervision is provided by the instructor in these courses than is the case with an Internship or Practicum course. Instructional method: S.

### x97 Cooperative Education

Applied, monitored and supervised, field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and or directed plan of study established between the student, instructor and field experience supervisor. Due to the presence of a field experience supervisor, a lower level of supervision is provided by the instructor in these courses than is the case with an Internship or Practicum course. Instructional method: S.

### 498 Undergraduate Research/Scholarship

Includes Senior Project, and Capstone Experience. Independent research problems/projects or scholarship activities. The plan of study is negotiated by the faculty member and the student. Contact between the two may be extensive and intensive. Does not include research courses which are theoretical. Instructional method: J.

# Course Description

## A&S (Arts & Sciences)

### **A&S 482-582 - Travel Studies Credits: (1-5)**

This travel study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators of other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

## ABE (Agricultural & Biosystems Engineering)

### **ABE 122 – Intro. to Agricultural & Biological Engineering Credits: 1**

An introduction to applications of engineering to agricultural and biological systems. Emphasis is on engineering as a career and engineering of plant, animal, soil based and biological materials systems.

### **ABE 132 Engineering Tools for Ag. & Biological Engineers Credits 1**

Familiarization with the equipment and systems common to agricultural and biological engineering. Introduction to measurement and analysis of parameters affecting engineered components and systems, including tolerance accumulation and external factors. Use of electronic spreadsheets will be developed as an engineering tool for programming and analysis of engineering data from natural resource, bio-processing, and equipment design.

### **ABE 222 Project Development for Ag & Biological Engineers Credits: 1**

Introduction to project development. A project oriented experience including problem definition, literature review, development of the state of the art, identification of knowledge or utility gaps, and valuation of the problem. Project objectives are developed and narrowed to performance criteria. Development of a budget to fill the gap identified, as is a project timeline in the form of a Gantt Chart to reach the identified objectives. A formal written and oral presentation of the project proposal is required.

### **ABE 314-314L - Ag Power and Machines and Lab Credits: 4**

Analysis and design of off-road vehicles and field machines. Includes engines, transmissions, traction, hitches, and hydraulic systems, as well as equipment for liquid and dry material applications. Prerequisites: EM 215. Corequisites: ABE 314L-314.

### **ABE 324-324L - Ag Structures & Indoor Environment & Lab Credits: 4**

Course is divided into two parts emphasizing design of wood structures and environmental control in animal housing. Loads, structural analysis (statically determinate and indeterminate systems), and wood and wood panel properties are introduced. Design of beams, columns, beam-columns, trusses, sheathing, and diaphragms are emphasized with mechanical fasteners. Desired animal production space (thermal environment and indoor air quality) for production, health, and welfare are discussed. Heating and cooling loads are emphasized along with sizing equipment, fans, inlets, heat exchangers, controls, etc.) to maintain the desired animal production space. Prerequisites: ME 314, EM 331 or concurrent. Corequisites: ABE 324L-324.

### **ABE 330 - Entrepreneurship Opportunities in Agricultural and Biosystems Engineering Credits: 1**

Introduction to entrepreneurship, including types of innovations, the nature and characteristics of entrepreneurs, the traditions and potential roles of Agricultural and Biological Engineers as entrepreneurs. Networking, teamwork, sources of finance, business practices, regulations, intellectual property, ethics, marketing and advertising, cost of production versus pricing, leadership and management. Group development and presentation (oral and written) of an entrepreneurial innovation is required.

### **ABE 343-343L - Engineering Properties of Biological Materials and Lab Credits: 3**

Engineering Properties of biological and interacting materials within a system. Relationships between composition, structure, and properties of various biomaterials including food and plant and animal tissues. Definition and measurement of mechanical, physical, thermal and electromagnetic properties and their variability. Use of these properties in engineering applications. Corequisites: ABE 343L-343.

### **ABE 350-350L Hydraulic & Pneumatic Systems & Lab Credits: 3**

Fluid properties, pumps, actuators, valves and their selection and performance in hydraulic circuits. Open center, closed center, load sensing and pressure compensated circuits. Proportional electro-hydraulic valves and closed-loop control in hydraulic circuits. Prerequisites: ME 314 or Consent. Corequisites: ABE350L-350.

### **ABE 390 - Seminar Credits: 1**

### **ABE 411 - Design Project III Credits: 2**

Procedures, theory, concepts and design of equipment for agricultural production or ag product processing applications. The integration of design principles with design projects and reports. Notes: Senior standing.

### **ABE 422 - Design Project IV (AW) Credits: 2**

Procedures, theory, concepts and design of equipment for agricultural production or ag product processing applications. The integration of design principles with design projects and reports. Notes: Senior standing.

### **ABE 434-434L - Natural Resources Engineering & Lab Credits: 4**

Precipitation, infiltration, evapotranspiration and runoff from small agricultural watersheds and application to design of conservation structures, water erosion control practices. Design of drainage and irrigation systems. Feedlot pollution control principles. Prerequisites: EM 331. Corequisites: ABE 434L-434.

### **ABE 444-444L/544-544L - Unit Operations of Biological Materials Processing and Lab Credits: 4**

Transport processes of heat and mass are applied to the following unit operations: evaporation, drying, gas liquid separation processes (humidification cooling towers), vapor-liquid separation processes (distillation), soil-liquid separation processes (leaching), membrane separations (ultrafiltration, reverse osmosis), mechanical separation processes, extrusion. Prerequisites: Senior standing or consent. Corequisites: ABE 444L-444/544L-544.

### **ABE 455-455L/555-555L - Principles of Biological Separation Processing and Lab Credits: 3**

Biological separation principle and process development for isolation of value added products from renewable agricultural based materials. The mass and heat transfer as well as engineering scale up will be applied to chromatography separation (gel filtration, ion exchange, affinity, hydrophobic interaction and affinity), membrane separation (microfiltration, ultrafiltration and diafiltration) and liquid-liquid extraction (aqueous two phase, micelle extraction and solvent extraction). Hands on laboratory experiments will be an integral part of this course. Students will be expected to complete comprehensive laboratory reports which include scale up computations. Corequisites: ABE 455L-ABE455/ABE 555L-ABE 555

### **ABE 463-463L Instrumentation for Agricultural and Biosystems and Lab Credits 3**

Measurement systems for strain, flow, pressure, displacement, and temperature as related to measurements for physical and biological systems are introduced with error analysis. The dynamic characteristics of the measurand measurement system explored and the interaction of the dynamic characteristics of the measurand with the measurement system is discussed. Filters, amplifiers, logic circuits, and input circuitry analysis and use are emphasized. Signal

conditioning required for digital data acquisition is introduced.  
Prerequisites: EE 300. Corequisites: ABE 463L-463.

**ABE 464-464L - Monitoring and Controlling Agriculture and Biological Systems and Lab Credits: 2**

Data acquisition, processing, and analysis for agriculture and biological applications using a computer based system. Application of electronic instrumentation, Lab View software programming. Introduction to CAN bus technology, proportional-integral-derivative (PID) controllers, and programmable logical controllers .  
Prerequisites: ABE 463. Corequisites: ABE 464L-464.

**ABE 490 - Seminar (AW) Credits: 1**

**ABE 491 - Independent Study Credits: 1-3**

**ABE 492/592 - Topics Credits: 1-4**

**ABE 494 - Internship Credits: 1-6**

**ABE 496 - Field Experience Credits: 1-6**

**ABE 497 - Cooperative Education Credits: 1-6**

**ABE 498 - Undergraduate Research/Scholarship Credits: 1-3**

**ABE 503 - Energy and Environment Credits: 3**

**ABE 512 - Advanced Ag. Tractors and Machines Credits: 2**

**ABE 522 - Bio-Environmental Engineering Credits: 2**

**ABE 543 - Fundamentals of Bioprocessing Credits: 3**

**ABE 551 - Fundamentals of Conversion Credits: 3**

**ABE 553 - Biochem. Eng. for Renewable Resources Credits: 3**

**ABE 590 - Sustainability Seminar Credits: 1**

**ABE 592 - Topics Credits: 1-3**

**ABE 632 - Environmental & Ecological Risk Assessment Credits: 3**

**ABE 662 - Life Cycle Assessment Credits: 3**

**ABE 732 - Advanced Hydrology in Agriculture Credits: 3**

**ABE 733 - Ground Water Engineering in Agriculture Credits: 3**

**ABE 734-734L - Advanced Irrigation Engin.& Lab Credits: 3**

**ABE 748 - Bioprocessions Credits: 3**

**ABE 752 - Theoretical Micro-Climatology Credits: 2**

**ABE 754-754L - Advanced Unit Operations of Food/Biomaterials Processing and Lab Credits: 3**

**ABE 763-763L - Instrumentation Credits: 3**

**ABE 765 - Adv. Biomass Thermochemical Conversion Credits: 3**

**ABE 771 - Graduate Seminar Credits: 1**

**ABE 772-772L - Similitude Credits: 2**

**ABE 773-773L - Programming Agricultural System Credits: 3**

**ABE 788 - Research Report/Design Paper Credits: (1-2)**

**ABE 791 - Independent Study Credits: (1-3)**

**ABE 792 - Topics Credits: (1-3)**

**ABE 792L - Topics Lab Credits: 0**

**ABE 798 - Thesis Credits: (1-7)**

**ABE 898D - Dissertation PhD Credits: (1-12)**

## **ABS (Agriculture & Biological Sciences)**

**ABS 109 - First Year Seminar\*\* Credits: 2**

First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\*Course meets IGR #1

**ABS 203 - Global Food Systems \*\* (G) Credits: 3**

Introduction to global food systems and agricultural diversity. Food production techniques, economics, society/cultural values, and agricultural constraints in several countries will be studied. The course is team taught with faculty from Economics, Animal and Range Sciences, and Plant Science. Notes: Course meets IGR #2

**ABS 205 - Biotechnology in Agriculture and Medicine Credits: 2**

This course will provide a means for students in various majors to gain an understanding of the rapidly emerging, multidisciplinary research and applications in biotechnology, and to learn of potential career directions and training opportunities in biotechnology-related fields. Course materials and lectures will change each year to keep up

with the changing technology. Guest lecturers will provide the best expertise available. Internet assistance is necessary to provide resource materials and new publications. Course will be open to all students.

**ABS 210 - Intro to Biorenewable Products & Processing Credits: 3**

A survey of biorenewable resources, technologies, and industries. Topics include sources and production of biomass; processing of biomass into fuels and other products; environmental impact; and economic analysis. Cross-Listed: AST 210 Introduction to Biorenewable Products and Processing

**ABS 310 - Leadership for Families & the Food System Credits: 3**

Principles of leadership within the unique contexts of agriculture, biological sciences, family and consumer sciences. Topics covered include definitions and approaches to the study of leadership, leadership styles, gender and ethnic diversity, leadership in groups, ethical issues, mission statements, and emerging leadership issues. Cross-Listed: FCS 310.

**ABS 381 - Multicultural Agriculture/Biological Science Experience Credits: 2-4**

This will be a team-mentored class. Students will work one on one or in small groups with professors that have knowledge of the region and one-to three week experience to an area in the U.S. that is different from their home agricultural community, to experience and evaluate diverse food/ agricultural systems. For the Bachelor's degree, a maximum of 8 credits is allowed for domestic multicultural travel/study experience (ABS 381) and/or an international travel/study experience (ABS 482). ABS203 is recommended.

**ABS 475-475L - Integrated Natural Resource Management and Lab (AW) Credits: 3**

A capstone course that requires students to integrate previously-learned natural resource techniques and information into the strategic planning process. Students will be divided into small groups for plan development. Various majors are involved to allow for integrated course material. Lab to accompany ABS 475 Prerequisites: Senior Standing and PS 390 or Senior Standing and written consent Corequisites: ABS 475L-475

**ABS 482-582 - International Experience (G) Credits: 2-4**

This will be a team-mentored class. Students will work one on one or in small groups with professors that have knowledge of the global region and culture that will be visited. Students will participate in a one-to-three week travel/study abroad experience to another nation(s) to experience and evaluate diverse food/agricultural systems. For the Bachelor's degree, a maximum of 8 credits is allowed for domestic multicultural travel/study experience (ABS 381) and/or an international travel/study experience (ABS 482). ABS 203 is recommended.

**ABS 492-592 - Topics Credits: 1-4**

**ABS 704 - Plant Systems Credits: 1-10**

**ABS 705 - Research Methodology Credits: 1-10**

**ABS 792 - Topics Credits: 1-6**

## **ACCT (Accounting)**

**ACCT 210 - Principles of Accounting I (COM) Credits: 3**

A study of fundamental accounting principles and procedures such as journalizing, posting, preparation of financial statements, and other selected topics. Accounting is emphasized as a service activity designed to provide the information about economic entities that is necessary for making sound decisions.

**ACCT 211 - Principles of Accounting II (COM) Credits: 3**

A continuation of ACCT-210 with emphasis on partnership and corporate structures, management decision-making, cost control, and other selected topics. Prerequisites: ACCT 210.

**ACCT 310 - Intermediate Accounting I (COM) Credits: 3**

Involves the intensive study of financial accounting standards, both in theory and practice, as they relate to the preparation and analysis of financial statements. Accounting problems and their impact on the financial statements are addressed in regard to current assets, fixed assets, intangible assets, liabilities, and other selected topics. Prerequisites: ACCT 211.

**ACCT 311 - Intermediate Accounting II (COM) Credits: 3**

Provides an intensive study of accounting standards, both in theory and practice, as they relate to the preparation and analysis of financial statements. Accounting problems and their impact on the financial statements are addressed in regard to liabilities, investments, stockholders' equity, leases, pensions, tax allocation and other selected topics. Prerequisites: ACCT 310 or consent of instructor.

**ACCT 320 - Cost Accounting (COM) Credits: 3**

The study of principles and techniques for accumulating, reporting, and analyzing cost information for decision-making and external reporting. The use of cost accounting systems for planning and controlling cost responsibility centers is emphasized. Consideration is given to the appropriate use of various cost accounting methods such as activity-based costing, target costing, and just in time management techniques in service and manufacturing industries. Prerequisites: ACCT 211.

**ACCT 406-506 - Accounting for Entrepreneurs Credits: 3**

Accounting concepts and practices for entrepreneurs/small business owners. Emphasis given to the use of accounting tools to solve small business problems.

**ACCT 430 - Income Tax Accounting (COM) Credits: 3**

Involves the study of Federal Income Tax law as it affects individuals, as well as other topics. Prerequisites: ACCT 211.

**ACCT 450 - Auditing (COM) Credits: 3**

Studies both theory and practice. Topics include audit planning, internal control, audit procedures, audit reports and opinions, materiality, audit risk, evidential matter, as required by generally accepted auditing standards (GAAS), professional ethics, legal responsibilities, and other selected topics. Prerequisites: ACCT 311 or consent of instructor.

**ACCT 490 - Seminar (COM) Credits: 3****ACCT 491 - Independent Study (COM) Credits: 1-4****ACCT 492-592 - Topics (COM) Credits: 1-4****ACCT 493 - Workshop (COM) Credits: 1-4****ACCT 494 - Internship (COM) Credits: 1-12****ADV (Advertising)****ADV 243 - Public Relations Principles Credits: 3**

An introduction to the theory and practice of public relations, emphasizing its publics, management function, writing skills, communication processes, tools and professional ethics. Cross-Listed: MCOM 243

**ADV 314 - Sales, Promotion and Marketing Credits: 3**

Promotion, sales, advertising, circulation, practices and theories of marketing in advertising and graphic arts.

**ADV 343 - Strategies - Public Relations Credits: 3**

Problem-solving strategies and principles of message design for developing public relations campaigns. Students will explore ways to create strategy-driven public relations plans that enable organizations to reach specific audiences with both traditional and new media. Prerequisites: ADV/MCOM 243 Cross-Listed: MCOM 343

**ADV 370 - Advertising Principles Credits: 3**

Study of advertising as an institution. Discussion of historical foundations, economics, social consequences, structure, planning, execution and evaluation phases of the advertising process.

Discussion of advertising as it relates to other types of marketing communication. Cross-Listed: MCOM 370

**ADV 371-371L - Advertising Copy & Layout & Studio (AW) Credits: 3, 0**

Discussion of principles and techniques for developing creative campaigns. Laboratory assignments apply thinking, design, and writing skills to creative problems for different media and different targets. Encompasses creative development for all advertising media. Corequisites: ADV 371L-371 Cross-Listed: MCOM 371-371L

**ADV 372-372L - Advertising Media Strategies & Lab Credits: 3**

Learn theory and fundamentals of evaluating advertising media. Analyze marketing variables, media characteristics, sources and strategies. Use computer planning models. Assigned range of planning problems and develop media plan within an integrated marketing framework. Hands-on application of advertising media strategies. Prerequisites: ADV/MCOM 370 Corequisites: ADV 372L-372

**ADV 411-411L - Media Analytics and Studio Credits: 3**

Students will gain an understanding of industry trends, terminology, planning, and measurement models related to traditional, social and emerging media environments. The studio provides hands-on application of media analytic principles. Corequisites: ADV 411L-411

**ADV 442-442L - Integrated Marketing Communication and Campaigns Studio Credits: 3, 0**

The capstone course of the advertising sequence. Use case study method and develop complete integrated communication plan for client. Make formal advertising campaign presentation. Hands-on application of integrated marketing communication campaigns. Corequisites: ADV 442L-442 Cross-Listed: MCOM 442-44L

**ADV 472 - Media Research and Planning Credits: 3**

This course develops the ability to conduct and analyze advertising and media research, and to prepare and execute a comprehensive consumer or audience plan. Cross-Listed: MCOM 472

**ADV 476 - International and Ethnic Advertising Credits: 3**

This course develops an understanding of international and ethnic advertising and marketing. Students gain experience in marketing decisions that reflect an understanding of intercultural and international markets and explore the social and ethical issues in such marketing. Cross-Listed: ADV 676, MCOM 476-676

**ADV 489 - Portfolio Production & Design Credits: 1-3**

Planning, creation, and production of portfolios for a variety of purposes. Cross-Listed: MCOM 489

**ADV 492 - Topics Credits: 1-5****ADV 676 - Ethnic and International Advertising Credits: 3****ADV 692 - Topics Credits: 1-3****AGEC (Agricultural & Resource Economics)****AGEC 271-271L - Farm and Ranch Mgmt & Lab Credits: 4**

Farm or ranch business from the viewpoint of sustainable profit and efficiency. Application of business and economic principles to a portfolio of enterprises, scale of production, size of business, capital investments, and efficiency. Business planning, including records and data management and financial analysis for current and future operations. Prerequisites: One course from MATH except 021, 095, 101, 100T. Corequisites: AGECE 271L- 271.

**AGEC 292 - Topics Credits: 1-4****AGEC 320 - Ethics in agribusiness Credits: 3**

Introduction to ethical theories and frameworks used to discuss general ethical questions such as death, theft, and lying, followed by more specific agribusiness issues. Includes marketing claims, unhealthy foods, the development of genetically-modified organisms,

controversy over hiring undocumented workers, and the consolidation of agriculture into industrial production facilities.

**AGEC 350 - Environmental law Credits: 3**

Introduction to regulatory theory, externalities and market failures, definition of key regulations affecting agribusiness, overview of local government law, and delineation of environmental laws relating to agriculture. Current environmental issues are related to statutory, administrative, and regulatory authorities.

**AGEC 352 - Agricultural Law Credits: 3**

Legal rights and duties of parties to agricultural business transactions: sales, secured transactions, real and personal property, business associations, labor relations, bankruptcy, water and drainage, and livestock. Emphasis is on South Dakota law. Prerequisites: BADM 350, junior standing.

**AGEC 354 - Agricultural Marketing and Prices Credits: 3**

Principal factors which affect supply, demand, and price determination within the food system. Evaluation of alternative marketing strategies, including the use of different price discovery mechanisms such as futures and options. Structure & organization of markets & food marketing channels. Prerequisites: ECON 201 or 202

**AGEC 356 - Equine Law Credits: 3**

Topics include forms of equine business organization, employer requirements, taxes, debt collection, contracts, liability of horsemen, animal abuse and neglect, laws governing horse transport, estate planning, and insurance considerations.

**AGEC 364 - Introduction to Cooperatives Credits: 3**

This course will address the concepts and business principles of the cooperative form of business. Cooperatives differ from other businesses because they are member-owned and operate for the benefit of members, not investors. The course is designed to provide students an understanding of cooperatives that is legally consistent and realistic.

**AGEC 366 - Food Law Credits: 3**

Course Description: Introduce U.S. statutes, regulations, and court cases relating to food safety concerns so students are prepared to handle real-world situations involving food safety. Students will gain an understanding of where and how to locate laws relating to food safety; the relationship between a statute, a regulation, and a court decision; and who has the authority to interpret them. The course also provides an overview of the interaction among federal and state food safety laws, and the expanding role of international food standards.

**AGEC 371 - Agricultural Business Management Credits: 3**

This course applies core economic and business principles to the management of agribusiness firms. Students will develop a fundamental understanding of the key ideas and concepts needed to successfully manage businesses that specialize in adding value to farm products through services and/or provide inputs to production agriculture. Key concepts include strategic planning, organizational structure, leadership, market analysis, marketing and pricing strategies, and control processes.

**AGEC 372 - Intro to Resource and Environmental Economics Credits: 3**

Introduction to environmental economics. The course surveys environmental issues such as pollution and carbon emissions. Cost-benefit analysis of the cleanup of environmental problems is introduced as are net present value metrics. Cross-Listed: ECON 372.

**AGEC 421-521 - Farming & Food Systems Economics Credits: 3**

Use of economic concepts in analyzing farming and food system alternatives. Using multidisciplinary approach, the course examines the critical linkages in the food system and engages in problem solving at each step of the process. Prerequisites: Senior standing, AGEC 271 or ECON 201.

**AGEC 430/530 - Advanced Ag Marketing & Prices Credits: 3**

Economic theory and quantitative techniques used in analysis of

agricultural market problems, construction of economic models, statistical estimates of supply and demand, and price forecasting. Prerequisites: AGEC 354 and STAT 281 or consent.

**AGEC 454 - Economics of Grain & Livestock Marketing Credits: 3**

Market structure issues related to grain and livestock markets in the US. Fundamental factors affecting agricultural markets. Impacts of national and international economic factors on the performance of US and world grain and livestock markets. Marketing management alternatives for producers, processors, and downstream supply chain participants. Prerequisites: AGEC 354.

**AGEC 471-571 - Advanced Farm & Ranch Management Credits: 3**

Leasing arrangements, capital investment, computerized accounting and budgeting. Linear programming as a tool for planning and organizing the farm business. Prerequisites: Senior standing, 271, Econ 301, or consent. Cross-Listed: AGEC 471

**AGEC 473-473L - Rural Real Estate Appraisal & Lab Credits: 3**

Principles and practices of rural real estate appraisal. Principles of soils valuation and their application for farmland appraisal. Cost, market data and income approaches to farmland and building appraisal. Tax, loan and other specialized rural appraisal procedures. Half-day field trips to area farms are required. Prerequisites: AGEC 271-271L or PS 213-213L Corequisites: AGEC 473L-AGEC 473 Cross-Listed: PS 473-473L

**AGEC 478-478L - Agricultural Finance and Lab Credits: 3**

Overview of demand for capital and credit from production agriculture and agribusiness sectors; role of banks, Farm Credit System, agribusiness financing and other financial intermediaries; developing information flows and methods to evaluate financial performance; capital budgeting and financial feasibility techniques; control of farmland and depreciable assets; applications to account for risk. Prerequisites: AGEC 271, ECON 201, ACCT 210 Corequisites: AGEC 478L-478.

**AGEC 479 - Agricultural Policy (AW) (G) Credits: 3**

This course examines the process of developing agricultural and food policy. Topics will include the policy development process; global and domestic implications of both US domestic and international trade policies; environmental and resource issues; food safety, security, and nutrition policies; and the intended and unintended consequences of policy decisions. Prerequisites: ECON 201 and ECON 202.

**AGEC 484 - Trading in Ag Futures and Options Credits: 3**

This course utilizes fundamental and technical analysis techniques to analyze agricultural futures and options. This is a hands-on commodity trading class. Students will analyze selected agricultural commodity markets, generate trading proposals, and initiate, manage, and close positions in selected agricultural commodity futures and options markets. Prerequisites: AGEC 354.

**AGEC 491 - Independent Study Credits: 1-3**

**AGEC 492 - Topics Credits: 1-4**

**AGEC 493 - Workshop Credits: 1-3**

**AGEC 494 - Internship Credits: 1-6**

**AGEC 498 - Undergraduate Research/Scholarship Credits: 1-4**

**AGEC 591 - Independent Study Credits: 1-3**

**AGEC 592 - Topics Credits: 1-4**

**AGEC 593 - Workshop Credits: 1-3**

**AGEC 672 - Bioenergy and Resource Economics Credits: 3**

**AGEC 691 - Independent Study Credits: 1-3**

## **AGED (Agricultural Education)**

**AGED 109-First Year Seminar - Agricultural Education\*\* Credits: 2**

First-year experience course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics,

contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\*Course meets IGR #1

#### **AGED 295 - Practicum Credits: 1**

**AGED 404 - Program Planning in Ag. Education (AW) Credits: 3**  
Developing and maintaining a strong agricultural education program requires knowledge of curriculum design and development, assessment, classroom management and other relevant topics. This course is designed to offer students an opportunity to further develop necessary skills for successfully teaching agricultural subjects in both formal and non-formal educational settings. Additionally, a brief history of the discipline, components of agricultural education, and current trends and issues will be explored. Working with advisory councils, adult education initiatives, and community organizations will also be addressed.

**AGED 405 - Philosophy of Career & Technical Education Credits: 2**  
Overview of career and technical education, including history and role and purpose in schools, communities and society; organization and characteristics of instructional programs at secondary, post-secondary and adult levels; career education; funding; and current trends and issues in career and technical education. Prerequisites: Sophomore status in education program. Corequisites: AGED 295 Cross-Listed: FCSE 405 Notes: For prospective teachers in agriculture or family and consumer sciences education.

#### **AGED 408 - Supervision of Work Experience and Youth Organizations Credits: 2**

This course is designed to enhance students' understanding of experiential learning opportunities in agricultural education. Specifically, content will address strategies, techniques, and practices needed to effectively advise an FFA chapter and/or other student leadership organizations. Promotion, utilization and management of Supervised Agricultural Experience programs and related opportunities will also be explored. Students will develop appropriate philosophies and skills for operation of a comprehensive agricultural education program. Prerequisites: PSI; EDFN 338 and EPSY 302

#### **AGED 412-412L - Preparation for Supervised Teaching Internship in AGED and Lab Credits: 4, 0**

Planning and developing instruction to meet the needs of selected age groups in formal and informal settings. Classroom/laboratory management, integration of core academics into career and technical education, assessment, advisement of student organizations, professional issues, and current topics in education will be addressed in preparation for a career in an educational setting. Prerequisites: Senior Standing, AGED/FCSE 295, AGED/FCSE 405, EPSY 302, EDFN 475, SEED 314, SEED 450, FCSE/AGED 404 Cross-Listed: FCSE 412-412L

#### **AGED 488 - 7-12 Student Teaching in AGED Credits: 6**

An experiential application of teaching pedagogy and content in agricultural education under the supervision of a certified teacher in an approved program. Prerequisites: Senior standing and successful completion of all PS I, PSII and all other pedagogy courses. An application for the experience must be completed and approved.

#### **AGED 491 - Independent Study Credits: 1-3**

#### **AGED 494 - Internship Credits: 1-12**

#### **AGED 496 - Field Experience Credits: (1-12)**

#### **AGED 497 - Cooperative Education Credits: 1-12**

#### **AGED 591 - Independent Study Credits: 1-3**

#### **AGED 690 - Seminar Credits: 1-2**

#### **AGED 788 - Research Problems in Agricultural Ed Credits: 1-2**

### **AHED (Adult Higher Education)**

#### **AHED 490 - Seminar for Residential Assistants Credits: 1-3**

#### **AHED 496 - Field Experience Credits: 2-5**

#### **AHED 691 - Independent Study Credits: 1-3**

#### **AHED 693 - Workshop Credits: 1-3**

#### **AHED 711 - Assessment and Program Design Credits: 3**

#### **AHED 720 - Principles of Post-Secondary Education Credits: 3**

#### **AHED 755 - Principles of College Teaching Credits: 3**

#### **AHED 772 - Admin. & Leadership in Student Affairs Credits: 3**

#### **AHED 788 - Research Problems in Adult Education Credits: 1-2**

#### **AHED 790 - Seminar Credits: 1-3**

#### **AHED 794 - Internship Credits: 1-6**

### **AIR (Aerospace Studies)**

**AIR 101-101L - The Foundations of the US Air Force & Lab Credits: 1**  
Professional appearance, customs and courtesies, officership/core values, basic communication, officer opportunities/benefits, and Air Force installations. Corequisites: AIR 101L- 101.

**AIR 102-102L - The Foundations of the US Air Force & Lab Credits: 1**  
Interpersonal communication, macro U.S. military history, Air Force organizations/chain of command, cadet/officer candidate/officer, oral communication, and group leadership problems. Corequisites: AIR 102L-102.

#### **AIR 201-201L - The Evolution of USAF Air and Space Power and Lab Credits: 1**

Air Power from balloons and dirigibles through 1947; Air Force mission, concepts, doctrine and use of air power. Corequisites: AIR 201L- 201.

#### **AIR 202-202L - The Evolution of USAF Air & Space Power and Lab Credits: 1**

History of air power from 1947 to present. Air Force relief missions and civic action programs in the late 1960's Corequisites: AIR 202L- 202.

#### **AIR 301-301L - Air Force Leadership Studies & Lab Credits: 3**

Individual motivational and behavioral processes; leadership and group dynamics provide a foundation for development of professional skills as an Air Force officer-includes speaking and writing as they apply to the Air Force. Air Force quality concepts and techniques. Corequisites: AIR 301L- 301.

#### **AIR 302-302L - Air Force Leadership Studies and Lab Credits: 3**

Basic management processes of planning organizing, decision-making, controlling and use of analytical aids. The manager's world of power, politics, strategy, tactics and value conflicts discussed within the context of the military organization. Corequisites: AIR 302L-302.

#### **AIR 401-401L - National Security Affairs/Preparation for Active Duty and Lab Credits: 3**

The complex interaction between military and civilian society. Theory and workings of National Defense policy. Roles and mission of the Air Force. Commissioned military service as a profession. Corequisites: AIR 401L-401.

#### **AIR 402-402L - National Security Affairs/Preparation for Active Duty and Lab Credits: 3**

Evolution of defense strategy and the methods of managing conflict. Analysis of the system of Military Justice and current issues affecting military professionalism. Corequisites: AIR 402L-AIR 402.

### **AIS (American Indian Studies)**

#### **AIS 100 - Introduction to American Indian Studies Credits: 3**

Introduction to indigenous cultures of North America with emphasis on those inhabiting the United States. Contemporary issues facing Indian people today are covered along with relevant historical, geographical, legal, cultural, and philosophical information.

#### **AIS 101 - Introductory Lakota I \* Credits: 4**

An introduction to the Lakota language with emphasis on conversation, language structure, and vocabulary. Notes: \* Course meets SGR #3

**AIS 102 - Introductory Lakota II \* Credits: 4**

A continued introduction to the Lakota language with emphasis on basic conversation, language structure, and vocabulary. Prerequisites: AIS/LAKL 101. Cross-Listed: LAKL 102 Notes: \* Meets SGR #3

**AIS 103 - American Indian Cultures & the Classroom Credits: 3**

This course will explore the experiences of American Indians in educational settings and the impact of those experiences on their cultural identity. Students will develop their writing and research skills as they learn about various tribes' interactions with American education. In particular, the course will help students understand the similarities and differences between the experiences of Native and non-Native students.

**AIS 199 First Year Seminar: American Indian Scholars Credits 2**

First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. In addition, this course is designed to facilitate the successful transition of American Indian students to university life, by developing in students the desire and ability to be informed participants in the educational process.

**AIS 201 - Intermediate Lakota I Credits: 3**

A continuation of the first-year course, with emphasis on reading, composition, and vocabulary building. Prerequisites: AIS/LAKL 101 and 102.

**AIS 202 - Intermediate Lakota II Credits: 3**

A continuation of intermediate Lakota with emphasis on reading, composition, vocabulary building and the oral tradition. Prerequisites: AIS/LAKL 101 and 102.

**AIS 238 - Native American Religions Credits: 3**

A survey of Native American religious traditions and their relation to both traditional and contemporary cultures. Focus on ritual, myth and practice in traditional settings, as well as forms of religious resurgence in the 20th century. Cross-Listed: REL 238

**AIS 256 - Literature of American West\*\* Credits: 3**

A study of the literature produced in our region, centered on the Great Plains, including that of Native Americans, both oral and written; of pioneers, immigrants; and farmers; Western literature, and current writers. Prerequisites: ENGL 101 Cross-Listed: ENGL 256 Notes: \*\*Course meets IGR #2

**AIS 362 - Indigenous Feminisms Credits: 3**

The course will examine feminism in indigenous communities around the world through the study of the personal and communal experiences of indigenous women. Topics will include colonial interactions with indigenous peoples and their impact on cultural concepts of gender roles, personhood, and leadership. Readings will draw from American Indian studies, critical pedagogy, education, gender studies, history, and literature. Cross-Listed: WMST 362

**AIS 368 - History & Culture of the American Indian\*\* Credits: 3**

Presents history and culture of North American Indians from before white contact to the present, emphasizing regional Dakota cultures. Cross-Listed: HIST 368 Notes: This course meets IGR Goal 2.

**AIS 400 - Education and Native Peoples Credits: 3**

This course will examine issues pertaining to the development of an appropriate educational system for Native Peoples, including Native control of education, Native-based learning theories, the of role culture, values and identity, teaching and learning styles, pedagogy and curriculum planning.

**AIS 410 - North American Ethnology Credits: 3**

A comparative survey of native North American cultures representative of major cultural areas of North America. Emphasis on traditional cultures using a case-study approach. Cross-Listed: ANTH 410.

**AIS 417 - American Indian Government and Politics Credits: 3**

An in-depth investigation of federal, state, and tribal laws, and the historical development and status of treaties, legislation, court decisions, and tribal governments. Cross-Listed: POLS 417

**AIS 421 - Indians of North America\*\* Credits: 3**

Provides prospective teachers and those interested in Indian people with a basic knowledge of Indian heritage and culture. Emphasis on the Dakota Indians. Prerequisites: junior, senior, or graduate student status OR written permission Cross-Listed: ANTH 421/521 Notes: This course fulfills teacher education certification requirement for S.D. Indian Studies and meets IGR Goal #2

**AIS 445 - American Indian Literature Credits: 3**

Concentration of myths and legends of major language groups, particularly the Siouan. Cross-Listed: ENGL 445

**AIS 447 - American Indian Literature of Present Credits: 3**

Twentieth-century autobiography, fiction, and poetry by Native American authors. Cross-Listed: ENGL 447

**AIS 462 - Formation of Federal Indian Policy Credits: 3**

This course will examine the development of U.S. policies on American Indian/Alaska Native peoples. Topics will include the legal and theological underpinnings of federal Indian policy, constitutional arguments for Congressional control of Indian affairs, treaty-making, allotment, termination, the Reorganization Act, and self-determination. The course will conclude with an examination of current federal policies on such issues as Indian gaming and child welfare.

**AIS 467 - Geography of the American Indian Credits: 3**

Study of the geography of the American Indians under three primary topics: loss of Indian lands; development of the Indian reservation system; historical and contemporary land issues. Prerequisites: HIST 368 or ANTH 410 or ANTH 421 or GEOG 219 Cross-Listed: GEOG 467

**AIS 491 - Independent Study Credits: 1-3****AIS 492 - Topics Credits: 1-3****AIS 496 - Field Experience Credits: 1-12****AM (Apparel Merchandising)****AM 172 - Introduction to Apparel Merchandising Credits: 2**

Introduction to basic concepts for success as an apparel merchandising major. Topics include mass media, research, teams, and careers in apparel merchandising.

**AM 231-231L - Ready-To-Wear Analysis and Lab Credits: 3**

Analysis of construction, fabric, fit, defects, and pricing of ready-to-wear. Product knowledge, including garment classifications. Examination of consumer attitudes toward product quality. Corequisites: AM 231L-231.

**AM 242-242L - Textiles I and Lab Credits: 3**

An investigation of fiber, yarn, fabrication, finishes and their interrelationship to specific end use and consumer satisfaction. Prerequisites: Sophomore standing. Corequisites: AM 242L-242

**AM 253 - Socio-Psychological Aspects of Dress Credits: 3**

Examination of clothing behavior from sociological, psychological and cultural perspectives. Cross-Listed: WMST 253.

**AM 274-274L - Fashion Promotion and Lab Credits: 3**

Principles in the promotion of merchandise to varied consumer groups by all segments of the fashion industry. Study of the techniques used for fashion promotion. Experience in planning,



execution, installation and evaluation of advertisements, displays, and special events. Corequisites: AM 274L-274.

**AM 282 - Customer Service Credits: 2**

Examination of customer service as a tool for business to develop positive interactions with current and potential customers. Discussion of customer service as an integral tool in customer relationship management. Cross-Listed: CS 282

**AM 292 - Topics Credits: 1-3**

**AM 315-315L - Apparel Design and Lab Credits: 3**

Course develops aesthetic judgment and design literacy of students. Fashion design for various levels of the industry including protective and functional clothing markets are studied. Prerequisites: AM 172. Corequisites: AM 315L-AM 315.

**AM 352 - History of Dress in the Western World Credits: 3**

Development of styles of dress from ancient times; social significance, symbolic meaning, and functions are investigated. The Snellman Hsia Collection serves as primary source material.

**AM 361-361L - Aesthetics and Lab Credits: 3, 0**

The study of aesthetics as it applies to our surroundings. Applications of the elements and principles of design to a wide range of disciplines. Laboratory course to accompany AM 361. Corequisites: AM 361L-361

**AM 372-372L - Trending and Buying and Lab Credits: 3**

Analysis of trends for the purpose of forecasting merchandise procurement. Development of merchandise lines within the forecast model. Study the buying process. Corequisites: AM 372L-372.

**AM 381 - Professional Behavior at Work Credits: 3**

Social skills and professional conduct in a global workplace. Emphasis will be on interpersonal communication and cross-cultural interactions appropriate in the work environment. Cross-Listed: CS 381

**AM 462 - Retail Management Credits: 3**

Examine and analyze the development and strategies of the continually changing structures within the retail community considering career opportunities, consumer demand and the competitive nature of retailing within the global economy.

**AM 472-472L - Merchandising and Lab Credits: 3**

Analysis of merchandising and marketing strategies for business profitability, sustainability and success. Emphasis on long term forecasting and planning; exploration of computer applications. Corequisites: AM 472L-472.

**AM 473-473L - Global Sourcing and Lab (AW) Credits: 3**

Examine the process of globalization within the fiber, textile, apparel and retail (FTAR) complex. Analyze size, scope and components. Consider the role politics and social responsibilities have within global trading regions and the FTAR complex. Develop computer skills in sourcing. Corequisites: AM 473L-473

**AM 477 - Current Issues in the Workplace Credits: 1**

Discussion of professional practices & current issues in the workplace.

**AM 480 - Travel Studies Credits: 1-5**

This travel-study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators at other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

**AM 490 - Seminar Credits: 3** Prerequisites: AM 495.

**AM 491 - Independent Study Credits: 1-3**

**AM 492 - Topics Credits: 1-3**

**AM 495 - Practicum Credits: 3** Prerequisites: CS 377 and AM 477

**AM 498 - Undergraduate Research/Scholarship Credits: 1-3**

## ANAT (Anatomy)

**ANAT 142 - Anatomy Credits: 3**

An introductory study of the structure of the human body. This course is designed for students interested in health related careers.

## ANTH (Anthropology)

**ANTH 210 - Cultural Anthropology \* (COM) Credits: 3**

Introduces the nature of human culture as an adaptive ecological and evolutionary system, emphasizing basic anthropological concepts, principles and problems. Draws data from both traditional and industrial cultures to cover such concepts as values and beliefs, social organization, economic and political order, science, technology, and aesthetic expression. Notes: \* Course meets SGR #3

**ANTH 220 - Physical Anthropology \* (COM) Credits: 3**

Focuses upon the interactive process between human biology and human culture, drawing relationships among such concepts as human evolution, human heredity, human biological diversity, and biological micro-adaptations. Notes: \* Course meets SGR #3.

**ANTH 421-521 - Indians of North America Credits: 3**

Provides prospective teachers and those interested in Indian people with a basic knowledge of Indian heritage and culture. Emphasis on the Dakota Indians. This course fulfills teacher education certification requirement for S.D. Indian Studies. Prerequisites: Junior, senior, or graduate student status OR Instructor's written permission Cross-Listed: AIS 421 Notes: This course fulfills teacher education certification requirement for S.D. Indian Studies and meets IGR #2

**ANTH 491-591 - Independent Study (COM) Credits: 1-3**

**ANTH 492-592 - Topics Credits: 1-3**

**ANTH 494 - Internship Credits: 1-12** Prerequisites: permission

**ANTH 496 Field Experience Credits 1-12** Prerequisites: permission

## ARAB (Arabic)

**ARAB 101 - Introductory Arabic I \* (COM) (G) Credits: 4**

Introduces the fundamental elements of Arabic writing and vocabulary and Muslim culture. Emphasizes sound/symbol relationships. Class work may be supplemented with required aural/oral practice outside of class. Notes: \* Course meets SGR #4.

**ARAB 102 - Introductory Arabic II \* (COM) (G) Credits: 4**

Continues with the introduction of the fundamental elements of Arabic writing and vocabulary and Muslim culture. Emphasizes sound/symbol relationships. Class work may be supplemented with required aural/oral practice outside of class. Prerequisites: ARAB 101. Notes: \* Course meets SGR #4

## ARCH (Architecture)

**ARCH 109 - First Year Seminar\*\* Credits: 2**

First-year experience course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\* Course meets IGR #1

**ARCH 131 - Building Thinking Credits: 2**

An introduction to the social art, urbanism, economics, and materiality of making buildings emphasizing the evolution from “master builder” to the highly mediated and digital nature of contemporary building design and construction practices.

**ARCH 151 - Design Practice I Credits: 2**

Introduces students to design studio and culture. Students learn basic concepts of architectural drawing and model making through studying precedents and surroundings. Students are expected to develop craftsmanship in representation as well as communication skills.

**ARCH 152 - Design Practice II Credits: 2**

Continues introducing students to design studio and culture. Students learn basic concepts of architectural drawing and model making through studying precedents and surroundings. Students are expected to develop craftsmanship in representation as well as communication skills.

**ARCH 241 - Building History I Credits: 3**

Studying architecture through the frame of history emphasizing buildings as artifacts of the technological processes of construction. Buildings from across diverse societies and geographies are put into historical context in categories of carving, stacking, framing, skinning, and casting space.

**ARCH 242 - Building History II Credits: 2**

Studying architecture through the frame of history emphasizing building as a professional and disciplinary practice. The course focuses on historical study of the genesis of the profession across time and cultures in Renaissance and Baroque Italy (1350-1650).

**ARCH 251 - Design Practice III Credits: 4**

Continuation of first year Design Practice studios. Students continue to learn drawing and modeling techniques and refine craft. Students begin to examine components in building design and construction systems for structures. Prerequisites: ARCH 152

**ARCH 252 - Design Practice IV Credits: 4**

Students look in-depth at building components and assemblies. Work will focus on component design and construction types. Students will begin to analyze building materials and related assemblies Prerequisites: ARCH 251

**ARCH 321 - Drawing, modeling, & notation Credits: 2**

Introduction to electronic building information modeling and notational drawing in raster and vector technologies. Prerequisites: ARCH 351

**ARCH 331 - Building Shop I Credits: 2**

An introduction to craftsmanship, assembly, and fabrication through hands-on demonstrations and projects. Prerequisites: ARCH 252 and MNET 231- 231L.

**ARCH 332 - Building shop II Credits: 2**

Continuation of ARCH 331 workshop studies in craftsmanship, assembly, and fabrication through hands-on demonstrations and projects. Prerequisites: MNET 231- 231L.

**ARCH 341 - Building history III (AW) Credits: 2**

Studying architecture through the frame of history emphasizing the 20th century development of the modern culture of architecture. Buildings, both local and global, from across diverse societies put into historical context as cultural, socio-political, and corporate artifacts of the profession. Prerequisites: ARCH 241 and ARCH 242

**ARCH 351 - Collaboration Studio Credits: 5**

Students design a simple but comprehensive in-fill building project problematizing construction and spatial sequence while introducing foundational issues of place-making and city form in architectural production. Prerequisites: ARCH 252.

**ARCH 352 - Architecture studio I Credits: 5**

Building design studio focusing on institutional program projects in masonry construction situated in a landscape or rural site. Prerequisites: ARCH 351

**ARCH 382 - Travel Studies Credits: 1**

This travel-study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators at other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

**ARCH 411 Site, Environment, Urbanism & Public Space Credits: 2**

Lecture and field work in urban design principles, environmental responsibilities, architecture’s role in the sustenance of public space in the implementation of site design technologies. Prerequisites: ARCH 341

**ARCH 421 - Building Information Technologies Credits: 2**

Lecture and workshop study on the integration of digital building information technologies in the building process from ideation to maintenance. Prerequisites: ARCH 351

**ARCH 431 - Building Shop III Credits: 2**

Continuation of ARCH 332 workshop studies in craftsmanship, assembly, and fabrication through hands-on demonstrations and projects. Prerequisites: MNET 231- 231L.

**ARCH 451 - Architecture Studio II Credits: 5**

Building design studio focusing on commercial program projects in steel construction situated in a small town corner site. Prerequisites: ARCH 352

**ARCH 452 - Architecture Studio III Credits: 5**

Building design studio focusing on housing program projects in concrete construction situated in a big city block infill setting. Prerequisites: ARCH 451

**ARCH 492/592 - Topics Credits: 3****ARCH 521 - Building Specification Credits: 2****ARCH 522 - Drawing in Detail Credits: 2****ARCH 551 - Whole Building Studio I Credits: 6****ARCH 552 - Whole Building Studio II Credits: 6****ARCH 571 - Architecture Practice I: Regulation Credits: 2****ARCH 572 - Architectural Practice II: Economics Credits: 2****ARCH 631 - Building Technology I Credits: 2****ARCH 632 - Building Technology II Credits: 2****ARCH 651 - Professional Design Practice I Credits: 6****ARCH 652 - Professional Design Practice I Credits: 6****ARCH 671 - Architectural Practice III: Stewardship Credits: 2****ARCH 672 - Architectural Practice IV Management Credits: 2****ARCH 692 - Topics Credits: 3****ART (Art)****ART 110 - First Review Credits: 0.5**

An orientation course and an assessment of basic knowledge of Visual Arts terminology and theory, including visual elements and design principles. Required of all students entering into Visual Arts or Graphic Design majors in their first semester. Students must register, attend, and complete the First Review. Completion of the course will be a satisfactory (S) or unsatisfactory (U) which is not calculated into the student’s GPA. If the work is unsatisfactory, ART 110 must be repeated before taking ART 200 Portfolio Review Jury on Student Progress. Notes: The course will be offered every semester.

**ART 111 - Drawing I \* \*\* (COM) Credits: 3**

Introduces various drawing concepts, media, and processes developing perceptual and technical skills related to accurate observing and drawing. Notes: \* Meets SGR #4 or \*\* IGR Goal #2

**ART 112 - Drawing II \* \*\* (COM) Credits: 3**

Emphasizes the continuing development of essential drawing skills and perceptual abilities as drawing concepts, compositional complexity, and creativity gain importance. Prerequisites: ART 111  
Notes: \* Course meets SGR #4 or \*\*IGR Goal #2

**ART 121 - Design I 2D \* \*\* (COM) Credits: 3**

Emphasizes the organization of visual elements and principles while exploring creative thought processes through art theory, concepts, material, and techniques. Notes: \* Course meets SGR #4 or \*\* IGR Goal #2

**ART 122 - Design II Color (COM) Credits: 3**

Intro to color theory as it applies to basic 2D & 3D design principles.

**ART 123 - Three Dimensional Design \* \*\* (COM) Credits: 3**

3-D visual problems solved through the organization of design elements, utilizing three dimensional design language revealed through its history, theory, aesthetics and materials. Notes: \* Course meets SGR #4 or \*\* IGR Goal #2

**ART 192 - Topics Credits: 3****ART 200-Portfolio Review Jury on Student Progress Credits: 0.5**

The faculty jury will assess how the student meets the standard of progress in the department, awarding a satisfactory (S) or unsatisfactory (U), which is not calculated into a student's GPA. The student must register in the course after completing 15 hours of coursework in the Visual Arts Core (ART 111, ART 112, ART 121, ART 122, ART 123, and ARTH 100). This course for sophomore-level majors must be completed before advancing to the Junior level of coursework in the student's major. The course will be offered every semester. Prerequisites: ART 110.

**ART 211 - Drawing III-Figurative \*\* (COM) Credits: 3**

Figurative drawing studied, emphasizing the development of individual ideas and approaches to various drawing media, including the use of multimedia. Prerequisites: ART 111 or instructor's consent  
Notes: \*\* Course meets IGR Goal #2

**ART 231 - Painting I \*\* (COM) Credits: 3**

Initial approach to painting, employing history, materials, techniques and process in various media as student work with concepts, objects or models Prerequisites: ART 111 or instructor's consent Notes: \*\* Course meets IGR Goal #2

**ART 241 - Sculpture I \*\* (COM) Credits: 3**

Introduces the development of sculptural concepts and objects through history, techniques and processes using basic three-dimensional materials, including clay, plaster, stone, metals, wood, and synthetic media. Notes: \*\* Course meets IGR Goal #2

**ART 251 - Ceramics I \*\* (COM) Credits: 3**

Introduces ceramic art through its history and basic methods of forming, decorating, glazing, and firing pottery forms, including glaze chemistry and kiln construction. Notes: \*\* Course meets IGR Goal #2

**ART 281 - Printmaking I \*\* (COM) Credits: 3**

Introduces the history and techniques of relief and intaglio processes, lithography (section 1) and screen printing (section 2) as a primary means of expression. Notes: \*\* Course meets IGR Goal #2

**ART 292 - Topics Credits: 3****ART 311 - Figurative Drawing-Advanced Credits: 3**

The studio course develops and expands live figure drawing practices using traditional methods and mixed media applications, and requires the creation of a portfolio of outside works that complements class-time assignments. Prerequisites: ART 112 Drawing II, ART 122 Color, and ART 211 Drawing III--Figurative. Notes: Course can be repeated for additional credit.

**ART 331 - Painting II (COM) Credits: 3**

Emphasizes painting based on complex combinations of concepts, materials, techniques and processes using objects, models, and individual creativity. Prerequisites: ART 231.

**ART 332 - Painting-Intermediate Level Credits: 3**

Continuation of Painting II. Emphasis on composition and expression. Prerequisites: ART 331.

**ART 341 - Sculpture II (COM) Credits: 3**

Continues Sculpture I as students explore individual concepts through various techniques and materials. Prerequisites: ART 241.

**ART 342 - Sculpture III (COM) Credits: 3**

Continues Sculpture II as students further explore individual concepts through various techniques and materials. Prerequisites: ART 341.

**ART 351 - Ceramics II (COM) Credits: 3**

Continues Ceramics I as students explore clay through individually creative application of concepts, techniques and glazing and firing methods. Prerequisites: ART 251.

**ART 352 - Ceramics-Intermediate Level Credits: 3**

Continuation of Ceramics II. Emphasis on individual concepts developed through hand-building and/or throwing techniques. Also more advanced glazing and firing techniques, kiln maintenance, and studio operations. Prerequisites: ART 351 (minimum grade of "C", or consent of instructor).

**ART 381 - Printmaking II (COM) Credits: 3**

Continues Printmaking I as students further individualized their application of printing processes and media Prerequisites: ART 281 or consent.

**ART 382 - Printmaking-Intermediate Level Credits: 3**

Continuation of Printmaking II. Creative use of advanced printmaking techniques and processes in relief, intaglio, and serigraphy. Prerequisites: ART 381.

**ART 391 - Independent Study Credits: 1-3****ART 400 - Senior Review Credits: 0.5**

A course for seniors in the department. Students must register, attend, and complete the Senior Review in order to graduate with a degree in Visual Arts or Graphic Design. The faculty will assess how the student's portfolio or exhibition meets the standards of the department major; and they will award either a satisfactory (S) or unsatisfactory (U) which is not calculated into the student's GPA. The review must be repeated until it is satisfactorily completed before graduation in the department major. Prerequisites: ART 200 and senior standing in the major.

**ART 431 - Painting III (COM) Credits: 3**

Continues Painting II emphasizing concepts in art history, art criticism, and issues in contemporary art as students are encouraged to use self-directed and experimental approaches in developing subject matter and content. Prerequisites: ART 331 or consent of instructor.

**ART 441 - Sculpture-Advanced Credits: 3-9**

Continuation of Sculpture III. Advanced exploration of sculpture concepts. Prerequisites: ART 342. Repeatable up to 9 hours.

**ART 451 - Ceramics-Advanced Credits: 3-9**

A continuation of Ceramics III, an advanced exploration of ceramic materials as directed by personal conceptual needs. Further technical aspects of clay, glaze, and firing processes. Students take a more active role in studio operations. Prerequisites: ART 352, minimum grade of "C" in ART 352, or consent of instructor. Notes: Repeatable up to 9 hours.

**ART 481 - Printmaking-Advanced Credits: 3-9**

A continuation of Printmaking III. Prerequisites: ART 382. Repeatable up to 9 hours.

**ART 482 - Travel Studies Credits: 1-5**

This travel study course is designed to provide extra-mural educational experiences, as approved by, and under the direction of a faculty member, and may be in cooperation with faculty and administrators of other institutions. Students will participate in hand-on activities, and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation and a written report and/or exhibition or portfolio of art/design work.

**ART 491 - Independent Study (COM) Credits: 1-12****ART 492/592 - Topics (COM) Credits: 1-9****ART 494 - Internship (COM) Credits: 1-16****ART 599 - Visual Arts Studio Credits: 1-9****ARTD (Art Design)****ARTD 201 - Graphic Design I Credits: 3**

An introduction to graphic design stressing theory and creative development.

**ARTD 202 - Computer Graphics I Credits: 3**

A non-programming introduction to drawing, photo-imaging and page layout design software emphasizing computer-generated design projects.

**ARTD 203 - Animation Foundations I Credits: 3**

This studio course focuses on principles of creating animation and sequential imagery that include a wide variety of time-based practices such as traditional cel-style animation, human-figurative work, stop-motion, cut-out, camera-less, pixilation, image capture and editing. Corequisites: ART 111

**ARTD 301 - Graphic Design II Credits: 3**

An introduction to typographic theory and practice for graphic designers. Emphasis on historical and contemporary typographic usage; hand and computer-generated projects. Recommend concurrent enrollment in ARTD 302. Prerequisites: ARTD 201.

**ARTD 302 - Computer Graphics II Credits: 3**

A non-programming intermediate computer graphics course focusing on digital-imaging and page-layout applications for graphic designers. Recommend concurrent enrollment in ARTD301. Prerequisites: ARTD 201, ARTD 202.

**ARTD 303 - Animation Foundations II Credits: 3**

This studio course expands on principles of creating animation and sequential imagery to include a wide variety of approaches that include character and concept development, narrative and non-narrative structure, audio design, image capture, advanced compositing and digital ink and paint. Prerequisites: ARTD 203 or equivalent, ART 112 Drawing II or concurrent enrollment.

**ARTD 304 - Motion Graphics Credits: 3**

This course explores the moving image as an information communication tool. The course also emphasizes overall time-based communication and a conventions for the creation of graphics and motion elements for broadcast over a variety of media outlets.

**ARTD 351 - Visual Communication I Credits: 3**

An intermediate Visual Communication course emphasizing theory and practice that explores graphic design and digital prepress. Prerequisites: ARTD 301, ARTD 302. Corequisites: ARTD 352.

**ARTD 352 - Design Media I Credits: 3**

Introduction to animation and web applications. Prerequisites: ARTD 301. ARTD 302 Corequisites: ARTD 351.

**ARTD 403 - Intermediate Animation Credits: 3**

The studio course develops and expands practices in cel-style animation, stressing digitally drawn techniques and increases the study of time-based theory and contemporary applications. Using digital methods of image creation and capture, compositing and editing, students produce an original short animation from concept to completion. Prerequisites: ARTD 303 Classical Animation II or equivalent, ART 112 Drawing II, ART 122 Color, and ART 211 Drawing III--Figurative. Notes: Course can be repeated for additional credit.

**ARTD 451 - Visual Communication II Senior Portfolio Credits: 3**

An advanced Visual Communication course emphasizing portfolio preparation and corporate identity study. Prerequisites: ARTD 351, ARTD 352 Corequisites: ARTD 452.

**ARTD 452 - Design Media II Credits: 3**

A continuation of Design Media I with emphasis on completed multimedia and web page projects as portfolio works. Prerequisites: ARTD 351, ARTD 352. Corequisites: ARTD 451.

**ARTE (Art Education)****ARTE 414 - K-12 Art Methods (COM) Credits: 2-3**

Students develop an understanding of the tools of inquiry of K-12 art; the ability to design, deliver and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to K-12 art; the ability to assess student learning in K-12 art; and to apply this knowledge, skills, and attitudes to real life situations and experiences.

**ARTE 491-591 - Independent Study Credits: 1-3****ARTH (Art History)****ARTH 100 - Art Appreciation \* \*\* (COM) (G) Credits: 3**

Explores the nature of art in various aesthetic, formal, and psychological dimensions, involving analysis of art objects for understanding, enjoyment, and life enhancement. Notes: \* Course meets SGR #4 or \*\* IGR Goal #2

**ARTH 120 - Film as Art\*\* Credits: 3**

This course introduces and explores concepts of the moving image as an art form. Aspects explored include film history, narrative elements, alternatives to mainstream media and visual compositional elements. Notes: \*\*Course meets IGR Goal #2

**ARTH 211 - History of World Art I \* \*\* (COM) (G) Credits: 3**

Art and architecture in the historical and contextual development of the role of visual arts including crafts, drawing, painting, sculptures and architecture, in the historical and cultural development of world civilizations from prehistory through the 14th century. Notes: \* Course meets SGR #4 or \*\* IGR Goal #2.

**ARTH 212 - History of World Art II \* \*\* (COM) (G) Credits: 3**

Art and architecture in the historical and contextual development. The role of visual art; including crafts, drawing, painting, sculpture, and architecture; in the historical and cultural development of world civilization from the renaissance through the 20th century. Notes: \* Course meets SGR #4 or \*\* IGR Goal #2

**ARTH 310 - History of US Art and Architecture (AW) Credits: 3**

From colonial times to present. Prerequisites: ARTH 212

**ARTH 320 Modern Art &Architecture Survey (AW) Credits: 3**

Survey of Modern Art and Architecture from its beginnings in the 19th century. Emphasis on international studies and cultural diversity. Prerequisites: ARTH 212.

**ARTH 490 - Seminar (COM) (AW) Credits: 1-3**

**ARTH 492 - Topics (COM) Credits: 1-6**

## **AS (Animal Science)**

**AS 101-101L - Introduction to Animal Science & Lab Credits: 3**  
Adaptation, breeding, feeding, marketing, behavior, classification, growth, genetics, reproduction and animal health as they apply to farm animals. Corequisites: AS 101L-AS 101.

**AS 104-104L - Intro to Horse Management & Lab Credits: 2**  
Basic principles in caring for horses, and introduction to the horse industry. Topics include: horse breeds and registry; grooming and safe handling, care and feeding practices; vital signs, body condition scoring, pre-purchase examination, recognition of common lameness and health problems and facilities. Laboratory sessions will include involvement with the SDSU Horse Unit's activities and field trips to nearby facilities. Corequisites: AS 104L-AS 104.

**AS 105-105L - Western Horsemanship and Lab Credits: 1**  
Breeds of horses, gaits, grooming, equipment, diets; basic instruction with suitable equipment. Corequisites: AS 105L-105

**AS 106-106L - English Horsemanship and Lab Credits: 1**  
Breeds of horses, gaits, grooming, equipment, diets; basic instruction with suitable equipment. Corequisites: AS 106L-106

**AS 109 - First Year Seminar\*\* Credits: 2**  
First-year experience course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. \*\*meets IGR #1

**AS 110 - Equine Yearling Halter Training Credits: 1**  
Practicum in techniques and strategies for handling and training a yearling horse. Students will learn the behavior of young horses and the appropriate steps necessary to teach a young horse to accept a halter and grooming, to lead properly, stand to be tied, load into a trailer and begin ground training for the future saddle-breaking process. Prerequisites: AS 104.

**AS 161 - Companion Animals Credits: 2**  
Introduction to the nutrition, health, care and management of companion animals. Feeding and care of dogs and cats will be the primary focus.

**AS 200 - Introduction to Meat Judging Credits: 1-2**  
Identifying, judging and grading of carcasses and wholesale cuts; training in writing reasons. Prerequisites: 12 crdts completed; AS 101

**AS 201 - Introduction to Livestock Judging Credits: 1-2**  
Livestock selection criteria and terminology for beef, sheep, swine, and horse; performance selection parameters and EPD's will be discussed. Prerequisites: AS 101 and junior standing

**AS 202 - Basic Swine Science Credits: 2**  
Basic disciplines and concepts involved in swine production including: industry structure, trends and statistics; production phases and buildings; genetic improvement; reproduction; nutrition; health and biosecurity; nutrient management; marketing and meat quality; and career opportunities in the swine industry.

**AS 203L - Basic Swine Science Lab Credits: 1**  
Basic application of concepts presented in basic swine science course. Including: artificial insemination; handling; semen collection; health and biosecurity; financial analysis; pig flow; buildings and ventilation; and feed management.

**AS 210 - Equine Two-Year-Old Saddle Training Credits: 2**  
Practicum on proper progression and safety of teaching a horse to accept a saddle, rider, bridle restraint and reining principles. Prerequisites: AS 104 and AS 110.

**AS 213-213L - Equine Health and Diseases and Lab Credits: 3**  
Study of equine vital signs, first aid, and wound care, as well as the function of the integument and immune systems. Communicable and common diseases and their prevention will be discussed, with emphasis on colic and laminitis. Corequisites: AS 213L-AS 213.

**AS 215 - Intro to Integrated Ranch Management Credits: 3**  
This course introduces the basic principles of ranching and the food and fiber system. Students will be exposed to the complexities of modern agricultural production systems. Topics include: natural resources as the basis for successful ranching; the family as the major supplier of labor and capital; animal and agronomic production systems; economic and financial forces; risk and opportunity; agricultural policy and law; the decision making process; and stress as the driving force of change. Students will incorporate outside readings into discussions and practice planning exercises held during lab sessions. Cross-Listed: RANG 215

**AS 220 - Equine Nutrition Credits: 3**  
Basic principles in equine nutrition focusing on how to best feed the horse to meet its nutritional needs. Topics include the gastrointestinal tract, nutrient requirements, common feedstuffs, diet selection and evaluation, assessment of nutritional status, nutritional imbalances and toxicities. Prerequisites: AS 104.

**AS 233-233L - Applied Animal Nutrition and Lab Credits: 4**  
Classification and nutritional characteristics of feedstuffs; methods of evaluating feedstuffs; principles of ration formulation and balancing for farm animals; preparation, processing, handling and storage of feedstuffs and feed regulation and control. Prerequisites: AS 101 or DS 130 Corequisites: AS 233L-AS 233.

**AS 241-241L - Introduction to Meat Science and Lab Credits: 3**  
Survey of meat science and industry. Meat as a food, structure of muscle, conversion of muscle to meat, food safety, meat quality, color, cooking, grading, inspection, curing, and processing. Hands-on carcass fabrication and meat processing. Corequisites: AS 241L-AS 241.

**AS 285-285L - Livestock Eval. & Marketing & Lab Credits: 4**  
Live and carcass evaluation of market animals. Methods of marketing and pricing livestock and carcasses. Prerequisites: AS 101. Corequisites: AS 285L-AS 285.

**AS 291 - Independent Study Credits: 1-12**

**AS 301L - Advanced Swine Science Lab Credits: 1**  
Advanced application of concepts associated with swine production. Including: semen processing; troubleshooting production efficiency; risk management; marketing; buildings and ventilation; and on farm euthanasia and carcass disposal. Prerequisites: Basic Swine Science Course and Basic Swine Science Lab.

**AS 302 - Swine Environment Management Credits: 1**  
Response of swine to thermal environment, ventilation system design and analysis, heating and cooling systems and examples of various designs for all phases of production. Troubleshooting ventilation systems and energy analysis of production units.

**AS 303 - Swine Feed Mill Management Credits: 1**  
Principles of feed manufacturing, equipment operation, feed and ingredient quality assurance and regulatory compliance in a modern feed milling operation. Overview of feed mill regulations and safety. Availability and utilization of various equipment available to the feed milling industry.

**AS 304 - Swine Manure and Nutrient Management Credits: 1**  
Function, application, and advantages and disadvantages of nutrient

management systems. Manure production rates, manure handling systems, storage and manure management planning for land application and odor mitigation strategies. Understanding the connection conscientious manure management provides between livestock and crop production.

**AS 305 - Swine Nutrition Credits: 1**

This course is designed to increase the student's understanding of the principles involved with developing and implementing a swine feeding program, and is part of the Swine Science Online (SSO) program. In this 1 credit course (equivalent to 15 contact hours), students will learn the fundamentals of feeding pigs, including understanding nutrients, factors affecting nutrient recommendations, feeding systems and management, feed ingredients, and formulation of swine diets.

**AS 306 - Swine Breeding and Gestation Management Credits: 1**

Concepts related to: reproductive physiology and endocrinology of boars and sows; genetic selection programs; development programs for future replacement gilts and boars; semen collection, evaluation, and preparation; detection of estrus and artificial insemination; pregnancy diagnosis; feeding and housing programs for gestating sows; environmental management; records; diseases; and development of quality assurance programs for identifying and solving reproductive problems.

**AS 307 - Swine Farrowing Management Credits: 1**

Advanced integration and application of reproductive management concepts during farrowing and lactation. Identification of production trends; formulation of strategies to improve productivity; and parturition and neonatal management.

**AS 308 - Swine Nursery and Finishing Management Credits: 1**

Overview of the critical management, housing, and financial considerations relevant to the successful operation of a swine nursery, grow-finish, and wean to finish enterprise, including: nutrient requirements; building and facility management; and marketing.

**AS 309 - Swine Business and Records Analysis Credits: 1**

Evaluation of swine operations using farm and enterprise records, budgeting, and financial analysis and benchmarks.

**AS 310 - Employee Management for the Swine Industry Credits 1**

Effective employee management in swine production units. Assist students in understanding the principles, policies, and practices related to recruitment, training, retaining, and managing employees.

**AS 311 - Marketing & Risk Mgmt. in Swine Industry Credits: 1**

A comprehensive view of industry structure and trends and marketing options available in the swine industry. Management of risk between markets and/or contracts.

**AS 312 - Pork Product Quality and Safety Credits: 1**

Pre- and post-harvest factors affecting pork product quality and safety. Overview of the pork harvesting process, and traits and characteristics of quality pork products.

**AS 313 - Swine Health and Biosecurity Credits: 1**

Overview of standard biosecurity protocols and identification of behavior and clinical signs of illness in pigs. Treatment administration and prevention methods. Introduction to immune system function and basic swine disease.

**AS 314 - Pork Export Markets Credits: 1**

Introduction to global markets; cultural preferences and customs associated with the global swine industry. International trade regulations and potential impact of foreign animal diseases and bioterrorism affecting the U.S. swine industry

**AS 315 - Contemporary Issues in the Swine Industry Credits: 1**

Evaluation of issues facing today's swine industry including: welfare,

nutrient management, and food safety and security. Development of skills needed for effective community relations such as media interviews and message points.

**AS 322 - Advanced Livestock Evaluation Credits: 2**

Advanced study of live and carcass evaluation of market animals. Type studies and selection for improvement in beef, sheep, and swine. Prerequisites: AS 200, AS 285.

**AS 323 - Advanced Animal Nutrition Credits: 3**

Functions of various nutrients; digestion and metabolism of nutrients by different animal species. Prerequisites: AS 233.

**AS 332 - Livestock Breeding and Genetics Credits: 4**

Application of genetics to improvement of farm animals. Emphasis on occurrence, origin, use and control of variation in economically important traits of farm livestock. Prerequisites: AS 101; and either BIOL 103 or BIOL 153.

**AS 345-345L - Value-Added Meat Products and Lab Credits: 3**

Study the science, art, and economics of processed meats. Investigate methods to add value to meat and meat products, including hands-on processing, new product development, and industry tours. Prerequisites: AS 241. Corequisites: AS 345L-AS 345.

**AS 350 - Meat Product Safety and HACCP Credits: 3**

Study of meat-borne pathogens and methods of control. Science and practical aspects of food safety in meat production. Seven principles of HACCP will be investigated and each student will receive HACCP Certification from the International HACCP Alliance.

**AS 365-365L - Horse Production and Lab Credits: 3**

Feeding, breeding and management principles for horses. Prerequisites: AS 101 or AS 104. Corequisites: AS 365L-AS 365.

**AS 370 - Stable Management Credits: 2**

This course will address skills needed to manage an equine facility for training, boarding, or reproductive purposes. Topics to include basic business concepts, such as advertising, contracts, and liability, facility design and maintenance, and practical equine skills pertaining to this type of enterprise Prerequisites: AS 104 and AS 105.

**AS 400 - Judging Team Credits: 1-2**

SECTION 1-MEATS Identifying, judging and grading carcasses and cuts; training in writing reasons; participation in intercollegiate meat judging contests.

SECTION 2-LIVESTOCK Trips to purebred herds; training in Oral Reasons; participation in American Royal and International Livestock Judging contests.

SECTION 3-WOOL Wool judging and grading, training in written reasons, participation in National Western Wool Judging contests. Prerequisites: 205 or 215 or consent of instructor.

**AS 420-420L Equine Reproductive Management & Lab Credits 3**

Study of the reproductive systems of the mare and stallion, including detailed anatomy and physiology, and behavior of each gender. Practicums at the SDSU Horse Unit include foaling procedures, stallion handling and semen evaluation, mare handling, breeding preparation, cycle monitoring and other advanced reproductive techniques. Prerequisite: AS 220 or 365. Corequisite: AS 420L- 420.

**AS 433-433L - Livestock Reproduction and Lab Credits: 3**

Basic physiological processes of reproduction in domestic animals, factors affecting and methods of improving reproductive efficiency. Prerequisites: VET 223 Corequisites: AS 433L-AS 433.

**AS 441-541 - Advanced Meat Science and Lab Credits: 3**

In-depth study of muscle anatomy and physiology, postmortem metabolism, rigor mortis, meat proteins, meat quality, and meat tenderness. Prerequisites: AS 241.

**AS 449-549 - Equine Issues and Leadership Credits: 3**

Students will be faced with professional development, service, and tackling major issues within the equine industry. A heavy emphasis on detail, fact finding, writing, and public speaking will prepare these students to serve as future leaders in our industry.

**AS 463-563 - Agricultural Waste Management Credits: 3**

Understand agricultural or biological wastes. Develop an understanding of regulatory requirements and best management practices that advocate responsible environmental stewardship. Topics include production, collection, handling, treating, and reusing agricultural and biological wastes. Course will emphasize written and oral reports. Prerequisites: PS-213; and PHYS-101 or PHYS-111 Cross-Listed: AST 463-563.

**AS 474-474L - Cow/Calf Management and Lab Credits: 3**

Feeding, breeding and management principles of beef cattle production under farm and ranch conditions. Prerequisites: AS 101, AS 233. Corequisites: AS 474L-AS 474.

**AS 475 - Feedlot Operations and Management Credits: 3**

Management principles of feedlot productions. Student participation in management techniques of feedlot operations. Feeding, health and personnel management issues are discussed. Prerequisites: AS 233.

**AS 477-477L - Sheep and Wool Production and Lab Credits: 3**

Feeding, breeding and management principles for maximum production of meat and wool in farm and range flocks. Prerequisites: AS 101, AS 233. Corequisites: AS 477L-AS 477.

**AS 478-478L - Swine Production and Lab Credits: 3**

Feeding, breeding and management principles for swine production. Breeds, production trends and equipment. Student participation in management techniques. Prerequisites: AS 101, AS 233. Corequisites: AS 478L-AS 478.

**AS 485-485L - Advanced Integrated Ranch Management and Lab Credits: 3**

A capstone course that requires students to integrate knowledge from previous coursework and experiences. Focus is on decision-making, analysis, and planning with respect to ranching enterprises. A key component of the course will be an extensive ranch planning exercise, which integrates the many factors influencing ranch sustainability and which incorporates the use of decision-support tools to evaluate management strategies. Prerequisites: RANG/AS 215 Corequisites: AS 485L-485

**AS 489 - Current Issues in Animal Science (AW) Credits: 2**

Senior capstone course requiring students to conduct independent research of the scientific literature on a current issue in the animal and/or range science field, formulate a position based upon the current science, and communicate this position via written and oral presentations.

**AS 491-591 - Independent Study Credits: 1-3****AS 492-592 - Topics Credits: 1-6****AS 494 - Internship Credits: 1-12****AS 497 - Cooperative Education Credits: 1-12****AS 711 - Ruminology Credits: 3****AS 712 - Ruminant Nutrition Credits: 3****AS 730 - Endocrinology Credits: 3****AS 732 - Advanced Physiology of Reproduction Credits: 3****AS 733 - Vitamins and Minerals Credits: 3****AS 734 - Protein and Energy Nutrition Credits: 3****AS 736 - Monogastric Nutrition Credits: 3****AS 740 - Metabolism Credits: 3****AS 750 - Animal Growth and Development Credits: 3****AS 753 - Research Topics in Meat Science Credits: 3****AS 790 - Seminar Credits: 1****AS 798 - Thesis Credits: 1-7****AS 898D - Dissertation-PhD Credits: 1-12****AST (Agricultural Systems Technology)****AST 109 - First Year Seminar\*\* Credits: 2**

First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\*Course meets IGR #1

**AST 202-202L - Construction Technology & Materials & Lab Credits: 2**

Wood and concrete building materials; efficient construction procedures; hand tools, portable and stationary power tools; safe working practices. Corequisites: AST 202L-202.

**AST 203-203L - Intro to Precision Agriculture & Lab Credits: 2**

Introduction to the tools and equipment used in precision farming practices. Topics covered include: Global positioning system, sources of error, correction options and accuracy, GIS, Ag equipment receivers, displays, guidance systems, yield monitors, and utilizing collected field data for optimal production practices. Corequisites: 203L-203

**AST 210 Intro to Biorenewable Products & Processing Credits 3**

A survey of biorenewable resources, technologies, and industries. Topics include sources and production of biomass; processing of biomass into fuels and other products; environmental impact; and economic analysis. Cross-Listed: ABS 210 Introduction to Biorenewable Products and Processing

**AST 211-211L - Ag & Outdoor Power for Teachers Credits: 1**

This course is designed for students majoring in Agricultural Education, Communication and Leadership. Students will obtain a general working knowledge of spark ignition and compression ignition engines Laboratory to accompany AST 311 Applied Electricity for Teachers Corequisites: AST 211L-211 Notes: Credit not allowed for both AST 211-211L and AST 213-213L

**AST 213-213L - Ag, Industrial & Outdoor Power & Lab Credits 3**

Operation and maintenance of large and small spark ignition engines and diesel engines. Proper selection of tractors with respect to: horsepower, fuel efficiency, safety, cost of operation, traction and power train type will be covered. Corequisites: AST 213L-213.

**AST 273-273L - Microcomputer Applications in Agriculture and Lab Credits: 3**

Application of microcomputers for solving production agriculture problems. Development and application of agricultural software, data management for production agriculture applications and processes. Corequisites: AST 273L-273.

**AST 298 - Undergraduate Research/Scholarship Credits: 1-3****AST 303-303L Design Management Experience & Lab Credits 3**

Collaboration on designs with Agricultural and Biosystems Engineering students. Develop design ideas and assist in the evaluation, construction and testing of designs. The students will have responsibility for managing the design projects. Prerequisites: GE 121, GE 123. Corequisites: AST 303L-303.

**AST 311-311L - Applied Electricity for Teachers & Lab Credits 1**

Basic wiring and electrical circuits. National Electric Code covering residential and farm applications. Laboratory course to accompany AST 311. Corequisites: AST 311L Notes: Credit not allowed for both AST 311-311L and AST 342 – 342L.

**AST 313-313L - Farm Machinery Systems Mgmt & Lab Credits 3**

Farm machine selection and operation (including power requirements) tillage, spraying, planting, harvesting, storage, and



ergonomics. Prerequisites: PHYS 101 or PHYS 111 Corequisites: AST 313L-313.

**AST 333-333L - Soil and Water Mechanics and Lab Credits: 3**  
Engineering phases of soil and water conservation; elementary measurements and surveying and application to field problems; design and layout of conservation, drainage and irrigation practices. Corequisites: AST 333L-333.

**AST 342-342L - Applied Electricity and Lab Credits: 3**  
Basic wiring, electrical circuits, controls, lighting, electric motor selection and operation. National Electric Code covering residential, farm and light industrial applications. Corequisites: AST 342L-342.

**AST 353-353L - Physical Climatology & Meteorology & Lab Credits: 3**  
Physical description of daily weather changes and circulation of the atmosphere. Long time means and variation from means of climatological parameters. Application of meteorological and climatological principles to various problem areas. Corequisites: AST 353L-353

**AST 390 - Seminar Credits: 1**

**AST 412-412L/512-512L - Fluid Power Technology and Lab Credits: 3**  
Basic fluid mechanics, pneumatics, hydraulics, control systems and common industrial circuits. Corequisites: AST 412L-412/512L-512.

**AST 4/522-4/522L - Environmental Control in Structures and Lab Credits: 2**  
Study of heat and moisture balance, gases, dust, and odors. Selection and design of fans, ducts, diffusers and efficient ventilation patterns. Corequisites: AST 422L-422/522L-522.

**AST 423-423L - Rural Structures and Lab Credits: 3**  
Stud-frame and post-frame design specifications and techniques. Snow and wind loads, truss and header design, mechanical properties of lumber and composite wood materials, and concrete reinforcement. Insulation, energy use, psychometrics and environmental control systems. Planning beef, dairy and swine livestock systems. Corequisites: AST 423L-423.

**AST 426-426L - Emerging Technologies in Ag & Lab Credits: 3**  
Application of recently introduced technology to agricultural production. The Global Positioning System, plus sensors for yield, quality, soil and crop properties as applied to crop production. GIS and remote sensing fundamentals for use in agriculture. Controls for variable rate application and automatic control, with communications networks for off-road equipment.

**AST 434-434L - Landscape Irrigation and Lab Credits: 3**  
Design and management of landscape, turf, and golf irrigation systems. Characteristics of uniform and efficient irrigation systems. Estimating cost of installation and operation. Responsible resource utilization, conservation, and protection. Prerequisites: MATH 102 or 115 or 121 or 123 Corequisites: AST 434L-434.

**AST 443-443L - Food Processing and Engineering Fundamentals and Lab Credits: 3**  
Mechanics, refrigeration, heat transfer, instrumentation, and equipment operation as applied to materials, handling, storing, preserving, packaging and processing agricultural products. Corequisites: AST 443L-443.

**AST 463/563 - Agricultural Waste Management (AW) Credits: 3**  
Understand agricultural or biological wastes. Develop an understanding of regulatory requirements and best management practices that advocate responsible environmental stewardship. Topics include production, collection, handling, treating, and reusing agricultural and biological wastes. Course will emphasize written and oral reports. Prerequisites: PS 213, PHYS 101 or 111, or Instructor consent. Cross-Listed: AS 463-563.

**AST 491 - Independent Study Credits: 1-3**  
**AST 492 - Topics Credits: 1-4**  
**AST 492L - Topics Lab Credits: 0**  
**AST 494 - Internship Credits: 1-12**  
**AST 496 - Field Experience Credits: 1-12**  
**AST 497 - Cooperative Education Credits: 1-12**  
**AST 498 - Undergraduate Research/Scholarship Credits: 1-3**  
**AST 791 - Independent Study Credits: 1-3**  
**AST 792 - Topics Credits: 1-4**

## AT (Athletic Training)

**AT 164 - Introduction to Athletic Training (COM) Credits: 2**  
A basic introductory course designed to acquaint students interested in athletic training with all aspects of the profession.

**AT 371 - Athletic Training Clinical Experience I Credits: 2**  
Clinical application of course presented in AT 454. This course will enable the student athletic trainer to achieve an appropriate level of skill competency related to each area taught in AT 454 and according to the requirements established by the National Athletic Trainers' Association. Prerequisites: Major in Athletic Training Corequisites: AT 454

**AT 372 - Athletic Training Clinical Experience II Credits: 2**  
Clinical application of course content presented in AT 456. This course will enable the student athletic trainer to achieve an appropriate level of skill competency related to athletic injury assessment and according to the requirements established by the National Athletic Trainers Association. Prerequisites: Major in Athletic Training Corequisites: AT 456

**AT 373 - Athletic Training Clinical Experience III Credits: 2**  
Clinical application of course content presented in AT 474. This course will enable the student athletic trainer to achieve an appropriate level of skill competency related to athletic rehabilitation according to the requirements established by the National Athletic Trainers' Association. Prerequisites: Major in Athletic Training Corequisites: AT 474

**AT 374 - Athletic Training Clinical Experience IV Credits: 2**  
Clinical application of course content presented in AT 464. This course will enable the student athletic trainer to achieve an appropriate level of skill competency related to therapeutic modalities and according to the requirements established by the National Athletic Trainers' Association. Prerequisites: Major in Athletic Training Corequisites: AT 464

**AT 441-441L/541-541L - Athletic Training Techniques I & Lab Credits 3**  
This course is designed to meet outcomes and guidelines set forth by the Education Council of the National Athletic Trainers' Association related to acute care provided by Athletic Trainers for Injuries and Illnesses. Students will obtain the knowledge, skills and clinical decision making to act efficiently and effectively in emergency situations related to life-threatening and non-life threatening conditions. Also, the course will address ethical and legal issues related to emergency care and the practice of Athletic Training. Prerequisites: Major in Athletic Training Corequisites: AT441L-441/541L-541L

**AT 442-542 - Athletic Training Techniques II Credits: 3**  
This course is the second of the intermediate athletic training courses designed to meet all of the guidelines and competencies required by the National Athletic Trainers' Association. Content includes techniques related to the prevention, recognition, and management of athletic injuries to the upper and lower extremities. Related topics include preseason screening, pre-participation physicals, and appropriate weight training techniques. Prerequisites: AT 441; Major in Athletic Training

**AT 4/543-4/543L Athletic Training Techniques III & Lab Credits: 3**

This course is the third of the intermediate athletic training courses designed to meet all of the guidelines and competencies required by the National Athletic Trainers' Association. These courses should be taken in sequence. AT443 includes a combination of material. One section of the class is devoted to the prevention, recognition, and management of athletic injuries relative to head, face, throat, abdomen, and thorax. The remainder of the class includes material in regards to evaluation and care of general illnesses and dermatological disorders common to athletics, understanding the role of pharmaceuticals in athletics-both legal and banned substances, drug testing procedures, special issues related to women in athletics, and the athletic trainer's role in counseling athletes. Athletic Training Techniques III Lab. This course is designed to meet outcomes and guidelines set forth by the Education Council of the National Athletic Trainers' Association related to prevention, evaluation and management of medical conditions and disabilities incurred by individuals involved in physical activity or sport. Students will obtain the knowledge, skill and clinical decision making to accurately assess and recognize general medical conditions (both acute and chronic), make appropriate referrals and work as part of a coordinated health care team to implement plans which allow individuals with medical conditions to participate safely in physical activity and sport. Prerequisites: Major in Athletic Training Corequisites: 443L-543L/443-543

**AT 444-544 - Athletic Training Techniques IV Credits: 2**

This course is designed to cover the athletic training competencies in organization and administration. It will cover knowledge, skills and values that an athletic trainer must possess to develop, administer, and manage a health care facility and associated venues that provide health care to athletes and others involved in physical activity. Prerequisites: Major in Athletic Training

**AT 454-554 - Athletic Injury Assessment-Lower Extremity Credits: 2**

This course is designed to have the athletic training student develop a sound understanding of the assessment of athletic related injuries and conditions occurring to the lower extremities. The course will incorporate anatomy of the lower extremity, the athletic related injuries or conditions which may occur, and evaluation techniques used to assess this area of the body. Prerequisites: Major in Athletic Training Corequisites: AT 371

**AT 456-556 - Athletic Injury Assessment-Upper Extremity Credits: 2**

This course is designed to have the athletic training student develop a sound understanding of the assessment of athletic related injuries and conditions occurring to the upper extremities. The course will incorporate anatomy of the upper extremity, the athletic related injuries or conditions which may occur, and evaluation techniques used to assess this area of the body. Prerequisites: Major in Athletic Training Corequisites: AT 372

**AT 462-562 - Interventions I Credits: 3**

First course in a 3-semester sequence, designed to teach students foundational principles and theories associated with the development of a treatment plan for an injured patient. The class is taught through lectures and demonstrations.

**AT 464-564 - Interventions II Credits: 2**

This course is designed to meet outcomes and guidelines set forth by the Education Council of the National Athletic Trainers' Association related to therapeutic interventions. The second course in a 3-semester sequence, it is designed to have the student develop a basic understanding of the theory and application of therapeutic interventions including modalities and exercise in the treatment of the injured patient. The class will be taught through lectures and demonstrations. Prerequisites: Major in Athletic Training Corequisites: AT 374

**AT 471 - Fall Clinical Experience Credits: 1**

This course is designed to meet the clinical experience competencies required during fall activity. Clinical applications include physical

examinations; fitting and maintaining football protective equipment; monitoring and management of environmental conditions; stretching and conditioning; and the evaluation and care of acute athletic injuries. Prerequisites: Athletic Training Major and Senior status Notes: Graded S/U

**AT 474-574 - Interventions III (AW) Credits: 2**

This course is designed to meet outcomes and guidelines set forth by the Education Council of the National Athletic Trainers' Association related to therapeutic interventions. The third course in a 3-semester sequence, it is designed to have the student develop an advanced level of understanding of the theory and application of therapeutic interventions including modalities and exercise in the treatment of the injured patient. The class will be taught through lectures and demonstrations. Prerequisites: Major in Athletic Training Corequisites: AT 373

**AT 490 - Seminar Credits: 2****AT 790 - Seminar Credits: 2****AT 795 - Practicum Credits: 1****AVIA (Aviation)****AVIA 101 - Introduction to General Aviation Credits: 1**

Overview of the general aviation industry. This course provides an awareness of the magnitude of aviation activity not involved in commercial air carrier operations. The student will discover a multitude of career opportunities and recognize the role general aviation holds in support of the nation's commerce and air transportation. The student will study the evolution of the industry and recognize general economic, social and political factors affecting the future of aviation activity.

**AVIA 150-150L - Intro. to Aviation Meteorology and Lab Credits: 2**

This course is an introduction to Meteorology and forecasting. The major focus of this course is to understand public and aviation weather observations and forecasts. Topics covered include understanding the global energy balance and structure of the atmosphere as a background to explain seasons and weather. Air masses and frontal systems, and weather phenomena such as thunderstorms, icing, tornadoes, and tropical systems are related to forecasting. Corequisites: AVIA 150L-150.

**AVIA 170 - Fundamentals of Flight Theory Credits: 3**

Basic aviation principles for the beginning aviator are presented in this course. Topics include aerodynamics, basic aircraft systems, aircraft performance computations, weight and balance computations, meteorology, radio navigation and communication techniques, cross-country preparation, pilot physiology, and emergency operations. Students completing this course will be ready to challenge the Federal Aviation Administration Private Pilot written and oral exams. Corequisites: AVIA 171

**AVIA 171 - Introductory Flight I Credits: 2**

This flight course involves individual flight instruction for the FAA Private Pilot Certificate. Topics include aircraft preflight, weather briefings, basic flight maneuvers, and basic flight regulations. Students will complete, under the supervision of SDSU flight instructors, at least the cross country progress check of the private pilot certificate. Corequisites: AVIA 170 Notes: Additional fees apply for aircraft rental and flight instruction.

**AVIA 180 - Attitude Instrument Theory Credits: 2**

This course begins with a discussion of Aeronautical Decision Making (ADM), airworthiness requirements for flight, and professionalism in aviation. The course proceeds to an in-depth study of instrumentation and glass technologies. Basic attitude flight principles will be enhanced through this course. In addition, students will have a fundamental knowledge of the air navigation systems used to conduct IFR flight. Corequisites: AVIA 181

**AVIA 181 - Introductory Flight II Credits: 2**

Students will continue learning how to fly aircraft in the VFR and IFR environments. Topics include cross-country flight and flight planning, night operations, lost and emergency procedures, basic instrument flight control, and National Airspace services. Student will obtain, under the supervision of SDSU flight instructors, the FAA Private Pilot Airplane Single Engine Land Certificate, as a requirement of course completion and continue on to at least stage I of the instrument commercial 14 CFR 141 requirements. Prerequisites: AVIA 171 Corequisites: AVIA 180 Notes: Additional fees apply for aircraft rental and flight instruction. Students enrolled in the program prior to Fall 2012 will take the course as AVIA 273 - Private Pilot Flight II

**AVIA 189 - Airframe & Powerplant Course Credits: 1-40**

The Airframe & Powerplant Course is a block of up to 40 credits awarded to students enrolling in the Aviation Maintenance Management specialization who have completed a Federal Aviation Administration (FAA) approved airframe & powerplant program. Students will be required to produce a FAA airframe & powerplant certificate as proof of successful completion. Notes: These credits will only apply to the aviation maintenance management specialization.

**AVIA 200 - Aviation Safety Credits: 3**

This course will introduce aviation safety principles as important aspects of air transportation. Topics will include regulatory issues, means of measuring air transportation safety, risk assessment, safety data analysis, use of technology in aviation safety, accident investigation, National Transportation Safety Board oversight of aviation safety, and other appropriate issues as arise.

**AVIA 201 - Aviation Weather Credits: 2**

This course is a study of the basic components of the earth's atmosphere and provides a basic foundation in the meteorological and environmental factors that influence the formation of the various weather patterns found in near and upper atmospheric levels over the continental United States and the Northern Hemisphere. Included in the course will be discussion on how weather influences the basic aerodynamics of an aircraft in-flight and the basic pilot-static instrument system. This course is intended for students who plan a career as professional pilots or a career in aviation operations or for an elective. Prerequisites: AVIA 150.

**AVIA 295 - Practicum Credits: 1 Prerequisites: AVIA 370.****AVIA 300 - Human Factors in Aviation Credits: 3**

This course will cover a basic, broad overview of human factors as they affect pilot and passenger safety. Topics will include pilot physiological and psychological issues as they relate to aviation safety, and the impact of the external environment upon these issues. The course will introduce the topic of crew resource management (CRM) and the importance of CRM to aviation safety, as well as a field trip to participate in altitude chamber training provided by the U.S. Air Force and Federal Aviation Administration Prerequisites: AVIA 200.

**AVIA 302 - Aviation Law Credits: 2**

This course will cover a basic overview of the aviation legal system. Many policies, procedures, laws and past and current cases that establish legal precedent in landmark court cases will be studied.

**AVIA 305 - Introduction to Aviation Administration Credits: 3**

This course is designed to familiarize the student with the organization and conduct of aviation operations involving the use of general aviation aircraft and services. The course will cover aspects of management involved in fixed base operations, corporate flight operations, and similar operations utilizing general aviation aircraft. Flight line operations, administrative considerations, aircraft maintenance operations, and decision-making will be covered during the course. Technological advances pertaining to general aviation operations will be discussed throughout the course. Prerequisites: AVIA 200, ACCT 210.

**AVIA 340 - Advanced Flight Principles Credits: 3**

This course will provide students with a background in the technical aspects of flying large complex aircraft. Topics will include advanced aerodynamics, advanced weight and balance, and advanced aircraft system operation.

**AVIA 350 - Tail-wheel Transition Credits: 1**

This course teaches the fundamental and advanced techniques of airmanship utilizing a conventional gear aircraft. The aircraft used for this course will help students to manipulate and master airmanship while building on advanced flight principles. In this course, students will learn how to safely and effectively operate a conventional aircraft. Prerequisites: Departmental authorization

**AVIA 370 - Professional Pilot Theory I Credits: 3**

This theory course prepares students for FAA instrument and commercial rating. Topics include navigation principles and procedures, air traffic control procedures, applicable FAA regulations, and meteorological considerations for flight in the airspace system. It also covers departure, arrival and en route considerations as well as terminal operating procedures. Students completing this course will successfully complete the FAA Instrument Pilot written examination as a requirement for course completion. Prerequisites: Instructor consent. Notes: Students enrolled the AVIA program prior to Fall 2012 will take AVIA 371 Instrument Pilot Theory

**AVIA 372 - Professional Flight I Credits: 2**

Individual flight instruction for the FAA instrument and commercial flight rating. Students will obtain, under the supervision of SDSU flight instructors, the FAA Airplane Single Engine Land instrument rating as a requirement for course completion as well as continue building hours towards the commercial certificate. Prerequisites: Instructor consent. Corequisites: AVIA 370 Notes: Additional fees apply for aircraft rental and flight instruction. Students must have their private pilot certificate before enrolling in course. Students enrolled in the AVIA program prior to Fall 2012 will take the course as AVIA 372 Instrument Flight.

**AVIA 375 - Professional Pilot Theory II Credits: 3**

This theory course prepares students to operate multiengine and single engine aircraft professionally through the National Airspace System as a commercial pilot. Federal regulations, complex aircraft performance and operation, high performance aircraft characteristics, and safe operation of commercial aircraft in the US air transportation system will be covered in this course. Student will successfully complete the FAA Commercial Pilot Certificate written examination as a requirement of course completion. Prerequisites: Instructor consent (Students must have their FAA instrument rating as a prerequisite for this course.) Corequisites: AVIA 377 Notes: Additional fees apply for aircraft rental and flight instruction. Students enrolled in the AVIA program prior to Fall 2012 will take the course as AVIA 375 Commercial Pilot Theory.

**AVIA 377 - Professional Flight II Credits: 2**

Professional flight II provides individualized flight instruction in preparation for the FAA Commercial Pilot Certificate. Student will complete, under the supervision of SDSU flight instructors, the FAA commercial practical exam. Prerequisites: AVIA 372 Corequisites: AVIA 375 Notes: Additional fees apply for aircraft rental and flight instruction. Students enrolled in the AVIA program prior to Fall 2012 will take the course as AVIA 376

**AVIA 392 - Special Topics in Aviation Credits: 1-3****AVIA 400 - Air Transportation System Credits: 3**

Advanced study of U.S. aviation issues to include: a historical perspective of the industry, regulatory aspects of the industry, general aviation, military aviation, commercial aviation, manufacturing, and other issues of interest to the air transportation industry. This will include local, state, national, and international aspects of the industry.

Discussion of the services and challenges faced by the air transportation system will also be covered in this course. Prerequisites: Instructor consent.

**AVIA 440 - Curriculum Design in Aviation (AW) Credits: 3**

This course will cover the development process of selection, organization and management of instructional content and supplemental materials related to aviation education. Special emphasis will be placed on development of objectives, integration of teaching/learning strategies, and scenario-based training.

**AVIA 450 - Methods of Teaching in Aviation Credits: 3**

This course will feature lesson presentation and methods of delivering instruction in aviation education. This course will equip the student with resources and technology used in the classroom and aircraft to specifically teach content related to aviation. Topics covered include teaching with technology, utilizing instructional aides, motivating students, and marketing a program. Instructional techniques appropriate for aviation education are developed based on models identified in competency-based or performance-based education. Additional support will be provided to help student deliver classroom and aircraft content, assess the content, and provide feedback on the assessment. Students will gain practical experience by utilizing skills learned in class to actively engage the aviation community.

**AVIA 470 - Professional Flight Instructor Theory I Credits: 2**

Defines the responsibilities and role of the professional flight instructor in the process of flight training and general aviation development. The student will study the market of new aspiring pilots and learn how to attract and retain flight students as permanent general aviation customers. This course focuses on the practical aspects of teaching adults to fly. Students completing this course are prepared to challenge the FAA Fundamentals of Instruction knowledge exam and the FAA Flight Instructor knowledge exam. Prerequisites: Instructor consent (Commercial certificate required) Corequisites: AVIA 474 Notes: Students enrolled in the AVIA program prior to Fall 2012 will take the course as AVIA 470 - Flight Instructor Theory/Flight.

**AVIA 471 - Professional Flight Instructor Theory II Credits: 2**

Defines the responsibilities and role of the professional flight instructor in the process of flight training and general aviation development. The student will study the market of new aspiring pilots and learn how to attract and retain flight students as permanent general aviation customers. This course focuses on the practical aspects of teaching adults to fly. Students completing this course are prepared to challenge the FAA Fundamentals of Instruction knowledge exam. Prerequisites: Instructor consent Corequisites: AVIA 475

**AVIA 472 - Certified Flight Instructor Instrument Credits: 1**

This course prepares the flight instructor to teach students in an instrument flight environment Prerequisites: Instructor consent.

**AVIA 473 - Certified Flight Instructor Multi-Engine Credits: 1**

This course prepares the flight instructor to teach students in an aircraft with two or more engines. Prerequisites: Instructor consent.

**AVIA 474 - Certified Flight Instructor I Credits: 2**

Provides the student with a detailed study of the responsibilities and teaching concerns of a flight instructor in a single engine aircraft environment. The course is concerned with the analysis of the flight maneuvers involved with Sport Pilot, Recreational Pilot, Private Pilot, Commercial Pilot and Flight Instructor Certificates. During this course the student is expected to complete the FAA Certified Flight Instructor practical checkride. Prerequisites: Commercial pilot certificate and instructor consent Corequisites: AVIA 470 Notes: Additional fees apply for aircraft rental and flight instruction.

**AVIA 475 - Certified Flight Instructor II Credits: 2**

This course prepares the flight instructor to teach students in an instrument flight environment in both single engine and multiengine

aircraft. Learning objectives include an in-depth study of the responsibilities and techniques to be used as an Instrument Flight Instructor in the training environment. This course will also include additional study of instrument flight, multi-engine operations, aerodynamics, single-engine operations, and regulations pertaining to the IFR environment. Supplementary information will help to develop the instructors' knowledge of Technically Advanced Aircraft (TAA) in a practical environment. The course will place special emphasis on multi-engine aerodynamics and performance, analysis of multi-engine operations, single-engine operations and procedures, flight safety concerns and instrument flight maneuvers in multi-engine airplanes. Prerequisites: Certified Flight Instructor certificate and written consent Corequisites: AVIA 471

**AVIA 488 - Student Flight Instruction Credits: 3**

Supervised flight instruction in a post-secondary setting. Prerequisites: AVIA 470 and consent

**AVIA 489 - Aviation Senior Seminar Credits: 3**

This course will explore contemporary and ethical issues in the aviation industry. Students will examine and solve issues related to global aviation, environmental concerns, technology advances, aviation safety and security practices, labor issues, aviation education, and aviation economics. Students will be required to demonstrate an understanding of information literacy and advanced communications through course work.

**AVIA 494 - Internship Credits: 3**

Prerequisites: Department approval required.

## **BADM (Business Administration)**

**BADM 260 Principles of Production & Operations Mgmt Credits: 3**

A broad analytical 'systems' viewpoint is used to develop competency in management decision-making and problem solving in operations setting in various businesses and especially manufacturing. This course involves the study of the production end of business, where resources are transferred into goods and services, and the management of operations through effective planning, implementing, and monitoring for continuous improvement. Prerequisites: One Math course except 021, 095, 101, 100T. Cross-Listed: MNET 260

**BADM 280 - Personal Finance (COM) Credits: 3**

This course is a survey of individual investment opportunities. Topics include common and preferred stocks and corporate bonds, auto, life, and health insurance, home ownership, and will and estate planning.

**BADM 291 - Independent Study (COM) Credits: (1-4)**

**BADM 292 - Topics (COM) Credits: (1-3)**

**BADM 293 - Workshop (COM) Credits: 1-3**

**BADM 310 - Business Finance (COM) Credits: 3**

Business finance is an overview of financial theory including the time value of money, capital budgeting, capital structure theory, dividend policies, asset pricing, risk and return, the efficient markets hypothesis, bond and stock valuation, business performance evaluation and other financial topics. Prerequisites: ACCT 211 Cross-Listed: MGMT 310.

**BADM 334 - Small Business Management (COM) Credits: 3**

This course applies business policies and procedures to the small business environment. As such, it is designed for students contemplating management or ownership of a small business. Topics include the nature of the entrepreneur, financing and ownership options, marketing, government regulations, taxation, inventory control and other relevant business functions

**BADM 336 - Entrepreneurship I (COM) Credits: 3**

This course is an introduction to the concepts, terminology, and process of new venture creation, operations and growth, as well as the introduction of entrepreneurial management practices into

existing businesses. This course will assist in the identification of entrepreneurial opportunities and strategies and the role of personal factors (including creativity). Legal, ethical, and social responsibilities are emphasized Cross-Listed: ENTR 366

**BADM 350 - Legal Environment of Business (COM) Credits: 3**

This is a study of legal topics as they apply to the business environment. Topics include an introduction to the law, the U.S. Court system, legal process, government regulation, and criminal, tort, and contract issues.

**BADM 351 - Business Law (COM) Credits: 3**

This course involves a thorough study of the law of contracts, sales, product liability, agency, corporations and other selected topics. Prerequisites: BADM 350.

**BADM 360 - Organization and Management (COM) Credits: 3**

This course is a study of management, including the planning, direction, controlling and coordinating of the various activities involved in operating a business enterprise. Cross-Listed: MGMT 360.

**BADM 370 - Marketing (COM) Credits: 3**

This course introduces the student to the basic concepts and practices of modern marketing. Topics include marketing and its linkages to business, consumer behavior, marketing research, strategy and planning, product and pricing decisions, distributions and promotion decisions, marketing management, and evaluation and control aspects for both consumer and industrial goods. Prerequisites: ECON 201 or ECON 202. Cross-Listed: ECON 370.

**BADM 406-506 Accounting for Entrepreneurs (COM) Credits: 3**

Accounting concepts and practices for entrepreneurs/small business owners. Emphasis given to the use of accounting tools to solve small business problems. Cross-Listed: ACCT /ENTR 406-506.

**BADM 411/511 - Investments (COM) Credits: 3**

This course is a thorough study of the equity market including fundamental valuation techniques, asset allocation, the efficient markets hypothesis and its implications, portfolio theory, risk and return, the primary and secondary market mechanisms, security market indicators, and international investing. An overview of the bond market including bond valuation, duration, and bond portfolio management, and an introduction to options, futures, and forward contracts are provided. The vital roles of computer technology and electronic trading are also explored. Prerequisites: BADM 310

**BADM 412 - Security Analysis (COM) Credits: (2-3)**

Security Analysis is a thorough study of portfolio management for individual as well as institutional investors and includes both equity and fixed income analysis. Security valuation and analysis are discussed as well as the topics of asset allocation, efficient diversification, portfolio theory and construction, investment policy, and performance evaluation. The vital roles of computer technology and electronic trading are also explored.

**BADM 416 - Commercial Bank Management (COM) Credits: 3**

This course is an in-depth study of banking institutions, with special emphasis on commercial banks and their connection to the federal reserve system and other financial institutions. A risk management perspective is adopted, and the fast changing global regulatory and financial environments are discussed. Prerequisites: ECON 330; BADM 360 or AGE 478.

**BADM 424 - Operations Research (COM) Credits: 3**

This course looks at quantitative tools and methods used in the decision making process of business organizations. Linear programming, decision making under uncertainty, simulation, inventory models, and queuing models will be studied. Prerequisites: ECON 301, STAT 281.

**BADM 438-538 - Entrepreneurship II (COM) Credits: 3**

This course focuses on the process of screening an opportunity, drafting a personal entrepreneurial strategy, and understanding the business plan writing process. Building the entrepreneurial team and the acquisition and management of financial resources are emphasized along with venture growth, harvest strategies, and valuation. Prerequisites: BADM/ENTR 336. Cross-Listed: ENTR 438-538.

**BADM 457 - Business Ethics Credits: 3**

This course is a study of the ethical implications of managerial decisions. Topics covered include the responsibility of the organization to the individual and society, the role of the individual within the organization, and ethical systems for American business. The course provides an examination and assessment of current American business practices.

**BADM 460 - Human Resource Management (COM) Credits: 3**

This course provides a survey of managerial practices with respect to the management of the human resource function and an introduction to the topic of human resource management as an occupational choice. Major areas of inquiry include recruitment and selection, training and development, compensation and benefits administration and work force integration and maintenance. Cross-Listed: MGMT 460.

**BADM 464 - Organizational Behavior (COM) Credits: 3**

This course is a study of individuals and groups. Traditional organization theory and concepts are presented and study is given to motivation, group dynamics, and methods of coordination, change and adaptation within an organization Prerequisites: BADM 360

**BADM 474 - Personal Selling (COM) Credits: 3**

This course is a study of the skills needed to develop and manage long-term relationships with customers and suppliers. Emphasis is placed on relationship selling, presentation, prospecting, handling objectives and closing techniques with consideration given to differences in the global marketplace

**BADM 476-576 - Marketing Research (COM) Credits: 3**

This course provides an in-depth study of the primary methodologies of marketing research. Emphasis is placed on collecting, analyzing, interpreting and presenting information for the purpose of reducing uncertainty surrounding marketing and management decisions. Prerequisites: BADM370 and MATH 281 or STAT 281. Cross-Listed: ECON 476-576.

**BADM 482 - Business Policy and Strategy (COM) Credits: 3**

This course is designed to develop an understanding of strategy formulation, implementation, and evaluation. It involves integrating all functional areas of business, analyzing the environment in which the firm operates, and choosing strategies that enable the firm to meet its objectives. Prerequisites: BADM 310, BADM 350, BADM 360, BADM 370, and senior standing.

**BADM 483 - Small Business Consulting (COM) Credits: 1-3**

This course is a consulting program whereby students, working under faculty guidance, assist businesses by researching and developing possible solutions to specific problems involved in business start-up and expansion. Prerequisites: Senior standing. Cross-Listed: ENTR 483

**BADM 489 - Business Plan Writing and Competition Credits: 1**

Students will write a business plan and present it to a panel of faculty and business community members. The top three business plan presenters will move on to a statewide competition. Crosslisted with ENTR 489.

**BADM 490 - Seminar (COM) Credits: 3**

**BADM 491 - Independent Study (COM) Credits: 1-4**

**BADM 492 - Topics (COM) Credits: 1-4**

**BADM 493-593 - Workshop (COM) Credits: 1-3**

**BADM 494 - Internship Credits: 1-12** Corequisites: ENTR 494  
**BADM 498 - Undergraduate Research/Scholarship Credits: 1-12**  
**BADM 592 - Topics Credits: (1-3)**

## **BIOL (Biology)**

### **BIOL 101-101L - Biology Survey I and Lab (COM) Credits: 3**

Study of the nature, diversity, and classification of life, ecology, cells and cell cycles, Mendelian and modern genetics evolution and evolution theory. Intended for those not majoring in biology. Laboratory experience that accompanies BIOL 101. Corequisites: BIOL 101L-BIOL 101.

### **BIOL 103-103L - Biology Survey II and Lab\* (COM) Credits: 3**

Study of energetics; plant growth; development and reproduction; animal structure and function. Intended for those not majoring in biology. Laboratory experience that accompanies BIOL 103. Prerequisites: Biol 101. Corequisites: BIOL 103L-BIOL 103. Notes: \* Course meets SGR #6. IGR #1

### **BIOL 105 - Human Biology \*\* Credits: 3**

Presents key biological principles that are characteristic of living things in general and human beings in particular, focusing on the application of these principles to the concerns of contemporary life. Not intended for life science majors. Notes: \*\* Course meets IGR #2.

### **BIOL 109-109L - First Year Seminar and Lab\*\* Credits: 2, 0**

First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Laboratory course to accompany BIOL 109 Corequisites: BIOL 109-109L Notes: \*\*Meets IGR #1

### **BIOL 142 - Anatomy (COM) Credits: 3**

An elementary study of the gross structure of the human body.

### **BIOL 151-151L - General Biology I and Lab\* (COM) Credits: 4**

The introductory course for those majoring in biology and microbiology. Presents the concepts of cell biology, evolution, heredity, molecular genetics and ecology. Laboratory experience that accompanies Corequisites: BIOL 151L-BIOL 151. Notes: \*Course meets SGR #6.

### **BIOL 153-153L - General Biology II and Lab\* Credits: 4**

A continuation of BIOL 151, the introductory course for those majoring in biology and microbiology. Presents the concepts of animal and plant structure and function, energetics, and reproduction. Laboratory experience that accompanies BIOL 153. Prerequisites: BIOL 151. Corequisites: BIOL 153L-BIOL 153. Notes: \*Course meets SGR #6.

### **BIOL 190 - Seminar Credits: 2**

### **BIOL 199L - First Year Experience Research Lab Credits: 1**

Guided independent research on isolation and characterization of bacteriophage. Prerequisites: Consent (Honors-eligible - ACT of 27 or higher)

### **BIOL 200-200L - Animal Diversity and Lab\* Credits: 3**

Investigate all members of the animal kingdom comprising the living world focusing on diversity, systematics, reproductive patterns, principles of structure and function, ecology, and environmental relationships Laboratory experience that accompanies BIOL 200. Prerequisites: BIOL 101 or BIOL 151. Corequisites: BIOL 200L-BIOL 200. Notes: \* Course meets SGR #6.

### **BIOL 202-202L - Genetics and Organismal Biology and Lab Credits: 4**

First course in a 2-semester sequence designed to teach students current concepts in genetics, cellular and molecular biology. This course prepares students in the biological sciences for advanced courses in their emphasis areas. Topics covered in this course include: mendelian inheritance; mitosis and meiosis; basic cell structure; chromosomal basis of inheritance and linkage; extra nuclear genes; chromosomal mutations; epistasis, alleles and the environment; gene function; genetic mapping; population genetics; quantitative genetics; evolution and natural selection. Laboratory experience that accompanies BIOL 202. Prerequisites: BIOL 153 or BIOL 103; CHEM 114-114L Corequisites: BIOL 202L-BIOL202.

### **BIOL 204-204L - Genetics & Cellular Biology & Lab Credits 3, 1**

Second course in a 2-semester sequence designed to teach students current concepts in genetics, cellular and molecular biology. This course will prepare students in the biological sciences for advanced courses in their emphasis areas. Topics covered in this course include: DNA and chromosomal structure; mobile genetic elements; transcription; RNA processing; translation; enzymes and metabolism; membrane structure and function; respiration and photosynthesis; the endomembrane system and trafficking; cytoskeleton; cell signaling; genetic engineering and biotechnology. Laboratory experience that accompanies BIOL 204 Prerequisites: BIOL 202. Corequisites: BIOL 204L-204 Notes: One semester of Organic Chemistry is highly recommended.

### **BIOL 210 - Human Physiology for Allied Health Professionals Credits: 4**

Lectures, laboratory work and demonstrations of human physiological processes both normal and abnormal.

### **BIOL 210L - Human Physiology for Allied Health Professionals Lab Credits: 0**

Laboratory experience that accompanies BIOL 210.

### **BIOL 221-221L - Human Anatomy and Lab (COM) Credits: 4**

Structures of various systems in the human body are presented as a structural basis for physiology; Laboratory experience that accompanies BIOL 221. Prerequisites: Sophomore standing OR consent based on the following criteria a combination of 30 credits completed or in progress, a B or better in CHEM 106 or higher, and an overall GPA of 3.0 Corequisites: BIOL 221L-BIOL 221.

### **BIOL 290 - Seminar Credits: 1** Cross-Listed: MICR 290

### **BIOL 291 - Independent Study (COM) Credits: 1-4**

### **BIOL 311-311L - Principles of Ecology & Lab Credits: 3, 1**

Basic principles of ecology including the sub disciplines of physiological ecology, population ecology, community ecology, evolutionary ecology, and ecosystems ecology from both a theoretical and applied aspect; Laboratory experience that accompanies BIOL 311. Corequisites: NRM 311-311L Notes: BIOL 311L is an optional, stand-alone lab.

### **BIOL 325-325L - Physiology and Lab (COM) Credits: 4**

Basic cell physiology, neural, hormonal and neuroendocrine control systems. Coordinated body functions. Laboratory experience that accompanies BIOL 325. Prerequisites: BIOL 221-221L and 8 credits of chemistry. Corequisites: BIOL 325L-BIOL 325

### **BIOL 371 - Genetics (COM) Credits: 3**

Principles governing the nature, transmission and function of hereditary material with application to plants, animals, humans, and microorganisms. Prerequisites: BIOL 101 OR BIOL 151

### **BIOL 373 - Evolution (COM) Credits: 3**

Surveys evidence for biological evolution and the historical development of evolutionary theory, and examines genetic and other mechanisms responsible for life's diversity. Prerequisites: BIOL 151.

**BIOL 383 - Bioethics \*\* (G) Credits: 4**

Ethical, social and policy dilemmas in medicine and biology. Cross-Listed: PHIL 383 Notes: \*\* Course meets IGR Goal #2.

**BIOL 415-415L/515-515L - Mycology and Lab (COM) Credits: 3**

Comprehensive taxonomic survey of the kingdom Fungi; reproductive biology, physiology, genetics, and ecology of fungal organisms; relationship to fungi to human affairs. Laboratory experience that accompanies BIOL 415-415L/515-515L Prerequisites: BIOL 101 or 151 Corequisites: BIOL 415L-BIOL 415/B IOL 515L-BIOL 515 Cross-Listed: PS 415-415L-515-515L

**BIOL 439-539 - Biology of Aging Credits: 3**

Physical, sensory, and physiological changes with age, aging of cells and tissues. Cellular, developmental, endocrine and other theories of aging. Pathologies of aging. Prerequisites: BIOL 325

**BIOL 440-440L - Restoration Ecology Credits: 4**

Scientific principles involved in restoration of natural ecosystems on degraded and disturbed lands. An understanding of ecological principles is recommended prior to enrollment. Laboratory to accompany BIOL 440. Corequisites: BIOL 440L-440 Cross-Listed: NRM 440-440L and LA 440-440L

**BIOL 453-553 - Advanced Genetics Credits: 3**

Procedures in genetic studies as they relate to molecular and classical genetic applications. Prerequisites: BIOL 202, or BIOL 204, or BIOL-371 Cross-Listed: PS 453-553

**BIOL 4/566 Environmental Toxicology & Contaminants Credits 3**

This course will prepare students in the area of Ecological Effects of Toxic Substances and other contaminants. Wildlife toxicology and impacts of agriculture on the Northern Plains will be emphasized. Topics covered will include pesticides, heavy metals, aquatic and terrestrial ecotoxicity and other topics related to Wildlife Toxicology. Cross-Listed: NRM 466-566

**BIOL 467-467L/567-567L - Parasitology and Lab Credits: 3**

The broad field of animal parasitology, including protozoa, helminths, and arthropods. Emphasis on identification, life histories, control, and economic and medical importance. Laboratory includes morphology and identification of representative groups of parasites, as well as techniques of diagnosis of parasitic disease. Laboratory experience that accompanies BIOL 467. Prerequisites: BIOL 101 or 151. Corequisites: BIOL 467L-BIOL 467/B IOL 567L-BIOL 567. Cross-Listed: ZOOL 467.

**BIOL 476-576 - Advanced Mammalian Physiology Credits: 4**

An advanced study of the physiological mechanisms utilized by mammals to regulate body functions with the nervous and endocrine systems, to acquire and use chemical energy from their environment, and to integrate the functions of the organs' systems to maintain the health of the animal. Emphasis is placed on applying physiological concepts and principles to solve problems. Previous courses in anatomy, physiology, and biochemistry are recommended. Corequisites: BIOL 221 or VET 223 or Instructor written consent Cross-Listed: VET 476/576

**BIOL 483-483L - Developmental Biology and Lab Credits: 4**

Analysis of the processes of animal development beginning with the formation of female and male gametes (ova and sperm) and ending with organ differentiation. Evolutionary concepts of animal development, developmental genetics, and molecular biological approaches to the analysis of development. Laboratory experience that accompanies BIOL 483. Prerequisites: BIOL 151.

**BIOL 490 - Seminar (COM) (AW) Credits: 1****BIOL 491 - Independent Study (COM) Credits: 1-4****BIOL 492/592 - 492/592L - Topics and Lab Credits: 1-5****BIOL 494 - Internship (COM) Credits: 1-12****BIOL 496 - Field Experience (COM) Credits: 1-12****BIOL 497 - Cooperative Education (COM) Credits: 1-12****BIOL 498 - Undergraduate Research/Scholarship Credits: 1-12****BIOL 645L - Microimaging Techniques Lab Credits: 1-3****BIOL 767 - Fire and Ecosystems Credits: 3****BIOL 782 - Epidemiology Credits: 3****BIOL 788 - Biological Research Problem Credits: 1-3****BIOL 790 - Seminar Credits: 1****BIOL 791 - Independent Study Credits: 1-4****BIOL 792 - Topics Credits: 1-6****BIOS (Biological Sciences)****BIOS 662 - Advanced Molecular and Cellular Biology Credits: 6****BIOS 663 - Advanced Concepts in Infectious Disease Credits: 6****BIOS 664 - Molecular Plant Physiology Credits: 6****BIOS 788 - Master's Research Problems Credits: 1-3****BIOS 790 - Seminar Credits: 1****BIOS 791 - Independent Study Credits: 1-6****BIOS 792 - Topics Credits: 1-6****BIOS 793 - Workshop Credits: 1-6****BIOS 794 - Internship Credits: 1-6****BIOS 796 - Field Experience Credits: 1-6****BIOS 798 - Thesis Credits: 1-10****BIOS 890 - Seminar Credits: 1****BIOS 898D - Dissertation PhD Credits: 1-7****BIST (Biology Topics)****BIST 692 - Topics for Biology Educators Credits: 1-12****BOT (Botany)****BOT 127 - Ethnobotany Credits: 3**

This course is designed to provide an overview of the traditional and current uses of plants native to the Great Plains. The course will help students: (1) Become familiar with standard field keys and to become competent with identification of plants of the region. (2) Learn to find and recognize 40-50 plant species of special significance to the indigenous peoples of the region. (This includes sight identification, knowledge of common plant habitats, preparation of herbarium collections, methods of propagation and modern horticultural practices.) (3) Participate in hands-on demonstrations of traditional and modern methods for the preparation and utilization of native plants (e.g. cooking, dye making) (4) Discover and share with the class in-depth information on one native plant species, not covered in the formal portion of the class.

**BOT 201-201L - General Botany and Lab\* (COM) Credits: 3**

A phylogenetic approach to the study of plant diversity and evolutionary relationships emphasizing structure and function of plant systems; Laboratory experience that accompanies BOT 201 Prerequisites: BIOL 101 or BIOL 151. Corequisites: BOT 201L-BOT 201. Notes: \*Course meets SGR #6.

**BOT 301-301L - Plant Systematics (COM) Credits: 4**

Principles of phylogeny, classification, nomenclature, evolution; demonstrations, field study and laboratory practice in collection, preserving, and identifying plants. Prerequisites: BIOL 103 or BIOL 153. Corequisites: BOT 301L

**BOT 303-303L - Forest Ecology & Management & Lab Credits 3**

The basics of environmental factors which control the growth of trees and forests and how forests in North America are managed. Corequisites: BOT 303L-BOT 303 Cross-Listed: HO 303-303L

**BOT 327-327L - Plant Physiology and Lab (COM) Credits: 4**

Chemical and physical principles of plant function including water relations and energy metabolism; genetic, environmental and hormonal regulation of plant growth and development; and plant responses to stress; Laboratory experience the accompanies BOT 327. Prerequisites: Select one group BIOL 101 and BIOL 103; OR



BIOL 151 and BIOL 153; OR BOT 201 and BIOL 101; OR BOT 201 and BIOL 151; Corequisites: BOT 327L-BOT 327

**BOT 405-405L/505-505L Grasses & Grasslike Plants & Lab Credits: 3**  
A systematic survey of grasses and grasslike plant of the northern Great Plains; field and lab practice in collection and identification of graminoid plants; discussion of unique biological aspects of grasses and grasslike plants that make them economically and ecologically significant. Laboratory experience that accompanies BOT 405-505. Prerequisites: BIOL 103 or BIOL 153. Corequisites: BOT 405L-BOT405/BOT 505L-BOT 505.

**BOT 415-415L/515-515L - Aquatic Plants and Lab Credits: 3**  
A systematic survey of vascular plants that grow in wetland habitats, and a study of their adaptations to life in the water. Field and laboratory practice in identification and recognition of common aquatic plants. Laboratory to accompany BOT 415-515. Prerequisites: BIOL 103 or 153 Corequisites: BOT 415L- 415/BOT 515L- 515.

**BOT 419-419L - Plant Ecology and Lab (COM) (G) Credits: 3**  
Description of plant communities, their dynamics and instruction. Environmental factors and their relationship with plants. Field trips. Laboratory experience that accompanies BOT 419 Prerequisites: BIOL 103 and BOT 201, or BIOL 153 Corequisites: BOT 419L- 419

**BOT 491 - Independent Study Credits: 1-4**  
Includes directed study, problems, readings, directed readings, special problems and special projects. Students complete individualized plans of study which include significant one-on-one student-teacher involvement. The faculty member and students negotiate the details of the study plans. Enrollments are usually 10 or fewer students. Meetings depending upon the requirements of the topic.

**BOT 492-592 - Topics Credits: 1-5**  
Includes Current Topics, Advanced Topics, and Special Topics. A course devoted to a particular issue in a specified field. Course content is not wholly included in the regular curriculum. Guest artists or experts may serve as instructors. Enrollments are usually of 10 or fewer students with significant one-on-one student-teacher involvement.

**BOT 494 - Internship Credits: 1-12**  
Applied, monitored and supervised, field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and or directed plan of study. A higher level of supervision is provided by the instructor in these courses.

**BOT 496 - Field Experience Credits: 1-12**  
Applied, monitored and supervised, field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and or directed plan of study established between the student, instructor and field experience supervisor. Due to the presence of a field experience supervisor, a lower level of supervision is provided by the instructor in these courses than is the case in an internship or practicum course.

**BOT 498 - Undergraduate Research/Scholarship Credits: 1-4**  
Includes Senior Project, and Capstone Experience. Independent research problems/projects or scholarship activities. The plan of study is negotiated by the faculty member and the student. Contact between the two may be extensive and intensive. Does not include research courses which are theoretical.

**BOT 664 - Molecular Plant Physiology Credits: 6**  
**BOT 715-715L - Advanced Plant Ecology and Lab Credits: 4**  
**BOT 788 - Research Problems Credits: 1-3**  
**BOT 791 - Independent Study Credits: 1-4**  
**BOT 792 - Topics Credits: 1-5**

## CA (Consumer Affairs)

**CA 110 - Individual Financial Literacy Credits: 1**  
Introduction to personal financial management. Topics covered include banking; budgeting; and financial statements.

**CA 111 - Individual Financial Management Credits: 1**  
Introduction to personal financial management. Topics covered include leasing and buying; credit cards and credit management; and time value of money.

**CA 150 - Introduction to Consumer Affairs Credits: 2**  
Foundations of the discipline of consumer affairs, including history and mission; role in meeting the needs of individuals and families through business, public and government sectors; the integrative nature of the discipline; and career opportunities. Analyze professionals traits, personal skills and knowledge needed to attain a position in the desired profession of consumer affairs. Overview of courses and sequencing for the Consumer Affairs major.

**CA 230 - Consumer Behavior Credits: 3**  
Understanding cultural, economic, social, and psychological conditions that influence the consumer purchase process. Study of diverse types of consumer subcultures. Cross-Listed: CS 230

**CA 289 - Consumers in the Market Credits: 3**  
Welfare of the consumer in relation to government regulation, policies, laws, consumer rights and responsibilities, and the economic system.

**CA 291 - Independent Study Credits: (1-3)**  
**CA 292 - Topics Credits: (1-3)**

**CA 340 - Work Family Interface (AW) Credits: 3**  
Introduction to resource management theories, processes and principles as applied to efficient use of human, time, social, and material resources in promotion of individual and family well-being. Balancing work and family is addressed as an application of family resource management. Prerequisites: ENGL 201.

**CA 345 - Foundations in Financial Management Credits: 3**  
Financial resource management related to the economic aspects of family financial planning. Specifically addresses major financial planning issues and problems that individuals and families encounter including goal setting, saving, borrowing, risk management, basic tax structure, investment diversification, and basic considerations for retirement and estate planning. Emphasis will be given to application of time value of money across the content.

**CA 350 - Family Financial Management I Credits: 3**  
Principles and practices of insurance needs and selection, investment strategies to realize financial goals and income tax planning to improve financial well-being of families. Technical skills required of family financial planners are emphasized. Prerequisites: CA 345.

**CA 412 - Emerging Issues in Consumer Affairs Credits: 2**  
Study of current and emerging consumer issues facing individuals, families, and the global community. Prerequisites: CA 494

**CA 430 - Consumer Decision Making Credits: 3**  
Study of theories and principles in judgment and decision making and behavioral economics. Barriers and strategies to improve consumer judgment and decision-making will be addressed including heuristics and biases, role of emotion and social forces. Cross-Listed: CS 430

**CA 442 - Family Resource Management Lab Credits: 3**  
Application of resource management concepts to improve individual and family economic well-being. The course emphasis is placed on managerial activities of families with limited resources. Management involves facing opportunities and solving the practical problems of everyday life, coordinating the activities of family members and

making and implementing decisions. A required service learning experience (20 hours) will provide an opportunity for direct application of resource management concepts to the problem solving process. Must be junior or senior standing following completion of all 100/200 level required courses. Prerequisites: Must be junior or senior standing.

**CA 450 - Family Financial Management II Credits: 3**

Principles and practices of retirement planning, saving and estate planning to improve financial well-being of families. Comprehensive case study will incorporate family financial planning principles addressed in CA 350. Prerequisites: CA 350.

**CA 480 - Travel Studies Credits: 1-5**

This travel-study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators at other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

**CA 487 - Transition to the Professional World Credits: 2**

Students acquire personal and professional skills necessary for success in the workplace. Students will secure an internship and address internship expectations. Prerequisites: CA 150, CA 230, CA 289, CS 377

**CA 490 - Seminar Credits: 1 Prerequisites: CA 494**

**CA 491 - Independent Study Credits: 1-3**

**CA 492-592 - Topics Credits: 1-3**

**CA 494 - Internship Credits: 3 Prerequisites: CA 340, CA 345, CA 487. Notes: Consumer Affairs Major, Senior Class Standing**

**CA 595 - Practicum Credits: 3-6**

**CA 604 - Family Systems Credits: 3**

**CA 612 - Financial Counseling Credits: 3**

**CA 620 - Family Economics Credits: 3**

**CA 640 - Fundamentals of Family Financial Planning Credits: 3**

**CA 645 - Military Personal Financial Readiness Credits: 3**

**CA 660 - Invest for Family's Future Credits: 3**

**CA 680 - Insurance Planning for Families Credits: 3**

**CA 704 - Estate Planning for Families Credits: 3**

**CA 715 - Housing and Real Estate in FFP Credits: 3**

**CA 725 - Family, Employee Benefits and Retirement Planning Credits: 3**

**CA 735 - Personal Income Taxation Credits: 3**

**CA 745 - Professional Practices in Financial Planning Credits: 3**

**CA 755 - Financial Planning Case Study Credits: 3**

**CA 791 - Independent Study Credits: 1-3**

**CA 792 - Topics Credits: 1-3**

## CD (Community Development)

**CD 600 - Orientation to Community Development Study Credits: 1**

**CD 601 - Organizing for Community Change Credits: 3**

**CD 602 - Community & Regional Economic Policy & Analysis Credits 3**

**CD 603 - Community Natural Resource Management Credits: 3**

**CD 604 - Community Analysis Credits: 3**

**CD 605 - Principles & Strategies of Community Change Credits 3**

**CD 611 - Impact Analysis Credits: 1**

**CD 612 - Housing and Development Credits: 3**

**CD 613 - Intro to Native Community Development Credits: 3**

**CD 616 - Public and Nonprofit Budgeting Credits: 3**

**CD 617 - Role of Tribal colleges in Economic Development Credits: 1**

**CD 623 - Ecological Economics Credits: 3**

**CD 624 - Building Native Community and Economic Capacity Credits: 3**

**CD 626 - Economic Development Strategies Credits: 3**

**CD 631 - Evaluation of Organizations and Programs Credits: 3**

**CD 633 - Introduction to Environmental Law Credits: 3**

**CD 634 - Native American Natural Resource Management Credits: 3**

**CD 635 - Sustainable Communities Credits: 3**

**CD 636 - Policy and Politics of Coastal Areas Credits: 3**

**CD 637 - Immigration and Communities Credits: 3**

**CD 638 - Community and Regional Economic Analysis II Credits: 3**

**CD 641 - Leadership for Change Credits: 3**

**CD 642 - Grant Writing Credits: 3**

**CD 643 - Nonprofit Management Credits: 3**

**CD 644 - Participatory Action Research Methods Credits: 3**

**CD 645 - Community Developer as Community Education Credits: 3**

**CD 791 - Independent Study Credits: 1-3**

**CD 792 - Topics Credits: 3**

**CD 794 - Internship Credits: 3**

**CD 795 - Practicum Credits: 3**

## CEE (Civil & Environmental Engineering)

**CEE 106-106L - Elementary Surveying and Lab Credits: 4**

Care and operation of instruments, concepts of horizontal and vertical control; measurement of horizontal distances, vertical angles and elevation differences. Coverage includes the definition and analysis of errors of measurement. Additional topics include: horizontal curves, traverse work and construction surveying. The course includes an introduction to the concepts and applications of GPS and GIS to surveying practice. Prerequisites: MATH 120 or MATH 115. Corequisites: CEE 106L-106.

**CEE 208-208L - Engineering Surveys and Lab Credits: 3**

Principles of topographic surveys and mapping, CAD applications for the conversion of topographic field data to site mapping, subdivision surveys, additional applications beyond those in CEE 106 to construction and route surveys. Prerequisites: CEE 106. Corequisites: CEE 208L-208.

**CEE 216-216L - Materials and Lab Credits: 3**

Basic structure of materials and its effect on material properties. Laboratory tests on materials, principles of concrete mixes. Prerequisites: CHEM 112. Corequisites: CEE 216L-216.

**CEE 225 - Principles of Environmental Science & Engineering\*\* Credits: 3**

Introduction to the basic principles of environmental management, environmental science and engineering, and natural resources engineering. The class will be team taught by faculty from environmental management, civil and environmental engineering, agricultural and biosystems engineering, and agricultural systems technology programs. The course will teach the fundamental physical, biological, and chemical principles of environmental processes. The course will also explore the impact of humans and human activity on ecosystems in the environment. Prerequisites: CHEM 106 or CHEM 112. Notes: \*\*Course meets IGR Goal #2

**CEE 282 - Computer-Aided Design Credits: 3**

Basic drawing techniques will be presented using an industry standard civil engineering software program. Computer-aided design techniques for civil engineers will be presented including topics such as input of surveying data for boundary and topography, creation of a digital terrain models, roadway alignments, earthwork, grading plans, plans and profiles and cross section drawings as they relate to the civil engineering. Prerequisites: GE 109-109L and CEE 106 Notes: A notebook computer is required for this course.

**CEE 304 - Land Surveying Credits: 3**

Public land surveys, land subdivisions, land boundaries, land descriptions, state plane coordinates, legal aspects of land ownership, precise surveying methods such as triangulation, base line measurements. Prerequisites: CEE 106.

**CEE 306-306L - Photo Interpret. & Photogrammetry & Lab Credits: 3**

Engineering evaluation of aerial photographs, including topography, analysis of soils and surface drainage characteristics. Use of aerial photographs for location and design of highways, airports and other construction projects. Prerequisites: CEE 208. Corequisites: CEE 306L-306.

**CEE 311 - Structural Materials Lab Credits: 1**

Laboratory tests on structural materials and elements, and interpretation of test results. Careful laboratory techniques are emphasized. Prerequisites: CEE 216. Corequisites: EM 321.

**CEE 323-323L - Water Supply and Wastewater Engineering and Lab Credits: 3**

Analysis of water and wastewater quality, water demands and wastewater flows; water and wastewater treatment process concepts; preliminary design of unit processes for municipal water and wastewater treatment systems, impacts of regulations on system design. Prerequisites: CEE 225. Corequisites: CEE 323L-323.

**CEE 331 - Fluid Mechanics Lab Credits: 1**

Measurement of properties of common fluids, and tests on fluids in motion Corequisites: EM 331.

**CEE 340-340L - Engineering Geology and Lab Credits: 3**

From an Engineering perspective, the principles of physical and environmental geology; minerals, rocks, weathering, soils, hydrologic cycle, groundwater and frost will be explored and related to engineering applications such as mechanics of unconsolidated materials, slope failures, subsidence, pollution, waste disposal, and exploration methods. Prerequisites: CEE 216. Corequisites: CEE 340L-340.

**CEE 346-346L - Geotechnical Engineering (COM) and Lab Credits: 4**

Composition, structure, index, and engineering properties of soils, soil classification systems, introduction to soil engineering problems involving stability, settlement, seepage, consolidation, and compaction; and laboratory work on the determination of index and engineering properties of soils. Computer-aided graphics and word processing are required for lab reports. Prerequisites: EM 321 and CEE 340. Corequisites: CEE 346L-346. Cross-Listed: MINE 346-346L.

**CEE 353 - Structural Theory (COM) Credits: 3**

Basic concepts in structural analysis of beams, trusses, and frames. Determination of governing load conditions for moving loads by use of influence lines. Development of basic virtual work concept to obtain deflections for beams, trusses, and frames. Introduction to slope deflection equations and the moment-distribution for analysis of indeterminate structure. Prerequisites: EM 321/CEE 284 or EM 215/MATH 321 or EM 215/MATH 321/ME 311.

**CEE 363 - Highway and Traffic Engineering Credits: 3**

Highway administration, traffic characteristics, highway standards, drainage, geometric design, construction methods. Prerequisites: CEE 106.

**CEE 390 - Seminar Credits: 1**

CEE 411-411L/511-511L - Bituminous Materials and Lab Credits: 3  
Properties of bituminous materials including their compatibility with various types of aggregates. Asphalt mixes are designed and tested. Standards tests are performed on bituminous materials with emphasis on test results. Asphalt surface evaluation techniques. Prerequisites: CEE 216. Corequisites: CEE 411L-411/511L-511L.

**CEE 4/522-4/522L - Environmental Engineering Instrumentation and Lab Credits: 3**

Analysis of water and waste water samples, using environmental laboratory instrumentation. Design of treatment facility process instrumentation and controls. Prerequisites: CEE 323 or consent. Corequisites: CEE 422L-422/522L-522.

**CEE 423/523 - Municipal Water Distribution and Collection System Design Credits: 3**

Design of municipal water distribution and collection systems utilizing modern design tools including the utilization of software to simulate system behavior in response to environmental changes. Prerequisites: CEE 323 and EM 331.

**CEE 424/524 - Industrial Waste Treatment Credits: 3**

Characteristics and composition of industrial wastes, sampling and

methods of analysis of these wastes and remedial measures for treatment and disposal. Prerequisites: CEE 323.

**CEE 4/529-4/529L - Solid Waste Engineering and Management and Lab Credits: 3**

Solid waste regulation and characterization. Design of disposal facilities, management of collection, transport, transfer, storage and disposal systems. Field trips to various disposal facilities required. Prerequisites: CEE 346. Corequisites: CEE 429L-429/529L-529.

**CEE 432 - Hydraulic Engineering Credits: 3**

Development of fundamental principles related to closed conduit flow, flow in open channels, open channel transitions and controls, introduction to wave mechanics, hydraulic structures. Prerequisites: EM 331.

**CEE 434/534 - Hydrology Credits: 3**

Principles of hydrology. Components of the hydrological cycle including the impact of precipitation, evaporation, infiltration, ground water flow and surface runoff on flow routing, water availability, extreme flows and drainage systems. Prerequisites: STAT 281 or STAT 381.

**CEE 435/535 - Water Resources Engineering Credits: 3**

Topics related to water resources engineering including: multiple purpose river development, economic analysis of flood control measures, aspects of water law, advanced topics related to surface and ground water hydrology and administrative aspects of water resources planning. Prerequisites: CEE 225.

**CEE 443/543 - Matrix Analysis of Structures Credits: 3**

Theory and application of matrix methods in structural analysis. Prerequisites: CEE 353.

**CEE 444/544 - Precast Concrete Structures Credits: 3**

Advantages of precast concrete. Structural and architectural precast elements. Building systems. Design concepts and structural design. Connections, specifications, and detailing. Prerequisites: CEE 456.

**CEE 446/546 - Advanced Geotechnical Engineering Credits: 3**

Development of a fundamental understanding of engineering properties of soils and the factors controlling their magnitude and changes with time and environment. Development of why this knowledge is important and how it can be used in the solution of geotechnical and geoenvironmental problems. Students enrolling in CEE 546 will be held to a higher standard than those enrolling in CEE 446. Prerequisites: CEE 346.

**CEE 447-547 - Foundation Engineering Credits: 3**

Application of the fundamental concepts of soil behavior to evaluation, selection, and design of shallow and deep foundation systems. Related topics such as temporary support systems for excavations and pile driving are also included. Prerequisites: CEE 346 Notes: Students enrolling in CEE 547 will be held to a higher standard than those enrolling in CEE 447.

**CEE 452/552 - Prestressed Concrete Credits: 3**

Theory and design of prestressed concrete including pre-tensioning and post-tensioning. Prerequisites: CEE 456.

**CEE 455 - Steel Design Credits: 3**

Limited states in design and the probabilistic nature of loads and resistance. Design of members subjected to tension, axial compression, bending and combined forces. Elementary concepts of frame design with an introduction to secondary effects. The importance of structural stability in design is stressed. Design of basic bolted and welded connections. Prerequisites: CEE 353.

**CEE 456 - Concrete Theory and Design (COM) Credits: 3**

Properties and behavior of concrete and reinforcing steel. Analysis and design of structural slabs, beams, girders, columns, and footings

with use of strength methods. Deflection of flexural members. Development of reinforcement. Prerequisites: CEE 353.

**CEE 457 - Indeterminant Structures (COM) Credits: 3**

Analysis of indeterminate structures by classical and matrix methods. The classical methods are the force method, the slope-deflection equations and the moment-distribution method. The classical methods also are used to determine influence lines for indeterminate structures. Stiffness matrices for truss and beam elements are derived and used to analyze trusses, beams and frames. Prerequisites: CEE 353. Corequisites: CEE 457L-457.

**CEE 458/558 - Design of Timber Structures Credits: 3**

Gravity and lateral loads, physical and mechanical properties of wood, properties of dimension lumber and glued laminated timber, design of beams and columns, properties of structural wood panels. Design of sheathing, diaphragms and shearwalls. Design of connections. Prerequisites: CEE 353.

**CEE 459-459L/559-559L - Advanced Structural Mechanics and Lab Credits: 3**

Review of principal moments of inertia; relationship of plane stresses and strains; use of rosettes; shear center; unsymmetrical bending; theories of failure; curved beams and closed rings; thick-walled cylinders; beams on continuous elastic support, miscellaneous topics in structural analysis. Prerequisites: CEE 353. Corequisites: CEE 459L-459/559L-559.

**CEE 464 - Civil Engineering Capstone Design I (COM) Credits 1**

Content will include major engineering design experience integrating fundamental concepts of mathematics, basic science, engineering science, engineering design, communication skills, humanities, and social science. Prerequisites: Senior standing.

**CEE 465 - Civil Engineering Capstone Design II (AW) Credits: 2**

Content will include major engineering design experience integrating fundamental concepts of mathematics, basic science, engineering science, engineering design, communications skills, humanities, and social science. Prerequisites: CEE 464.

**CEE 467/567 - Transportation Engineering Credits: 3**

Engineering principles in various common modes of transportation. Prerequisites: CEE 363.

**CEE 472/572 - Geosynthetics Credits: 3**

Detailed study of the types of geosynthetic materials used in environmental, geotechnical, and transportation engineering as well as how they are used and manufactured. Particular emphasis will be placed on erosion control, landfill, transportation, drainage, filtration and reinforcement applications. Students enrolling in CEE 572 will be held to a higher standard than those enrolling in CEE 472. Prerequisites: CEE 346.

**CEE 482 - Engineering Administration Credits: 3**

Law of contracts, agency, and other legal aspects of engineering. Preparation of specifications. Economic aspects of engineering. Prerequisites: Senior standing Cross-Listed: CM 482

**CEE 483-483L - Municipal Engineering and Lab Credits: 3**

Design/construction of municipal facilities including subdivisions, drainage, streets, water and wastewater systems, and solid waste disposal. Duties and responsibilities of city engineer. Prerequisites: CEE 208. Corequisites: CEE 483L-483.

**CEE 490 - Seminar (COM) Credits: (1-3)**

**CEE 491 - Independent Study (COM) Credits: (1-3)**

**CEE 492/592 - Topics (COM) Credits: (1-3)**

**CEE 494 - Internship Credits: (1-6)**

**CEE 496 - Field Experience Credits: (1-6)**

**CEE 497 - Cooperative Education Credits: (1-6)**

**CEE 623 - Advanced Sanitary Engineering Credits: 3**

**CEE 633 - Open Channel Hydraulics Credits: 3**

**CEE 656 - Advanced Reinforced Concrete Design Credits: 3**

**CEE 664 - Highway Capacity Analysis Credits: 3**

**CEE 692 - Topics Credits: (1-3)**

**CEE 702-702L Advanced Civil and Envnt. I Eng. &Lab Credits: 1-13, 0**

**CEE 720-720L - Water Treatment Plant Design & Lab Credits: 3**

**CEE 721 - Environmental Engineering Credits: 3**

**CEE 722-722L - Hazardous/Toxic Waste Disposal Credits: 3**

**CEE 724-724L - Land Treatment of Wastes Credits: 3**

**CEE 725 - Biological Principles of Environmental Eng. Credits: 3**

**CEE 726-726L - Physical/Chemical Principles of Environmental Engineering and Lab Credits: 3**

**CEE 729-729L - Waste Water Treatment Plant Design &Lab Credits: 3**

**CEE 732 - Advanced Foundation Engineering Credits: 3**

**CEE 733 - Water Resources Engineering Credits: 3**

**CEE 734 - Surface Water Quality Model Credits: 3**

**CEE 737 - Hydraulic Design Credits: 3**

**CEE 738-738L - Advanced Hydraulics Credits: 3**

**CEE 749-749L - Geotechnical Testing and Lab Credits: 3**

**CEE 754 - Advanced Design of Steel Structures Credits: 3**

**CEE 755 - Advanced Reinforced Concrete Design Credits: 3**

**CEE 756 - Reinforced Masonry Design Credits: 3**

**CEE 759 - Structural Dynamics Credits: 3**

**CEE 762-762L - Pavement Mgmt and Rehabilitation Credits: 3**

**CEE 765 - Pavement Design Credits: 3**

**CEE 769 - Design Steel and Concrete Bridges Credits: 3**

**CEE 787 - Research Credits: (1-9)**

**CEE 788 - Engineering Research or Design Paper Credits: (1-3)**

**CEE 790 - Seminar Credits: 1**

**CEE 791 - Independent Study Credits: (1-3)**

**CEE 792 - Topics Credits: (1-3)**

**CEE 792L - Topics Lab Credits: 0**

**CEE 798 - Thesis Credits: (1-7)**

## CHEM (Chemistry)

**CHEM 106-106L - Chemistry Survey and Lab\* Credits: 3,1**

A one-semester survey of chemistry. Not intended for those needing an extensive chemistry background. Introduction to the properties of matter, atomic structure, bonding, stoichiometry, kinetics, equilibrium, states of matter, solutions, and acid-base concepts. Laboratory designed to accompany CHEM 106. Prerequisites: MATH 101 or higher (102, 115, 120, 121, 123, 125, 281, or placement). Corequisites: CHEM 106L-CHEM 106. Notes: \*Course meets SGR #6.

**CHEM 108-108L - Organic and Biochemistry and Lab\* (COM) Credits: (4, 1)**

A survey of the chemical principles important to biological systems. For students who do not plan to take additional chemistry. Not a prerequisite for any 200 level and above course. Laboratory designed to accompany CHEM 108. Prerequisites: CHEM 106. Corequisites: CHEM 108L-CHEM 108. Notes: \* Course meets SGR #6.

**CHEM 109 - First Year Seminar\*\* Credits: 2**

First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\*Course meets IGR #1

**CHEM 112-112L General Chemistry I and Lab\* (COM) Credits: 3, 1**

An introduction to the basic principles of chemistry for students needing an extensive background in chemistry (including chemistry majors, science majors, and pre-professional students). Completion of a high school course in chemistry is recommended. Laboratory designed to accompany CHEM 112. Corequisites: CHEM 112L-CHEM 112 and MATH 102. Notes: \* Course meets SGR #6.

**CHEM 114-114L - General Chemistry II and Lab \* (COM) Credits: 3, 1**

A continuation of CHEM 112. An introduction to the basic principles of chemistry for students needing an extensive background in chemistry. Laboratory designed to accompany CHEM 114. Prerequisites: CHEM 112, MATH 102 or higher (115, 120, 121, 123, 125, 281) Corequisites: CHEM 114L-CHEM 114. Notes: \* Course meets SGR #6.

**CHEM 115-115L Atomic & Molecular Structure & Lab\* Credits 3,1**

This is the first course in a four-course sequence that serves as an advanced introduction to the principles of general chemistry relevant to preparation for organic chemistry. Topics covered include atomic structure, theories of bonding, molecular structure, inter- and intramolecular forces, the structure-activity relationship, and qualitative thermochemistry. Laboratory course to accompany CHEM 115. Prerequisites: Completion of a high school course in chemistry is required. Corequisites: CHEM 115L-CHEM 115 and MATH 102. Notes: This course is intended for students majoring in chemistry or biochemistry, or those who have been admitted to the honors college. AP credit will not be acknowledged as equivalent to CHEM 115. CHEM 112/CHEM 112L may not be substituted for CHEM 115/CHEM 115L unless explicitly allowed by the department head.

\* Course meets SGR #6.

**CHEM 120-120L Elementary Organic Chemistry & Lab\* Credits: 3, 1**

Compounds of carbon with emphasis on those of interest to students of Agriculture, Family and Consumer Sciences. Not a prerequisite for any 200 level and above course. Prerequisites: CHEM 106 or CHEM 112. Corequisites: CHEM 120L-CHEM 120. Notes: \* Course meets SGR #6.

**CHEM 127-127L - Structure and Function of Organic Molecules and Lab\* Credits: (3, 1)**

A continuation of CHEM 115 which introduces the chemistry of carbon containing compounds. It is the second course in a four-course sequence. Topics covered include: nomenclature, functional group analysis, stereochemistry, acid/base chemistry, organic chemistry reactions, mechanistic explanation of electron movement, and thermochemistry of organic reactions. Chemistry, Biochemistry, and Honors College students only. CHEM 326 may not be substituted for CHEM 127 unless explicitly allowed by the department head. Laboratory designed to accompany CHEM 127. Prerequisites: CHEM 115. Corequisites: CHEM 127L-CHEM 127. Notes: \* Course meets SGR #6.

**CHEM 229-229L - Transformations of Organic Molecules and Lab Credits: (3, 1)**

A continuation of CHEM 127 which focuses on instrumentation related to analytical organic chemistry, as well as advanced reactions, synthesis and retrosynthetic analysis, and an introduction to biochemistry. It is the third course in a four-course sequence. Credit may not be substituted for CHEM 328 and CHEM 328L. Laboratory designed to accompany CHEM 229. Prerequisites: CHEM 127. Corequisites: CHEM 229L-CHEM 229.

**CHEM 237 - Intermediate Laboratory Investigations Credits: 2**

This laboratory based course builds upon previous training to include problem based learning in research contexts. Students will design and implement experiments related to departmental research, evaluate data, and report outcomes of their experimentation. Prerequisites: CHEM 229-229L

**CHEM 242-242L - Chemical Equilibrium and Thermodynamics and Lab Credits: 4, 1**

This course is the foundational course in physical chemistry. Topics include coverage of the first and second laws of thermodynamics, and equilibrium of chemical systems. Laboratory for CHEM 242. Prerequisites: CHEM 114 or CHEM 127; MATH 125; PHYS 211. Corequisites: CHEM 242L

**CHEM 326-326L - Organic Chemistry I and Lab(COM) Credits: (3, 1)**

A systematic treatment of the chemistry of carbon compounds, including nomenclature, structure-reactivity relationships, reaction mechanisms, synthesis, and spectroscopy. Laboratory designed to

accompany CHEM 326. Prerequisites: CHEM 114, minimum 4 credits. Corequisites: CHEM 326L-CHEM 326.

**CHEM 328-328L - Organic Chemistry II and Lab Credits: (3, 1)**

A continuation of CHEM 326. A systematic treatment of the chemistry of carbon compounds, including nomenclature, structure-reactivity relationships, reaction mechanisms, synthesis, and spectroscopy. Laboratory designed to accompany CHEM 328. Prerequisites: CHEM 326. Corequisites: CHEM 328L-CHEM 328.

**CHEM 329 - Organic Chemistry III Credits: 2**

An advanced undergraduate course in organic chemistry, this course builds upon previous organic chemistry training and will include topics of contemporary synthesis, organometallic chemistry, molecular orbital theory, pericyclic reactions, and physical organic chemistry. Prerequisites: CHEM 229 or CHEM 328 Notes: Co-registration in CHEM 329L is not required.

**CHEM 329L - Organic Chemistry III Lab Credits: 2**

Advanced stand-alone laboratory course for advanced undergraduate organic chemistry. The laboratory course focuses on multistep synthetic methodologies to assemble and analyze complex molecules. Prerequisites: CHEM 229L or CHEM 328L. Notes: Co-registration in CHEM 329 is not required.

**CHEM 332-332L - Analytical Chem. and Lab Credits: 3, 1**

Fundamental concepts and principles of quantitative chemical analysis including quantitative chemical equilibrium calculations and error analysis applied to the evaluation of experimental measurements and data. Laboratory to accompany CHEM 332. Prerequisites: CHEM 114 (minimum 4 credits.) or CHEM 127 Corequisites: CHEM 332L-CHEM 332.

**CHEM 345 - Quantum Mechanics of Chemical Systems Credits: 2**

Applications of quantum mechanics to chemical systems. Topics include comparative study of classical and quantum mechanics, the foundations of quantum mechanics, problems with exact solutions, and molecular spectroscopy. Prerequisites: CHEM 229 or CHEM 114; MATH 125; PHYS 213

**CHEM 347 - Chemical Kinetics Credits: 2**

Course devoted to the study of reaction rates. Topics include the kinetic molecular theory of gases, transport processes, reaction kinetics, and theories of reaction rates. Prerequisites: CHEM 242; PHYS 213

**CHEM 348-348L - Biophysical Chemistry and Lab Credits: 3, 1**

A study of the fundamental principles governing the physical chemistry of biological systems. Topics covered include the forces governing protein and nucleic acid stability, the thermodynamics of protein folding and protein-ligand interactions, bioenergetics, kinetics of biochemical reactions, biological membranes and membrane transport. The physical basis of protein purification, probing protein-ligand interactions, and the determination of macromolecular structure is also discussed. Fundamental physical chemistry principles and techniques of physical chemistry used in studying biomacromolecules and biological systems. Prerequisites: MATH 125, CHEM 464-464L Corequisites: CHEM 348L-348. Notes: CHEM 342-342L and 344-344L may be taken as electives but may not be substituted for CHEM 348-348L.

**CHEM 432 - Analytical Chemistry II Credits: 2**

Theory and applications of electrochemistry, atomic spectroscopy, X-rays, surface characterization, thermal methods, and radiochemistry applied to chemical analysis. Prerequisites: CHEM 332.

**CHEM 433 - Bioanalytical Chemistry Credits: 2**

Introduction to the principles and methods of analytical techniques applied to biochemical systems, including method validation, separations, microscopy, and related techniques. Prerequisites: CHEM 332 and CHEM 464.

**CHEM 434-434L - Instrumental Analysis and Lab Credits: (3, 1)**  
Theory and application of modern instrumental methods to chemical analysis. Laboratory designed to accompany CHEM 434. Prerequisites: CHEM 328, CHEM 332, CHEM 344. Corequisites: CHEM 434L-CHEM 434.

**CHEM 452-452L - Inorganic Chem. & Lab(COM) Credits: 3, 1**  
Theoretical and periodic aspects of inorganic chemistry. Synthesis and characterization of inorganic compounds. Prerequisites: CHEM 332 Corequisites: CHEM 452L-CHEM 452.

**CHEM 464 - Biochemistry I (COM) Credits: 3**  
A study of the fundamental principles governing the behavior of biochemical systems. Topics covered in the two semester sequence include the study of proteins, lipids and carbohydrates, metabolic processes, biological oxidation and reduction processes, molecular aspects of DNA replication and repair pathways, transcription and RNA processing, and protein translation. Prerequisites: CHEM 229 or 328

**CHEM 465 - Biochemistry II (COM) Credits: 3**  
A continuation of CHEM 464. Prerequisites: CHEM 464.

**CHEM 466 - Laboratory Methods- Biochemistry Credits: 1**  
A study of fundamental biochemistry laboratory skills, including, protein isolation and analysis by electrophoresis, enzyme kinetics and spectroscopic analysis of biomolecules. Prerequisites: CHEM 464.

**CHEM 482 - Environmental Chemistry (COM) Credits: 3-4**  
Examination of the chemistry and chemical processes of the environment, including the role of chemistry in current environmental issues. Prerequisites: CHEM 127 or CHEM 326

**CHEM 484 - Chemical Toxicology Credits: 3**  
Understanding of the principles of toxicity, including the molecular basis for toxicity and the environmental fate and transport of chemicals in the environment. Prerequisites: CHEM 464

**CHEM 491 - Independent Study (COM) Credits: (1-9)**  
**CHEM 492 - Topics (COM) Credits: (1-4)**  
**CHEM 494 - Internship (COM)(AW) Credits: (1-4)**  
**CHEM 498 - Undergraduate Research/Scholarship (AW) Credits: 1-12**  
**CHEM 516 - Chemical Communication Skills Credits: 2**  
**CHEM 691 - Independent Study Credits: (1-4)**  
**CHEM 701 - Advanced Organic Chemistry I Credits: 3**  
**CHEM 703 - Advanced Physical Chemistry Credits: 3**  
**CHEM 704 - Advanced Inorganic Chemistry Credits: 3**  
**CHEM 705 - Principles of Biochemistry Credits: (2-5)**  
**CHEM 706 - Advanced Analytical Chemistry Credits: 3**  
**CHEM 710 - Philosophy of Science Credits: 2**  
**CHEM 711 - Chemical Education Research Credits: 2**  
**CHEM 713 - Qualitative Research Methods Credits: 2**  
**CHEM 714 - Quantitative Research Methods Credits: 2**  
**CHEM 715 - Chemistry Instruction in Higher Ed. Credits: 2**  
**CHEM 722 - Synthesis of Natural Products Credits: 3**  
**CHEM 724-724L - Struct. Determnt of Orgc. Compounds & Lab Credits 3**  
**CHEM 726 - Advanced Organic Chemistry II Credits: 3**  
**CHEM 728 - Bioorganic Chemistry Credits: 3**  
**CHEM 731 - Advanced Environmental Chemistry Credits: 3**  
**CHEM 732 - Aquatic Chemistry Credits: 3**  
**CHEM 733 - Atmospheric Chemistry Credits: 3**  
**CHEM 734 - Environmental Surface Chemistry Credits: 3**  
**CHEM 735 - Analytical Spectroscopy Credits: 3**  
**CHEM 736 - Chromatography and Separation Credits: 3**  
**CHEM 738 - Electroanalytical Chemistry Credits: 3**  
**CHEM 741 - Quantum Chemistry I Credits: 3**  
**CHEM 742 - Quantum Chemistry II Credits: 3**  
**CHEM 744 - Chemical Thermodynamics Credits: 3**  
**CHEM 745 - Statistical Thermodynamics Credits: 3**  
**CHEM 748 - Chemical Kinetics Credits: 3**  
**CHEM 753 - Organometallic Chemistry Credits: 3**  
**CHEM 764 - Biochemistry I Credits: 3**  
**CHEM 766 - Biochemistry II Credits: 3**

**CHEM 767 - Biophysical Chemistry Credits: 3**  
**CHEM 770 - Atomic Theory & Bonding Credits: 3**  
**CHEM 771 - Intermolecular Interactions & Phases of Matter Credits: 3**  
**CHEM 772 - Thermodynamics Credits: 3**  
**CHEM 773 - Equilibria & Acid-Base Chemistry Credits: 3**  
**CHEM 774 - Kinetics, Nuclear, & Electrochemistry Credits: 3**  
**CHEM 775 - Organic & Biochemistry Credits: 3**  
**CHEM 776 - Laboratory Development Credits: 3**  
**CHEM 777 - Action Research in the Secondary Classroom Credits: 2**  
**CHEM 778 - Chemistry Teaching Strategies Credits: 3**  
**CHEM 781 - Bioinorganic Chemistry Credits: 3**  
**CHEM 788 - Research Problems Credits: 1-2**  
**CHEM 790 - Seminar Credits: 1**  
**CHEM 792 - Topics Credits: (1-6)**  
**CHEM 798 - Thesis Credits: (1-7)**  
**CHEM 898D - Dissertation PhD Credits: (1-12)**

## CHIN (Chinese)

**CHIN 101 - Introduction to Chinese I Credits: 4**  
An opportunity to develop skills in everyday spoken Chinese. Emphasis will be on correct pronunciation, listening skills and fluency.

**CHIN 102 - Introductory Chinese II Credits: 4**  
A continuation of Chinese 101, except that 200 new characters will be introduced.

## CHRD (Counseling and Human Resource Development)

**CHRD 301 - Introduction to Rehabilitation Credits: 3**  
The purpose of this course is to provide introductory level information regarding the counseling profession. Students will be exposed to the history, traditions, methods, and purposes of professional counseling, as well as the legal and ethical requirements that apply to clinical practice. The course will provide overview of the counseling field and provide students with a basis for development of a beginning professional identity.

**CHRD 351 - Medical & Vocational Case Management Credits: 3**  
The purpose of this course is to provide students with experience in the day to day requirements and skills needed to manage casework and provide services for consumers in actual human services agencies.

**CHRD 352 - Counseling Special Populations Credits: 3**  
This course will familiarize students with the history, needs, and cultural characteristics of consumers of counseling services that have disabilities. Ethnic and religious aspects will be considered as they relate to professional counseling.

**CHRD 353 - Ethics and the Helping Professions Credits: 3**  
The purpose of this course is to provide ethical and legal standards as related to critical professional issues. The relationship and integration of values for the counselor's role in practice, training, and consultation will be explored.

**CHRD 451 - Individual and Group Counseling Credits: 3**  
This course will introduce students to fundamental perspectives on professional counseling. Change processes and strategies will be examined from differing viewpoints. Students will be familiarized with group dynamics, structure, and power.

**CHRD 452 - Addictions Rehabilitation Credits: 3**  
The purpose of this course is to introduce students to practice and policy aspects of addictions counseling. From a strengths perspective, biological, psychological, social, and spiritual factors will be considered as they relate to substance abuse issues.

### **CHRD 453 - Family Therapy Credits: 3**

Family structure, systems, and communication will be examined. Perspectives on family dynamics and therapeutic change will be explored.

### **CHRD 471-571 - Gerontology Issues in Counseling Credits: 3**

This course is designed to familiarize helping professionals with psychological aspects of the aging process. Students will gain skills in establishing rapport and interacting in a professional, caring manner with older adults and learn about appropriate resources and techniques to assist older clients.

### **CHRD 475 - Wellness Counseling Credits: 2**

This course will introduce students to interventions designed to enhance individual wellness including behavioral and motivational strategies. Change processes and strategies will be examined along with signs and symptoms of mental health states.

### **CHRD 601 - Intro to Professional Issues & Ethics Credits: 1**

**CHRD 602 Research & Eval. in Counseling & Human Devlpt Credits 3**

**CHRD 610 - Developmental Issues in Counseling Credits: 3**

**CHRD 661 - Theories of Counseling Credits: 3**

**CHRD 690 - Seminar Credits: (1-3)**

**CHRD 691 - Independent Study Credits: (1-3)**

**CHRD 692 - Topics Credits: (1-3)**

**CHRD 693 - Workshop Credits: (1-3)**

**CHRD 701 - Professional Issues & Ethics II Credits: 1**

**CHRD 706 - Counseling the Victim Credits: 3**

**CHRD 713 - Admin & Mgmt of Mental Health Orgs Credits: 3**

**CHRD 716 Human Resource Mgmt in Business & Indust. Credits: 3**

**CHRD 721 - School Counseling Credits: 3**

**CHRD 722 Admin & Mgmt of Schl Counseling Programs Credits: 3**

**CHRD 723 - Counseling the Family Credits: 3**

**CHRD 731 - Multicultural Counseling & Human Relations Credits: 3**

**CHRD 736 - Appraisal of the Individual Credits: 3**

**CHRD 742 - Career Counseling and Planning Credits: 3**

**CHRD 751 - Overview of Rehab & Mental Hlth Counseling Credits: 3**

**CHRD 752 - Medical & Psychological Aspects of Disability Credits: 3**

**CHRD 753 - Case Mgmt Principles & Plan Development Credits: 3**

**CHRD 755 - Clinical Diagnosis and Treatment Planning Credits: 4**

**CHRD 756 - Counseling the Addictive Client Credits: 3**

**CHRD 757 - Advanced Testing: Intellectual Assessment Credits: 3**

**CHRD 759 - Advanced Testing: Personality Assessment Credits: 3**

**CHRD 766 - Group Counseling Credits: 3**

**CHRD 770 - Student Development: Theory and Practice Credits: 3**

**CHRD 771 - Student Personnel Services Credits: 3**

**CHRD 772 - Admin and Leadership in Student Affairs Credits: 3**

**CHRD 785 - Pre-Practicum Credits: 3**

**CHRD 786 - Counseling Practicum Credits: (3-5)**

**CHRD 788 Research Problems in Counseling & Guidance Credits 1-3**

**CHRD 791 - Independent Study Credits: (1-3)**

**CHRD 794 - Internship Credits: (2-6)**

**CHRD 798 - Thesis Credits: (1-6)**

## **CHST (Chemistry Topics)**

**CHST 601 - Chemistry Topics for Educators Credits: (1-12)**

## **CJUS (Criminal Justice)**

### **CJUS 201 - Introduction to Criminal Justice \* (COM) Credits: 3**

Overviews the criminal justice institutions involved in the operations of criminal law including the police, the attorney, the bail system, the trial, the guilty plea, sentencing, corrections and an analysis of criminal law in terms of why certain kinds of conduct are criminal in our society. Notes: \* Course meets SGR #3

### **CJUS 203 - Policing in a Free Society (COM) Credits: 3**

Presents the role of law enforcement within the criminal justice system, including law enforcement organizations and functions of separate operational units. Also examines the role of the police in a

democratic society, covering concepts such as police services, crime deterrence, discretion and enforcement policies.

### **CJUS 330 - Civil Rights and Liberties Credits: 3**

Individual First Amendment guarantees, constitutional rights of the accused in the criminal process and equal protection of the law as interpreted through U.S. Supreme Court decisions. Cross-Listed: POLS 330

### **CJUS 412 - Criminal Prosecution and Defense (COM) Credits: 3**

Presents a behavioral and legal analysis of criminal case concepts, such as initial appearance, bail, preliminary hearing, grand jury, arraignment, suppression hearings, trial and sentencing, emphasizing bail reform, plea bargaining, screening, diversion, speedy trial, insanity defense, discovery, and the role of the defense attorney, prosecutor, and judge. The court system is examined as a social institution of human actors, exercising discretion within the boundaries of the law.

### **CJUS 431 - Criminal Law (COM) Credits: 3**

Examines the substantive criminal law, exploring the larger issues concerning the relationship of the individual to the state through analyzing such topics as the nature of criminal liability and the functions and justifications for criminal punishment, legal limitations upon criminalization, and the general principles of criminal liability, such as the "Act" and "State of Mind" requirements, specific offenses against persons and property, the law of attempt, the law of complexity, and conspiracy.

### **CJUS 433 - Criminal Procedure (COM) Credits: 3**

Constitutional analysis of the criminal procedures, focusing primarily on the fourth, fifth, and sixth amendments, respectively, the right to be free from unreasonable search and seizure, the privilege against self-incrimination, and the right to counsel. Examines the need to protect individual defendants from abuse at the hands of the state while enhancing law enforcement efficiency.

### **CJUS 436 - Juvenile Justice (COM) Credits: 3**

Examines the separate system created in our society to handle juvenile justice, tracing the historical and philosophical development of the juvenile justice system and inspecting the various stages of the juvenile justice process as well as critical issues currently facing the system.

### **CJUS 491-591 - Independent Study (COM) Credits: (1-3)**

**CJUS 492-592 - Topics (COM) Credits: 3**

## **CM (Construction Management)**

### **CM 101 - Introduction to Construction Credits: 1**

Introduction to the construction industry and the concept of being a construction management professional as well as the ethics required of a person with influence on the construction industry. A variety of ideas are presented to the students to assist in their career choice.

### **CM 124 - Construction Graphics Credits: 2**

Introduction to graphic communications used in construction including civil, architectural, structural, mechanical and electrical drawings, plans, and schematics; creating and editing plans; symbols, terminology, and layout. Prerequisites: GE 121.

### **CM 210-210L - Construction Surveying and Lab Credits: 3**

The study of construction surveying and layout including topographic surveys and mapping. Land and construction surveys, principles of curve and quantity calculations and other advanced topics in surveying. Prerequisites: GE 121, ID 122 or LA 120; MATH 102 Corequisites: CM 210L-210

### **CM 216 - Construction Materials Credits: 3**

Source, processing, and applications of construction materials. Prerequisites: MATH 102



**CM 230 - Applied Construction Credits: 1-3**

The supervised application of construction principles to the actual building of a whole or part of a structure. Prerequisites: CM 101  
Notes: May be repeated for up to 3 credits.

**CM 232-232L - Cost Estimating and Lab Credits: 3**

The study of the basic concepts of construction plan, specification and blueprint reading by requiring the student to do actual quantity takeoff using both traditional hand methods and computer enhanced procedures. Prerequisites: CM 124, CM 216, or consent Corequisites: CM 232L- 232.

**CM 291 - Independent Study Credits: (1-3)****CM 292 - Topics Credits: (1-3)****CM 320-320L - Construction Soil Mechanics and Lab Credits: 3**

Introduces updated information developed in research and practices for application to construction operations. An overview of the nature of soil materials and their engineering properties is coupled with simple, direct examples of analysis to show how common construction methods and operation may be controlled or influenced. Corequisites: CM 320L-CM 320.

**CM 332 - Building Construction Methods and Systems Credits: 3**

The study of the structural and finish systems that make up a building and the related methods of implementation. Prerequisites: Junior standing or instructor approval, CM 232, CM 216.

**CM 333 - Mechanical, Electrical, Plumbing Systems Credits: 3**

The study of mechanical, electrical, plumbing, and fire protection systems, design considerations, and system components in a modern building.

**CM 352 - Advanced Cost Estimating Credits: 3**

The study of the procedures and methods required to determine the value of construction projects with associated bidding procedures. Prerequisites: ACCT 211, CM 216, CM 232.

**CM 353-353L - Construction Structures and Lab Credits: 3**

The study of the structural design process in the built environment. Prerequisites: EM 321 Corequisites: CM 353L-353

**CM 360 - Building Design and Evaluation Concepts Credits: 3**

The study of the design of buildings and the use of contemporary concepts to regulate and influence the design process. Prerequisites: GE 123, CM 332, and CM 353-353L

**CM 374 - Heavy Construction Methods and Systems Credits: 3**

The study of the systems involved in heavy construction and the equipment and methods required to implement them. Prerequisites: CM 216

**CM 400-500 - Risk Management and Construction Safety Credits: 3**

Construction safety and health and effective management of risk.

**CM 410 - Construction Project Management and Supervision Credits: 3**

The study of the ethical, procedural, and supervisory concepts involved with the execution of a construction project. Prerequisites: CM 332

**CM 420 - Construction Student Competitions Credits: 1-3**

Participation and related preparation for student competitions hosted by regional, national, and international industry organizations. Prerequisites: Instructor Approval.

**CM 421 - Commercial Building Inspection and Plan Checking Credits: 3**

Preparation to become a certified building inspector or building plan checker/reviewer by studying the prevailing building code. Prerequisites: CM 332

**CM 430 - Building Environmental Certification Credits: 3**

Preparation for accreditation by a recognized authority in the efficient construction of buildings.

**CM 443 - Construction Planning and Scheduling Credits: 3**

Planning and scheduling construction projects. Both manual methods and computer programs will be used to schedule activities, control cost and manage resources. Prerequisites: CM 332, CM 374.

**CM 452 - Heavy and Highway Estimating Credits: 3**

The study of the procedures and methods required to determine the value of heavy, highway, and site development projects with associated bidding procedures. Prerequisites: ACCT 211, CM 232, CM 374.

**CM 455-455L - Residential Construction and Lab Credits: 3**

The study of the residential construction process including design, documentation, and construction. Corequisites: CM 455L-455

**CM 460 - Sustainable Building Systems Concepts & Analysis Credits: 3**

The analysis of energy efficient and environmentally responsible building design and construction. Material selection, energy and climate analysis, and practical applications of new technology will be covered. Prerequisites: CM 332

**CM 473 - Construction Law and Accounting (AW) Credits: 3**

The study of the application of legal, contractual, and generally accepted accounting principles to the construction industry. Prerequisites: ACCT 210 Notes: Registration Restriction: Senior Standing or instructor approval.

**CM 482 - Engineering Administration Credits: 3**

Law of contracts, agency, and other legal aspects of engineering. Preparation of specifications. Economic aspects of engineering. Prerequisites: Senior standing Cross-Listed: CEE 482

**CM 485-485L - Site Development and Feasibility Analysis and Lab Credits: 3**

Tools and techniques used to evaluate the cost of new site development; risk assessment and market feasibility analysis for properties to be acquired for economic development. Corequisites: CM 485L-CM 485.

**CM 491 - Independent Study Credits: (1-3)****CM 492 - Topics Credits: (1-3)****CM 493 - Workshop Credits: 1-3****CM 494 - Internship Credits: (1-3)****CM 497 - Cooperative Education Credits: (1-3)****CS (Consumer Science)****CS 230 - Consumer Behavior Credits: 3**

Understanding cultural, economic, social, and psychological conditions that influence the consumer purchase process. Study of diverse types of consumer subcultures.

**CS 282 - Customer Service Credits: 2**

Examination of customer service as a tool for business to develop positive interactions with current and potential customers. Discussion of customer service as an integral tool in customer relationship management. Cross-Listed: AM 282

**CS 377 - Professional Documents Credits: 1**

Organization and preparation of professional documents

**CS 381 - Professional Behavior at Work Credits: 3**

Social skills and professional conduct in a global workplace. Emphasis will be on interpersonal communication and cross-cultural interactions appropriate in the work environment. Cross-Listed: AM 381

**CS 430 - Consumer Decision Making Credits: 3**

Study of theories and principles in judgment and decision making and behavioral economics. Barriers and strategies to improve consumer judgment and decision-making will be addressed including heuristics and biases, role of emotion and social forces. Cross-Listed: CA 430

**CS 492 - Topics Credits: 3****CSC (Computer Science)****CSC 105 - Introduction to Computers (COM) Credits: 3**

Overview of computer applications with emphasis on word processing, spreadsheets, database, presentation tools and internet-based applications.

**CSC 112 - Principles of Internet Applications Credits: 3**

This course provides students with a conceptual and practical understanding in the effective and critical use of the Web and other Internet services through the application of problem-based activities. Includes a general grounding in interacting with the Internet, using e-mail, news and web-resources, basic HTML, as well as social and security issues.

**CSC 130 - Visual Basic Programming (COM) Credits: 3**

Fundamentals of programming using Visual Basic. Focus on problem solving, visual design, and programming concepts. Topics include sequence, selection, repetition, procedures, and functions.

**CSC 150-150L - Computer Science I (COM) Credits: 3**

An introduction to computer programming. Focus on problem solving, algorithm development, design, and programming concepts. Topics include sequence, selection, repetition, functions, and arrays. Corequisites: CSC 150L-150

**CSC 205 - Advanced Computer Applications (COM) Credits: 3**

This course covers advanced topics in word processing and spreadsheet applications such as macros, advanced functions, graphics, merging, linking, and transferring data. The course emphasizes the efficient use of software packages. Operating systems/environment topics are also addressed. Prerequisites: CSC 105 or consent.

**CSC 218 - Introduction to C/C++/Unix for Engineers Credits: 3**

This is an introductory course on the topics of structured programming using C/C++. Topics covered will be top-down design, step-wise refinement, functions, and decisions statements, loops, arrays, pointers, dynamic allocation of memory, use of external files, character strings, macros, introduction to objects and structures.

**CSC 250 - Computer Science II (COM) Credits: 3**

Problem solving, algorithm design, standards of program style, debugging and testing. Extension of the control structures and data structures of the high-level language introduced in CSC 150. Elementary data structures and basic algorithms that include sorting and searching. Topics include more advanced treatment of functions, data types such as arrays and structures, and files. Prerequisites: CSC 150.

**CSC 291 - Independent Study (COM) Credits: (1-3)****CSC 292 - Topics (COM) Credits: (1-3)****CSC 294 - Internship Credits: (1-6)****CSC 300 - Data Structures (COM) Credits: 3**

A systematic study of data structures and the accompanying algorithms used in computing problems; structure and use of storage; methods of representing data; techniques for implementing data structures; linear lists; stacks; queue; trees and tree traversal; linked lists; and other structures. Prerequisites: CSC 250.

**CSC 303 - Ethical & Security Issues in Computing (G) Credits: 2**

This course will cover the code of ethics adopted by the major computer science societies and the consequences of violating the

code. Laws affecting computer and information processing as well as the varied interpretations of those laws will be covered. It also provides students with a fundamental knowledge of computer security including security terminology, software and hardware vulnerabilities, and encryption.

**CSC 314 - Assembly Language (COM) Credits: 3**

A thorough introduction to assembly language programming and processor architecture. A study of low-level programming techniques, and the layout of a typical computer. The student will gain insight into the memory layout, registers run-time stack, and global data segment of a running program. Prerequisites: CSC 250.

**CSC 317 - Computer Organization & Architecture Credits: 3**

A course in computer organization with emphasis on the hierarchical structure of computer systems. Covers such topics as: components of computer systems and their configuration, design of basic digital circuits, the microprogram level, the conventional machine level, the operating system level, assembly language, address modes, interpreters/translators, computer arithmetic. Prerequisites: EE 245-245L.

**CSC 325 - Management Information Systems (COM) Credits: 3**

Introduction to the application of information technology in organizations, roles of managers and staff professionals in developing and using information systems with current and future technology.

**CSC 330 - Cobol I (COM) Credits: 3**

Introduction to structured COBOL programming: input, output, and reformatting; arithmetic program design; report writing; intrinsic functions; conditional branching; condition-names; iteration; control breaks; program maintenance; validity checking; and interactive programming. Prerequisites: CSC 150 or CSC 213.

**CSC 331 - Cobol II (COM) Credits: 3**

Advanced structured COBOL programming with arrays; table look-ups; subprograms; sequential file processing; sorting and merging; indexed file processing; text manipulations; debugging; and on-line applications. Prerequisites: CSC 330.

**CSC 346 - Object Oriented Programming (COM) Credits: 3**

The study of object oriented methodologies using a modern language such as C++ or Java. Advanced data structures, I/O and file management will be implemented using polymorphism, inheritance, overloading and encapsulation. Prerequisites: CSC 300.

**CSC 354 - Introduction to Systems Programming Credits: 3**

The study of macros, subroutines, subroutine linkage, conditional assembly, input-output, interrupt processing, assemblers, loaders and linkers. Prerequisites: CSC 300, CSC 314.

**CSC 391 - Independent Study (COM) Credits: (1-3)****CSC 392 - Topics (COM) Credits: (1-3)****CSC 422/522 - GUI Programming (COM) Credits: 3**

This course is event-driven graphical user interface (GUI) programming will cover topics such as C++ programming for Windows. Prerequisites:

**CSC 433/533 - Computer Graphics (COM) Credits: 3**

Graphical programming concepts. Display media and device characteristics. Point, line, and circle plotting. Coordinating systems and transformations. Polygon clipping and filling. Spline methods, hidden surface elimination, and shading. Prerequisites: CSC 300, MATH 125.

**CSC 445 - Intro to Theory of Computation (COM) Credits: 3**

Introduction to a series of models for computation and their relationship to formal languages that are useful in the definition of programming languages along with a look at the theoretical limits of computers. Topics include finite and pushdown automata, Turing machines, grammars, decidability and computational complexity. Prerequisites: CSC 250, MATH 253, MATH 316.

**CSC 446 - Compiler Construction Credits: 3**

Structure of algorithmic, conversational, list processing and string manipulation languages. Concepts and facilities of programming languages; structure of compilers, introduction to formal languages and parsing. Prerequisites: CSC 300, CSC 445.

**CSC 447/547 - Artificial Intelligence (COM) Credits: 3**

Concepts in Artificial intelligence: programming in languages such as Prolog or LISP; knowledge representation; search algorithms. Prerequisites: CSC 250.

**CSC 450/550 - Game Programming Credits: 3**

This course teaches the fundamental concepts of computer game programming using Windows and C/C++. The C/C++ languages are used for this course because they are the standard language used for most commercial games. In this course, students will learn how to design 2D games for Windows, creating a simple game as part of the course.

**CSC 456 - Operating Systems (COM) Credits: 3**

A study of the functions and structures associated with operating systems with respect to process management, memory management, auxiliary storage management, and processor management. Topics include concurrent and distributed computing, deadlock, real and virtual memory, job and processor scheduling, security and protection. Prerequisites: CSC 300, CSC 314.

**CSC 461 - Programming Languages (COM) Credits: 3**

This course consists of two parts. The first part introduces how programming languages are designed, including an introduction to the concepts of parsing and compiling. Issues related to implementation such as type checking, binding, and memory management are discussed. Secondly, the course will survey the spectrum of programming languages paradigms, including traditional imperative, object oriented, functional, and logic languages. Prerequisites: CSC 300.

**CSC 470 - Software Engineering (COM) Credits: 3**

An introduction to the software engineering process, including lifecycle phases, problem analysis, specification, project estimation and resource estimations, design, implementation, testing/maintenance, and project management. In particular, software validation and verification as well as scheduling and schedule assessment techniques will be discussed. Prerequisites: CSC 300.

**CSC 474/574 - Computer Networks Credits: 3**

Analysis of current and future computer networks with emphasis on the OSI model. Local and wide area networks. TCP/IP, SNA, token ring, ethernet and other common networks will be covered. Protocol and interfaces within and across networks including the OSI layers, routers, bridges and gateway. Prerequisites: CSC 300.

**CSC 480 - Methods of Teaching Computer Science Credits: 3**

The principles, methods and theories in teaching computer science subjects to secondary school students will be studied. Prerequisites: CSC 300.

**CSC 481 - Systems Analysis (COM) Credits: 3**

Systems analysis covers concepts, skills, methodologies, techniques, tools and perspectives essential for systems analysts to successfully design information systems. Topics include requirements specifications, object-oriented analysis and design using the unified modeling language and project management.

**CSC 484 - Database Management Systems (COM) Credits: 3**

The study of formalized database design. This course will focus on relational model design and the use of SQL. Students will use a modern relational database to implement designs and learn the basics of data management. Prerequisites: CSC 300.

**CSC 485 - Software Engineering II (AW) Credits: 3**

The course is designed to illustrate the principles discussed in CSC 470. The students will be team leaders on a project that involves the

system analysis, design, integration, testing, and maintenance of a large, real world software system. The students will also document the process of the real world software development. Prerequisites: CSC 470

**CSC 490 - Seminar (COM) Credits: (1-3)****CSC 491 - Independent Study (COM) Credits: (1-3)****CSC 492/592 - Topics (COM) Credits: (1-3)****CSC 494 - Internship (COM) Credits: (1-8)****CSC 496 - Field Experience (COM) Credits: (1-3)****CSC 497 - Cooperative Education Credits: (1-3)****CSC 498 - Undergraduate Research/Scholarship (COM) Credits: 1-6****CSC 601 - Accelerated Computer Science Fundamentals Credits: 3****CSC 630 - Principles of Data Base System Design Credits: 3****CSC 705 - Design and Analysis of Computer Algorithms Credits: 3****CSC 710 - Structure & Design of Programming Languages Credits: 3****CSC 720 - Theory of Computation Credits: 3****CSC 740 - Management Information Systems Credits: 3****CSC 750 - Recent Advances in Parallel Process Credits: 3****CSC 770 - Software Engineering Management Credits: 3****CSC 788 - Research Report/Design Paper Credits: 1-2****CSC 790 - Seminar Credits: 1****CSC 791 - Independent Study Credits: (1-3)****CSC 792 - Topics Credits: (1-3)****CSC 798 - Thesis Credits: (1-7)****CSS (Computational Science & Statistics)****CSS 890 Seminar in Computational Science & Statistics Credits: 1****CSS 891 Independent Study Credits: (1-3)****CSS 892 - Topics in Computational Science & Statistics Credits: (1-3)****CSS 898D - Dissertation Research (COM) Credits: 1-36****CTE (Career & Technical Education)****CTE 105 - Principles of Career and Technical Education Credits: (1-3)**

A study of career and technical education terminology, service areas, instructional programs and basic principles of vocational technical education.

**CTE 189 - Technical Specialty: Credits: (1-32)**

(Name of technical program.) Granted to students who have: 1. successfully completed approved coursework related to a Technical Specialty from a vocational technical institute or school; 2. documentation of a chronological history of relevant occupational work experience leading to identifiable competencies completed in a Technical Specialty approved by granting institution; 3. successfully passed an occupational competency evaluation, such as: National Occupational Competency Testing Institute (NOCTI) exam for a specific Technical Specialty; and 4. validated military experiences that are related to a technical specialty.

**CTE 201 - Mentorship/Practicum I Credits: 2**

This course is the first class in a two-year mentorship/practicum program designed for new faculty entering secondary and post-secondary education. Course content will focus on teaching and learning, philosophy, curriculum development, assessment and evaluation, program planning and management, and individual and organizational development.

**CTE 202 - Mentorship/Practicum II Credits: 2**

This course is the second class in a two-year mentorship/practicum program designed for new faculty entering secondary and post-secondary education. Course content will focus on teaching and learning, philosophy, curriculum development, assessment and evaluation, program planning and management, and individual and organizational development, but at higher cognitive, affective, and psychomotor levels than CTE 201.

**CTE 208 - Occupational Internship I Credits: (1-3)**

Coordinated work experience in an occupation related to a specific vocational education content area. Prior application is required. Prerequisites: Permission of instructor.

**CTE 251 - Occupational Analysis Credits: (1-3)**

An analysis breakdown of a trade or occupation to determine units for instruction.

**CTE 301 - Mentorship/Practicum III Credits: 2**

This class is the third class in a two-year mentorship/practicum program designed for new faculty in their second year in secondary and postsecondary education. Course content will focus on teaching and learning, philosophy, curriculum development, assessment and evaluation, program planning and management, and individual and organizational development, but at higher cognitive, affective, and psychomotor levels than CTE 201 and 202. Emphasis will be placed on developing leadership skills and abilities in the education profession.

**CTE 302 - Mentorship/Practicum IV Credits: 2**

This course is the fourth class in a two-year mentorship/practicum program designed for new faculty in their second year in secondary and postsecondary education. Course content will focus on teaching and learning, philosophy, curriculum development, assessment and evaluation, program planning and management, and individual and organizational development, but at higher cognitive, affective, and psychomotor levels than CTE 201, 202 and 301. Emphasis will be placed on developing leadership skills and abilities in the education profession.

**CTE 308 - Occupational Internship II Credits: (1-3)**

Coordinated work experience in an occupation related to a specific vocational education content area. Coordinated plan must build upon CTE 208 and substantiate a progressive educational experience. Prior application is required. Prerequisites: Prior approval of instructor.

**CTE 311 - Career and Technical Adult Education Credits: (1-3)**

Objectives, principles, methods and practices to be used in the teaching of adult classes. Emphasis will be placed upon classes for retraining and upgrading adults in skilled or technical occupations.

**CTE 312 - Technical Education Credits: (1-3)**

Technical education programs are studied in regard to their development, curriculum content, equipment, and staff requirements.

**CTE 313 - Organization and Coordination of Cooperative Educational Programs Credits: 3**

The development of an effective cooperative relationship between school based coordinator and the business/industrial sponsor; the selection, orientation and training of sponsors; reporting and record keeping; the evaluation and selection of students; and program evaluation.

**CTE 314 - The Special Needs Learner Credits: 3**

Introduction to vocational education for learners with special needs. Historical and current issues and trends, including review of existing programs.

**CTE 352 - Instructional Resources Development Credits: 2**

Study of instructional materials, sources and application; emphasis on principles for making resources useful to CTE teachers. Construction and application of materials required.

**CTE 371 -Laboratory Organization &Management Credits:1-3**

The basic elements of organizing and managing a vocational program, the selection of equipment, faculty development, legal responsibilities of laboratory instructors, inventory, storage control and safety.

**CTE 380 - Technical Industrial Training Credits: (5-6)**

(Registration is initiated by submitting CTE Form No. 149 to the Coordinator of Vocational Technical Teacher Education.) Manufacturers, industries, and service firms offer many special technical courses that are available to vocational trade, industrial and technical instructors or prospective instructors. Some of these courses

are suitable for college credit, and upon approval credit may be granted. The following guidelines are used to award such credit: 1. The student must submit CTE Form No. 149 to receive approval for registration. 2. The student must make all the necessary arrangements with the industrial firm offering the industrial training session. 3. Credit is awarded on the basis of one-half credit for twenty hours of attendance.

**CTE 405 - Philosophy of Career and Technical Education Credits: 2**

Overview of vocational-technical and practical arts education, its place in the community and school; organization and characteristics of instructional programs at secondary, post-secondary and adult levels in agriculture, family and consumer sciences education, business and office, industrial, health, and distributive education; career education; legislation; and current trends and issues. Prerequisites: Sophomore in education. Notes: For prospective teachers and guidance personnel.

**CTE 408 - Occupational Internship III Credits: (1-3)**

Coordinated work experience in an occupation related to a specific vocational education content area. Coordinated plan must build upon CTE 308 and substantiate a progressive educational experience. Prior application is required. Prerequisites: Prior approval of instructor.

**CTE 420/520 - Entrepreneurship in Career and Technical Education Credits: 3**

This course is designed to help educators in all areas of vocational education to incorporate basic concepts of entrepreneurship into the curriculum. Topics include: small business plans, government regulations, site locations, record keeping, financing, legal considerations, business promotions, managing human resources, small business contributions to the economy and economic development, educational resources for entrepreneurship, placement of the entrepreneurship concept in vocational education programs and review of basic concepts related to entrepreneurship such as business ownership options and entrepreneur characteristics.

**CTE 425/525 - Development of Career and Technical Education Thought and Practice Credits: 3**

Philosophy, origins, and development of vocational, technical and practical arts, educations at adult, postsecondary, secondary, and pre-vocational levels. Current and emerging principles, practices, and issues are stressed.

**CTE 430/530 - Cooperative Edu. Coordination Techniques Credits: 3**

This course emphasizes the organization of cooperative work experience in vocational education programs: agriculture, marketing education, health occupations, family consumer sciences education, business education, and trade and industrial. Emphasizes strategies and techniques for coordinating classroom instruction with on-the-job work experience. Topics include: program organization, coordinator responsibilities, student selection, placement, advisory councils, public relations, training stations, training plans, legal aspects, and program and student evaluation.

**CTE 438 - Industrial Safety Credits: 2**

Industrial accident prevention considering the nature and extent of the accident problem. Emphasis upon the development of a safety program for instructional programs and industrial management.

**CTE 457 - Instructional Technology Credits: 2**

Visual aids used in vocational and technical education and their relationship to the various occupational areas.

**CTE 463/563 - Technical and Industrial Experience Credits: 1-4**

This course is designed for Career and Technical Educators. The purpose of this course is to aid the educator in staying current with new technologies and methodologies occurring in business and industry. Approval is required from the Coordinator of Career and Technical Education (CTE) at least two weeks prior to the

educational experience. To receive graduate credit a student will need to complete a paper reviewing the educational experience. Complete details on receiving undergraduate and graduate credit for the Technical and Industrial Experiences course are included in the application materials. (Appropriate forms and related paperwork can be acquired from the Coordinator of CTE.)

**CTE 472 - Public Relations and Advisory Committee Credits: 1-3**  
Techniques and media for communicating with the public information on different types of advisory committees used in vocational technical education and industrial firms.

**CTE 474 - Industrial Conference Leading Credits: (1-3)**  
Methods, procedures and techniques utilized by the vocational technical educator in arranging and conducting conferences with industrial personnel.

**CTE 475 - Vocational Youth Organizations Credits: (1-3)**  
Methods of establishing organizations at the local level.

**CTE 477 - Job Analysis and Employee Evaluation Credits: 3**  
Analyzing jobs and evaluating employee performance for purposes of training, promotion, salary adjustments, and establishing hiring criteria.

**CTE 488 - Student Teaching Credits: 8**  
Full time off-campus supervised teaching in a secondary or post-secondary Vocational Technical setting for 10 weeks. Student teaching fee assessed.

**CTE 490 - Seminar Credits: (2-3)**

**CTE 491/591 - Independent Study Credits: (1-4)**

**CTE 492/592 - Topics Credits: (1-3)**

**CTE 519 - Methods of Teaching Credits: 3**

**CTE 540 - Curriculum Design in Career & Technical Edu. Credits: 3**

**CTE 700 - Technology in Career Education Credits: 3**

**CTE 720 - Entrepreneurship Career Education Credits: 3**

**CTE 731 - Admin & Supervision of Career Education Credits: 3**

**CTE 788 - Research Problems Credits: (1-2)**

**CTE 790 - Seminar Credits: (1-3)**

**CTE 791 - Independent Study Credits: (1-3)**

**CTE 792 - Topics Credits: (1-3)**

**CTE 794 - Internship Credits: (1-3)**

**CTE 798 - Thesis Credits: 5**

## DANC (Dance)

**DANC 130 - Dance Fundamentals Credits: 1**

Basic skills course required of all physical education and public recreation majors. Includes analysis, skill development, and leadership of round, folk, square and social dances, traditional and contemporary.

**DANC 131 - Movement 1 Credits: 2**

Movement and dance theory as it relates to the body as an instrument of expression and communication.

**DANC 132 - Movement 2 Credits: 2**

The advanced principles of human movement as they apply to the individual, actor, dancer and the musician. Prerequisites: DANC 131.

**DANC 135 - Dance Activities Credits: 1**

Credit earned by active participation in academic sponsored dance performance activities. Prerequisites: Consent. Notes: May be repeated for up to 8 credits.

**DANC 230 - Technique 1 Credits: 2**

Technical dance training in basic structures of Classical Ballet and Jazz.

**DANC 231 - Technique 2 Credits: 2**

Technical dance training in basic structures of Modern and Tap dance.

**DANC 240 - Multicultural Dance Activities Credits: 1**

Folk dances from around the world, including cultural background, costumes, skill differences for elementary, middle and high school, or adults.

**DANC 241-241L Creative Movement for Children & Lab Credits: 2**

Theory and laboratory class which studies how creative movement activities meet special needs of children. Emphasis is on a problem-solving approach. Consideration is given to developmental stages of children, basic elements of dance, creative movement, games, rhythms and manipulatives, plus teaching methods, structuring and presenting lessons. Corequisites: DANC 241L-DANC 241

**DANC 330 - Technique 3 Credits: 2**

Technical dance training in intermediate and advanced structures of Classical Ballet and Jazz. Prerequisites: DANC 230 or Instructor Consent.

**DANC 331 - Technique 4 Credits: 2**

Technical dance training in intermediate and advanced structures of Modern and Tap Dance. Prerequisites: Technique 2 or Instructor Consent.

**DANC 420 - Techniques of Teaching Dance Credits: 2**

Theory and practice of teaching the various dance forms: social, square, folk, modern, rhythmic games, creative dance for children. Experience in lesson planning. Unit and general curriculum requirements K-12. Prerequisites: DANC 130, DANC 240.

**DANC 430 - Composition and Choreography Credits: 2**

Methods of creating dance choreography. Prerequisites: DANC 230 and 231, or DANC 330 and 331, or Instructor Consent.

**DANC 431 - Dance for the Musical Theatre Credits: 2**

Dance exploration in many genres of dance for the musical theatre. Prerequisites: DANC 230 and 231, or DANC 330 and 331, or Instructor Consent.

**DANC 491 Independent Study Credits: 1-3** Prerequisites: Consent.

**DANC 492 - Topics Credits: 1-5**

## DS (Dairy Science)

**DS 109 - First Year Seminar\*\* Credits: 2**

First-year experience course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\*Course meets IGR #1

**DS 130-130L - Introduction to Dairy Science and Lab Credits: 3**

Essentials of successful dairy farm operation, production testing, feeding, and management of dairy herd. Composition of milk; testing of milk for milk fat, milk solids and quality; and an examination of nutritive value of dairy products. Fall and Spring. Corequisites: DS 130L-DS 130.

**DS 202 - Dairy Products Judging Credits: 1** Quality of milk, cheddar cheese, ice cream, and cottage cheese. Spring

**DS 212 - Dairy Cattle Evaluation Credits: 2**

Fundamental aspects of evaluation of dairy cattle for type; type classification of dairy cattle. Spring

**DS 231 - Dairy Foods Credits: 3**

Survey of the dairy processing industry. Principles of processing and manufacturing dairy foods including quality standards and nutritive quality. For non-dairy manufacturing majors only. Fall.

**DS 301-301L - Dairy Microbiology and Lab Credits: 3**

Quality control problems during the production and processing of fluid milk for human use, including role of regulatory agencies and quality standards. Odd Spring. Prerequisites: MICR 231-231L or MICR 233-233L Corequisites: DS 301L-DS 301.

**DS 311 - Dairy Cattle Judging Credits: 1**

Judging major breeds of dairy cattle. Type classification. May include participation in regional dairy cattle or national collegiate cattle judging contests. Maximum of 2 credits. Fall. Prerequisites: DS 212.

**DS 313-313L Technical Control of Dairy Products I & Lab Credits: 3**

Fundamental properties of milk and its products as they affect testing. Common laboratory tests for procurement and grading milk. Compositional tests for control of dairy products during processing. Fall. Prerequisites: DS 130, CHEM 106 or CHEM 112. Corequisites: DS 313L-DS 313.

**DS 314 - Dairy Farm Operation Evaluation Credits: 1**

Examination of the performance and management of milking operations, feeding protocols, reproduction, herd health, facilities, heifer-raising, and financial records of dairy farms. Evaluations will include written reports and oral presentations on a herd's challenges and opportunities for optimization. Students may have opportunities to participate in regional or national Dairy Challenge competitions.

**DS 321-321L - Dairy Product Processing I and Lab Credits: 5**

Principles and practices in assembling, receiving, processing, and packaging milk and cream for beverage use, frozen milk and cream, concentrated milks, and ice cream. Sanitation procedures. **Odd Fall.** Prerequisites: DS-130; DS 313 (as pre-requ or concurrent); and MICR 231-231L or MICR 233-233L Corequisites: DS 321L-DS 321.

**DS 322-322L - Dairy Product Processing II and Lab Credits: 5**

Processing or manufacturing of relatively nonperishable dairy products such as butter, cultured milks, cheese, dried milk, casein, lactose, and anhydrous milk fat. Even Spring. Prerequisites: DS 130, DS 313, and MICR 231-231L or MICR 233-233L Corequisites: DS 322L-DS 322.

**DS 401 - Advanced Dairy Products Judging Credits: 1-2**

Quality evaluation of dairy products. Includes participation for alternate team members in the regional collegiate dairy products evaluation contest. Alternate team members take course for 1 credit. Team members who participate in both the regional and national contests take course for 2 credits. Fall. Prerequisites: DS 202 Notes: Maximum of 3 credits.

**DS 411-411L - Dairy Breeds and Breeding and Lab Credits: 3**

Origin, genetics, characteristics, and development of major breeds of dairy cattle. Breeding and selection based on pedigrees, production records, type classification, and sire analysis. Odd Fall. Prerequisites: DS 130. Corequisites: DS 411L-DS 411.

**DS 412-412L - Dairy Farm Management and Lab Credits: 4**

Dairy herd management practices, production testing, labor requirements, buildings and equipment maintenance, crop systems, merchandising cattle and milk. Dairy farm capital, budgets, and credits; and factors affecting economic returns of dairy farming. Odd Spring. Prerequisites: DS 130 Corequisites: DS 412L-DS 412.

**DS 413-513 - Physiology of Lactation Credits: 3**

Anatomy, physiology, and biochemistry of mammary glands. Factors affecting quality and quantity of milk. Even Spring.

**DS 421 - Dairy Plant Management Credits: 3**

General costs, buildings, equipment, merchandising, personnel, other management factors of dairy processing plants. Even Fall. Prerequisites: Junior standing

**DS 422-422L - Technical Control of Dairy Products II and Lab Credits: 4**

Physical and chemical properties of milk constituents and their effect on processing, testing, and nutritive value of milk and its products. Intentional or accidental additives, their effect and significance. Laboratory tests for process control or legal compliance. Spring. Prerequisites: DS 313 and CHEM 108 or 120. Corequisites: DS 422L-DS 422.

**DS 432 - Dairy Cattle Feeding Credits: 3**

Practical considerations involved in feeding dairy cattle. **Even Fall.** Prerequisites: AS 233.

**DS 442-542 - Dairy Product and Process Development Credits: 3**

Students will work in small groups to design and produce a prototype dairy product. The course will include standards of identity for dairy products, nutritional labeling requirements, least cost formulation, design of manufacturing processes and methods for planning product development. Odd Spring. Prerequisites: DS 313.

**DS 490 - Seminar (AW) Credits: 1 Fall.****DS 491 - Independent Study Credits: (1-3)****DS 492 - Topics Credits: (1-4)****DS 494 - Internship Credits: (3-12)****DS 496 - Field Experience Credits: (3-12)****DS 497 - Cooperative Education Credits: (3-12)****DS 498 - Undergraduate Research/Scholarship Credits: 1-6****DS 711 - Ruminology Credits: 3****DS 722-722L - Advanced Dairy Microbiology and Lab Credits: 3****DS 731 - Lab Techniques in Dairy Science Credits: 3 Even Fall.****DS 790 - Seminar (COM) Credits: 1-3****DS 791 - Independent Study Credits: (1-4)****DS 792 - Topics Credits: (1-4)****DS 798 - Thesis Credits: (1-7)****DS 898D - Dissertation-Ph.D. Credits: (1-12)****ECE (Early Childhood Education)****ECE 150-150L - Early Experience and Lab Credits: 2**

Experimental-based introduction to professional contexts within early childhood education (ECE) and/or human development and family studies (HDFS). Students serve as volunteers in community-based human services and educational settings, shadowing professionals to better understand professional roles and opportunities. Corequisites: ECE 150L-ECE 150.

**ECE 228-228L - Guidance with Young Children and Lab (COM) Credits: 1-21**

Observation and guidance in preschool under supervision of professional practitioners. Laboratory that accompanies ECE 228. Prerequisites: Admission into PSI, ECE 150; ECE-372-372L Corequisites: ECE 228L-228 & department written consent Notes: Students enrolled in ECE prior to Fall 2012 will take the course as ECE 228 - Guidance with Young Children and ECE 228L - Observation and Participation in Early Childhood Lab (COM)

**ECE 292 - Topics Credits: 1-3****ECE 361-361L - Methods and Materials/Early Childhood Education and Lab (AW) Credits: 2, 1**

Applications for early childhood classrooms will be studied. Inquiry-based, hands-on methods to address materials exploration, creative and affective development, anti-bias and culturally responsive curriculum which are both developmentally appropriate and inclusive for all children from ages three to eight. Prerequisites: Admission to PS I, ECE 150, ECE 371, and ECE 372 Corequisites: ECE 361L-361, 228/228L, ECE 362/362L, ECE 363/363L Notes: Students enrolled in ECE prior to Fall 2012 will take ECE 361/362 as ECE 361-361L - Methods and Materials/Early Childhood Education and Lab (AW) and ECE 362-362L - Early Childhood Education Curriculum and Lab

**ECE 362-362L - Early Childhood Curriculum & Assessment and Lab Credits: 2, 1**

This course will focus on curriculum models and assessment protocols that have evolved from historical and theoretical perspectives. Rules and regulations, ethical standards, as well as principles of developmentally appropriate curriculum and assessment practices, that are inclusive for all children from ages three to eight, will be practiced. An emphasis will be placed on inquiry-based practices and multicultural perspectives, and connection between curriculum and assessment will be learned. Prerequisites: Admission to PS I Corequisites: ECE 228-228L, ECE 361-361L, ECE 363-363L Notes: Students enrolled in ECE prior to Fall 2012 will enroll in the course will take the course as ECE 362-362L - Early Childhood Education Curriculum and Lab.

**ECE 363-363L - Emergent Literacy and Numeracy and Lab Credits: 3, 0**

This course will focus on language and math learning and emergent literacy and math development of children from infancy to age 8. Focus will be on providing authentic, developmentally appropriate activities that are integrated across the curriculum. Students will learn to evaluate developmentally appropriate literature and literacy and math lessons/activities for young children (birth to 8). A lab experience will enable students to develop and implement strategies for classroom teaching and for linking classroom learning to home literacy and math. Laboratory course to accompany ECE 363. Prerequisites: Acceptance into PSI Corequisites: ECE 363L-363, ECE 228-228L, ECE 361-361L, ECE 362-362L Notes: Students enrolled in ECE prior to Fall 2012 will take the course as ECE 365-365L - Emergent Literacy in Birth to Eight Education and Lab.

**ECE 365-365L - Emergent Literacy in Birth to Eight Education and Lab Credits: 3**

This course will focus on language and emergent literacy development of children from infancy to age 8. Focus will be on providing authentic, developmentally appropriate activities that are integrated across the curriculum. Students will learn to evaluate developmentally appropriate literature for young children (birth to 8). A lab experience will enable students to develop and implement strategies for classroom teaching and for linking classroom learning and home literacy. Prerequisites: ECE 150, ECE 227, completed or currently enrolled in ECE 228. Corequisites: ECE 365L-ECE 365.

**ECE 371-371L - Infant and Toddler: Developmentally Appropriate Practices and Lab (COM) Credits: 3**

This course is a study of developmentally appropriate practices for infants/ toddlers (aged birth to 3 years). Students will learn developmentally appropriate learning environments and experiences for infants and toddlers that facilitate development and learning in the cognitive, language, physical, social/emotional, and aesthetic domains. The health, safety, and nutritional needs of infants and toddlers will also be studied and applied. Prerequisites: ECE 228-228L, HDFS 227. Corequisites: ECE 371L-ECE 371.

**ECE 372-Preschool to Middle Childhood Development Credits: 2**

This is a beginning level development course focused on the study of human growth and development from age three to twelve. This is one of two foundational development courses for the Early Childhood Education curricula. The curriculum for this course includes historical and modern view of child development, biological, cognitive and socio-emotional processes and periods of development from preschool to middle childhood and theories of development.

**ECE 412/512 - Kindergarten Education Credits: 3**

Course designed for students and teachers interested in work with kindergarten-age children. Issues, activities, and materials specific to kindergarten will be emphasized.

**ECE 420 Health, Safety & Nutrition of Young Children Credits 2**

Exploration of school health, safety, disease control and nutrition; development of health and nutrition policies and standards in early childhood settings based on current public policy; creating a healthy and safe school environment for young children; exploration of materials and methods for teaching health, safety and nutrition in

early childhood. Prerequisites: ECE 488, ECE 465, ECE 364, ECE 470 Notes: Students enrolled in ECE prior to Fall 2012 will enroll in the course as ECE 220 - Health, Safety and Nutrition of Young Child.

**ECE 441 Professional Issues in Child & Family Studies Credits 2**

Study of professional issues in the Child and Family Studies field. Course materials are inclusive of public policy, advocacy, leadership, professional development and ethics and workplace issues. Prerequisites: PS II, ECE 488 Corequisites: PSIII Notes: Students enrolled in ECE prior to Fall 2012 will take the course as ECE 441 - Professional Issues in Child and Family Studies.

**ECE 455 Admin. & Supervision of Early Childhood Setting Credits: 2**

Exploration of issues surrounding the administration of early childhood programs including identification of community needs, evaluation and appropriate use of space, equipment and materials, and policy and legal responsibilities. Exploration of staff selection, training and supervision. Prerequisites: ECE 488; PSIII Admission Corequisites: ECE 495 Notes: Students enrolled in ECE prior to Fall 2012 will take the course as ECE 455 - Administration and Supervision of Early Childhood Setting.

**ECE 464 Parent/Child Relationships in a Professional Context Credit: 3**

The focus of this course includes home-based, school-based, and community-based communication and involvement strategies with families. Students will learn about the diversity of families within society today. Theoretical, international, and other diverse perspectives on partnerships between families and professionals will be explored. Prerequisites: Admission into PSII; ECE 228/228L, ECE 362/362L, ECE 363/363L, ECE 361-361L Corequisites: ECE 488 Notes: Students enrolled in ECE prior to Fall 2012 will take the course as ECE 364 - Parent/Child Relationships in a Professional Context.

**ECE 465 Documentation, Inquiry & Teacher Research Credits: 2**

Methods of documentation, inquiry and teacher research will be explored. Students will engage students in the process of inquiry with young children and participate in teacher research on specific topics of interest as applied to work with children in a preschool setting. Prerequisites: ECE 228/228L, ECE 361/361L, ECE 362/362L, and ECE 363/363L Notes: Admission into PS II. Students enrolled in ECE prior to Fall 2012 will take the course as ECE 465 - Introduction to Developmental Assessment and Teacher-Research with Young Children

**ECE 468 Early Intervention in Family-Centered Practices Credits: 3**

An overview of current theories, issues and practices in early intervention including: historical, philosophical and attitudinal attributes, early intervention legislation, and service delivery models. Teaming with families and other professionals will be emphasized with attention to cultural sensitivity and family-centered practices. Prerequisites: HDFS 241, ECE 361, ECE 362, ECE 364.

**ECE 470 - Early Childhood Inclusion Strategies Credits: 3**

An introduction to teaching strategies and curriculum adaptations to include children who have disabilities in 0-5 early childhood educational settings. An overview of the following current early childhood intervention issues will be covered: risk determinants, disability characteristics, medical issues, assistive technology, and other resources both online and traditional. Family-centered practices will be emphasized. Prerequisites: ECE 228/228L, ECE 361/361L, ECE 362/362L, ECE 363/363L; PS II Admission Corequisites: ECE 488 Notes: Students enrolled in ECE prior to Fall 2012 will take the course as ECE 470 - Early Childhood Inclusion Strategies.

**ECE 473 - Orientation to K-3 Student Teaching Credits: 2**

This course is designed to prepare students for the professional role of teaching in kindergarten through third grade. Students study professional issues related to early childhood and elementary education. Course materials are inclusive of public policy, advocacy, leadership, professional development, ethics, and workplace issues. Corequisites: ECE 488



**ECE 475 Pedagogy & Guidance in Primary Grade Classrooms Credits 2**

This course explores the unique aspects of instructional design for the primary grades (kindergarten through grade 3). Content includes organizing the primary classroom for learning, establishing and maintaining a safe and predictable learning environment, developing effective lesson plans and aligning them with state curriculum standards and district curriculum goals, and exploring models of teaching and approaches to learning in the early elementary grades. Corequisites: ECE 495 Practicum (for K-3)

**ECE 478-478L - Integrated Curriculum in Birth-to-Age Eight Education and Lab Credits: 4**

This course supports teacher candidates in the semester immediately preceding the K-Grade 3 student teaching semester. Topics of study include content and methods of instruction for teaching an integrated curriculum in the primary grades with specific emphasis on science, social studies, and language arts. Students will develop and collect applicable resources for teaching in the primary grades. Prerequisites: PS III admission & consent Corequisites: ECE 478L-478, ECE 495 (K-3)

**ECE 480 - Travel Studies Credits: 1-5**

This travel study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators of other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation and a written report.

**ECE 487 Orientation to Child & Family Studies Practicum Credits: 1**

Orientation to Child and Family Services Practicum will identify expectations of the experience. Students will develop written and verbal communication skills necessary to obtain a practicum and work site. Students will investigate and locate an appropriate practicum site and set professional and educational goals for the practicum experience. Prerequisites: ECE 488; PS III admission Corequisites: ECE 495 Notes: Students enrolled in ECE prior to Fall 2012 will take the course as ECE 487 - Orientation to Child and Family Services Practices.

**ECE 488 - Student Teaching (COM) Credits: 1-12**

Students preparing for teaching in the early childhood setting will observe, participate, and teach under the supervision of the regular classroom teacher in an approved early childhood setting. An additional "Mandatory Fee" applies to this course. Corequisites: ECE 420, ECE 465, ECE 464, ECE 470 Notes: Students enrolled in ECE prior to Fall 2012 will take the course as ECE 488 - Student Teaching (COM).

**ECE 491-591 - Independent Study Credits: 1-3****ECE 492-592 - Topics Credits: 1-3****ECE 495 - Practicum (COM) Credits: 1-12**

Corequisites: ECE 455, ECE 441, ECE 487 Notes: Students enrolled in ECE prior to Fall 2012 will take the course as ECE 495 - Practicum (COM).

**ECE 543 - Child Inquiry Credits: 2****ECE 645 - Contemporary Perspectives inECE Credits: 3****ECE 665 - Parent Education: Theory and Issues Credits: 3****ECE 676 - ECE Admin & Practicum Credits: 1-4****ECE 700-700L - Research Methods and Lab Credits: 4****ECE 711 - Child Development Theory & Application Credits: 3****ECE 788 - Individual Research and Study Credits: 1-7****ECE 790 - Seminar Credits: 1-3****ECE 791 - Independent Study Credits: 1-3****ECE 792 - Topics Credits: 1-3****ECE 794 - Internship Credits: 1-7****ECE 795 - Practicum Credits: 1-6****ECE 798 - Thesis Credits: 1-7****ECON (Economics)****ECON 101 - Global Economy \* (G) Credits: 3**

A study of basic economic principles presented from a global perspective and focused at individuals with little or no previous economic skills. Topics include: modern economic systems, foreign exchange rates, import and export trade, labor flows, government policy, and consumer behavior and welfare. (Not a substitute for ECON 201 or ECON 202.) Notes: \* Course meets SGR #3.

**ECON 201 - Principles of Microeconomics \* \*\* (COM) Credits: 3**

Principles of Microeconomics studies basic economic concepts as they relate to consumer, worker, and business decisions. Emphasis is given to satisfaction maximizing behavior by individuals and profit maximization by firms. Market structures are thoroughly analyzed regarding their effect on price, output, and competitiveness. Notes: \*Course meets SGR #3 and \*\* IGR #2

**ECON 202 - Principles of Macroeconomics \* (G) Credits: 3**

Principles of Macroeconomics considers the economy as a whole, how its sectors interact, and how monetary and fiscal policy can influence output, inflation, interest rates, unemployment, poverty, debt, and other factors. Notes: \* Course meets SGR #3

**ECON 292 - Topics Credits: (1-4)****ECON 301 - Intermediate Microeconomics (COM) Credits: 3**

Intermediate microeconomics examines more advanced microeconomic theory, then applies it to consumers' and businesses' consumption, pricing, and output decisions in various types of markets. Prerequisites: ECON 201, MATH 121 or MATH 123 or MATH 125.

**ECON 302 - Intermediate Macroeconomics (COM) Credits: 3**

Intermediate macroeconomics examines more advanced macroeconomic theories, then uses them to understand the determinants of national output, prices, interest rates, and employment under various conditions, and to evaluate effectiveness of monetary and fiscal policies. Prerequisites: ECON 201; ECON 202; MATH 102 or 115 or 120 or 121 or 123 or 125 or 281.

**ECON 330 - Money and Banking (COM) Credits: 3**

Money and banking examines the historical development of money, the bank system, and the federal reserve in the United States. The course studies interest rate determination and how monetary policy affects rates and the economy. Prerequisites: ECON 201, ECON 202.

**ECON 370 - Marketing Credits: 3**

Marketing; market organization and cooperative marketing functions; pricing; efficiency, and role and management of marketing activities. Prerequisites: ECON 201 or ECON 202 Cross-Listed: BADM 370.

**ECON 372 - Intro to Resource & Environmental Economics Credits: 3**

Introduction to environmental economics. The course surveys environmental issues such as pollution and carbon emissions. Cost-benefit analysis of the cleanup of environmental problems is introduced as are net present value metrics. Cross-Listed: AGECE 372

**ECON 403-503 - History of Economic Thought Credits: 3**

History of economic thought surveys the historical development of economic theory from ancient to modern times. The writings of Aristotle, Adam Smith, Marx, and Marshall provide part of the diverse menu of economic thought. Prerequisites: ECON 201 or 202.

**ECON 405 - Comparative Economic Systems (COM) Credits: 3**

Comparative economic systems studies the characteristics of modern economic systems and the significant thought and experience that have influenced their emergence and development. It uses the U.S. as a benchmark for comparing developed and developing economies in terms of output per capita, social welfare, income distribution, and other conditions. Prerequisites: ECON 201, ECON 202.

**ECON 420-520 - Economics of the Public Sector Credits: 3** (offered on demand) Governmental operations, policies, and revenues as related to employment, productivity and economic welfare. Alternatives that would affect social services, education, commerce and trade, fiscal policies, and quality of life. Prerequisites: ECON 201 or consent.

**ECON 423 - Introduction to Econometrics (COM) Credits: 3** Introduction to econometrics studies probability, point and interval estimation, test of hypotheses, multiple regression and correlation, chi-square analysis, and analysis of variance. Prerequisites: MATH 121, STAT 281.

**ECON 428 - Mathematical Economics Credits: 3** Mathematical methods in introductory calculus and linear algebra. Applications to economic analysis. Static and dynamic partial and general equilibrium models, production functions, activity analysis, distribution, cycles, growth, mathematical programming, and model building. Prerequisites: ECON 301, ECON 302, MATH 121.

**ECON 431-531 - Managerial Economics Credits: 3** Applications of microeconomic theory, statistics and other quantitative methods to analysis and solution of decision making problems confronted by managers of agribusiness, commercial and manufacturing enterprises. Topics include economic analysis of demand, production, cost, market structure, government regulation, risk, and capital budgeting. Prerequisites: ECON 201, STAT 281.

**ECON 433 - Public Finance (COM) (AW) Credits: 3** Public finance focuses on the role of the public sector in the United States economy. It uses economic analysis to examine when government intervention in a market economy might be justified and to evaluate public spending and taxes. Prerequisites: ECON 201, ECON 202.

**ECON 440-540 - Economics of International Sector Credits: 3** International flow of trade and balance of payments. Monetary and fiscal policies. Trade controls and their effect upon the agricultural and domestic economics. Significant current developments in trade and finance. Prerequisites: ECON 201, 202, and ECON 301, 302, or 330

**ECON 450-550 - Industrial Organization (COM) Credits: 3** Industrial organization studies how different industry structures influence firm performance and business practices, and how government policies affect competitiveness and the economy. Prerequisites: ECON 201, ECON 202.

**ECON 453-553 - Risk Management-Personal and Business Credits: 3** Protection against or adaptation to risk and uncertainty. Principles and practices of fire, casualty, surety and life insurance and other risk management techniques. Prerequisites: STAT 281 and ECON 301.

**ECON 460-560 - Economic Development \*\* (G) Credits: 3** Developing and developed national economies. Factors impacting economic development. Role of public policies in development. Agricultural and rural development issues emphasized. Prerequisites: ECON 201, ECON 202, or consent. Notes: \*\* Course meets IGR #2.

**ECON 467 - Labor Law and Economics Credits: 3** History and development of the U.S. labor movement; the labor market in a market economy from firm's and union's viewpoint; collective bargaining; public policy toward collective bargaining. Prerequisites: ECON 201 or ECON 202, or junior standing.

**ECON 472-572 - Resource and Environmental Economics (COM) Credits: 3** Resource and environmental economics surveys the allocation and conservation of natural resources from a perspective of optimal use and sustainability. Emphasis is placed on environmental economics including the problems of pollution, population, and economic

growth. Methods for evaluating projects and programs are considered. Prerequisites: ECON 201

**ECON 476-576 - Marketing Research Credits: 3** Marketing problems confronting agribusinesses and businesses. Descriptive and analytical techniques in a research methods approach. Marketing research techniques. Prerequisites: ECON 370, STAT 281. Cross-Listed: BADM 476.

**ECON 482 - Labor Economics (COM) Credits: 3** Labor economics studies the functioning of labor markets. Topics include the theory of labor supply, unions, discrimination, and the government role in labor markets. Prerequisites: ECON 201 and 202

**ECON 490 - Seminar (COM) Credits: (1-3)**  
**ECON 491-591 - Independent Study (COM) Credits: (1-4)**  
**ECON 492 - Topics (COM) Credits: (1-4)**  
**ECON 493-593 - Workshop Credits: (1-3)**  
**ECON 494 - Internship (COM) Credits: (1-6)**  
**ECON 496 - Field Experience Credits: (1-3)**  
**ECON 498 - Undergraduate Research/Scholarship (COM) Credits: 1-12**  
**ECON 601 - Economics Study in Industrial Management Credits: 3**  
**ECON 610 - Financial Management Credits: 3**  
**ECON 660 - Operations Management Credits: 3**  
**ECON 662 - Bio-Energy Economics and Sustainability Credits: 3**  
**ECON 663 - Bio-Energy Feasibility and Commercialization Credits: 3**  
**ECON 672 - Bioenergy and Resource Economics Credits: 3**  
**ECON 691 - Independent Study Credits: (1-3)**  
**ECON 692 - Topics Credits: (1-4)**  
**ECON 703 - Advanced Macroeconomics Credits: 3**  
**ECON 704 - Advanced Microeconomics Credits: 3**  
**ECON 705 - Econometrics Credits: 3**  
**ECON 707 - Research Methodology in Applied Economics Credits 2**  
**ECON 740 - Investment Science Credits: 3**  
**ECON 788 - Research Paper Credits: (1-3)**  
**ECON 792 - Topics Credits: (1-4)**  
**ECON 798 - Thesis Credits: (1-7)**

## **ED (Education)**

**ED 692 - Topic Credits: 1-4**  
**ED 695 - Practicum Credits: 1-4**

## **EDAD (Educational Administration)**

**EDAD 695 - Practicum Credits: 1**  
**EDAD 700 - Introduction to School Administration Credits: 2**  
**EDAD 701 - Introduction to Educational Admin Credits: 3**  
**EDAD 707 - The Principalship Credits: 2**  
**EDAD 708 - Elementary Principalship Practicum Credits: 1**  
**EDAD 709 - Secondary Principalship Practicum Credits: 1**  
**EDAD 715 - Supervision Credits: 3**  
**EDAD 730 - School Finance Credits: 2**  
**EDAD 735 - School Law Credits: 3**  
**EDAD 741 - Community and Public Relations Credits: 2**  
**EDAD 788 - Research Problems in Edu. Admin Credits: 1-2**  
**EDAD 790 - Seminar Credits: (1-3)**  
**EDAD 791 - Independent Study Credits: (1-3)**  
**EDAD 792 - Topics Credits: (1-3)**  
**EDAD 793 - Workshop Credits: (1-3)**  
**EDAD 794 - Internship Credits: (1-6)**

## **EDER (Education Evaluation & Research)**

**EDER 415 - Educational Assessment Credits: 2**  
A study of educational measurements covering both the elementary and secondary fields.

**EDER 492-592 - Topics Credits: (1-3)**  
**EDER 691 - Independent Study Credits: (1-3)**  
**EDER 711 - Educational Assessment Credits: 3**  
**EDER 760 - Informational Literacy Credits: 3**  
**EDER 788 - Research Problems in Education Credits: (1-2)**  
**EDER 792 - Topics Credits: (1-3)**

## **EDFN (Education Foundations)**

**EDFN 193 - Workshop Credits: 1**

**EDFN 293 - Workshop Credits: 1**

**EDFN 338 - Foundations of American Education (COM) Credits: 1-2**

A survey of the goals, history, organization, and philosophy of pre-K-12 American education, with emphasis on teaching as a profession; contemporary issues and practices, legal and ethical responsibilities, and attributes of effective teachers.

**EDFN 365 - Computer-Based Technology & Learning Credits: 2**

Prepares students to integrate computers into the curriculum by exploring the evolving uses and expectations of technology as a teaching and learning tool. Course objectives based on ISTE standards.

**EDFN 366 - Teaching Using Video Conferencing (COM) Credits: 1**

This course is an introduction to distance teaching methods, including designing lessons, best practices, and classroom management for distance education classrooms. Emphasis will be placed on videoconferencing classrooms and online learning.

**EDFN 393 - Workshop (COM) Credits: 1**

**EDFN 427-527 - Middle School: Philosophy and Application Credits: 2**

Group processes and issues in affective education at the middle school/junior high level. Topics for study are group processes, interdisciplinary team planning, cooperative learning, student advisory programs, self-esteem building, and student/teacher relationships. Prerequisites: Consent (admission into teacher education program, junior standing, an adolescent psychology/development course)

**EDFN 428-528 - Middle School Curriculum and Instruction Credits: 3**

The essential methods and materials of judging high/middle school instruction. Methods and topics included are the middle school concept, team teaching, mastery learning, exploratories, classroom management, and grouping strategies. Representative curriculum materials, appropriate to the transescent learner, are examined and utilized in multi-disciplinary team planning projects. Prerequisites: Consent (admission into teacher education program, junior standing, an adolescent psychology/development course)

**EDFN 452-552 - Foundations of Reading Credits: 3**

Description of normal process of development in reading skills and techniques which may be used in remedying deviations which hinder readers in speed or comprehension. Recommended for graduate students in Language Skills and Communications programs.

**EDFN 460-560 - Applied Linguistics for Teaching English as a Second Language Credits: 3**

The study of social and linguistic structures which undergird different discourse forms. Emphasis will be on discourse forms which are particularly important for full participation in US culture such as the rhetoric of public and school interactions.

**EDFN 461-561 - Cultural and Psychological Perspectives in the Acquisition of English as a Second Language Credits: 3**

Addresses the social and cognitive processes involved in the acquisition of a second language including developmental influences. Prerequisites: EDFN 460/560

**EDFN 462-562 - Teaching Language Arts for English as Second Language Across the Curriculum Credits: 3**

The teaching of reading and writing to students with limited English proficiency. Emphasis will be on reading and writing as it pertains to performance in educational and public settings. Prerequisites: EDFN 460/560

**EDFN 463-563 - Methods of Teaching English as Second Language Credits: 3**

Develops the central concepts, tools of inquiry, and structure of teaching English to students with limited English proficiency. Includes the evaluation of instructional processes, learning resources, curriculum, and programs. Emphasis will be on teaching students to use English in educational and public settings. Prerequisites: EDFN 460/560

**EDFN 466-566 - Literacy in Primary Grades Credits: 3**

This course is designed for individuals interested in teaching literacy in the primary grades. It follows the International Reading Association's (IRA) professional standards and includes scientifically-based reading research regarding instruction and assessment Corequisites: EDFN 466L-566L

**EDFN 466L-566L - Literacy in Primary Grades Lab Credits: 0**

Lab to teach reading methods in local elementary primary classrooms. This will be an application of material learned in EDFN 466-566. Corequisites: EDFN 466-566.

**EDFN 475 - Human Relations (COM) Credits: 3**

Focuses on characteristics, contributions, and strengths of a pluralistic society; various cultural perspectives and specific information about cultures, the dehumanizing impact of biases and negative stereotypes; and the human relations approach to teaching.

**EDFN 489 - Professional Issues in Education Credits: 1**

**EDFN 490-590 - Seminar (COM) Credits: 1-3**

**EDFN 492-592 - Topics (COM) Credits: (1-3)**

**EDFN 496 - Field Experience Credits: 1**

**EDFN 691 - Independent Study Credits: (1-3)**

**EDFN 700 - Exceptional Learners Credits: 3**

**EDFN 725 - Education in a Pluralistic Society Credits: 3**

**EDFN 727 - Group Processes Credits: 3**

**EDFN 730 - Current Issues in Education Credits: 3**

**EDFN 745 - Effective Teaching: Theory into Practice Credits: 3**

**EDFN 747 - Curriculum: Theory and Practice Credits: 2**

**EDFN 750 - Technology in Education Credits: 3**

**EDFN 751 - Teaching Reading Across Disciplines Credits: 3**

**EDFN 790 - Seminar (COM) Credits: (1-3)**

**EDFN 792 - Topics (COM) Credits: (1-3)**

**EDFN 794 - Internship Credits: (1-6)**

## **EE (Electrical Engineering)**

**EE 102 - Introduction to Electrical Engineering II Credits: 1**

Students will learn fundamental design techniques and build a system for entry into the EE design contest (SDSU's showcase engineering event). Students are exposed to systems aspects of electrical engineering through faculty and industry seminars and a variety of presentations.

**EE 220-220L - Circuits I and Lab (COM) Credits: 4**

This course is designed to provide the electrical engineering students with an understanding of the basic concepts of the profession. Topics covered include resistive circuits, transient circuits, and sinusoidal analysis. Students also investigate essential principles by conducting laboratory experiments related to the topics studied in the classroom. P-spice is used to analyze electrical circuits using personal computers. Prerequisites: "C" or better in MATH 125.

**EE 221-221L - Circuits II and Lab (COM) Credits: 4**

This course is designed to provide the electrical engineering student with an understanding of the basic concepts of the profession. Topics covered include resistive circuits, transient circuits, and sinusoidal analysis. Students also investigate essential principles by conducting laboratory experiments related to the topics studied in the classroom. P-spice is used to analyze electrical circuits using personal computers. Accompanies EE 221. Prerequisites: MATH 321 and "C" or better in EE 220.

**EE 222-222L - Circuits and Machines and Lab Credits: 4**

This course is designed to provide the electrical engineering student with an understanding of the basic concepts of the profession. Topics covered include resistive, capacitive and inductive circuits, transient and sinusoidal analysis. Other topics include magnetically coupled devices, such as transformers, DC and AC motors. Students also investigate essential principles by conducting laboratory experiments related to the topics studied in the classroom. Software tools are used to analyze electrical circuits. Prerequisites: P, MATH 321 and "C" or better in EE 220. Corequisites: EE 222L-222.

**EE 224L - EE Software Tools Lab Credits: 1**

Introduction to software application tools used in a majority of electrical engineering courses. Two primary applications tools studied are PSpice (circuit simulation) and MATLAB (matrix-based mathematics software). The course enables rapid mastery of each application's syntax and provides an ability to apply each tool to analyze and/or solve electrical engineering problems. The course is taught concurrently with EE 222 (Circuits and Machines) allowing for several circuit applications to be explored while learning the fundamentals of each tool. Prerequisites: "C" or better in EE 220 or consent Corequisites: EE 222.

**EE 245-245L - Digital Systems and Lab Credits: 4**

The fundamental concepts of analysis and design of digital circuits including combinational and sequential logic design using TTL, CMOS, PLD's and software tools. Laboratory topics which enhance the design concepts of the lecture course, EE 245. Prerequisites: "C" or better in CSC 150 or CSC 218. Corequisites: EE 245L-245.

**EE 260 - Electronic Materials Credits: 3**

Introduction to the materials, processes and designs used for the fabrication of electronic devices and packaging. Prerequisites: CHEM 112, PHYS 213 Corequisites: EE 220.

**EE 291 - Independent Study Credits: 1-3****EE 292 - Topics (COM) Credits: (1-3)****EE 300-300L - Basic Electrical Engineering I and Lab Credits: 3**

Circuit analysis and measurement concepts applicable to dc and sinusoidal ac electrical systems, including Ohm's Law and Kirchhoff's Laws. Non-EE students. Hands-on exposure to electrical components, circuits, test equipment and safety issues. Experiments are designed to reinforce the theoretical concepts presented in EE 300. For non-EE students.; Hands-on exposure to electrical components, circuits, test equipment and safety issues. Experiments are designed to reinforce the theoretical concepts presented in EE 300. For non-EE students. Prerequisites: MATH 125, PHYS 213 Corequisites: EE 300L-EE 300.

**EE 302-302L - Basic Electrical Engineering II & Lab Credits: 3**

Introduction to analog and digital electronic devices and applications. For non-EE students. Prerequisites: EE 300, EE 300L.

**EE 310 - Probabilistic Methods in Electrical Engineering Credits: 3**

Basic probability and random variables. Applications to system reliability and effect of tolerance specifications. Description of engineering systems and problems using nondeterministic modeling. Prerequisites: EE 316.

**EE 315 - Linear Control Systems Credits: 3**

Feedback control systems by operational and differential methods. Topics include differential and Laplace system modeling, Nyquist and Routh-Hurwitz stability analysis, and cascade PID/lead/lag and state-space feedback compensation design using root-locus, Bode and Ackermann's pole-placement methods. Prerequisites: EE 316.

**EE 316 - Signals and Systems I (COM) Credits: 3**

Description of deterministic signals through use of Fourier Series, Fourier and Laplace transforms. System descriptions and response treated by differential equations and transform theory. Prerequisites: "C" or better in EE 221.

**EE 317 - Signals and Systems II (COM) Credits: 3**

Study of discrete time signals and systems, including difference equations, discrete Fourier transforms, and Z transform. Applications and methods of digital signal filtering are considered. Prerequisites: EE 316.

**EE 320-320L - Electronics I (COM) Credits: 4**

Presents concepts of electronic devices and circuits including modeling of semiconductor devices, analysis and design of transistor biasing circuits, and analysis and design of linear amplifiers. Use of computer simulation tools and breadboarding as part of the circuit design process is emphasized. Students are introduced to methods for designing circuits that still meet specifications even when there are statistical variations in the component values. Accompanies EE 320. Prerequisites: "C" or better in EE 221.

**EE 321-321L - Electronics II and Lab Credits: 4**

Design and analysis concepts for linear and digital electronic circuits. Emphasis on integrated circuit design. Experimental design and analysis of electronic circuits Prerequisites: EE 320. Corequisites: EE 321L-EE 321.

**EE 347-347L - Microcontroller Systems Design & Lab Credits: 3**

Hardware concepts, organization and design of microcomputer systems, including single-chip microcomputers. Principles of microcomputer programming and operation using machine and assembly language. Laboratory topics which enhance the design concepts of the concurrent lecture course, EE 347. Prerequisites: "C" or better in EE 245 and either CSC 218 or 250. Corequisites: EE 347L-EE 347.

**EE 360 - Electronic Devices Credits: 3**

Introduction to microelectronic devices, semiconductor and junction theory, semiconductor devices, other solid-state devices. Prerequisites: EE 260. Corequisites: EE 320.

**EE 385 - Electromagnetics Credits: 4**

Experimental results of Coulomb, Ampere, and Faraday, classical field theory. Forces, potentials, energy storage and dissipation are all treated for static fields. Faraday's induction law, Maxwell's displacement current, and a complete description of the time-varying fields given by Maxwell's equations. Prerequisites: EE 221, MATH 225.

**EE 420-420L/520-520L - Electronics III and Lab Credits: 4**

Selected topics in the design of analog and digital electronics. Provides increased understanding of theory, simulation, and application of semiconductor devices. Experimental design and analysis of analog and digital electronic circuits. Prerequisites: EE 321-321L, EE 245. Corequisites: EE 420L-EE 420/EE 520L-EE 520.

**EE 422 - Engineering Economics and Management Credits: 2**

Economic aspects of engineering, annual cost and present worth calculations, and decisions among alternatives are treated. Management of life cycle, requirements generation, risk management, project management, and systems engineering are also covered.

**EE 424-424L/524-524L - RF Electronics and Lab Credits: 3**

Performance analysis and design methods for the functional blocks of radio frequency systems operating below the microwave bands. Prerequisites: EE 321, EE 316.

**EE 430-430L - Electromechanical Systems and Lab Credits: 4**

Basic engineering laws and concepts in analysis of electromechanical energy-conversion systems and devices. Includes study of DC and AC machines, and electronic drives. Systems, including electronic drives, electric machines, and mechanical loads, are analyzed in open-loop and closed-loop control for systems under steady-state and transient conditions. Experimental work with electronic drives and electric machines. Prerequisites: EE 385 Corequisites: EE 430L-EE 430.

**EE 433-533 - Computer Analysis Power Systems Credits: 3**

Concepts used in formulating load flow and fault study problems and stability analysis of power systems using computer solutions. Prerequisites: for undergraduates only EE-430, EE-415 or EE-515

**EE 434-434L - Power Systems and Lab Credits: 4**

Basic parameters of transmission lines. Representation of power systems, symmetrical components, network equations and solutions, load-flow studies and load-flow control, and symmetrical faults on synchronous machines. Computer (PowerWorld Simulator and/or PSCAD) modeling and simulation of power systems. Load-flow and load-flow control, symmetrical and asymmetrical faults, and contingency analysis studies are performed. Prerequisites: EE 385. Corequisites: EE 434L-EE 434

**EE 436-436L/536-636L - Photovoltaic Systems Engineering and Lab Credits: 3, 1**

Fundamentals of hybrid photovoltaic power systems. Topics may include: an overview of energy and electricity use; solar resource characteristics; load assessment; the fundamentals of solar cells, batteries, power electronics, and generators and other power sources; power system design; the National Electric Code; and energy economics. This lab provides practical experience in the design of hybrid photovoltaic power systems. Prerequisites: EE 320 & EE 360 Corequisites: EE 436/536L - 436/536

**EE 438 - Power Technology Tour Credits: 1**

Approximately 10 tour sites are visited and all companies cooperate with the tours by making special presentations on the site. Central to the theme of the course is to have inspections of electric generation, substation and industrial sites in the four-state area of South Dakota, North Dakota, Minnesota, and Wisconsin, which make a significant contribution to present electric power technology. Typical sites have included hydro, steam, and nuclear generation plants; sunflower and wood, and garbage co-generation plants; lignite coal fields; 400 kV DC transmission line terminals; 500 kV AC substation; energy control centers; coal gasification plant; static VAR generators, taconite mining and paper mills, wind power manufacturers, coal handling facilities, various manufacturing facilities. Prerequisites: Instructor Consent.

**EE 440-440L/540-540L - VLSI Design & Lab (COM) Credits: 3**

Provides an introduction to the technology and design of VLSI integrated circuits. Topics include MOS transistors, switch and gate logic, scalable design rules, speed and power considerations, floor planning, layout techniques, and design tools. (Design content -two credits) Prerequisites: EE 245 and EE 320 Corequisites: EE 440L-EE 440/EE 540L-EE 540.

**EE 450-550 - Biomedical Signal Processing Credits: 3**

Methods and techniques for the analysis and processing of physiological signals. Off-line and real-time digital signal processing using time and frequency domain techniques. Emphasis on signal processing of electrocardiographic signals. Prerequisites: EE 317.

**EE 454-554 Biomedical Instrument & Electrical Safety Credits: 3**

The design of electronic instrumentation for physiological applications. Emphasis on modeling and design of biopotential electrode/amplifier systems, physiological measurement techniques, therapeutic and prosthetic devices, and electrical safety in health care facilities. Prerequisites: EE 321 or consent.

**EE 4560-4560L - Sensor and Measurements Lab Credits: 2, 1**

Introduction to the operation, design, testing and applications of modern sensors in use and under development. Signal conditioning and system integration are also reviewed. Laboratory to accompany EE 460-560. Corequisites: EE 460L-460/560L-560.

**EE 462L-562L - Electronic Materials Lab Credits: 1**

An introduction to microelectronic fabrication techniques including evaporative and sputter deposition, photolithography, mask design, and packaging. Prerequisites: Instructor consent.

**EE 464-464L - Senior Design I and Lab(COM) Credits: 2**

This course will focus on the design process and culminate with the EE faculty approval of design projects (including schematics and

parts lists) for EE 465. Typical topics included are the development of a product mission statement, identification of the customer and customer needs, development of target specifications, consideration of alternate designs using a decision matrix, project management techniques, legal and ethical issues, FCC verification and certification, uses of probability and statistics for reliable design, interpretation of data sheets, and component selection. Prerequisites: Senior standing and completes EE 315, EE 317, EE 321, EE 321L, EE 347, EE 347L, EE 360, ENGL 277. Corequisites: EE 464L-EE 464.

**EE 465-465L - Senior Design II and Lab(COM) (AW) Credits: 2**

Sequel to EE 464 Senior Design I. Seniors build and test design project in simulated environment incorporating engineering standards and realistic constraints. Requirements include laboratory notebook, progress reports, final oral presentation and written report. Prerequisites: EE 464. Corequisites: EE 465L-EE 465.

**EE 470 - Communications Engineering Credits: 3**

Modulation and detection methods including circuit analysis and design for digital and analog communication systems are presented. Prerequisites: EE 316, EE 320.

**EE 471-471L/571-571L - Fiber Optic Comm. and Lab Credits: 4**

Theory and application of optical fibers and communication systems. Topics include fundamentals of optical fiber waveguides, electroluminescent sources, single-mode and multimode, propagation, coupling consideration, photo-detectors, signal degradation, fabrication and cabling, and transmission linked analysis This laboratory reinforces the theoretical concepts presented in the lecture course, EE 471-571. Topics include basic knowledge and skills needed for handling and testing optical fibers, characteristics of optical components, fiber optic communication systems and fiber optic sensing systems. Prerequisites: EE 316 Corequisites: EE 471L-EE 471/EE 571L-EE 571.

**EE 475-575 - Digital Image Processing Credits: 3**

Introduction to the fundamentals of digital image processing. Topics include image formation, transforms, enhancement, restoration, compression, and analysis. Prerequisites: EE 317 or consent.

**EE 491 - Independent Study (COM) Credits: (1-3)****EE 492-592 - Topics (COM) Credits: (1-3)****EE 492L-592L - Topics in Laboratory Experience Credits: 1**

This course provides opportunities for students to engage in hands-on experience in subject material that does not already have a laboratory component.

**EE 494 - Internship Credits: (1-3)****EE 497 - Cooperative Education Credits: (1-3)****EE 498 - Undergraduate Research/Scholarship Credits: 1-3****EE 570 - Digital Communication Systems Credits: 3****EE 615 - Linear Systems Theory Credits: 3****EE 636 - Photovoltaics Credits: 3****EE 660 - Electric Properties of Materials Credits: 3****EE 670 - Information and Signal Processing Credits: 3****EE 685 - Microwave Theory Credits: 3****EE 691 - Independent Study Credits: (1-3)****EE 692 - Topics Credits: (1-3)****EE 702 - Theory & Applications of Nanoscale Materials Credits:3****EE 716 - Printed Electronics Materials and Processes Credits: 3****EE 720 - Synthesis & Characterization of Nanomaterials Credits: 3****EE 723 - Luminescent Spectroscopy Materials Credits: 3****EE 736 - Advanced Photovoltaics Credits: 3****EE 737 - Organic Photovoltaics Credits: 3****EE 740 - Advanced Digital Hardware Credits: 3****EE 760 - Advanced Electronic Materials Credits: 3****EE 788 - Engineering Research or Design Paper Credits: (1-2)****EE 790 - Seminar Credits: 1****EE 791 - Independent Study Credits: (1-9)****EE 792 - Topics Credits: (1-3)****EE 798 - Thesis Credits: (1-7)****EE 898D - Dissertation Credits: Variable**

## EES (Ecology and Environmental Science)

### **EES 275 – Intro. to Environmental Science \*\* (G) Credits: 3**

Presents an introduction and review of the factors influencing the quantity, quality and distribution of resources within the environment, uses of the environment and relation to human population size and demographics, effects of natural and human disturbances on the environment and economic and political considerations for environmental management. Prerequisites: CHEM 112 AND BIOL 101, 103, 151, or 153. Notes: \*\*Course meets IGR #2

### **EES 425-425L/525-525L - Disturbance Ecology and Lab Credits: 4**

Introduction to basic concepts of disturbance ecology. Demonstration and discussion of linkages between basic biology and management of natural resources. Introduction to field and laboratory techniques for monitoring and assessment of ecological responses to pollution and other forms of disturbance. Prerequisites: BIOL 153, BIOL/NRM 311 Corequisites: EES 425L-425/525L-525.

### **EES 491 - Independent Study Credits: 1-3**

### **EES 494 - Internship Credits: 1-12**

### **EES 496 - Field Experience Credits: 1-12**

### **EES 498 - Undergraduate Research/Scholarship Credits: 1-4**

### **EES 592/692 - Topics Credits: 1-7**

## EHS (Education and Human Sciences)

### **EHS 109 - First Year Seminar \*\* Credits: 2**

First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society.

Notes: Course meets IGR #1

### **EHS 292 - Topics Credits: (1-3)**

### **EHS 309 - Interdisciplinary Group Processes Credits: 2**

This course is designed to help students to expand critical thinking skills and intellectual risk-taking strategies, learn to manage feedback and critique processes, and apply innovative solutions through problem-based learning in an interdisciplinary setting. Students will continue to investigate, reflect on, and integrate their awareness of contemporary issues, diversity, and wellness topics introduced in EHS 109.

### **EHS 310 - Leadership for Families & the Food System Credits: 3**

Principles of leadership within the unique contexts of agriculture, biological sciences, family and consumer sciences. Topics covered include definitions and approaches to the study of leadership, leadership styles, gender and ethnic diversity, leadership in groups, ethical issues, mission statements, and emerging leadership issues. Cross-Listed: ABS 310.

### **EHS 480/580 - Travel Studies Credits: 1-5**

This travel-study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators at other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

### **EHS 491/591 - Independent Study Credits: (1-3)**

### **EHS 492/592 - Topics Credits: (1-3)**

### **EHS 495 - Practicum Credits: (2-6)**

## ELED (Elementary Education)

### **ELED 488 - K-8 Student Teaching (COM) Credits: (2-16)**

Students preparing for teaching in the elementary school will observe, participate, and teach under the supervision of the regular classroom teacher in an approved elementary school. An additional "Mandatory Fee" applies to this course.

### **ELED 493-593 - Workshop Credits: 1-3**

### **ELED 495 - Practicum (COM) Credits: (1-12)**

### **ELED 592 - Topics Credits: 1-3**

### **ELED 748 - Elementary Curriculum Practicum Credits: 1**

## EM (Engineering Mechanics)

### **EM 214 - Statics (COM) Credits: 3**

The study of the effects of external forces acting on stationary rigid bodies in equilibrium. Vector algebra is used to study two and three dimensional systems of forces. Trusses, frames and machines, shear and moment in beams, friction, centroids, moments of inertia, and mass moments of inertia are discussed. Prerequisites: MATH 123.

### **EM 215 - Dynamics (COM) Credits: 3**

Newton's laws of motion are applied to particles and rigid bodies. Absolute and relative motion; force, mass and acceleration; work and energy; and impulse and momentum. Prerequisites: EM 214.

### **EM 216 - Statics and Dynamics (COM) Credits: (3-4)**

Statics: The study of effects of external forces acting on stationary rigid bodies in equilibrium. Frames and machines, friction, centroid and moments of inertia on areas and mass are discussed. Dynamics: Newton's laws of motion are applied to particles and rigid bodies. Topics considered are absolute and relative motion; force, mass, and acceleration (or particles and rigid bodies); work and energy; and impulse and momentum (of particles). Prerequisites: MATH 125, PHYS 211 or consent.

### **EM 321 - Mechanics of Materials (COM) Credits: 3**

Basic concepts of stress and strain that result from axial, transverse, and torsional loads on bodies loaded within the elastic range. Shear and moment equations and diagrams, combined stresses, Mohr's circle; beam deflections; and column action and equations. Prerequisites: EM 214.

### **EM 331 - Fluid Mechanics (COM) Credits: 3**

An introduction to the static and dynamic properties of real and ideal fluids, application of continuity, energy, and momentum principles to laminar, turbulent, compressible, and incompressible flows; and laminar and turbulent flow of fluids in closed conduits and around immersed bodies. Prerequisites: EM 215

### **EM 421/521 Intro to Mechanics of a Continuous Medium Credits 3**

General theory of a continuous medium. Kinematics of deformation and flow; stress tensors; conservation of mass, momentum and energy; invariance requirements; constitutive equations for solids and fluids; applications for special problems. Prerequisites: EM 331, MATH 331.

### **EM 422/522 - Theory of Elasticity Credits: 3**

Analysis of stress and strain; equilibrium and compatibility equations; Hooke's law; fundamental problems in the theory of elasticity; plane-stress and plane-strain problems of the narrow beam, rotating discs and a plate with a circular hole. Prerequisites: EM 321, MATH 331.

### **EM 423/523 - Theory of Plasticity Credits: 3**

Analysis of stress and strain; plastic behavior of materials; basic laws of plastic flow; applications to bending of beams, torsion of bars and thick-walled cylinders; slip line theory and its application to

extrusion problems; limit analysis theorems and their applications to structural problems Prerequisites: 422/522 or consent.

**EM 624 - Theory of Plates and Shells Credits: 3**

**EM 731 - Advanced Fluid Mechanics Credits: 3**

**EM 741 - Finite Element Analysis Credits: 3**

## **ENGL (English)**

**ENGL 3 - English as a Second Language: Grammar Review and Intermediate Composition Credits: 3**

Conversation, listening, and reading comprehension, vocabulary and idioms, grammar review and intermediate composition.

**ENGL 13 - English as a Second Language: More Complex Structural Patterns and Advanced Composition Credits: 3**

Conversation, listening, and reading comprehension, vocabulary and idioms, more complex structural patterns, and advanced composition. Prerequisites: ENGL 003 or placement.

**ENGL 23 - English as a Second Language: Listening and Reading, Grammar, Comprehension Credits: (3-5)**

A multi-skills course preliminary to ENGL 003 and ENGL 013. Reading and listening comprehension, vocabulary building, pronunciation, grammar and sentence structure, and formal and informal written and spoken English. A major focus will be written and oral sources. Prerequisites: Placement or permission of the instructor. May be required instead of or in addition to other English courses.

**ENGL 31 - Basic Writing I Credits: 1**

Intensive work in grammar and usage, punctuation, and paragraph development. Does not count toward graduation. (Taught as needed.)

**ENGL 32 - Basic Writing II Credits: 2**

Intensive work in grammar and usage, punctuation, and paragraph development. Does not count toward graduation.

**ENGL 33 - Basic Writing III Credits: 3**

Intensive work in grammar and usage, punctuation, and paragraph development. Does not count toward graduation.

**ENGL 101 - Composition I \* Credits: 3**

Practice in the skills, research, and documentation needed for effective academic writing. Analysis of a variety of academic and non-academic texts, rhetorical structures, critical thinking, and audience will be included. Prerequisites: ENGL 032, 033, or placement. Notes: \* Course meets SGR #1.

**ENGL 125 - Intro. to Peace and Conflict Studies\*\* Credits: 3**

Introduction to historical and contemporary debates within the discipline of Peace and Conflict Studies, during which each student is guided to identify her or his own interests within those debates, and then encouraged to evaluate and apply those interests within a coordinated service learning experience. Cross-Listed: GLST 125. Notes: This course meets IGR Goal 2.

**ENGL 151 - Introduction to English Studies Credits: 3**

This course, required of all first year English majors, will provide students with the background and professional skills to read critically and write analytically about literary texts. Students will learn to write from a variety of critical and theoretical stances. In addition, the course provides training in research methods for the discipline, including use of print and electronic sources, and in MLA documentation style. Students will generate bibliographies, source studies, and both documented and undocumented critical papers. Papers will be based on readings from poetry, fiction, and drama.

**ENGL 201 - Composition II \* Credits: 3**

Study of and practice in writing persuasive prose, with the aim to improve writing skills in all disciplines. Prerequisites: ENGL 101. Notes: \* Course meets SGR #1.

**ENGL 210 - Introduction to Literature \* \*\* Credits: 3**

Readings in fiction, drama, and poetry to acquaint students with literature and aesthetic form. Prerequisites: ENGL 101. Notes: \* Course meets SGR #4 or \*\* IGR Goal #2

**ENGL 211 - World Literature I \* \*\* (G) Credits: 3**

Selected works of world literature in translation from ancient times through the Renaissance Prerequisites: ENGL 101. Notes: \* Course meets SGR #4 and \*\* IGR Goal #2

**ENGL 212 - World Literature II \* (G) Credits: 3**

Selected works of world literature in translation since the Renaissance. ENGL 211 and 212 need not be taken in sequence. Prerequisites: ENGL 101. Notes: \* Course meets SGR #4

**ENGL 221 - British Literature I \* \*\* (G) Credits: 3**

A chronological survey of British literature from Old English through the 18th century. Prerequisites: ENGL 101. Notes: \* Course meets SGR #4 or \*\* IGR Goal #2

**ENGL 222 - British Literature II \* \*\* (G) Credits: 3**

A chronological survey of British literature from the 19th century to the present. ENGL 221 and 222 need not be taken in sequence. Prerequisites: ENGL 101. Notes: \*Meets SGR #4 or \*\* IGR Goal #2

**ENGL 240 - Juvenile Literature \* \*\* Credits: 3**

A survey of the history of literature written for children and adolescents, and a consideration of the various types of juvenile literature. Notes: \* Course meets SGR #4 or \*\* IGR Goal #2

**ENGL 241 - American Literature I \* \*\* Credits: 3**

Background to and survey of major works from the beginnings to the Civil War. Prerequisites: ENGL 101. \* Meets SGR #4 or \*\* IGR #2

**ENGL 242 - American Literature II \* \*\* Credits: 3**

Background to and survey of major works from the Civil War to the present. ENGL 241 and 242 need not be taken in sequence. Prerequisites: ENGL 101. Notes: \*Meets SGR #4 or \*\* IGR #2

**ENGL 248 - Women in Literature \* \*\* Credits: 3**

Study of literature by and about women from early times to the present. Prerequisites: ENGL 101 Cross-Listed: WMST 248 Notes: \* Course meets SGR #4 or \*\* IGR Goal #2

**ENGL 249 - Literature of Diverse Cultures \* \*\* Credits: 3**

Study of the literature of the world's peoples to appreciate ethnicity and cultural diversity. Course materials may range from early times to the present and may also include literature from Asia, Africa, South America, and Australia, as well as works from Native American, African American, Hispanic, Chicano, Jewish, Scandinavian, etc., sources. Accepted as humanities credit. Notes: \* Course meets SGR #4 or \*\* IGR Goal #2

**ENGL 250 - Science Fiction \* Credits: 3**

A survey of short stories and novels from the 19th century to the present. Notes: \* Course meets SGR #4

**ENGL 256 - Literature of the American West \* \*\* Credits: 3**

A study of the literature produced in our region, centered on the Great Plains, including that of Native Americans, both oral and written; of pioneers, immigrants; and farmers; Western literature, and current writers. Prerequisites: ENGL 101 Cross-Listed: AIS 256 Notes: \* Course meets SGR #4 or \*\* IGR #2

**ENGL 268 - Literature \* (COM) Credits: 3**

Introductory literature course focusing on one genre such as fiction, poetry, drama, etc. The genre will be identified each semester as, for example, "Literature: Fiction," or "Literature: Poetry," etc. May be repeated with different genre and content. Prerequisites: ENGL 101. Notes: \* Course meets SGR #4



**ENGL 277 - Technical Writing in Engineering\* Credits: 3**

Study and practice of technical writing in Engineering and related disciplines Prerequisites: ENGL 101 and GE 109 or PHYS 109 or consent Notes: \* Course meets SGR #1.

**ENGL 283 - Creative Writing I \*\*\* Credits: 3**

Study and practice in the techniques of writing fiction, poetry and/or drama. Prerequisites: ENGL 101. Notes: \* Course meets SGR #1, SGR #7, and \*\*IGR #2

**ENGL 330 - Shakespeare Credits: 3**

Representative comedies, tragedies, and histories of Shakespeare Prerequisites: ENGL 101; ENGL 201 is a *recommended* prerequisite

**ENGL 334 - English Drama: Credits: 3**

Course content can be any period or type of English drama; the period or type will be identified each semester as, for example, "English Drama: Renaissance" or "English Drama: Contemporary," etc. May be repeated with different name and content. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 335 - English Novel: Credits: 3**

Course content can be any period or type of the English novel; the period or type will be identified each semester as, for example, "English Novel: Gothic" or "English Novel: Victorian," etc. May be repeated with different name and content. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 356 - American Poetry: Credits: 3**

Course content can be any period or type of American poetry; the period or type will be identified each semester as, for example, "American Poetry: Contemporary" or "American Poetry: Nature," etc. May be repeated with different name and content. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 367 - American Short Story: Credits: 3**

Course content can be any period or type of American short story; the period or type will be identified each semester as, for example, "American Short Story: Contemporary" or "American Short Story: Western," etc. May be repeated with different name and content. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 368 - American Novel: Credits: 3**

Course content can be any period or type of American novel; the period or type will be identified each semester as, for example, "American Novel: Contemporary" or "American Novel: Gothic," etc. May be repeated with different name and content. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 379 - Technical Communication (COM) (AW) Credits: 3**

This writing intensive course provides instruction and practice in communicating effectively in technical and professional situations. Students can expect to write and deliver both informal and formal reports, proposals, and other professional documents, using standard and electronic formats and effective, concise, and ethical written and spoken English. Students will develop skills in document design and information literacy while analyzing workplace audiences (including global audiences) and writing collaboratively. Prerequisites: ENGL 201.

**ENGL 380 - Futuristic Communications Credits: 3**

Drawing upon the tenets of Futurism, the historical artistic movement begun by Italian poet Filippo's *Futurist Manifesto*, this intensive writing course will expose students to a wide-ranging set of cultural disruption issues caused by machines, technological innovations, and other rapid changes in modern life. Students will consider both the positive and negative implications caused by these cultural revolutions in a wide variety of literary, artistic, and cinematic texts. They will also think critically about their own role as global citizens. Prerequisites: ENGL 101 and 201. Cross-Listed: GLST 380.

**ENGL 383 - Creative Writing Credits: 3**

Study and practice in the techniques of writing fiction, poetry, and/or drama. Prerequisites: ENGL 201 and 12 credits from the subject ENGL.

**ENGL 410 - Mythology and Literature (COM) (AW) Credits: 3**

Origin and development of myths. Their importance in classical literature and their influence in literature, drama, music, psychology, and art. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 422-522 - Age of Chaucer Credits: 3**

Literature of the later medieval period, especially the 14th century, with some attention to continental works. Major focus on Geoffrey Chaucer, with reading in middle English. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 423-523 - Old and Middle English Literature Credits: 3**

Emphasizing pre-Norman heroic and Christian literature, the work of Chaucer and his contemporaries, and folk literature such as the ballads. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 424 - 7-12 Language Arts Methods (AW) Credits: 3**

Techniques, materials, and resources for teaching English language and literature to middle and secondary school students. Required of students in the English Education Option. Prerequisites: Acceptance into PSII; junior class standing

**ENGL 427-527 - Advanced Shakespeare Credits: 3**

Selected plays of Shakespeare and significant Shakespearean criticism. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 428-528 - English Renaissance/16th Century Literature Credits: 3**

Major writers of the 16th and early 17th centuries, excluding Shakespeare. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 434-534 - 18th Century English Literature Credits: 3**

British poetry, prose, drama, fiction, and criticism, 1660-1800. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 437-537 - English Romantic Literature Credits: 3**

English literature of the Romantic movement (1789-1832). Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 438-538 - English Victorian Literature Credits: 3**

English literature of the Victorian period (1830-1900). Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 439-539 - Modern English Literature Credits: 3**

English literature from 1900 to 1945. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 440-540 - Contemporary English Literature Credits: 3**

English literature since WWII. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 445 - American Indian Literature Credits: 3**

Traditional oral literature and autobiographies of American Indians. Prerequisites: ENGL 201 is a *recommended* prerequisite Cross-Listed: AIS 445

**ENGL 447 - American Indian Literature of the Present Credits 3**

Twentieth-century autobiography, fiction, and poetry by Native American authors. Prerequisites: ENGL 201 is a *recommended* prerequisite Cross-Listed: AIS 447

**ENGL 453-553 - American Renaissance Credits: 3**

An analysis of the major American writers from 1820-1865. Prerequisites: Junior class standing; ENGL 201 is a *recommended* prerequisite

**ENGL 454-554 - American Realism and Naturalism Credits: 3**  
American literature of the realist and naturalist movements of the late 19th and early 20th centuries. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 459-559 American Literature Between the Wars Credits 3**  
American literature of the modernist movement from 1917 to 1945. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 460-560 - Contemporary American Literature Credits: 3**  
American literature since WWII. Prerequisites: ENGL 201 is a *recommended* prerequisite

**ENGL 470 - Capstone in Peace and Conflict Studies Credits: 3**  
Student-driven course in which the instructor guides each student through the completion of an experience-based research project of her or his design. The topic of this project will both derive from and expand upon the interests that the student has identified during the Introduction to Peace and Conflict Studies course. Prerequisites: ENGL 125; ENGL 201 is a *recommended* prerequisite

**ENGL 479 - Capstone Course and Writing in the Discipline (AW) Credits: 3**

In depth study of selected major author (s), works(s), or other aspects of literary history; incorporates a review of current methods of literary criticism and an intensive focus on research and writing within the discipline. To be taken in the student's final on-campus Spring semester. Prerequisites: ENGL 151; Senior standing required

**ENGL 481-581 - Travel Studies Credits: (1-5)**

This travel study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators of other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

**ENGL 483-583 - Advanced Creative Writing Credits: 3**  
Advanced study of the writing process with the emphasis on refining technique and style in a genre of the student's choice, fiction, creative nonfiction, and drama. Prerequisites: ENGL 383.

**ENGL 484 - Literary Criticism Credits: 3** The theory and practice of various critical approaches to literature. Prerequisites: ENGL 101.

**ENGL 490 - Seminar Credits: (1-4)**

**ENGL 491-591 - Independent Study Credits: (1-5)**

**ENGL 492-592 - Topics Credits: (1-5)**

**ENGL 494 - Internship Credits: (1-12)**

**ENGL 704 - Introduction to Graduate Studies Credits: 3**

**ENGL 705 - Seminar in Teaching Composition Credits: 3**

**ENGL 710 - Seminar in Rhetoric Credits: 3**

**ENGL 724 - Seminar in English Literature to 1660 Credits: 3**

**ENGL 725 - Seminar in English Literature since 1660 Credits: 3**

**ENGL 728 - Seminar in American Literature to 1900 Credits: 3**

**ENGL 729 - Seminar in American Literature since 1900 Credits 3**

**ENGL 742 - Seminar in American Indian Literature Credits: 3**

**ENGL 755 - Seminar in Minority Literature Credits: 3**

**ENGL 791 - Independent Study Credits: (1-3)**

**ENGL 792 - Topics Credits: (1-4)**

**ENGL 798 - Thesis Credits: (1-7)**

## **ENTR (Entrepreneurship)**

**ENTR 202 - Human Resource Operations in Entrepreneurship Credits: 1**

Study of human resource issues and regulations and how they impact operations and work flow efficiencies.

**ENTR 203 - Intellectual Property in Entrepreneurship Credits: 1**  
Students will learn of mechanisms for the protection of ideas, products or services from unauthorized use. Students will also understand the relative merits of patents, trademarks, and copyrights and learn of ways to make such mechanism work for them.

**ENTR 204 Finance/ Venture Capital in Entrepreneurship Credits: 1**  
Study of the various financing options and their requirements that are available to help grow a business including traditional financing, angel investors, venture capital and government programs.

**ENTR 205 Legal Issues/Business Structure/Risk Mgmt Credits: 1**  
Legal Issues: Legal structure of your business; government regulations dealing with business taxation, employees, consumer protection, commerce, zoning, bankruptcy, and the environment; contract and lease terms and requirements.

**ENTR 206 - Taxation in Entrepreneurship Credits: 1**  
Study of the Internal Revenue Code sections and provisions that apply to individuals conducting business under sole proprietorship, partnership, s-corporation and/or limited liability company form of organization. Sales and Use tax reporting requirements.

**ENTR 207 - Financial Analysis/Record Keeping/Accounting in Entrepreneurship Credits: 1**

The course will cover financial projections in the context of business planning; general record keeping and accounting practices for existing businesses; and financial analysis to make business decisions.

**ENTR 208 - E commerce in Entrepreneurship Credits: 1**

This course provides a basic technical introduction to build "virtual" Internet-based businesses in creating opportunities and marketing plans. It investigates some different facets of electronic commerce and pertinent basic technologies to develop strategies.

**ENTR 236 - Innovation & Creativity Credits: 3**

Students will learn about the variables that stimulate and inhibit creativity and innovation in individuals, teams, and organizations. Strong emphasis is placed on thinking outside the structured environment while dealing with real applications. Students will learn the process of generating ideas that lead to innovative outcomes.

**ENTR 237 - ENTR II: Entrepreneurship Development Credits: 3**

Students will learn and understand the concepts of what it takes to be an entrepreneur by understanding entrepreneurial characteristics, forms of business, and business finances. Students will learn the value of doing a feasibility analysis, developing goals and objectives, and a vision and mission for a business. Students will also develop a strategic business plan and implement the business plan by starting a team business. Prerequisites: ENTR 236.

**ENTR 301 - Marketing/Promotion in Entrepreneurship Credits 1**

Marketing: Define marketing and market(s); analyze the customer and competition, develop strategies using the 4-P's of marketing—product, price, promotion, and place; learn the basics of collecting information and conducting market research.

**ENTR 302 - International & Global Marketing in Entrepreneurship Credits: 1**

This module will examine opportunities, risk, and reward involved in marketing products and services in the global market as compared to the domestic market as well as an analysis of business types that have the potential for success outside the United States.

**ENTR 304 - Strategy/Pricing/Location in Entrepreneurship Credits: 1**

Students will learn concepts and theories in marketing strategies; the techniques used for pricing products based on development costs and market demand, and the effects of location on sales, strategy and development.

**ENTR 305 - Selling in Entrepreneurship Credits: 1**

Students will learn to identify and develop communication skills to promote products in regards to consumer needs and desires.

**ENTR 306 - The Harvest in Entrepreneurship Credits: 1**

Discussion and analysis of various methods for harvesting a business including succession of planning, licensing, franchising, and when to sell a business.

**ENTR 320 Principles and Practices of Social Entrepreneurship Credits: 3**

Students will understand principles and practices of social entrepreneurship and be introduced to perspectives and endeavors of thought leaders and entrepreneurs who address social needs through various organizations. Students will identify issues and assess needs for social improvement in a local, national, and global perspective by defining the social good and assessing the role of market forces, philanthropy, and government to create sustained positive social value.

**ENTR 336 - Entrepreneurship I (COM) Credits: 3**

This course is an introduction to the concepts, terminology, and process of new venture creation, operation and growth, as well as the introduction of entrepreneurial management practices into existing businesses. New ventures include public and non-profit institutions as well as for profit businesses. This course will assist in the identification of entrepreneurial opportunities and strategies and the role of personal factors (including creativity). Legal, ethical, and social responsibilities are emphasized Cross-Listed: BADM 336.

**ENTR 338 - ENTR III: New Venture Creation Credits: 3**

Students will build on entrepreneurial concepts by discovering methods to structure and harvest a business, evaluate growth opportunities and challenges, understand advanced market research, business planning, learn financial concepts, ratio trend analysis, and business ethics. Students will apply the knowledge by writing individual business and marketing plans. Prerequisites: ENTR 237.

**ENTR 406-506 - Accounting for Entrepreneurs (COM) Credits: 3**

Accounting concepts and practices for entrepreneurs/small business owners. Emphasis given to the use of accounting tools to solve small business problems. Cross-Listed: ACCT 406-506 and BADM 406-506.

**ENTR 410 - Financing Innovative Ideas Credits: 3**

Students will learn various financing options and techniques to acquire funds to start and grow their ventures through traditional financing, angel investors, venture capital, and government programs. Students will produce a financial plan geared at obtaining funding for their concept and learn the tools necessary for the strategic analysis and understanding of financial information. Prerequisites: BADM/ENTR 438/538.

**ENTR 438-538 - Entrepreneurship II (COM) Credits: 3**

This course focuses on the process of screening an opportunity, drafting a personal entrepreneurial strategy, and understanding the business plan writing process. Building the entrepreneurial team and the acquisition and management of financial resources are emphasized along with venture growth, harvest strategies, and valuation. Prerequisites: BADM/ENTR 336. Cross-Listed: BADM 438-538.

**ENTR 483 - Small Business Consulting Credits: 3**

This course is a consulting program whereby students, working under faculty guidance, assist businesses by researching and developing possible solutions to specific problems involved in business start-up and expansion.

**ENTR 488 - Entrepreneurial Studies Capstone Credits: 1**

Students will complete and fine tune their business plan and learn how to effectively present their business plan. By this time the students will be accumulating resources and have determined potential financing for the business. Upon completion of the course, students will have an investment-ready business plan and be prepared to present their plan to financiers and/or investors. Prerequisites: ENTR 338.

**ENTR 489 - Business Plan Writing and Competition (COM) Credits: 1**

Students will write a business plan and present it to a panel of faculty and business community members. The top three business plan presenters will move on to a statewide competition. Cross-Listed: BADM 489.

**ENTR 494 - Internship Credits: 3**

Applied, monitored, and supervised field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and/or directed plan of study. A higher level of supervision is provided by the instructor in these courses than is the case with field experience courses.

**EPSY (Educational Psychology)****EPSY 302 - Educational Psychology (COM) Credits: 3**

A comprehensive study of the fundamental psychological facts, principles and theories that apply to the nature of the learner and the learning process.

**EPSY 422 - Psychology of Adolescence (COM) Credits: 3**

A study of the behavior and development of middle and secondary level students.

**EPSY 526 Psychology of the Early Adolescent Learner Credits: 3****EPSY 723 - Adolescent Psychology Credits: 3****EPSY 740 - Advanced Educational Psychology Credits: 3****ET (Electronics Technology)****ET 100-100L - Survey of Electronics and Lab Credits: 4**

Nonmathematical survey of fundamental electronic components and circuits. Corequisites: ET 100L-ET 100.

**ET 114-114L - DC Concepts and Lab Credits: 4**

Direct Current Circuits. Topics covered are basic laws and theorems directed toward resistive circuits. Kirchhoff's Laws, series and parallel circuits. Corequisites: ET 114L-ET 114.

**ET 116-116L - AC Concepts and Lab Credits: 4**

Alternating Current Circuits. Study of series and parallel circuits, network analysis, capacitance, inductance, and impedance. Prerequisites: ET 114 Corequisites: ET 116L-ET 116.

**ET 118-118L - DC and AC Concepts and Lab Credits: 6**

Direct and alternating current circuit concepts. Study of laws, theorems, and techniques used to predict, analyze, and measure electrical circuits. Basic electrical components, Kirchhoff's Laws, series/parallel circuits, instruments, network analysis, capacitance, inductance, and impedance. Corequisites: ET 118L-ET 118.

**ET 122-122L - Introductory Circuits and Lab Credits: 4**

The course provides a foundation in the theory and operation of semiconductor devices including solid-state diodes, bipolar junction and field effect transistors and other components related to discrete active circuits. Troubleshooting, schematic interpretation, and measurement techniques will be covered. Prerequisites: ET 114 or 118. Corequisites: ET 122L-ET 122.

**ET 210-210L - Introduction to Electronic Systems Credits: 4**

Introduction to electronic systems and circuits. Direct current and alternating current circuits including Ohm's law and Kirchhoff's laws. Measurement and characterization of electronic systems at the block diagram level. Introduction to semiconductors, including diodes, BJTs and MOSFETs. Introduction to digital circuitry, including basic logic gates. Laboratory practice includes the proper use of standard test instruments in troubleshooting. A study in the operation of active devices and their applications. Primary focus is on regulators, multivibrators, timers, and microcontrollers. Troubleshooting methods, measurement techniques, introductory circuit board design

and soldering fundamentals are also explored Prerequisites: MATH 102 Corequisites: ET 210L-210

**ET 222-222L - Radio Frequency Systems I and Lab Credits: 4**  
Radio wave propagation, transmission line theory, and antennas, and practical applications of each. Emphasis is placed on conduction of radio waves from a source to a load and its propagation through space. Prerequisites: ET 210. Corequisites: ET 222L-ET 222.

**ET 230-230L - Introductory Digital and Lab Credits: 4**  
Binary and hexadecimal number systems, switching theory, Boolean Algebra, logic diagrams, Karnaugh mapping, counter circuits, and pulse circuits. Prerequisites: ET 114 Corequisites: ET 230L-ET 230.

**ET 232-232L - Digital Electronics & Microprocessors & Lab Credits: 3**  
Development of digital logic and circuit building blocks, number systems, Boolean algebra, combinational and sequential logic, and integrated logic families. Introduction to the architecture, programming, application and troubleshooting of programmable logic device (PLD) electronic systems, including VHDL programming. Exploration of the basic architecture of microprocessors and applications. Laboratory practice includes digital circuit measurement and troubleshooting techniques. Laboratory to accompany ET 232. Prerequisites: ET 210-210L Corequisites: ET 232L-232.

**ET 240 - Techniques of Servicing Credits: 2**  
The practical aspects of servicing many types of electronic equipment. The latest techniques and equipment will be available for demonstration and laboratory usage Prerequisites: EET 210-210L.

**ET 251-251L - Electricity and Electronics I and Lab Credits: 3**  
The course is designed to provide students with a background and understanding of the essential topics in AC/DC circuits, electrical circuit materials, electrical energy and sources of electricity, basic circuits and their analysis, magnetism, and applications of motors, generators, and power distribution. Lab for ET/MNET 251 Prerequisites: 1 course from subject MATH, except courses MATH 021, MATH 101, MATH 100T, or MATH 102. Corequisites: ET/MNET 251L-251 Cross-Listed: MNET 251-251L

**ET 252-252L - Electricity and Electronics II and Lab Credits: 3**  
This course is the continuation of 251 and is designed to provide students with a background and understanding of the essential topics in semiconductor devices, semiconductor power supply and technology, and semiconductor amplifiers and their applications. Other topics include digital logic, integrated circuits, oscillators, AM/FM communications, TV signal transmissions, and computer structure and operations. Prerequisites: ET/MNET 251-251L Corequisites: ET/MNET 252-252L Cross-Listed: MNET 252-252L

**ET 291 - Independent Study Credits: 1-3**

**ET 292 - Topics Credits: 1-3**

**ET 293 - Workshop Credits: 1-3**

**ET 296 - Field Experience Credits: 1-3**

**ET 320-320L - Analog Electronics and Lab Credits: 3**  
Introduction to analog circuits, including amplifiers, oscillators, and filters, using diodes, bipolar transistors, field-effect transistors, and operational amplifiers. Laboratory practice includes analog circuit measurement techniques and troubleshooting techniques. Prerequisites: ET 210 Corequisites: ET 320L-320.

**ET 325-325L Advanced Analog Electronics and Lab Credits 3, 0**  
Active devices and their applications. Detailed analysis of power supplies, audio amplifiers, and phase-locked loops. Emphasis on test system design & practice. Lab practice includes measurement, troubleshooting, and fabrication. Prerequisites: ET 320

**ET 330-330L - Microcontrollers & Networks & Lab Credits: 3, 0**  
Introduction to the architecture, programming, application and troubleshooting of single-chip microcontroller electronic systems; includes programming in microcontroller-specific BASIC language; interface of the microcontroller for practical applications, measurement techniques and instrumentation; network components: hardware, software, protocols (TCP/IP), topologies, and cabling. Laboratory practice includes the use of in-circuit emulation, personal computer hardware and software installation and troubleshooting techniques. Prerequisites: ET 210 Corequisites: ET 330L-330

**ET 332-332L - Advanced Digital Electronics & Lab Credits: 3, 0**  
Advanced digital logic at a component and systems level, using VHDL programming. Memory mapping and state machine operations. Differentiation of logic family device specifications and small system design. Prerequisites: ET 232

**ET 345-345L - Power Systems and Lab Credits: 3/0**  
Basics of electrical power and wiring, including panel board, conductor and over-current protection sizing, 3-phase power, grounding, commercial and industrial power systems installation, and power monitoring and reporting. Current National Electric Code will be reviewed. Prerequisites: ET 320

**ET 370-370L - Computer Systems and Lab Credits: 4**  
A course to familiarize students with hardware/software configurations, installations, usage, and basic troubleshooting techniques of past and current personal computers. Prerequisites: ET 330. Corequisites: ET 370L-ET 370.

**ET 380-380L - Circuit Boards and Design and Lab Credits: 3, 0**  
A course to acquaint the student with procedures used to prototype and construct circuits used in electronics manufacturing. Topics include pre-fabrication planning, component specification, printed circuit board layout and production, customer interfacing, assembly and soldering, and final test procedures. State-of-the-art circuit board layout software will be used in the design of an electronics circuit project. Project management techniques introduced. Prerequisites: ET 320 Corequisites: ET 380L-380

**ET 426-426L - Communication Systems and Lab Credits: 4**  
Study of transmitter and receiver circuits. Principles of modulation and demodulation are investigated. Basic fiber optics are discussed. Basic telephone circuits, both analog and digital are studied. Prerequisites: ET 320 Corequisites: ET 426L-426

**ET 428-428L Advanced Communication Systems & Lab Credits 4**  
Complex radio systems including repeaters, mobile telephone, and paging systems. Systems design and troubleshooting techniques are studied as well as microwave and basic radar. Prerequisites: ET 426. Corequisites: ET 428L-ET 428.

**ET 451-451L - Industrial Controls & PLCs and Lab Credits: 3, 0**  
The course is designed to provide students with the fundamentals of industrial control systems, control system classifications and control operations including programmable logic controllers, process control and common detection sensors, motion control systems, and motors and motor drive systems. Laboratory to accompany ET 451. Prerequisites: ET 210 Corequisites: ET 451L-451; ET 384

**ET 453-453L - Manufacturing Automation and Lab Credits: 3**  
The course offers advanced topics in manufacturing automation including automation hardware/software, system design and integration, and management techniques for improving design and manufacturing operations. Hands-on lab activities provide the students the opportunity to develop and program automated systems. Corequisites: ET 453L-ET 453. Cross-Listed: MNET 453.

**ET 471-471L - Capstone Experience & Lab (CI) (AW) Credits: 1**  
Technical projects developed in Project Management are completed. Student teams present results in a public venue. Prerequisites: OM 469 or GE 469 Corequisites: OM/MNET/ET 471L-471 Cross-Listed: OM/MNET 471-471L

**ET 472-472L - Networking I and Lab Credits: 4**

The study of personal computer systems, concentrating on Intel-type personal computers, networking and data connections from a software and management point of view. Microsoft NT and Novell are explored. Prerequisites: ET 370 Corequisites: ET 472L-ET 472.

**ET 474-474L - Networking II and Lab Credits: 4**

Further study of personal computer systems, concentrating on Intel-type personal computers, networking and data communications from a software and management point of view. Microsoft NT and Novell are explored. Prerequisites: ET 472. Corequisites: ET 474L-ET 474.

**ET 491 - Independent Study Credits: 1-3****ET 492 - Topics Credits: 1-3****ET 493 - Workshop Credits: 1-3****ET 494 - Internship Credits: 1-8****ET 496 - Field Experience Credits: 1-3****ET 497 - Cooperative Education Credits: 1-8****EURO (European Studies)****EURS 300 - Topics in European Culture Credits: 3**

Topics in European culture as expressed in literature, art, music, philosophy, and religion. The topic may be limited to a theme, for example, Death, War, or Justice, or to a period in history, for example, Women in the Renaissance, Love in the Seventeenth Century, or Solitude in the Romantic Period. (May be repeated for credit when the topic is different.)

**EURS 301 - Topics in European Society Credits: 3**

An interdisciplinary examination of a topic in European social life. Examples include, among others, Ethnicity and Nationality, Aging, Revolution, European Unification, Political Parties and Economic Development, or Migrant Workers. (May be repeated for credit when the topic is different.)

**EURS 492 - Topics Credits: (1-3)****EXCH (Exchange Programs)****EXCH 389 - Student Exchange - International Credits: 0-18**

This course allows students to register as full-time students while taking part in an Exchange Program. Students will register on their home campus for the number of credit hours they intend to take while enrolled at another campus.

**EXCH 489 - Student Exchange - International Credits: 0-18**

This course allows students to register as full-time students while taking part in an Exchange Program. Students will register on their home campus for the number of credit hours they intend to take while enrolled at another campus.

**EXPL (Experiential Learning)****EXPL 178-578 - Student Exchange - Domestic Credits: 0-18**

Students enroll in coursework from approved consortia or tuition reciprocity agreements enabling them to benefit from richer, more specialized, and relevant course and program options. This course tracks enrollment, allows students to retain an active status, and qualifies them for financial aid at SDSU. Prerequisites: Consent

**EXPL 187 - Study Abroad: Global Learning Credits: 1-4**

The course will introduce students to studying abroad during college and will discuss topics related to cross-cultural experiences.

**EXPL 287 - Study Abroad: Global Learning Credits: 1-4**

The course will introduce students to studying abroad during college and will discuss topics related to cross-cultural experiences.

**EXPL 384 - National Student Exchange (COM) Credits: 0-16**

Qualified students enroll in an exchange with an NSE member school to enhance and expand their academic horizons and meet personal needs and interests. Students attend courses for a semester or a year, choosing classes that complement or supplement their majors at their home institution.

**EXPL 387 - Study Abroad: Global Learning Credits: 1-4**

The course will introduce students to studying abroad during college and will discuss topics related to cross-cultural experiences.

**EXPL 487-587 - Study Abroad Credits: 0-18**

The goal of the course is to track student enrollment in a study abroad experience as well as to award credit for the time and effort necessary in the preparation, culture-learning, and re-entry processes of study abroad.

**FCS (Family & Consumer Sciences)****FCS 230 - Consumer Behavior Credits: 3**

Understanding cultural, economic, social, and psychological conditions that influence the consumer purchase process. Study of diverse types of consumer subcultures.

**FCSE (Family & Consumer Sciences Education)****FCSE 1-7 - Thesis Credits: 1-7****FCSE 292 - Topics Credits: (1-3)****FCSE 295 - Practicum Credits: 1****FCSE 331 - Work Force Preparation in Family and Consumer Sciences Credits: 2**

Strategies for developing curriculum and designing methods of instruction for teaching employability skills, career decision making and occupational areas of family and consumer sciences. A field experience will be included.

**FCSE 405 - Philosophy of Career and Technical Edu. Credits: 2**

Overview of career and technical education, including history and role and purpose in schools, communities and society; organization and characteristics of instructional programs at secondary, post-secondary and adult levels; career education; funding; and current trends and issues in career and technical education. Prerequisites: Sophomore status in education program. Corequisites: FCSE 295 Cross-Listed: AGED 405 Notes: For prospective teachers in agriculture or family and consumer sciences education.

**FCSE 411 - Philosophy and Methods Family and Consumer Sciences (AW) Credits: 4**

The philosophical foundations and history of vocational family and consumer sciences programs in school systems. The learner and the constructivist learning process, curriculum development, and program planning, methods of instruction, selection and use of resource materials, and the educator's role will be studied in depth as preparation for the student teaching experience. Must be taken in semester immediately preceding

**FCSE 412-412L - Preparation for Student Teaching in FSCE and Lab Credits: 4, 0**

Planning and developing instruction to meet the needs of selected age groups in formal and informal settings. Classroom/laboratory management, integration of core academics into career and technical education, assessment, advisement of student organizations, professional issues, and current topics in education will be addressed in preparation for a career in an educational setting. Prerequisites: Senior Standing, FCSE/AGED 295, FCSE/AGED 405, EPSY 302, EDFN 475, SEED 314, SEED 450, FCSE/AGED 404 Corequisites: FCSE 412-412L Cross-Listed: AGED 412L-412.

**FCSE 421 - Adult Education Credits: 3**

Theories, strategies and trends related to working with diverse adult audiences within the context of family and consumer sciences. Experience in working with adults will be included. Open to all majors.

**FCSE 480 - Travel Studies Credits: 1-5**

This travel study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators of other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation and a written report.

**FCSE 488 - 7-12 Student Teaching FCSE Credits: 1-6**

An experiential application of teaching pedagogy and content in family and consumer sciences education under the supervision of a certified teacher in an approved program. Prerequisites: Admittance into the Teacher Education Program and PS III, Senior Class Standing, and FCSE 412

**FCSE 491/591 - Independent Study Credits: (1-3)****FCSE 492/592 - Topics Credits: (1-3)****FCSE 496 - Field Experience Credits: (1-12)****FCSE 595 - Practicum Credits: (1-3)****FCSE 611 - History and Philosophy of FCS Credits: 3****FCSE 673 - Supervised Student Teaching in FCSE Credits: (6-9)****FCSE 721 - Occupational Programs in FCS Credits: 3****FCSE 741 - Supervision of FCSE Credits: 2****FCSE 751 - Curriculum of FCSE Credits: 3****FCSE 761 - Advanced Methods & Assessment in FCSE Credits: 3****FCSE 788 - Action Research Project Credits: (1-3)****FCSE 791 - Independent Study Credits: (1-3)****FCSE 792 - Topics Credits: (1-3)****FCSE 798 - Thesis Credits: 1-7****FREN (French)****FREN 101 - Introductory French I \* (COM) (G) Credits: 4**

Fundamentals of language structure and introduction to French culture enabling students to converse, read, and write simple French. Class work may be supplemented with required aural/oral practice outside of class. Notes: \* Course meets SGR #4

**FREN 102 - Introductory French II \* (COM) (G) Credits: 4**

Fundamentals of language structure and introduction to French culture enabling students to converse, read, and write simple French. Class work may be supplemented with required aural/oral practice outside of class. Prerequisites: FREN 101. Notes: \* Course meets SGR #4

**FREN 201 - Intermediate French I \* \*\* (COM) Credits: 4**

Goals of the introductory course continued. Emphasis on cultural and intellectual aspects of French life and literature. Class work may be supplemented with required aural/oral practice outside of class. Prerequisites: FREN 102. Notes: \* Course meets SGR #4 and \*\* IGR #2

**FREN 202 - Intermediate French II \* \*\* (COM) Credits: 4**

Continues FREN 201. Laboratory as required. Prerequisites: FREN 201. Notes: \* Course meets SGR #4 and \*\* IGR #2

**FREN 211 - Intermediate Oral Practice I Credits: 2-3**

Intensive conversational work to develop interpersonal, interpretive, and presentational modes of communication in French. Prerequisites: FREN 102 and FREN 201 (completed or concurrent) Notes: May be taken concurrently with French 201 or with another course above 201.

**FREN 212 - Intermediate Oral Practice II Credits: 2-3**

Intensive conversational work to develop interpersonal, interpretive, and presentational modes of communication in French. Prerequisites: FREN 201 and FREN 202 (completed or concurrent) Notes: May be taken concurrently with French 202 or with another course above 202.

**FREN 296 - Field Experience Credits: (1-6)****FREN 310 - French Language Skills (COM) Credits: 3**

A video and computer-assisted, advanced level course designed to strengthen and expand oral comprehension, conversation and composition within the context of contemporary French culture. Prerequisites: FREN 202.

**FREN 333 - Topics in Francophone Culture (COM) Credits: 3**

Overview of the historical events in Francophone civilizations as they relate to contemporary culture. Second semester emphasizes contemporary Francophone culture and civilization Prerequisites: FREN 202 - Intermediate French II \* \*\* (COM)

**FREN 350 - Business Communications in French Credits: 3**

An introduction to the language of business and business practices in French-speaking countries. Included are commercial terminology, business forms, office correspondence and the common expressions used in a business setting Prerequisites: FREN 202.

**FREN 353 - Exploring Literature in French (COM) Credits: 3**

Study of literary texts from throughout the French-speaking world. Prerequisites: FREN 202.

**FREN 385 - Travel Study Abroad Francophone (G) Credits: 1-6**

Offered to students engaged in an approved program of studies under faculty supervision. Hours of credit as contracted with instructor and approved by the cooperating institutions.

**FREN 392 - Topics Credits: (1-3)****FREN 433 - French Culture and Civilization (AW) Credits: 3**

This class will cover how French culture has developed throughout history, specifically in France, and will explore geography, history, politics and art. Students will investigate the many cultural influences that have impacted present-day France, and they will be required to do extensive independent research and writing. Prerequisites: FREN 310 or instructor's consent.

**FREN 491 - Independent Study (COM) Credits: (1-3)****FREN 492 - Topics (COM) Credits: (1-3)****FREN 493 - Workshop (COM) Credits: 1-6****FREN 496 - Field Experience Credits: (1-6)****FREN 591 - Independent Study Credits: (1-3)****GE (General Engineering)****GE 101 - Introduction to Engineering and Technology Credits: 1**

Students are introduced to the concept of being a professional and the ethics required of a professional person. A breadth of ideas are presented to the students which helps them in their career choice.

**GE 109-109L - First Year Seminar and Lab\*\* Credits: 1, 1**

First-year experience course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Laboratory to accompany GE109 Corequisites: GE 109-109L Notes: \*\*Course meets IGR #1

**GE 120-120L - Engineering Drawing/CAD and Lab Credits: 3**

This course will cover the fundamentals of technical drawing including design processes, geometric construction, multi-view projection, dimensioning, sectional views, auxiliary views, and assembly and working drawings. Integral to this course is the use of Computer-Aided Drawing (CAD) in both 2D and 3D modes emphasizing visualization concepts. Prerequisites: 1 course from subject MATH, except MATH 021, MATH 101, MATH 100T. Corequisites: GE 120L-GE 120.

**GE 121 - Engineering Design Graphics I Credits: 1**

A course in graphical communication, expression and interpretation. The ability to visualize in three dimensions is developed through shape description, sketching and multi-view projection exercises. The emphasis is on visualization and free hand sketching. Also includes Engineering, Mechanical, and Architectural scales, geometric constructions, use of instruments, dimensioning, and sectional views. Corequisites: One MATH course except for 021, 101, 100T.

**GE 122 - Engineering Design Graphics II Credits: 1**

This course provides a basic in graphical descriptive geometry as applied to solving spatial problems. Graphical conventions including but not limited to section, scales, and dimensions are also covered. Prerequisites: GE 121.

**GE 123 - Computer Aided Drawing Credits: 1**

A course with Major emphasis on 2-dimensional drafting skills and 3dimensional solid modeling utilizing microcomputer software. All work requires a "hands-on" approach. Prerequisites: GE 121 or ID 150 or LA 120.

**GE 225 - Survey of Machine Tool Applications Credits: 1**

A survey course introducing machine tools and their applications. Automation in machining and CNC programming and operations are also topics addressed in this course.

**GE 231 - Technology, Society, and Ethics\*\* Credits: 3**

An examination of technological change by means of current problems and case studies. The creation and utilization of tools, machines, materials, techniques and technical systems will also be studied, as well as their environmental impacts. Notes: \*\*Course meets IGR #2

**GE 241 - Applied Mechanics Credits: 3**

Basic statics, dynamics, and two-dimensional analysis of stress and strain. Fundamental principles of structural and machine elements. Prerequisites: MATH 102 or higher and 1 course from PHYS Cross-Listed: MNET 241

**GE 291 - Independent Study Credits: (1-3)****GE 292 - Topics Credits: (1-3)****GE 293 - Workshop Credits: 1-3****GE 294 - Internship Credits: (1-3)****GE 296 - Field Experience Credits: (1-6)****GE 310 - Geometric Dimensioning and Tolerancing Credits: 2**

Study and application of ANSI Y14.5M standards for GD&T as variation in part tolerances in the design of products and components for assembly; applications relative to product design, production, testing, and inspection are covered.

**GE 410-510 - Human Factors in Design Credits: 3**

Human factors engineering (HFE), sometimes called ergonomics, deals with optimizing working and living conditions through design for human use. This course will explore design methods to enhance the effectiveness and efficiency of work and to enhance product user's comfort, safety, health and satisfaction. Prerequisites: MATH 102.

**GE 425-525 - Occupational Safety and Health Mgmt Credits: 3**

This course covers methods to implement and manage a safe work environment. Study will address OSHA standards and other related governmental regulations, hazard recognition and control, accident cost assessment, ergonomics, and emphasis on a proactive approach to accident prevention.

**GE 469 - Project Management Credits: 3**

Basic theory, application, and techniques of project management applied to technical projects. A team-oriented, collaborative approach to building and testing products, developing and managing processes, and/or conducting applied research. Prerequisites: consent Cross-Listed: MNET/ET 469

**GE 491-591 - Independent Study Credits: (1-3)****GE 492-592 - Topics Credits: (1-3)****GE 493-593 - Workshop Credits: 1-3****GE 494 - Internship Credits: (1-3)****GE 496 - Field Experience Credits: (1-6)****GE 603 - Designing the Work Place for Production Credits: 3****GE 650 - Manufacturing Systems Management Credits: 3****GE 667 - Decision Theory Credits: 3****GE 690 - Seminar Credits: (1-3)****GE 691 - Independent Study Credits: (1-3)****GE 692 - Topics Credits: (1-3)****GE 693 - Workshop Credits: 1-3****GE 696 - Field Experience Credits: (1-6)****GE 788 - Research Problems/Projects Credits: (1-2)****GE 791 - Independent Study Credits: (1-9)****GE 792 - Topics Credits: (1-3)****GE 798 - Thesis Credits: (1-7)****GEOG (Geography)****GEOG 101 - Introduction to Geography \* (COM) Credits: 3**

The course presents a broad, introductory overview of geographic concepts, themes, and elements designed to help students better understand and analyze the world from a geographic perspective. It provides a background to Earth's physical and human elements and systems. It also emphasizes the unique quality of world regions, and the spatial interaction of people, elements, and regions, as well as major global and regional problems and prospects. Notes: \* Course meets SGR #3

**GEOG 131-131L - Physical Geography: Weather and Climate and Lab\* Credits: 4**

An introduction to the physical patterns of the Earth focusing on location, Earth-sun relationships, portrayal of the Earth, cartographic analysis, and weather and climate phenomena. Corequisites: GEOG 131L-GEOG 131. Notes: \* Course meets SGR #6.

**GEOG 132-132L - Physical Geography: Natural Landscapes and Lab\* Credits: 4**

An introduction to Earth's natural landscapes; focusing on landforms as spatial features and their processes plus consideration of human-environmental interactions. Corequisites: GEOG 132L-GEOG 132. Notes: \* Course meets SGR #6.

**GEOG 200 Intro. to Human Geography \*\*\* (G) Credits: 3**

Systematic study of world culture from perspective of five integrating themes: cultural region, cultural diffusion, cultural ecology, cultural integration, and cultural landscape. Topics include population, agriculture, political and economic systems, religion and language, folk and popular culture, and ethnicity. Notes: \* Course meets SGR #3 and \*\* IGR Goal #2

**GEOG 210 - World Regional Geography \* \*\* (COM) (G) Credits: 3**

A survey of the Earth from a broad global framework through the differentiation of the world in terms of both natural and human environmental features and characteristics on a regional basis. Notes: \* Course meets SGR #3 or \*\* IGR Goal #2

**GEOG 212 - Geography of North America \* (COM) Credits: 3**

A regional and topical analysis of the geographic patterns of the United States and Canada. Focus is upon the interaction of groups of people with the natural environment to produce regional differentiation. Geographic aspects of the physical geography, population, culture groups, economy, settlement systems, land division, and use of natural resources. Notes: \* Course meets SGR #3

**GEOG 219 - Geography of South Dakota \* (G) Credits: 3**

Provides an in-depth study of the physical, cultural, and economic characteristics of the state, including an analysis of past, present, and prospective cultures and economies, dating from early Native



American settlement through the present time period. Notes: \*  
Course meets SGR #3

**GEOG 310-310L - Soil Geography and Land Use Interpretation and Lab\*\* (G) Credits: 3**

Relationship of soil characteristics and soil classification to land use interpretations. Laboratory exercises involve field and laboratory procedures used in soil survey investigations. Studio to accompany PS/GEOG 310 Prerequisites: GEOG 132-132L, or PS 213-213L, or consent of instructor. Corequisites: GEOG 310L-310. Cross-Listed: PS 310-310L Notes: \*\*Course meets IGR#2

**GEOG 320 - Regional Geography: Credits: 3**

Geographic description and analysis of selected world regions. Physical and cultural conditions and landscapes, as well as their interrelationships and importance, are emphasized. Course may be repeated under different regional topics. The specific region studied will change each semester.

**GEOG 337 - Atmospheric Sciences Credits: 3**

Systematic methodological investigation of the meteorological elements (weather, climate, altitude, etc.) and their effects on geographic features.

**GEOG 339 - Geomorphology Credits: 3**

A study of the relationship of landforms and how they are impacted by human activity. Changes in land-use evolution through time and how this has impacted the landscape.

**GEOG 343 Environmental Disasters & Human Hazards Credits 3**

An in-depth examination of various geophysical events (earthquakes, volcanic eruptions, tsunamis, earth failures), meteorological events (floods, severe storms – tornados, hurricanes, blizzards, lightning) and human induced disasters (technological failures involving dams, nuclear power plants, etc.). Attention given to people's responses and their interactions with the environment plus prevention and amelioration efforts.

**GEOG 351 - Economic Geography Credits: 3**

Worldwide distribution of economic activities and their physical bases. Agriculture, mining and manufacturing industries and their important commercial products and role in world trade.

**GEOG 353 - Geography of Religion Credits: 3**

This course examines the diversity of religious practice and belief from a geographical perspective. Each offering of the course will emphasize a different region of the world, with standard areas of study being North America & Europe, Middle East & Africa, South & Central America, and South & East Asia. The course will examine specific religious traditions (Christianity, Islam, Buddhism, etc.) as they occur in a geographical region, the relationship between religion and place, and how religions change and adapt to new locales. The course may be repeated up to four times. Cross-Listed: REL 353.

**GEOG 363 - Rural Geography Credits: 3**

Character of American countryside as shaped by private and public decision-making processes. Case studies of major U.S. and European rural planning efforts to understand the present landscape and the problems of rural populations.

**GEOG 365 - Land Use and Planning\*\* Credits: 3**

Geographical patterns of United States land use and land cover, human occupancy, land tenure, and land division. Emphasis on the origin and consequences of these patterns on the environment, resource use, and land use planning. Notes: \*\*Course meets IGR Goal #2

**GEOG 382 - Geographic Research Methods (AW) Credits: 3**

This course will include a general review of methods most commonly employed in geographic research including varied library research, observation, map analysis, and the use of geographic theories and models. Experience will be gained in identifying geographic

problems, collecting and analyzing geographic data, both organizing and presenting geographic information.

**GEOG 383-383L - Cartography and Lab Credits: 3**

History and principles of cartography. Emphasis on field mapping; map projections; cartographic design; map interpretations; and exercises in map making. Corequisites: GEOG 383L-GEOG 383.

**GEOG 384-384L - Advanced Cartography and Lab Credits: 3**

This course provides advanced cartographic training techniques as applied to practical applications in field mapping, the production of map projections, cartographic design, and map making. Prerequisites: GEOG 383. Corequisites: GEOG 384L-GEOG 384.

**GEOG 400 - Cultural Geography (COM) Credits: 3**

A detailed analysis of the concept of culture in a geographical context, including such applications as culture and nature, cultural growth and change, cultural universals, culture and economy, cultural relativity, cultural landscape, culture region, and cultural conflict.

**GEOG 405 - Historical Geography Credits: 3**

Historical periods portrayed against geographical background.

**GEOG 415-515 - Environmental Geography\*\* Credits: 3**

Geographical aspects of environmental issues including historical geography of environmental problems, global driving forces, land ethics and stewardship, environmental externalities, population, resources, climate change, and environmental restoration. Focus on connections between human and natural systems; consequence chains between cause and effect; impact of time and space on problem perception, analysis, and solution; and natural and human laws. Term paper required. Notes: \*\*Course meets IGR Goal #2

**GEOG 425 - Population Geography Credits: 3**

Geographic analysis of such population characteristics as: numbers and distribution; growth and change; composition; mortality, fertility, and theories of population change; policy and family planning; migration and mobility; population, environment, food supply, and human wellbeing. Problems and prospects are considered in the context of each topic.

**GEOG 447 - Geography of the Future Credits: 3**

A futuristic analysis of Earth's natural environmental elements, natural resources, population and settlement, and cultural institutions at the global, national, and state levels.

**GEOG 454 - Site Selection and Development Credits: 3**

Analysis of geographic factors involved in selection of locations and sites for manufacturing, commercial and agricultural enterprises.

**GEOG 459-559 - Political Geography \*\* Credits: 3**

Spatial perspectives of political phenomena from the local to the global scales. Issues include ethnicity, nationalism, boundaries, territory, power, electoral geography, and impacts on the natural environment. Notes: Course meets IGR Goal #2

**GEOG 460-560 - Geopolitics Credits: 3**

An introduction to geopolitics that addresses the fundamental links between power and space at the global, national, and local scales. Focuses on classical geopolitics, critical geopolitics, political-economic approaches to geopolitics, world orders and hegemonic cycles, historical development of the international state system, and geography of imperialism.

**GEOG 461 - Urban Geography Credits: 3**

Geography of cities: types, functions, and distribution of world cities. Special emphasis on planning of cities in the U.S.

**GEOG 464 - Local and Regional Planning Credits: 3**

Regional planning with particular reference to the upper Mid-West.

**GEOG 467 - Geography of the American Indian Credits: 3**

Study of the geography of the American Indians under three primary topics; loss of Indian lands; development of the Indian reservation system; historical and contemporary land use issues. Prerequisites: HIST 368 or ANTH 410 or ANTH 421 or GEOG 219 Cross-Listed: AIS 467

**GEOG 470 - Intercultural Communication Credits: 3**

A study of theoretical dimensions of intercultural communication as well as specific characteristics of intercultural study. Emphasis is placed on complex, mindful, creative and invitational communication, which welcomes diversity and its richness. Cross-Listed: SPCM 470

**GEOG 472 - Introduction to GIS Credits: 3**

This course introduces many of the basic concepts of Geographic Information Systems (GIS) and provides an overview of the functions and capabilities of ArcGIS Desktop GIS software and an introduction to the ArcGIS Spatial Analyst extension. It will be taught primarily as a hands-on-course with supplementary lectures, demos, and discussion.

**GEOG 473-573 - GIS: Data Creation and Integration Credits: 3**

This course introduces advanced tools and techniques of data creation, data integration, mapping, and spatial analysis in Geographic Information Systems (GIS). It provides basic approaches for solving problems of data integration including format identification, conversion, and spatial registration. Building on the skills and techniques learned in the introductory GIS course or equivalent, it gives a conceptual base to many methods and techniques associated with vector and raster-based spatial analysis including imagery. It provides an examination of the functions and capabilities of ArcGIS Desktop GIS software (including extensions).

**GEOG 474-574 - GIS: Vector and Raster Modeling Credits: 3**

This course introduces basic concepts of vector and raster modeling in Geographic Information Systems (GIS) with special emphasis is on construction and use of raster digital elevation models (DEMs). Provides in-depth experience with a range of geoprocessing techniques for handling and analyzing GIS data. Topics include vector processing in a model framework, weighted suitability modeling, path finding, modeling viewsheds, constructing surfaces from point samples, and spatial hydrologic modeling. Builds on the skills and techniques learned in the introductory GIS course or equivalent.

**GEOG 475/575 - GIS Applications Credits: 3**

This course explores the latest software and its applications in Geographic Information Sciences.

**GEOG 481-581 - Field Geography Credits: 3**

All geographic data are field based. This field-oriented course typically will focus upon various aspects of the physical, historical, and cultural aspects of eastern South Dakota. Emphasis will be on the observation, collection, organization, analysis, and interpretation field derived data to answer geographic questions.

**GEOG 482-582 - Travel Studies Credits: (1-4)**

This travel study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators of other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

**GEOG 483-483L - Air Photo Interpretation and Lab Credits: 3**

Development of skills and techniques involved in the interpretation of aerial photographs showing physiography, land use, industrial, commercial and military functions. Various computer softwares and other laboratory equipment will be applied to the methods and principles of air photo interpretation. Prerequisites: GEOG 383 Corequisites: GEOG 483L.

**GEOG 484-484L - Remote Sensing and Lab Credits: 3**

Applications of remote sensing. Development of remote sensing; instrumentation; and techniques and methodology that will aid in the determination of need and proper utilization of our physical and cultural resources. The lab is a hands-on experience using various software and the application of methods and principles of remote sensing. Corequisites: GEOG 484L-GEOG 484.

**GEOG 485-485L Quantitative Remote Sensing & Lab Credits: 3**

This course will concentrate on the digital processing and visualization of various types on remotely sensed imagery. Image sources, characteristics, formats and analysis techniques will be explored as well as the integration of remotely sensed imagery with GIS and GPS datasets. Prerequisites: GEOG 484 Corequisites: GEOG 485L-GEOG 485.

**GEOG 490-590 - Seminar Credits: (1-4)****GEOG 491 - Independent Study (COM) Credits: (1-4)****GEOG 491L - Independent Study Lab Credits: 0****GEOG 492 - Topics (COM) Credits: (1-5)****GEOG 494 - Internship Credits: (1-12)****GEOG 495 - Practicum Credits: 3**

Prerequisites: Junior standing, including 17 credits from GEOG; minimum grade C Notes: for GISc-CE Scholars

**GEOG 496 - Field Experience Credits: 1-12****GEOG 692 - Topics Credits: (1-4)****GEOG 710 - Evolution of Geographic Thought Credits: 3****GEOG 714 - Research and Writing Credits: 3****GEOG 732 - Geomorphology Credits: 3****GEOG 734 - Climatology Credits: 3****GEOG 741 Quant. Remote Sensory for Terrestrial Monitoring Credits:3****GEOG 742 - Cultural Geography Credits: 3****GEOG 743 - Geospatial Analysis Credits: 3****GEOG 760 - Advanced Methods in Geospatial Modeling: Credits: 3****GEOG 765 - Advanced Studies in Land Utilization Credits: (1-4)****GEOG 766 - Advanced Remote Sensing Application Credits: 3****GEOG 767 - Fire and Ecosystems Credits: 3****GEOG 770 - Advanced Geographic Techniques Credits: (1-4)****GEOG 785 - Quantitative Methods in Geography Credits: 3****GEOG 786 - Geographic Information Systems Credits: 3****GEOG 788 - Research Paper in Geography Credits: (1-3)****GEOG 790 - Seminar Credits: (1-4)****GEOG 791 - Independent Study Credits: (1-4)****GEOG 792 - Topics Credits: 3****GEOG 794 - Internship Credits: (1-3)****GEOG 798 - Thesis Credits: (1-7)****GER (German)****GER 101 - Introductory German I \* (COM) (G) Credits: 4**

Becoming sensitized to authentic listening, speaking, reading, writing and culture skills at the elementary level. Introduction to basic functional grammar and sentence structure. Notes: \* Course meets SGR #4

**GER 102 - Introductory German II \* (COM) (G) Credits: 4**

Continued emphasis on authentic listening, speaking, reading, writing, and culture skills at the elementary level. Prerequisites: GER 101. Notes: \* Course meets SGR #4

**GER 201 - Intermediate German I \* \*\* (COM) Credits: 3**

Develop active listening skills, functional language skills, reading skills related to student learners immediate environment, guided free writing and understanding of interrelationships of language and culture. Prerequisites: GER 101 and GER 102. Notes: \* Course meets SGR #4 and \*\* IGR #2

**GER 202 - Intermediate German II \* \*\* (COM) Credits: 3**

Develop interactive listening and speaking skills toward initiating and responding to simple statements and questions, ability to understand selected descriptive readings to include literature of various types,

and continued refinement of language and culture, traditions, customs, folklore, etc. Prerequisites: GER 101, GER 102, GER 201. Notes: \* Course meets SGR #4 and \*\* IGR #2

**GER 211 - Intermediate Oral Practice Credits: 2-3**

Intensive conversational work to develop interpersonal, interpretive, and presentational modes of communication in German. Prerequisites: GER 102 - Introductory German II \* (COM) (G) and GER 201 - Intermediate German I \* \*\* (COM) Notes: With instructor's permission, may be taken concurrently with GER 201 - Intermediate German I \* \*\* (COM) or with courses above

**GER 296 - Field Experience Credits: (1-6)**

**GER 310 - Practical German Language Skills Credits: 3**

This course is meant for students who have completed the 200-level sequence, either via coursework at SDSU or via an approved placement exam. It will give them a thorough review of important grammatical points and will lead them towards dealing with and understanding German texts. In the process, they will develop and improve their speaking skills. The combination of grammar review, reading, and discussion will give the student a solid foundation for the 311/312 sequence.

**GER 311 - Composition and Conversation I (COM) Credits: 2**

Oral and written work. Grammar review and composition; emphasis on German conversation. Maybe taken concurrently with GER 411. Prerequisites: GER 202 or consent.

**GER 312 - Composition and Conversation II (COM) Credits: 2**

Oral and written work. Grammar review and composition; emphasis on German conversation. Maybe taken concurrently with GER 412. Prerequisites: GER 202 or consent.

**GER 330 - Reading and Writing for Communication Credits: 3**

Development of reading, writing, and speaking proficiency through examination of writings from the German-speaking world. Emphasis on vocabulary needed to read and discuss literary and authentic texts. Prerequisites: GER 201\* \*\* and GER 202\* \*\*

**GER 353 - Introduction to German Literature Credits: 3**

Introduction to German Literature through reading and discussion. Prerequisites: GER 201 - Intermediate German I \* \*\* (COM) and GER 202 - Intermediate German II \* \*\* (COM)

**GER 380 - Deutschland Heute (COM) Credits: 3**

An examination of contemporary German society, politics, country and people. Taught in German. Prerequisites: GER 311, GER 312.

**GER 392 - Topics (COM) Credits: 2-3**

Includes current topics, advanced topics and special topics. A course devoted to a particular issue in a specified field. Course content is not wholly included in the regular curriculum. Guest artists or experts may serve as instructors. Enrollments are usually of 10 or fewer students with significant one-on-one student/teacher involvement.

**GER 396 - Field Experience Credits: (1-6)**

**GER 410 - Focus on German Grammar Credits: 3**

Intensive study of challenging grammatical features of Standard German. Students will review important grammar concepts and apply them in various forms in writing and speech. GER 411 - Advanced Composition and Conversation I (COM) Credits: 3 Conversational work, oral reports, discussion, diction. Maybe taken concurrently with GER 311. Prerequisites: GER 202.

**GER 412 - Advanced Composition & Conversation II Credits: 3**

Conversational work, oral reports, discussion, diction. Maybe taken concurrently with GER 312. Prerequisites: GER 202.

**GER 433 - German Civilization I (COM) (AW) Credits: 3**

The culture of the German-speaking countries from beginning to modern times including literary and artistic trends, governmental structures, and the life and customs of the people. Reading and discussions in German. Prerequisites: GER 202.

**GER 434 - German Civilization II (COM) (AW) Credits: 3**

The culture of the German-speaking countries from the beginning to the 18th century and then to modern times including literary and artistic trends, and customs. Reading and discussion in German.

**GER 453 - Survey of German Literature I (COM) Credits: 3**

Main currents of German literature from the earliest times to the age of Goethe.

**GER 454 - Survey of German Literature II (COM) Credits: 3**

The main currents of German literature from Romanticism to the present.

**GER 455 - German Film Credits: 3**

An exploration of German film from its inception to the present, with research and discussion of the interrelationship between film and historical experience.

**GER 491/591 - Independent Study (COM) Credits: (1-3)**

**GER 492 - Topics (COM) Credits: 2-3**

**GER 496 - Field Experience Credits: (1-6)**

## GERO (Gerontology)

**GERO 201 - Introduction to Gerontology Credits: 3**

Introduction and overview of the field of gerontology. Interdisciplinary focus on aging process, community resources, diversity, health care and caregiving, retirement, death and bereavement, public policy and professional issues.

**GERO 415/515 - Intergenerational Issues Credits: (1-3)**

Exploration of intergenerational issues (impacting both younger and older generations). Examination of intergenerational practice in the United States and internationally, including naturally occurring intergenerational activities and intentional programming, as a means of addressing intergenerational issues.

**GERO 486/586 - Service Learning Credits: (1-3)**

Service-Learning in Gerontology, including service planning, interaction with community, and reflection. Prerequisites: Instructor permission required. Cross-Listed: HDFS/LMNO 486-586.

**GERO 491/591 - Independent Study Credits: (1-3)**

**GERO 492/592 - Topics Credits: (1-3)**

## GLST (Global Studies)

**GLST 101 - Introduction to Global Studies Credits: 3**

This course introduces students to global issues from an interdisciplinary perspective. Emphasis will be given to the concepts of globalization and global citizenships and to cross-cultural communication.

**GLST 125 Introduction to Peace and Conflict Studies\*\* Credits 3**

Introduction to historical and contemporary debates within the discipline of Peace and Conflict Studies, during which each student is guided to identify his or her own interests within those debates, and then encouraged to evaluate and apply those interests within a coordinated service learning experience. Cross-Listed: ENGL 125 Notes: This course meets IGR Goal 2.

**GLST 201 - Global Studies I \* \*\* (G) Credits: 3**

This introductory course investigates globalization from multiple perspectives. Understanding of worldviews and the development of

skills to work effectively in a cross-cultural setting are stressed. Techniques for accessing and analyzing varied sources of information about globalization will be emphasized. No prerequisites or corequisites. Notes: \* Course meets SGR #3 or \*\* IGR Goal #2

### **GLST 380 - Futuristic Communications Credits: 3**

Drawing upon the tenets of Futurism, the historical artistic movement begun by Italian poet Filippo's *Futurist Manifesto*, this intensive writing course will expose students to a wide-ranging set of cultural disruption issues caused by machines, technological innovations, and other rapid changes in modern life. Students will consider both the positive and negative implications caused by these cultural revolutions in a wide variety of literary, artistic, and cinematic texts. They will also think critically about their own role as global citizens. Prerequisites: ENGL 101 and 201 Cross-Listed: ENGL 380

### **GLST 401 - Global Studies II (G) (AW) Credits: 3**

Capstone course for the Global Studies major. Explores globalization, global citizenship, and intercultural competence. Students participate in "hands on experiences" and learn to adapt interdisciplinary approaches to research. Prerequisites: GLST 201 Notes: Study abroad prior to enrolling in GLST 401 is recommended. Meets IGR Goal 2.

### **GLST 480 - Ethics of Globalization Credits: 3**

A writing intensive, critical, and rigorous examination of the ethical bases and moral philosophical foundations which underpin, support, and justify globalization theory and practice. Cross-Listed: PHIL 480. Notes: This course meets IGR Goal 2.

### **GLST 481 - Travel Studies (Cross Cultural Experience) Credits:3**

This is the 3-credit core component of the Global Studies Major (Cross-Cultural Experience). all Global Studies Majors are required to complete a cross-cultural experience outside the USA that includes at least three credits of coursework. There are at least four distinct ways in which this course can be completed (please see SDSU Bulletin for specifics).

### **GLST 490 - Seminar Credits: 3**

### **GLST 491 - Independent Study Credits: 1-3**

### **GLST 492 - Topics Credits: 3**

### **GLST 494 - Internship Credits: 1-6**

## **GS (General Studies)**

### **GS 486 - Service Learning (COM) Credits: 1-12**

Service learning involves the integration of academic learning, relevant service with community partners, purposeful civic engagement and structured reflection for the purpose of enriching the learning experience and increasing student involvement in community service. The academic study may be in any discipline. Open to all majors.

## **GSE (Geospatial Science and Engineering)**

### **GSE 740 - Intro to Geospatial Science Engineering Credits: 3**

### **GSE 741 Quant. Remote Sensing for Terrestrial Monitoring Credits: 3**

### **GSE 743 - Geospatial Analysis Credits: 3**

### **GSE 760 - Advanced Methods in Geospatial Modeling: Credits: 3**

### **GSE 766 - Advanced Remote Sensing Application Credits: 3**

### **GSE 767 - Fire and Ecosystems Credits: 3**

### **GSE 790 - Seminar Credits: 1-3**

### **GSE 791 - Independent Study Credits: 1-3**

### **GSE 792 - Topics Credits: 1-3**

### **GSE 898D - Dissertation PhD Credits: 1-12**

## **GSR (Graduate School & Research)**

### **GSR 591 - Independent Study Credits: 1-3**

### **GSR 601 - Research Regulations Compliance Credits: 1**

### **GSR 691 - Independent Study Credits: 1-3**

## **HDFS (Human Development & Family Studies)**

### **HDFS 141 - Individual and the Family \* Credits: 3**

Patterns of behavior and relationships as influenced by family interaction. Emphasis on social and emotional needs of individual and family within various cultural and family contexts as informed by Systems Theories. Open to students of all majors. Notes: \* Course meets SGR #3

### **HDFS 150 - Early Experience Credits: 2**

Experimental-based introduction to professional contexts within early childhood education (ECE) and/or human development and family studies (HDFS). Students serve as volunteers in community-based human services and educational settings, shadowing professionals to better understand professional roles and opportunities.

### **HDFS 210 - Lifespan Development \* Credits: 3**

Study of the changes that take place during an individual's life, from conception till death. Emphases on theory, psychosocial, biosocial, and cognitive development. Notes: \* Course meets SGR #3

### **HDFS 227 - Human Development and Personality I:**

Childhood Credits: 3 Knowledge and understanding of human beings through study of development beginning at conception continuing to adolescence. Consideration given to biological growth, social, emotional and intellectual development as it changes behavior and shapes the individual. Notes: Crosslisted with ECE 227.

### **HDFS 241 - Family Relations Credits: 3**

A survey course of family development across the lifespan including the study of the family as a system, family interaction and family roles. Consideration is given to the cultural diversity and heritage of families.

### **HDFS 250 - Development of Human Sexuality Credits: 3**

A basic course which explores the biological, behavioral, and cultural aspects of human sexuality. The course focuses on individual sexual development, interpersonal aspects of sexual behavior and social/cultural values and beliefs about sexuality and sex roles throughout the lifespan. Cross-Listed: WMST 250

### **HDFS 292 - Topics Credits: (1-3)**

### **HDFS 337 - Human Development II: Adolescence Credits: 3**

Knowledge and understanding of adolescence within the developmental framework. Dimensions of physical growth, biological changes, social, intellectual and emotional development will be considered, as well as the impact of interaction of these forces on the individual. Emphasis is upon normal developmental patterns.

### **HDFS 341 - Family Theories Credits: 3**

Various theoretical approaches to marriage and family. Explores strengths and weaknesses, similarities and differences among theories. How each theoretical framework influences views and approaches to marriage and family issues. Prerequisites: HDFS 150 and HDFS 241 or by permission.

### **HDFS 347 - Human Development III: Adulthood Credits: 3**

Developmental approach to Human Development across adulthood. Emphasis on the physical, biological, intellectual and emotional changes. Impact of change upon the personality, self-concept of the individual and their effects upon social behavior, productivity and personal relationships.

### **HDFS 355 - Program Design, Implementation and Evaluation Credits: 3**

Principles and application of methods used in the design of programs to enhance the development of individuals and families. Strategies used in program evaluation examined. Consideration of model programs currently developed. Prerequisites: HDFS 341 or by permission.

**HDFS 410/510 - Parenting Credits: 3**

The study of theories, models, research and skills regarding parenting effectiveness and parent-child relations in the context of Western, Native American, and other cultures living in the U. S. Included are comparisons of the relative strengths and weaknesses of various parenting approaches, historical perspective on parenthood and children, and the developmental perspectives of children and parenting. Best practices for individual and community parent education programs will be addressed.

**HDFS 425-525 - Family Resiliency Credits: 3**

Literature on stress experienced by individuals and families with an emphasis on a systemic analysis of the conceptual/clinical literature of individual and family resilience will be examined. Individual and family characteristics of resilient families and prevention and solution-based principles will be explored in order to understand and promote family resilience in a developmental and ecological context. Students in counseling and human development as well as education, nursing, and other behavioral, social, and health sciences may benefit from the course.

**HDFS 435-535 - Family Policy Credits: 3**

This course examines the impact of family policies, government laws, and programs related to family life. The course will emphasize the current state of families—or family trends—and the implications of such trends for family policy. The varied effects that policies and programs have on different types of families and different aspects of family functioning and well-being will be explored.

**HDFS 441 - Professional Issues in Human Development and Family Studies Credits: 3**

Study of professional issues in the Child and Family Studies field. Course materials are inclusive of public policy, advocacy, leadership, professional development and ethics and workplace issues. Prerequisites: HDFS major with senior standing

**HDFS 480 - Travel Studies Credits: 1-5**

This travel study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators of other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation and a written report.

**HDFS 486-586 - Service Learning Credits: (1-3)**

Service-Learning in Human Development and Family Studies, including service planning, interaction with community, and reflection. Prerequisites: Instructor permission required. Cross-Listed: GERO/LMNO 486-586.

**HDFS 487 - Preparation for Practicum Credits: 1**

Preparation for Practicum will complete the requirements needed to enroll in HDFS 495 Practicum. Students will independently investigate practicum sites using criteria for an approved site. Upon approval, students will meet with the agency supervisor to develop professional goals for the practicum experience and create the practicum contract. This course will be taken the semester prior to enrolling in HDFS 495 Practicum. Prerequisites: HDFS 495.

**HDFS 491/591 - Independent Study Credits: (1-3)****HDFS 492/592 - Topics Credits: (1-3)****HDFS 495 - Practicum Credits: 6**

Prerequisites: Completion of all 300 level HDFS courses HDFS 441: Professional Issues in Human Development; HDFS 487: Preparation for Practicum, and by department consent.

**HDFS 501 - Foundations & Principles of Community Service Credits: 3****HDFS 601 - Orientation in Graduate Study Credits: 1****HDFS 602 - Research & Eval in Counseling & Human Dvlp Credits: 3****HDFS 605 -Program Administration and Management Credits:3****HDFS 610 - Family Resource Management Credits: 3****HDFS 614 - Adult Development Credits: 3****HDFS 620 - Family Dynamics Credits: 3****HDFS 630 - Lifespan Development Credits: 3****HDFS 635 - Crises Across the Lifespan Credits: 3****HDFS 640 - Interpersonal Relationships Credits: 3****HDFS 665 - Parent Education: Theory and Issues Credits: 3****HDFS 710 - Program Design, Eval., & Implementation Credits: 3****HDFS 711 Child Development Theory and Application Credits: 3****HDFS 730 - Grant Writing Credits: 3****HDFS 742 - Family Theory and Research Credits: 3****HDFS 745 - Work and Family Credits: 3****HDFS 753 - Family Public Policy Credits: 3****HDFS 788 - Individual Research and Study Credits: (1-7)****HDFS 790 - Seminar Credits: (1-3)****HDFS 791 - Independent Study Credits: (1-3)****HDFS 792 - Topics Credits: (1-3)****HDFS 794 - Internship Credits: (1-7)****HDFS 798 - Thesis Credits: (1-7)****HMGT (Hospitality Management)****HMGT 171 - Introduction to Hospitality Industry Credits: 3**

A review of the basic components of the hospitality and tourism industry in the state, national and international economy. Future trends and career opportunities within these areas will be explored.

**HMGT 251 - Foodservice Sanitation Credits: 1**

Food sanitation and personal hygiene in a foodservice management setting. Students will receive national sanitation certification upon successful completion of The National Registry of Food Safety Professionals® exam.

**HMGT 295 - Practicum Credits: (1-3)****HMGT 361 - Hospitality Industry Law Credits: 3**

This course presents common and civil law as it relates to the operation of various hospitality industry enterprises. Preventative law is presented to permit managers to be aware of potential legal pitfalls and steps required to minimize legal problems. Techniques for industry professionals to research current laws and to identify tools and develop strategies to keep ahead of the ever-changing hospitality legal environment will be explained. At the completion of the course the student will be certified to serve alcoholic beverages in South Dakota.

**HMGT 370 Lodging Operations and Purchasing Mgmt Credits:3**

Functions of management as applied to the lodging industry including organizing, staffing, controlling, planning, purchasing and marketing for the front office, housekeeping, and maintenance departments. Industry terminology and methods of operations will be explored for all levels of service and segments in the lodging industry. Prerequisites: HMGT 171.

**HMGT 371-371L - Leisure Activities Mgmt and Lab Credits: 3**

The course will explore management and sales skills required to ensure the success of attractions providing leisure activities in the tourism industry. The lab portion will include planning and conducting industry visits or tours of attractions and the development and practice of professional sales skills for this segment of the hospitality industry. Prerequisites: HMGT 171. Corequisites: HMGT 371L-371.

**HMGT 372 - Hospitality Facilities Mgmt and Design Credits: 3**

Application of various systems, procedures, and controls associated with the maintenance and engineering departments of lodging and foodservice operations. The course will include the decision-making process used in the planning and designing of hospitality facilities.

**HMGT 380 Foodservice Operations & Purchasing Mgmt Credits 3**

A managerial and systems approach to foodservice operations and purchasing. Cross-Listed: NFS 380.

**HMG 381-381L - Quantity Food Production and Service and Lab Credits: 4**

Application of foodservice management principles in quantity food production, purchasing, and service. Lab to accompany HMG/NFS 381. Prerequisites: NFS 141-141L, HMG 251 (or concurrently), HMG 380. Corequisites: HMG/NFS 381L-381. Cross-Listed: NFS 381-381L.

**HMG 455 - Meeting and Convention Management Credits: 3**

The roles and responsibilities of professional hospitality meeting planners and convention sales and service managers are examined for purposes of securing, planning, hosting and rebooking a major convention or corporate, association, or special meeting event. Prerequisites: Junior, senior, or consent.

**HMG 465 - Hospitality Managerial Accounting Credits: 3**

This course is designed for hospitality students to learn how to make effective managerial and operational decisions based on an examination of the accounting and financial analysis. Topics includes general accounting practices, the analysis of financial statements, costs and pricing practices, budgeting and other related topics. Prerequisites: ACCT 210 & 211

**HMG 480/580 - Travel Studies Credits: 1-5**

This travel-study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators at other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

**HMG 482 - Hospitality Marketing Credits: 3**

Applied marketing covering case studies in the hotel and restaurant industry. Emphasis on implementing marketing strategies including: demographics, image development, advertising, sales promotion, public relations, administering and controlling a marketing plan. Prerequisites: Junior standing or consent.

**HMG 491-591 - Independent Study Credits: 1-3**

**HMG 492 - Topics Credits: (1-3)**

**HMG 495 - Practicum Credits: 1-3**

**HMG 788 - Individual Research and Study Credits: (1-7)**

**HMG 791 - Independent Study Credits: (1-3)**

**HMG 792 - Topics Credits: (1-3)**

**HMG 798 - Thesis Credits: (1-7)**

## **HIST (History)**

**HIST 111 - World Civilizations I \* \*\* (COM) Credits: 3**

A survey of the history, culture, religion and society of the principal civilizations of the world to 1500. Meets SGR #4 and \*\*IGR Goal #2

**HIST 112 - World Civilizations II \* \*\* (COM) (G) Credits: 3**

A survey of the history, culture, religion and society of the principal civilizations of the world since 1500. Notes: \* Course meets SGR #4 and \*\*IGR Goal #2

**HIST 121 - Western Civilization I \* \*\* (COM) Credits: 3**

Surveys the evolution of western civilization from its beginnings into the Reformation and religious wars. Notes: \* Course meets SGR #4 or \*\* IGR Goal #2

**HIST 122 - Western Civilization II \* \*\* (COM) (G) Credits: 3**

Surveys the development of western civilization from the Reformation era to the present. Notes: \* Course meets SGR #4 or \*\* IGR Goal #2

**HIST 151 - United States History I \* \*\* (COM) Credits: 3**

Surveys the background and development of the United States from its colonial origins to the Civil War and Reconstruction Notes: \* Course meets SGR #3 or \*\* IGR Goal #2

**HIST 152 - United States History II \* \*\* (COM) Credits: 3**

Surveys development of the United States since the Civil War and Reconstruction. Notes: \* Course meets SGR #3 or \*\* IGR Goal #2

**HIST 280 - Writing History Credits: 3**

Study and practice in the major types of historical writing, including research papers, critical book reviews, and essays.

**HIST 292 - Topics (COM) Credits: (1-3)**

**HIST 311 - Chinese History Credits: 3**

A survey of Chinese history to 1840.

**HIST 312 - History of Modern Asia (COM) Credits: 3**

Focuses on the history of modern Chinese and Japanese civilizations.

**HIST 313 - History of the Middle East (COM) Credits: 3**

Surveys the history of the Middle East from Muhammad to the present, emphasizing the political development of the last 200 years.

**HIST 314 - History of Modern Japan Credits: 3**

Focuses on the history of modern Japan from 1853 to the present, with emphasis on economic, social, and political changes.

**HIST 316 - Pre-Modern Japan Credits: 3**

This course will cover the history and culture of Japan from ancient times to the coming of the Europeans in 1853.

**HIST 322 - Ancient Greece and Rome (COM) Credits: 3**

Examines the history, philosophy, and culture of Greece from the Minoan age through the Hellenistic period and the development of the Roman Republic and Empire. Prerequisites: HIST 121.

**HIST 326 - Renaissance and Reformation (COM) Credits: 3**

A study of the major European political powers in the 14th-16th centuries. The course will examine the dramatic changes in politics, society, religion, economics and world view occasioned by the phenomena known as the Renaissance and the Reformation.

**HIST 329 - French Revolution & Napoleon, 1789-1815 Credits: 3**

A study of the major changes in the European political powers due to the French Revolution and the emergence of Napoleon. The effects of the Congress of Vienna will also be evaluated.

**HIST 330 - Nineteenth Century European History Credits: 3**

A study of developments in Western Europe from the Congress of Vienna to the outbreak of the Great War.

**HIST 331 - Europe in the Age of Louis XIV, 1648-1789 Credits: 3**

A study of the emergence of the modern nation states of both Eastern and Western Europe, concentrating on the development of the French, English and Russian nations. The role of absolutism, mercantilism and militarism will be considered.

**HIST 341 - English History to 1688 (COM) Credits: 3**

Presents English History from the earliest times through the Glorious Revolution of 1688.

**HIST 345 - History of Russia Credits: 3**

From the earliest times to present. Treats cultural and social as well as political aspects.

**HIST 346 - Canada: History and Geography (COM) Credits: 3**

Examines the impact of the physical geography of Canada upon the nation's exploration, settlement, and development from the earliest

inhabitants to modern times, and emphasizes the economic and cultural relations between Canada and the United States.

**HIST 349 - Women in American History Credits: 3**

This course will investigate the role of women in the history of the United States. It will attempt to discover what impact women had on the course of events. Selected women and their careers will be highlighted. Cross-Listed: WMST 349.

**HIST 350 - Women in World History Credits: 3**

This course will investigate the role of women in the history of the world beyond the US. It will attempt to discover what impact women had on the course of events. Selected women and their careers will be highlighted. Cross-Listed: WMST 350.

**HIST 352 Revolution and Early National United States Credits: 3**

Causes of the American Revolution, War for Independence, Articles of Confederation, Constitutional Convention of 1787, establishment of the Federal Union and early years of the Republic.

**HIST 354 - Jefferson and Jackson 1800-1840 Credits: 3**

Early Presidential administrations through the Mexican War of 1846-48.

**HIST 356 - Gilded Age America & American Empire Credits: 3**

Examination of political, economic, social and cultural developments in the US from 1877-1914.

**HIST 357 - America from WWI to the Great Depression: The Perils of Prosperity, 1914-1941 Credits: 3**

Major political, social, economic, and cultural developments from 1914 to 1941, including WWI, the "Roaring" 20s, the Great Depression, and movement toward WWII.

**HIST 358 - The U.S. Since 1941 (COM) Credits: 3**

Social, economic, and political change. The consequences, domestic and foreign, of global power and rising affluence.

**HIST 368 History & Culture of the American Indian\*\* Credits: 3**

Presents history and culture of North American Indians from before white contact to the present, emphasizing regional Dakota cultures. Cross-Listed: AIS 368. Notes: This course meets IGR Goal 2; fulfills teacher education requirement.

**HIST 377 - Economic History of U.S. (COM) Credits: 3**

Examines major United States economic issues from the colonial period to the present, including the rise of big business, territorial expansion, agricultural issues, labor management relations, and finances and banking.

**HIST 378 - Social and Cultural History of the US Credits: 3**

Aspects of social development, with major emphasis on the period since the Civil War. Themes include gender, class, race, family, education, religion, leisure, music, arts, and values.

**HIST 379 - Environmental History of the U.S. (COM) Credits: 3**

Examines the relationship between the natural environment and the historical movements of humans by tracing U.S. environmental changes, beginning with the activities of the Native American peoples through the Euro-American presence to the Cold War era.

**HIST 401 - History of Western Religious Thought I Credits: 3**

This course surveys important issues in western religious thought from first century Christian origins through the "great medieval synthesis" of the thirteenth century. While both Jewish and Islamic developments are examined, emphasis is placed upon emergence and growth of Christian doctrine and ecclesiology. Cross-Listed: REL 401

**HIST 402 - History of Western Religious Thought II Credits: 3**

This course surveys important issues in western religious thought from the "great medieval synthesis" of the thirteenth century through

the Reformation and Counter reformation of the sixteenth century. While both Jewish and Islamic developments are examined, emphasis is placed upon the development of Christian doctrine. Cross-Listed: REL 402

**HIST 415 - Women in Antiquity (COM) Credits: 3**

Survey of archaeological, historical, and literary sources to examine women's place in ancient civilizations, their social conditions, their gender roles, and their power/authority in these civilizations.

**HIST 418 - History of Latin America (COM) Credits: 3**

Examines the political, social, and economic developments in Latin America for the pre-Columbian period to the present.

**HIST 425 - Medieval Europe (COM) Credits: 3**

Examines the history of Western Europe from the end of the Roman Empire to the beginning of the Renaissance and emphasizes religious, political, economic, and social developments. Prerequisites: HIST 121.

**HIST 441 - History of Modern Britain (COM) Credits: 3**

Examines the chief political, cultural, economic, and social developments of England, Scotland, Wales, and Ireland from 1688 to the present.

**HIST 442 - Europe in the Age of Dictators 1914-1945 Credits: 3**

Examines the political, social and cultural history of Europe from the outbreak of the Great War to the fall of the Third Reich.

**HIST 445 - Cold War Europe Credits: 3**

Examines the political, social and economic history of Europe from the end of the Second World War to the collapse of the Soviet Union.

**HIST 447 - History of Modern Germany (COM) Credits: 3**

Examines German history in the nineteenth and twentieth centuries, including the formation of the German nation, Bismarck, development of the German Empire, World War I, rise of Hitler, Nazi Germany and World War II.

**HIST 448 - Nazi Germany (COM) Credits: 3**

Presents Germany history from the establishment of the Weimar Republic after World War I through Adolf Hitler's Third Reich to 1945, including the political, social, economic, cultural, and military aspects of Germany under National Socialist rule.

**HIST 450 - American Colonial History (COM) Credits: 3**

Provides an in-depth look at the English colonies in America, emphasizing how and why they were founded, and tracing their growth and development through the revolutionary period. Prerequisites: HIST 151.

**HIST 455 - American Civil War and Reconstruction Credits: 3**

Explores the economic, political, military, and social aspects of the Civil War and Reconstruction era.

**HIST 460 - American Military History (COM) Credits: 3**

Examines the origins and development of military institutions, traditions, tactics, and practices in the United States from 1775 to the present, including the relation between the armed forces and other government agencies.

**HIST 465 - Western Expansion of the U.S. (COM) Credits: 3**

Examines the role of the West in American history from exploration and colonization to the closing of the frontier about 1900, emphasizing territorial expansion of the U.S. and various frontier developments, e.g. transportation, transformation of the wilderness into statehood, influence of the frontier in shaping the American character and the role of the West in shaping national policies.

**HIST 469 - American Foreign Relations (COM) Credits: 3**

Surveys American diplomatic history from colonial times to the present, emphasizing political, social and economic forces affecting diplomatic developments reflected in American foreign policies.



**HIST 476 - History of South Dakota (COM) Credits: 3**

Examines the history of South Dakota's physical environment, Native American presence, European settlement, economic developments, political institutions, and social life.

**HIST 480 Historical Methods and Historiography (AW) Credits: 3**

Introduces the problems, materials, and techniques of historical writing, explains the larger meaning and directions of history, and examines major schools of historical thought.

**HIST 482-582 - Travel Studies Credits: (1-5)**

This travel study course is designed to provide extra-mural educational experiences, as approved by, and under the direction of a faculty member, and may be in cooperation with faculty and administrators of other institutions. Students will participate in hand-on activities, and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

**HIST 491-591 - Independent Study (COM) Credits: (1-3)****HIST 492-592 - Topics (COM) Credits: (1-4)****HIST 494 - Internship (COM) Credits: (1-12)****HLTH (Health)****HLTH 120 - Community Health Credits: 2**

Discussion based course with the goal of understanding the philosophy and principles of community health. Emphasis on knowledge, attitudes and behaviors utilized in solving community health problems. Cross-Listed: HSC 120.

**HLTH 200 Complementary & Alternative Health Care Credits: 3**

This interdisciplinary course introduces complementary and alternative health care (CAHC) practices. This course is designed to explore complementary methods utilized by health care professional and lay persons to provide culturally congruent care for individuals and families. The role and responsibilities of the health care consumer related to disclosure of CAHC use will be described. The role of the healthcare professional as a consumer advocate will be discussed. This course explores definitions, backgrounds, examples, and on-going research of various therapies including the holistic approach to Mind/Body Medicine, Herbs, Traditional Chinese Medicine, Naturopathy, Homeopathy, Spiritual Healing, Acupuncture, Dietary and Nutritional Supplements, and Ayurvedic Medicine.

**HLTH 212 - Contemporary Health Problems Credits: 2**

Personal health education course which focuses on the health problems facing today's society from birth to death. Emphasis on the knowledge essential in maintaining a healthy lifestyle. Open to all students. Cross-Listed: HSC 212.

**HLTH 230 - Stress Management for Life Credits: 3**

Stress management course designed to expose students to a holistic approach to preventing and managing stress. Students learn both healthy cognitive (coping) skills and relaxation techniques with the intention of preventing and/or alleviating the symptoms of stress. Content includes the science of stress, the mind/body connection, stress prevention strategies such as perception, mindfulness, time management, and financial management, and a variety of stress management techniques including guided imagery, progressive muscle relaxation, yoga, meditation, and autogenics. The course has both personal application and professional application for students working in any area of healthcare.

**HLTH 250-250L - Pre-Professional First Aid & CPR & Lab COM Credits: 2**

Instruction of those who are frequently in a position to provide first aid/CPR and emergency care. Provides essential knowledge and skills needed to develop the functional first aid/CPR capabilities required by a basic first responders, including nurses, teachers, athletic trainers, and other special interest groups. Accompanies HLTH 250.

**HLTH 251 - First Aid and CPR (COM) Credits: 1**

First aid instruction meeting the requirements of the American Red Cross Responding to Emergencies Standard First Aid Course is given. Safety in everyday living is emphasized, with special consideration given to the kindergarten and elementary school levels.

**HLTH 298 - Allied Health Technical Training Credits: 20-48**

Designed to facilitate transfer of students who have completed a one or two year regionally or nationally accredited or certified program in an allied health area. The purpose is to provide transfer of previous work into an upward mobility option for students who have a commitment to an allied health profession.

**HLTH 302 - Wellness and the Family Credits: 2**

Overview of health promotion as applied to the family throughout all stages of development. Planning for promotion of family health. Cross-Listed: HSC 302.

**HLTH 315 - Human Nutrition Credits: 3**

The science of food, the nutrients and other substances therein, their action, interaction, and balance in relation to health and disease and the processes by which the organism ingests, digests, absorbs, transports, utilizes and excretes food substances. Prerequisites: CHEM 106 and 108, or CHEM 112 and 114.

**HLTH 322 - Public Health Law Credits: 3**

Will investigate issues across a range of specific contexts in public health such as communicable disease control, public health class action litigation and medical care e.g., the right to have and refuse medical care, confidentiality and privacy). Issues include how health policies are developed; the impact current and potential policies have and will have on public health; the courts role and interpretations of public health law; and the interaction of national, state, local, and interest group politics in the formation of policies. The course will focus on the states' roles and the constitutions of the states as well as the Tenth Amendment of the United States Constitution.

**HLTH 364-364L Emergency Medical Technician & Lab Credits 4**

This course provides the knowledge and skill base for an individual to become a Nationally Registered EMT. The course follows the curriculum set by the National Emergency Medical Services Educational Standards. Students are expected to learn the skills necessary to recognize numerous medical and trauma related emergencies. Students will learn vital signs monitoring, Basic Life Support interventions and patient moving/packaging skills. Students will apply learned skills to patients in scenario-based training. 10 hours of in-hospital observation and training are required. Laboratory course to accompany HLTH/HSC 364 Prerequisites: Written Consent (Current CPR certification at the level of BLS Healthcare Provider (American Heart Association)) Corequisites: HLTH/HSC 364-364L Notes: This course does not certify students as an EMT; they must pass the National Registry exams.

**HLTH 420/520 - Methods of Health Instruction Credits: 2**

Curriculum content at elementary and secondary levels. Methods of presentation including direct, correlated, and integrated health instruction. Organization of health and safety education. Prerequisites: Consent

**HLTH 443 - Public Health Science (G) Credits: 3**

Study of organization and administration of public and voluntary health agencies. Principle functions and program development in vital statistics, maternal-child health, adult health, sanitation, health education, and special health programs. Introduces the student to public health by describing its history and its bases in sociology, economics, philosophy and government. The relationship of environmental factors to health and illness is examined. The course will provide the student with an understanding of administrative and political processes of operation of health agencies by examining traditional and new innovative programs of federal, state and local health agencies. Cost-benefit, cost-effectiveness, and risk assessment are addressed as in the relationship of public law and policies to the delivery of health care. Cross-Listed: HSC 443. Meets IGR Goal 2.

**HLTH 445 - Epidemiology Credits: 3**

This course provides information on the epidemiological concepts, principles, and methods for understanding the distribution and determinants of selected diseases, conditions and indices of health in control and evaluation are analyzed. Prerequisites: Junior or senior standing or consent of the instructor. Cross-Listed: HSC 445.

**HLTH 479-479L - Health Promotion Programming and Evaluation and Lab Credits: 2**

Practical skills of a worksite and community wellness professional will be investigated. Topics include a definition of worksite wellness, rationale for programs, types of programs, design, promotion, evaluation, marketing. Corequisites: HLTH 479L-479.

**HLTH 490 - Seminar Credits: 1-4****HLTH 494 - Internship Credits: 1-12****HLTH 496 - Field Experience Credits: 1-12****HNS (Health and Nutritional Science)****HNS 490-590 - Seminar Credits: 1-3****HNS 491-591 - Independent Study Credits: 1-3****HNS 492-592 - Topics Credits: 1-3****HNS 493-593 - Workshop Credits: 1-3****HNS 494-594 - Internship Credits: 1-6****HNS 495-595 - Practicum Credits: 1-3****HNS 496-596 - Field Experience Credits: 1-6****HNS 497-597 - Cooperative Education Credits: 1-6****HNS 498 - Undergraduate Research/Scholarship Credits: 1-3****HNS 788 - Master's Research Problems/Project Credits: 1-7****HNS 790 - Seminar Credits: 1****HNS 791 - Independent Study Credits: 1-3****HNS 792 - Topics Credits: 1-3****HNS 793 - Workshop Credits: 1-3****HNS 794 - Internship Credits: 1-7****HNS 795 - Practicum Credits: 1-9****HNS 796 - Field Experience Credits: 1-9****HNS 798 - Thesis Credits: 1-7****HNS 890 - Seminar Credits: 1****HNS 898D - Dissertation Credits: 1-12****HO (Horticulture)****HO 111-111L - Intro to Horticulture and Lab Credits: 2, 1**

Connecting basic plant science to growing techniques and decision making relating to light, water, temperature, and soil. Introductory plant care, propagation and identification for a wide variety of horticultural crops. Corequisites: HO 111L-111.

**HO 200-200L - Weed Mgmt for Horticulture & Lab Credits: 2**

An introduction to common weeds found in horticultural settings (Turf, nursery, food crops, etc.). The use of cultural, biological, chemical and physical methods of weed management will be discussed. Weed identification, control methods and related activities will be handled in the laboratory. Corequisites: HO 200L-200 Cross-Listed: PS 200-200L

**HO 222-222L - Fundamentals of Turf Mgmt and Lab Credits: 3**

Introduction to basic maintenance and culture of turfgrass for utility turf, home lawns, and commercial grounds. Prerequisites: HO 111-111L or PS 103-103L or consent Corequisites: HO/PS 222L-222. Cross-Listed: PS 222-222L

**HO 231 - Greenhouse Crop Production Credits: 2**

Fundamentals of greenhouse crop production techniques: primary crops, establishment, irrigation, fertilization, growth management, pest control, and harvest. Lab format will provide students with practical growing experience of herbaceous ornamental horticultural crops.

**HO 250-250L - Woody Plants: Trees and Lab Credits: 3**

Nomenclature, identification and classification of hardy coniferous and deciduous trees. Landscape use as affected by inherent ornamental qualities, hardiness, environmental factors, and pests. Prerequisites: HO 111, BIOL 101. Corequisites: HO 250L-HO 250.

**HO 260 - Woody Plants: Shrubs and Vines Credits: 2**

Nomenclature, identification, and classification of shrubs and vines hardy for the Northern Plains. Prerequisites: HO 250

**HO 290 - Professionalism in Horticulture Seminar Credits: 2**

This course addresses the skills necessary to become a professional in the field of horticulture. Students will develop writing, speaking, presentation and organizational skills pertaining to their success in the industry as well as look at current ethical issues.

**HO 303-303L - Forest Ecology & Management & Lab Credits: 3**

The basics of environmental factors which control the growth of trees and forests and how forests in North America are managed. Corequisites: HO 303L-303. Cross-Listed: BOT 303-303L

**HO 311-311L - Herbaceous Plants and Lab Credits: 3**

Identification, description, landscape uses, propagation, culture and adaptability of selected non-woody ornamental plants with emphasis on annuals, perennials and indoor plants. Prerequisites: HO 111, BOT 201, or consent. Corequisites: HO 311L-HO 311.

**HO 312-312L - Plant Propagation and Lab Credits: 3**

Fundamental anatomical and physiological principles and methods of reproducing herbaceous and woody plants by seeds, cuttings, grafts, layers and division. Prerequisites: HO 111, BOT 201, or consent. Corequisites: HO 312L-HO 312.

**HO 324 - Horticulture Pests I: Entomology Credits: 2**

A survey of integrated pest management principles and practices on horticultural systems. The commodities covered include turfgrass, urban forestry, vegetables, fruits and ornamentals both in open and protected (e.g. greenhouse, high tunnel) systems. Cross-Listed: PS 324

**HO 325 - Horticulture Pests II: Diseases Credits: 2**

A survey of abiotic and biotic diseases of horticultural systems. The commodities covered include turfgrass, urban forestry, vegetables, fruits and ornamentals both in open and protected (e.g. greenhouse, high tunnel) systems. Cross-Listed: PS 325

**HO 327-327L - Golf Course Design and Mgmt & Lab Credits: 3**

Principles and practices of golf course design, including site analysis, design process, construction specifications and techniques, and aesthetic/design elements and professional turf management of golf courses and athletic fields, including history, culture, equipment, diagnostics, case studies, and facilities management. Cross-Listed: LA 327-327L.

**HO 330 - Arboriculture Credits: 2**

The establishment and care of woody plants: vines, shrubs and trees. Prerequisites: BOT 201-201L or BIOL 153-153L.

**HO 331 - Arboricultural Operations Credits: 1**

The techniques used in the safe and efficient pruning, cabling and removal of woody plants. Prerequisites: HO 330.

**HO 350 - Environmental Stewardship in Horticulture Credits: 3**

Concepts and principles of stewardship and sustainability relative to realized and potential impacts of horticultural practices on the environment.

**HO 383-383L Principles of Crop Improvement & Lab Credits 2, 1**

Evaluation of crop species, reproduction of crop plants, use of genetic variability, traits of interest, breeding programs, designs and management. Heritability, plant introduction, vegetative propagation,

hands-on lab demonstrations. Prerequisites: Take PS 103/103L or HO 111/HO111L; and take BIOL 103/103L or BIOL 153/153L or BOT 201/201L. Corequisites: HO 383L-383. Cross-Listed: PS 383-383L

**HO 411-511 - Fruit Crop Systems Credits: 1-6**

Studies in perennial fruit crop production and management systems. Credit earned will depend on the number of 1 credit modules taken. Course may be repeated as long as the topic module(s) are not repeated. Topic modules could include: tree fruit production systems; small fruit production systems; viticulture; perennial fruit; integrated pest management; native fruit production systems; fruit harvest, quality, and postharvest care; vines and wines; fruit value-added systems; pruning fruit crops; cover crop management, marketing specialty fruit crops.

**HO 412-412L - Greenhouse Management and Lab Credits: 3**

Greenhouse construction, environmental control, production and scheduling of major greenhouse crops. Trips to commercial greenhouse operations and laboratory work in greenhouse crop production. Corequisites: HO 412L-HO 412L.

**HO 415 - Nursery Management Credits: 3**

A study of current nursery and garden center crop cultural practices and business management. Topics to be covered include nursery and garden center design and organization, field and container crop production, transplanting, pricing, and shipping techniques. The working relationship between nurseries, landscape designers and contractors is also discussed. Prerequisites: HO 111, PS 213.

**HO 422 - Current Issues in Turfgrass Science Credits: 1**

Presentation of selected topics not covered in other turfgrass management courses.

**HO 423-523 - Turfgrass Stress Physiology Credits: 3**

The focus of this course is the physiological response to abiotic stress in perennial grass systems, including environmental, cultural, and traffic stress. Prerequisites: Senior or graduate student status or consent Cross-Listed: PS 423-523

**HO 434 - Local Food Production Credits: 2**

Topics include planning, planting, cultivation, harvest, season extension and marketing of fruits and vegetable crops. Experiential learning model.

**HO 440-540 - Vegetable Crop Systems Credits: 1-6**

Studies in vegetable crop production and management systems. Credit earned will depend on the modules taken. Course may be repeated as long as the module(s) are not repeated. Potential topic modules could include: root crop systems; cucurbit production systems; vegetable legumes; herbs; solanaceous crops; heirloom vegetable crops; integrated pest management; market gardening; organic production systems; extended season crop management; leaf and cool season crops; annual crop rotation systems; marketing specialty crops.

**HO 464 - Senior Project I (AW) Credits: 1**

A capstone course that requires students to develop a comprehensive research project, service project, or case study. Written and oral presentation of project/case study plan and preliminary work, and plans for second semester completion of the project.

**HO 465 - Senior Project II (AW) Credits: 2**

A capstone course that requires students to complete a comprehensive research project, service project, or case study. Written and oral presentation of completed project or case study. Prerequisites: HO 464

**HO 491 - Independent Study Credits: 1-2**

**HO 492-592 - Topics Credits: 1-4**

**HO 494 - Internship Credits: 1-12**

**HO 496 - Field Experience Credits: 1-12**

**HO 497 - Cooperative Education Credits: 1-12**

**HO 498 - Undergraduate Research/Scholarship Credits: 1-3**

## HON (Honors)

**HON 100 - Honors College Orientation Credits: 1**

Opportunities and requirements associated with continued participation in the SDSU Honors College will be emphasized along with general university orientation materials.

**HON 109 - First Year Seminar - Honors\*\* Credits: 2**

First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\*Course meets IGR #1 This course is designed as an introduction to the Honors College student experience, and, more broadly to students' first year experience at SDSU. Built around themes of ethics, diversity and empowerment, the course will include practical examination of Honors approaches to general education, contracted courses, colloquium, and independent study, along with integration of the Honors experience with students' academic major(s) and university experience. Instruction will include lecture, guest speakers, discussion and group work. Student reading, writing, reflection over course material and engagement in the classroom and broader university community will be emphasized throughout. Appropriate educational technologies will be utilized in support of the course objectives.

**HON 290 - Seminar Credits: 1-3**

A highly focused, and topical course. The format includes student presentations and discussions of reports based on literature, practices, problems, and research. Seminars may be conducted over electronic media such as internet and are at the upper division or graduate levels. Enrollment is generally limited to fewer than 20 students.

**HON 299 - Text and Context of Human Thought Credits: 3**

This course introduces students to a selection of seminal works of literature, history and philosophy and explores how the ideas expressed in them have influenced a range of thought traditions. Topics to be explored include: the public university, government, human perception and consciousness, wealth and poverty, nature, gender, culture, ethics and morality. Topics will be examined in multiple ways, through reading and writing, discussion, faculty lectures and guest speakers.

**HON 303 - Honors Colloquium \*\* Credits: 1-4**

The Social Sciences. Notes: May be repeated once. This course meets IGR #2. Honors Colloquium is an engaging, multidisciplinary examination of a societal issue, theme, or question. Colloquium is open to Honors College students from all majors. Students are required to take Colloquium at least once to fulfill requirements for graduation with Honors College distinction. There are no pre-requisites for the course but students must be Honors College eligible. Students are encouraged to take Colloquium when the topic is of interest and when it fits into the schedule of their academic program. Recent themes have included: Future of Medicine and Health; The Work of Creativity; Influences of Popular Culture; Numeracy; Agriculture, Food and Society; The Global Ecosystem: What is our role?; The Art and Adventure of Leadership; Food, Ethics and International Development.

**HON 390 - Seminar Credits: 1-3**

A highly focused, and topical course. The format includes student presentations and discussions of reports based on literature, practices, problems, and research. Seminars may be conducted over electronic media such as internet and are at the upper division or graduate levels. Enrollment is generally limited to fewer than 20 students.

**HON 399 - Introduction to Independent Study Credits: 1**

An introduction to the Honors Independent Study experience, this course is designed to prepare students for successful execution of the Honors Independent Study project. Students will learn project parameters and requirements and be guided through the process of identifying a topic, connecting with a faculty member, interdisciplinary research methodologies and public presentation of their project in written, oral and poster formats. Credit may be used to fulfill a portion of students' upper division Honors requirements.

**HON 490 - Seminar (COM) Credits: 1-3**

A highly focused, and topical course. The format includes student presentations and discussions of reports based on literature, practices, problems, and research. Seminars may be conducted over electronic media such as Internet and are at the upper division or graduate levels. Enrollment is generally limited to fewer than 20 students.

**HON 491 - Independent Study (COM) Credits: 1-3** Includes directed study, problems, readings, directed readings, special problems and special projects. Students complete individualized plans of study which include significant one-on-one student-teacher involvement. The faculty member and students negotiate the details of the study plans. Enrollments are usually 10 or fewer students. Meetings depending upon the requirements of the topic. Notes: Honors College students work one-on-one with a faculty mentor on an original scholarly project related to their academic and professional goals. Projects may include laboratory, field, or social science research; design projects; historical analyses; or original creative pieces in literature and the arts. Students are encouraged to take Honors 390 to help prepare for their Independent Study. Deliverables include a scholarly paper and presentation at a public scholarly venue. Registration is by permission upon approval of the application for Independent Study form.

**HON 492 - Topics Credits: 1-3**

A course devoted to a particular issue in a specified field. Course content is not wholly included in the regular curriculum. Guest artists or experts may serve as instructors. Enrollments are usually limited with significant one-on-one student-teacher involvement.

**HON 493 - Workshop Credits: 1-3**

Special, intense sessions in specific topic areas. Approximately 45 hours of work is required for each hour of credit. Workshops may vary in time range, but typically use a compressed time period for delivery. They may include lectures, conferences, committee work, and group activity.

**HON 494 - Internship Credits: 1-12**

Applied, monitored, and supervised field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and/or directed plan of study. A higher level of supervision is provided by the instructor in these courses than is the case with field experience courses.

**HON 495 - Practicum Credits: 1-12**

Applied, monitored, and supervised field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and/or directed plan of study. A higher level of supervision is provided by the instructor in these courses than is the case with field experience courses.

**HON 496 - Field Experience Credits: 1-12**

Applied, monitored, and supervised field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and/or directed plan of study established by the student, instructor, and field-based supervisor. Due to the presence of a field experience supervisor, a lower level of supervision is provided by the instructor in these courses than is the case with an internship or practicum course.

**HON 498 - Undergraduate Research/Scholarship Credits: 1-12**

Includes Senior Project, and Capstone Experience. Independent research problems/projects or scholarship activities. The plan of study is negotiated by the faculty member and the student. Contact between the two may be extensive and intensive. Does not include research courses which are theoretical.

**HPER (Health, Physical Education & Recreation)****HPER 742 Psychological Aspects of Sport and Exercise Credits 3****HPER 745 - Sports Medicine Credits: 2****HPER 760 - Motor Learning and Development Credits: 3****HPER 780 - Intro to Graduate Study and Research Credits: 1****HPER 783 - Research Methods in HPER Credits: 3****HSC (Health Science)****HSC 100 - First Year Seminar for Health Professionals in the Learning Community Credits: 1**

Instruction to introduce students to not only the college environment but also health related professions. The course will focus on engagement in the university experience. Topics covered will include setting goals, discovering campus resources, academic advising, academic requirements, community service, and time management. Includes group discussion, participation in tours of healthcare facilities and panel discussions.

**HSC 120 - Community Health Credits: 2**

Discussion based course with the goal of understanding the philosophy and principles of community health. Emphasis on knowledge, attitudes and behaviors utilized in solving community health problems. Cross-Listed: HLTH 120.

**HSC 200 - Complementary & Alternative Health Care Credits: 3**

This interdisciplinary course introduces complementary and alternative health care (CAHC) practices. This course is designed to explore complementary methods utilized by healthcare professional and lay persons to provide culturally congruent care for individuals and families. This course explores definitions, history, examples, and on-going research of various therapies including holistic approach to Mind/Body Medicine, Herbs, Traditional Chinese Medicine, Naturopathy, Homeopathy, Ayurveda, Spiritual Healing, Acupuncture, Dietary and Nutritional supplements, and additional energy therapies.

**HSC 212 - Contemporary Health Problems Credits: 2**

Personal health education course which focuses on the health problems facing today's society from birth to death. Emphasis on the knowledge essential in maintaining a healthy lifestyle. Open to all students. Cross-Listed: HLTH 212.

**HSC 230 - Stress Management for Life Credits: 3**

Stress management course designed to expose students to a holistic approach to preventing and managing stress. Students learn both healthy cognitive (coping) skills and relaxation techniques with the intention of preventing and/or alleviating the symptoms of stress. Content includes the science of stress, the mind/body connection, stress prevention strategies such as perception, mindfulness, time management, and financial management, and a variety of stress management techniques including guided imagery, progressive muscle relaxation, yoga, meditation, and autogenics. The course has both personal application and professional application for students working in any area of healthcare.

**HSC 253 - Disaster Preparedness Credits: 2**

Basic philosophy, fundamental principles of civil defense; citizen's role in emergency planning for non-military national defense. Open to all students.

**HSC 260 - Women's Health Issues Credits: 3**

This interdisciplinary course critically examines issues in women's health. Biological, socio-cultural, psychological, historical and political processes that shape and define women's health and healthcare experiences are explored. Cross-Listed: WMST 260

**HSC 302 - Wellness and the Family Credits: 2**

Overview of health promotion as applied to the family throughout all stages of development. Planning for promotion of family health. Cross-Listed: HLTH 302.

**HSC 364-364L Emergency Medical Technician and Lab Credits: 4**

This course provides the knowledge and skill base for an individual to become a Nationally Registered EMT. The course follows the curriculum set by the National Emergency Medical Services Educational Standards. Students are expected to learn the skills necessary to recognize numerous medical and trauma related emergencies. Students will learn vital signs monitoring, Basic Life Support interventions and patient moving/packaging skills. Students will apply learned skills to patients in scenario-based training. 10 hours of in-hospital observation and training are required. Laboratory course to accompany HLTH/HSC 364 Prerequisites: Written consent (Current CPR certification at the level of BLS Healthcare Provider (American Heart Association)) Corequisites: HCS/HLTH 364L-364 Notes: This course does not certify students as an EMT; they must pass the National Registry exams.

**HSC 420/520 - Methods of Health Instruction Credits: 2**

Curriculum content and methods in health education. Emphasis on elementary and secondary. Demonstration of teaching strategies. Organization of health/safety education. The course will present an overview of the need for health education in schools as well as the teacher's role in promoting health instruction. Included will be strategies for planning, implementing, and evaluating health education for grades K-12. Students will also be introduced to useful academic and community resources. Cross-Listed: HLTH 420.

**HSC 433-533 \*\* - Occupational Health Credits: 3**

Occupational Health is a survey course dealing with health concerns in the workplace and the scope, objectives, and functions of occupational programs. Work related injuries and diseases and the effects of harmful exposure to chemical and physical agents which cause discomfort, stress, inefficiency or disease are examined. Emphasis is placed on preventative measures and early intervention to assure a reasonable, healthful work environment.

**HSC 443 - Public Health Science (G) Credits: 3**

Study of organization and administration of public and voluntary health agencies. Principle functions and program development in vital statistics, maternal-child health, adult health, sanitation, health education, and special health programs. Introduces the student to public health by describing its history and its bases in sociology, economics, philosophy and government. The relationship of environmental factors to health and illness is examined. The course will provide the student with an understanding of administrative and political processes of operation of health agencies by examining traditional and new innovative programs of federal, state and local health agencies. Cost-benefit, cost-effectiveness, and risk assessment are addressed as in the relationship of public law and policies to the delivery of health care. Cross-Listed: HLTH 443. Notes: This course meets IGR Goal 2.

**HSC 445 - Epidemiology Credits: 3**

The course provides information on the epidemiological concepts and methods needed to understand the description of the occurrence of health outcomes, and the identification of risk factors for health outcomes in human populations. Prerequisites: Junior or senior standing or consent of instructor. Cross-Listed: HLTH 445.

**HSC 452 - Interprofessional Issues in Health Care Credits: 2**

This interprofessional course will focus on the analysis of current issues and topics related to health care, including quality improvement, safety, patient- and family-centered care, and leadership. Health care students will engage in interprofessional discussion and collaboration utilizing resources such as the Institute for Healthcare Improvement Open School© modules.

**HSC 490 - Seminar (AW) Credits: 1-4****HSC 492 - Topics Credits: 1-4****HSC 493 - Workshop Credits: 1-4****HSC 494 - Internship (COM) Credits: (1-12)****HSC 496 - Field Experience Credits: 1-12**

Prerequisites: PE 400, PE 450 and HSC 494.

**HSC 497 - Cooperative Education Credits: (1-12)****HSC 631 - Biostatistics I Credits: 3****HSC 731 - Biostatistics II Credits: 3****HSC 782 - Epidemiology Credits: 3****ID (Interior Design)****ID 150-150L Introduction to Interior Design I and Lab Credits: 4**

The lecture promotes and builds upon design awareness, design fundamentals and knowledge of human factors to develop new ways of perceiving the interior built environment. The studio teaches basic manual representation methods including drafting, modeling, and presentation layout; and introduces students to the fundamentals of design concept and critique. Studio associated with ID 150. The studio teaches basic manual representation methods including drafting, modeling, and presentation layout; and introduces students to the fundamentals of design concept and critique. Corequisites: ID 150L-150

**ID 151-151L – Intro to Interior Design II and Lab Credits: 4**

The lecture introduces programming, design process, design thinking, behavioral factors, social and cultural issues as applied to the layout and planning of interior environments. Studio projects integrate and correspond to lecture content while exploring concept and spatial development. Two and three-dimensional representation techniques are introduced, including diagramming, sketching, one and two point constructed perspectives and supportive finishing methods. Studio associated with ID 151. Studio projects integrate and correspond to lecture content while exploring concept and spatial development. Two and three-dimensional representation techniques are introduced, including diagramming, sketching, one and two point constructed perspectives and supportive finishing methods. Prerequisites: ID 150. Corequisites: ID 151L-ID 151.

**ID 215-215L - Materials and Lab Credits: 3**

This course explores the characteristics of interior finishes and furnishings, including history, resources, environmental issues, selection and performance criteria and installation. Projects focus on material research, selection and application for a particular design typology and client situation. Corequisites: ID 215L-ID 215.

**ID 222 - Interior Design Studio I Credits: 4**

This studio explores conceptual thinking and placemaking through spatial articulation utilizing the elements and principles of design. Developing communication skill sets (visual, graphic and written) and computer software knowledge is paramount. Prerequisites: ID 151-151L. Notes: Interior Design majors and minors must achieve a "C" or better in ID 222 to progress to ID 223

**ID 223 - Interior Design Studio II Credits: 4**

This studio explores issues of universal/inclusive design through residential and hospitality spaces. A focus on global awareness and practice through an international project reinforces development of skills for operating within a global market. Visual communication and computer software skills are expanded. Prerequisites: "C" or better in ID 222

**ID 224 - History of Interior Design I Credits: 2**

This course presents a History of Interior Design from Antiquity to the Industrial Revolution; examining art, architecture, interior design, furniture, and the sociological and cultural context of various architectural movements.

**ID 225 - History of Interior Design II Credits: 2**

This course presents a History of Interior Design from the Industrial Revolution to the present; examining art, architecture, interior design, furniture, and the sociological and cultural context of various architectural movements. Prerequisites: ID 224.

**ID 292 - Topics Credits: (1-3)****ID 317 - Professional Practices in Interior Design Credits: 2**

This course provides an overview of the business of interior design, focusing on the profession, ethics, project management, design fees and contracts, estimating, business formation, business organization and management, personnel issues, legal issues and businesses processes. This imbeds professional values that mold responsible, accountable and effective interior designers.

**ID 319-319L - Building Systems I and Studio Credits: 2**

This course examines the materials and methods of construction to understand how various building systems are organized. Understanding the coordination required of the building trades, including structural, mechanical, electrical, architectural and interior detailing is fundamental to the design and construction of built environments. Corequisites: ID 319L-ID 319.

**ID 320-320L - Lighting and Acoustics and Lab Credits: 2**

This course examines the materials and methods of construction to understand how various building systems are organized. Understanding the coordination required of the building trades, including structural, mechanical, electrical, architectural and interior detailing is fundamental to the design and construction of built environments. Corequisites: ID 320L-ID 320.

**ID 322 - Interior Design Studio III (AW) Credits: 4**

This studio explores advanced commercial design through lenses of healthcare and retail interior design. Projects investigate the design process with emphasis on programming, design thinking and research. Presentation skills, graphic techniques and technical proficiencies are necessary to effectively communicate design intent. Prerequisites: "C" or better in ID 223.

**ID 323 - Interior Design Studio IV Credits: 4**

This studio explores branded commercial interior environments, varying largely in scale. Projects investigate the design process, with emphasis on programming, concept development, planning and spatial articulation that support and enhance client culture. Prerequisites: "C" or better in ID 322.

**ID 329-329L - Building Codes and Regulations and Lab Credits:2**

This course focuses on the understanding and application of industry codes and regulations, including ADA standards, life safety standards, the International Building Code and various state, municipal and specialty codes. Integration of principles of universal design into built environment is further emphasized. Prerequisites: ID 319 Corequisites: ID 329L-ID 329.

**ID 377-377L - Portfolio and Lab Credits: 1**

This course focuses on the content and graphics for cover letter, resume and portfolio development, necessary for internships and job seeking. Prerequisites: ID 223. Corequisites: ID 377L-ID 377.

**ID 422 - Interior Design Studio V Credits: 4**

This studio provides experience in solving design problems related to socio-economic or cultural issues; requiring comprehensive project development from concept through detail and integration of building systems. Prerequisites: ID 329-329L, ID 495, and "C" or better in ID 323

**ID 423 - Interior Design Studio VI Credits: 4**

This studio experience culminates the comprehensive independent research developed in ID 498 through the design and detailed development of an interior environment. This process sharpens students' design and presentation skills, challenges critical thinking, reinforces the value of research-based design, instills social responsibility, encourages holistic thinking of building systems, and encourages the development of students' project management skills and leadership. Prerequisites: ID 422 with a C or better; ID 498

**ID 480 - Travel Studies Credits: 1-5**

This travel-study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators at other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

**ID 490-590 - Seminar Credits: 1-3****ID 491-591 - Independent Study Credits: (1-3)****ID 492-592 - Topics Credits: (1-3)**

**ID 495 - Practicum Credits: 3** Prerequisites: ID 317 & 323, 2.2 GPA, 90 credits.

**ID 498 - Undergraduate Research/Scholarship Credits: 1-3****IDL (Interdisciplinary Studies)****IDL 100 - Concepts in Sustainability\*\* Credits: 3**

This course will provide an overview of what sustainability is and how to measure sustainable actions. Students will learn sustainability concepts, such as systems thinking, sustainable design principles, and resource utilization. Students will learn the complex interactions between social systems, environmental ethics, and ecological literacy. Applications of sustainability in the arts and humanities and social, physical, and natural sciences will be presented. Notes: \*\*Course meets IGR #2

**IDL 262 - Foundations of Interdisciplinary Studies Credits: 3**

This course creates the foundation for interdisciplinary thinking, enabling students to study complex issues by integrating insights from a variety of disciplines. The course will also provide a broad historical view and background of interdisciplinary studies. By developing interdisciplinary traits and skills, students will better understand themselves and their major through the multi-step process of self-reflection, self-assessment, and goal setting. Notes: A grade of C or higher is required to progress to IDL 362.

**IDL 362 - Interdisciplinary Inquiry and Integration Credits: 2**

This course builds on the foundational knowledge base of IDL 262, Foundations of Interdisciplinary Studies through application and integration of interdisciplinary insights into complex problem-solving. Students will develop critical research and writing skills. Prerequisites: C or better in IDL 262

**IDL 479 - Interdisciplinary Studies Capstone (AW) Credits: 2**

The Capstone course will be used as a culminating experience in which students synthesize subject-matter knowledge they have acquired, integrating cross-disciplinary knowledge, and connect theory and application in preparation for entry into a career. The course will be taken last in a sequence of courses in an Interdisciplinary Studies program. The capstone course will require students to integrate the student's plan of study into a final product (paper, portfolio, and presentation) that demonstrates their ability to make connections and apply their knowledge and skills. The nature of interdisciplinary studies will be examined along with emphasis on intellectual abilities such as writing, researching, thinking critically, and speaking. Prerequisites: C or better in IDL 362

## INFO (Informatics)

### **INFO 101 - Introduction to Informatics\* Credits: 3**

An introduction to informatics and basic computer programming. Other topics include the basic operation of hardware, software, servers, the Internet, intranets, networks, web browsers, and information security. Notes: Course meets SGR 6.

### **INFO 102 - Social and Ethical Aspects of Informatics\* Credits: 3**

A study of the social, political, economic and ethical implications of information and informatics on business and society. Other topics include information ownership, intellectual property and the social construction of information. Notes: Course meets SGR 3

## LA (Landscape Architecture)

### **LA 120 - Fundamentals of Landscape Graphics Credits: 2**

Provides the foundation for landscape graphic communication through both technical and conceptual standards. Topics include: the principles of landscape drafting, free hand sketching and visualization, graphic symbol communication, and an introduction to the professional graphic production process.

### **LA 201 - Introduction to Landscape Design Credits: 3**

A survey of the field of Landscape Design and Environmental Planning. Introduction to conceptual aspects of the discipline with a focus on landscape appreciation, environmental problems of land use, conservation, landscape design and planning, and land ethics and stewardship.

### **LA 231 - Computer Applications in Landscape Arch. Credits: 3**

An introductory course in computer aided design and drafting with specific application to landscape design software applications. Emphasis is placed on the practical application of CAD to site analysis, design problem-solving, design management, and professional communication toward the creation of site plans, cost estimates and working drawings for the landscape industry. Prerequisites: GE 123, LA 314.

### **LA 241 - History of Landscape Architecture Credits: 3**

History from early Egyptian to contemporary times. Styles viewed from the standpoint of aesthetic thought, societal and technological influences. Works of major historical and contemporary designers will be stressed.

### **LA 284 - Landscape Graphics and Theory of Design Credits: 4**

Basic free hand graphic techniques and design theory for landscape design. Graphics used in landscape design (plan drawings, elevations, isometrics, perspective and models). Form and spatial relationships are stressed as applied to materials of landform, vegetation, water, and architecture. Prerequisites: LA 120 or consent.

### **LA 289 - Travel Studies in Landscape Architecture Credits: 2**

This course is a required class for landscape architecture majors in the spring semester of their sophomore year. Topics will cover landscape themes, design challenges, etc. of the sites to be visited in LA 289L. Students will take LA 289 during the spring semester in preparation for the travel trip (LA 289L) during the week following finals. Prerequisites: LA 314 Notes: Maybe repeated for credit twice.

### **LA 289L - Travel Studies in Landscape Arch. Lab Credits: 1**

Travel experience in landscape architecture, is intended to expose students to the breadth of the discipline of landscape architecture by making first hand site visits to regional and national cities and sites. In addition to site visits, tours, and presentations, students will have a chance to network with design professionals, experience different cultural impacts, and gain exposure to the types of landscape architecture projects not readily available in and around Brookings and the campus of SDSU. Prerequisites: LA 289 Notes: Maybe repeated for credit twice.

### **LA 314 - Landscape Design Studio Credits: 4**

Basic landscape design problem solving on smaller scale sites (residential, small commercial, rural and urban). Development of aesthetic sensitivity and awareness of site problems. Site analysis, programming, concept formation, master plan development and plan presentation. Prerequisites: LA 284.

### **LA 322 - Landscape Site Engineering Credits: 3**

Technical work in preparing grading plans, computing areas of cut and fill, site selection, topographic analysis, soil and exposure analysis, surface and subsurface drainage, and pedestrian and vehicular circulation. Prerequisites: LA 364 or CM 210.

### **LA 323 - Landscape Construction Credits: 3**

Design and construction of walks, terraces, fences, walls, pools, and other landscape structures and systems. Prerequisites: LA 314.

### **LA 324-324L - Planning Public Grounds and Lab Credits: 3**

Contemporary problems in the design of public properties such as parks and civic areas. Complexities of functional use, pedestrian and vehicular circulation, and land use are addressed. Prerequisites: LA 314. Corequisites: LA 324L-LA 324.

### **LA 327-327L - Golf Course Design and Mgmt & Lab Credits: 3**

Principles and practices of golf course design, including site analysis, design process, construction specifications and techniques, and aesthetic/design elements and professional turf management of golf courses and athletic fields, including history, culture, equipment, diagnostics, case studies, and facilities management. Corequisites: LA 327L-327. Cross-Listed: HO 327-327L.

### **LA 364 - Planting Design and Specifications Credits: 4**

Preparation of planting designs, plans, and specifications for projects of increasing complexity. Emphasis on northern plains landscapes. Focus on use of native plants and sustainable design. Projects from small residential scale to larger regional scale. Design applications emphasizing the space forming potential and functional use of natural and man-made plant groups. Prerequisites: LA 314; HO 250.

### **LA 421-421L - City Planning and Lab Credits: 3**

City planning in the United States, planning practice and theory, urban design, and land use planning. Local planning efforts observed. Prerequisites: LA 324. Corequisites: LA 421L-LAB 421.

### **LA 424-424L - Recreational Facilities Design and Lab Credits: 3**

Design of public and private recreational facilities including parks, resorts, golf courses, trails, and ecosystems. Planning and design of facilities, and their function, operation, and maintenance will be emphasized. Prerequisites: LA 421-421L. Corequisites: LA 424L-LA 424.

### **LA 440-440L - Restoration Ecology and Lab Credits: 4**

Scientific principles involved in restoration of natural ecosystems on degraded and disturbed lands. An understanding of ecological principles is recommended prior to enrollment. Laboratory to accompany LA 440. Corequisites: LA 440L-440. Cross-Listed: BIOL/NRM 440-440L.

### **LA 464 - Landscape Professional Practicum Studio Credits: 4**

An advanced design studio with an emphasis on environmental design, land use ethics, current issues in landscape design and professional practice. Senior exit examination requirement is completed during this class. Prerequisites: Senior standing.

### **LA 491 - Independent Study Credits: 1-2**

### **LA 492 - Topics Credits: 1-4**

### **LA 494 - Internship Credits: 1-12**

### **LA 497 - Cooperative Education Credits: 1-12**

### **LA 498 - Undergraduate Research/Scholarship Credits: 1-3**



## LAKL (Lakota)

### LAKL 101 - Introductory Lakota I \* (COM) Credits: 4

This course is an introduction to the Lakota language. Emphasis is placed on the basic sounds of the Lakota language, correct pronunciation, and orthography used to represent those sounds. The course includes a focus on male/female speech patterns, kinship terms, other ordinary environmental and cultural contexts, and basic sentence structure. Language tables are used to enhance fluency in conversational Lakota. Cross-Listed: AIS 101. \* Meets SGR #4

### LAKL 102 - Introductory Lakota II \* (COM) Credits: 4

This course is a continuation of the Lakota language in both written and oral forms. Emphasis is placed on pronunciation, a more extended examination of grammar, expanded vocabulary, and continued practice in reading, writing, and speaking Lakota. Language tables are used to enhance fluency in conversational Lakota. Prerequisites: AIS 101 OR LAKL 101 or consent of instructor. Cross-Listed: AIS 102. Notes: \* Course meets SGR #3

### LAKL 201 - Intermediate Lakota I (COM) Credits: 3

This course is an advanced course that builds on the introductory Lakota language courses. Students will learn advanced grammar and Lakota literacy with an emphasis on verb conjugation, composition of sentences, and an analysis of Lakota/Dakota language texts. Language tables are used to enhance fluency in Lakota speaking skills. Cross-Listed: AIS 201. P, AIS 101 and AIS 102 or LAKL 101 and LAKL 102 or consent of instructor.

### LAKL 202 - Intermediate Lakota II (COM) Credits: 3

This course is a continuation of teaching grammar and Lakota literacy with an emphasis on verb conjugation, composition of sentences, and further in-depth analysis of Lakota/Dakota language texts. Language tables are used to enhance fluency in Lakota speaking skills. Prerequisites: LAKL 101 and LAKL 102, or AIS 101 and AIS 102, or consent of instructor. Cross-Listed: AIS 202

## LAS (Latin American Studies)

### LAS 301 - Latin American Cultures Credits: 2-3

A broad view of a country, region, epoch or theme concerning Latin America. A multidisciplinary and multimedia approach. Prerequisites: Sophomore standing or consent Notes: May be repeated with consent of the coordinator of the LAS program.

### LAS 302 - Latin American Societies Credits: 3

A broad view of the society of a country, region, epoch or theme concerning Latin America. A multidisciplinary and multimedia approach. Prerequisites: Sophomore standing or consent Notes: May be repeated for credit with consent of the LAS Coordinator.

### LAS 491 - Independent Study Credits: 1-3

Includes Directed Study, Problems, Readings, Directed Readings, Special Problems, and Special Projects. Students complete individualized plans of study which include significant one-on-one student-teacher involvement. The faculty member and students negotiate the details of the study plans. Enrollments are usually 10 or fewer students. Meetings depending upon the requirements of the topic.

## LEAD (Leadership)

### LEAD 210 - Foundations of Leadership\*\* Credits: 3

Foundations of Leadership is designed to sharpen fundamental leadership skills, develop core competencies and advance the goals of the University. The goal for the Foundations of Leadership course is to equip students with the knowledge, skills, and networks needed to achieve their goals within the classroom and in relation to their own personal development and future careers. Notes: \*\*Course meets IGR #2

### LEAD 310 - Leadership in Context \*\* Credits: 3

Principles of leadership within the unique contexts of agriculture, biological sciences, family and consumer sciences. Topics covered include definitions and approaches to the study of leadership, leadership styles, gender and ethnic diversity, leadership in groups, moral and ethical issues, leadership renewal, mission statements, and contemporary leadership issues facing the agricultural, biological, family, and consumer sciences. Notes: \*\* Meets IGR Goal #3 .

### LEAD 410 - Leadership: Senior Seminar Credits: 1

Senior seminar in leadership. Students will examine contemporary leadership issues through readings, speakers and class discussions, and will develop a senior portfolio showcasing their development and capacities as a leader.

### LEAD 433 - Leadership and Organizations Credits: 3

Emphasis is on the emergence of leadership patterns, group dynamics, small groups, and leadership in management. Prerequisites: SOC 100 or 150. Cross-Listed: SOC 433.

### LEAD 435 - Organizational Leadership and Team Development Credits: 3

This course focuses on leadership and team development in organizational structures. Students will study organizations and teams through the lens of leadership to better apply theory to practice in different organizations including nonprofit organizations. Topics include leadership intelligence, organizational alignment and vision, leadership values, creating a civil work climate, leading teams, follower engagement, personality and skills performance management, and leading change. Cross-Listed: LMNO 435

### LEAD 494 - Internship Credits: 3

### LEAD 496 - Field Experience: Leadership in Action Credits: 2

## LING (Linguistics)

### LING 203 - English Grammar Credits: 3

Instruction in the theory and practice of traditional grammar including the study of parts of speech, parsing, and practical problems in usage. Prerequisites: ENGL 101

### LING 420-520 - The New English Credits: 3

Diverse new theories and applications in English linguistics: lexicography, pragmatics, stylistics, socio-semantics, semiotics, and discourse theory. Prerequisites: ENGL 101; ENGL 201 (undergraduates only)

### LING 425-525 - The Structure of English Credits: 3

Structures of modern English through analyses that are primarily traditional, structural, and transformational. Prerequisites: ENGL 201 is a *recommended* prerequisite

### LING 443-543 - Development of the English Language Credits: 3

Historical survey of phonology, grammar, syntax, and lexicon of English leading to an understanding of the present state of the language and future developments. Prerequisites: ENGL 201 is a *recommended* prerequisite

### LING 452-552 - General Semantics Credits: 3

Relations between symbols; human behavior in reaction to symbols including unconscious attitudes, linguistics assumptions; and the objective systematization of language. Prerequisites: ENGL 101 & ENGL 201

## **LMNO (Leadership and Management of Nonprofit Organizations)**

### **LMNO 201 - Introduction to Leadership and Management of Nonprofit Organizations Credits: 3**

The course provides a basic understanding of the nonprofit sector and the role of philanthropy in the United States. It introduces students to the history, philosophy, ethics, and organization of nonprofit and social service agencies, and the roles of a human service professional in the nonprofit field.

### **LMNO 291 - Independent Study Credits: (1-3)**

### **LMNO 292 - Topics Credits: (1-3)**

### **LMNO 435 – Org. Leadership and Team Development Credits: 3**

This course focuses on leadership and team development in organizational structures. Students will study organizations and teams through the lens of leadership to better apply theory to practice in different organizations including nonprofit organizations. Topics include leadership intelligence, organizational alignment and vision, leadership values, creating a civil work climate, leading teams, follower engagement, personality and skills performance management, and leading change. Cross-Listed: LEAD 435

### **LMNO 486-586 - Service Learning Credits: (1-3)**

Service Learning in Leadership and Management of Nonprofit Organizations, including service planning, interaction with community, and reflection. Cross-Listed: HDFS/GERO 486-586.

### **LMNO 491 - Independent Study Credits: 1-3**

### **LMNO 492 - Topics Credits: 1-3**

### **LMNO 495 - Practicum Credits: (1-8)**

## **MATH (Mathematics)**

### **MATH 021 - Basic Algebra (COM) Credits: 3**

This course prepares students for college level mathematics. Topics generally include: basic properties of real numbers, exponents and radicals, rectangular coordinate geometry, solutions to linear and quadratic equations, inequalities, polynomials, and factoring. Students may also be introduced to functions and systems of equations. Prerequisites: Placement. Notes: This is a remedial level course and no credit for MATH 021 will be granted for graduation.

### **MATH 091 - Algebra for Statistics Credits: 1**

This course provides supplemental instruction in algebra to students co-enrolled in an introductory college level statistics course. Algebraic topics are sequenced in a manner that supports the needs of the co-requisite statistics course. Prerequisites: Placement. Corequisites: STAT 281 Notes: This is remedial level course. No credit will be granted towards graduation.

### **Math 092L - College Algebra Laboratory Credits: 2**

This course provides supplemental instruction in algebra topics to students co-enrolled in an introductory college algebra course. Topics are sequenced in a manner that supports the needs of the co-requisite college algebra course. Prerequisites: Placement. Corequisites: Math 102

### **MATH 093 - Algebra for Quantitative Literacy Credits: 1-2**

This course provides supplemental instruction in algebra to students co-enrolled in a quantitative literacy course. Algebraic topics are sequenced in a manner that supports the needs of the co-requisite quantitative literacy course.

Prerequisites: Placement. Corequisites: MATH 103 Notes: This is remedial level course. No credit for MATH 093 will be granted for graduation.

### **MATH 095 - Pre-College Algebra Credits: 3**

This course prepares students for college level mathematics. Topics include basic properties of real numbers, exponents & radicals, rectangular coordinate geometry, solutions to linear and quadratic

equations, systems of equations, inequalities, polynomials, factoring, rational expressions and equations, radical expressions and equations, and an introduction to functions such as polynomial, exponential and logarithmic functions. Prerequisites: Placement Notes: This is remedial level course. No credit for MATH 095 will be granted for graduation.

### **MATH 099 - Enhanced Pre-College Algebra Credits: 5**

This course prepares students for college level mathematics. Topics include basic properties of real numbers, exponents & radicals, rectangular coordinate geometry, solutions to linear and quadratic equations, systems of equations, inequalities, polynomials, factoring, rational expressions and equations, radical expressions and equations, and an introduction to functions such as polynomial, exponential and logarithmic functions. Additional topics will include effective methods for studying and learning mathematics. Prerequisites: Placement. Notes: This is remedial level course. No credit for MATH 099 will be granted for graduation.

### **MATH 101 - Intermediate Algebra (COM) Credits: 3**

Basic properties of real numbers, linear equations and inequalities, quadratic equations, systems of equations, polynomials and factoring, rational expressions and equations, and radical expressions and equations, and an introduction to functions such as polynomial, exponential and logarithmic functions. Credit for MATH 101 will not be granted to anyone who has previously received credit for MATH 102 or MATH 115. Prerequisites: Placement.

### **MATH 102 - College Algebra \* (COM) Credits: 3**

Equations and inequalities; polynomial functions and graphs, exponents, radicals, binomial theorem, zeros of polynomials; systems of equations; exponential, logarithmic, and inverse functions, applications and graphs. Other topics selected from sequences, series, and complex numbers. Prerequisites: Placement, Math 095, or Math 101 (C or better) Notes: \* Course meets SGR #5

### **MATH 103 - Quantitative Literacy\* Credits: 3**

This course is designed to provide the liberal arts student with practical number theory, logical thinking, and mathematical skills to be quantitatively literate. The student will develop critical thinking skills, interpret data, and reason quantitatively to solve authentic problems and increase confidence with mathematics while simultaneously building a cultural appreciation for the relevant and meaningful role that mathematics plays in many areas of life. Students will use information and knowledge from multiple areas to apply mathematics to new situations and dynamic processes. This course does not serve as a prerequisite for courses requiring MATH 102 (College Algebra). Prerequisites: Placement, or MATH 095, or MATH 101 Notes: Course meets SGR #5

### **MATH 115 - Precalculus \* (COM) Credits: 5**

A preparatory course for the calculus sequence. Topics include: polynomial, rational, exponential, logarithmic and trigonometric functions and their graphs; systems of equations, inequalities and complex numbers. Prerequisites: MATH 102 or placement Notes: \* Course meets SGR #5

### **MATH 120 - Trigonometry \* (COM) Credits: 3**

Topics include: trigonometric functions, equations, and identities; inverse trigonometric functions; exponential and logarithmic functions, and applications of these functions. Prerequisites: MATH 102 or placement. Notes: \* Course meets SGR #5

### **MATH 121-121L -Survey of Calculus and Lab\* (COM) Credits 5**

A survey of calculus including an intuitive approach to limits, continuity, differentiation, and integration with an emphasis on applications of the derivative and the integral as well as topics from multivariable calculus; A lab which supplements Math 121 and provides the opportunity to study applications in more detail. Prerequisites: MATH 102 or MATH 115 or placement. Corequisites: MATH 121L-121. Notes: \* Course meets SGR #5

**MATH 123 - Calculus I \* (COM) Credits: 4**

The study of limits, continuity, derivatives, applications of the derivative, antiderivatives, the definite and indefinite integral, and the fundamental theorem of calculus. Prerequisites: for MATH 123-123L is MATH 115 with grade of C or D or placement; Prerequisites: for MATH 123 is MATH 115 with grade of A or B or placement. Notes: \* Course meets SGR #5

**MATH 123L - Calculus I Lab (COM) Credits: 1**

A lab which supplements MATH 123 and provides the opportunity to study applications in more detail. Corequisites: MATH 123.

**MATH 125 - Calculus II \* (COM) Credits: 4**

A continuation of the study of calculus, including the study of sequences, series, polar coordinates, parametric equations, techniques of integration, applications of integration, indeterminate forms, and improper integrals. Prerequisites: MATH 123. Notes: \* Course meets SGR #5

**MATH 141 - Survey of Mathematics Credits: 3**

To give the students in social science and liberal arts an appreciation of the nature of mathematics. An introduction to the logical structure of mathematics and its application to modern life, including such topics as logic, number systems, geometry, probability, statistics, and consumer mathematics.

**MATH 198 - The Mathematics Profession Credits: 1**

An overview of the SDSU Department of Mathematics and Statistics, the mathematics profession, careers in mathematics, and effective techniques for pursuing such careers. 1 credit, fall semester only, S/U grading, may not be used to satisfy System Goal #5.

**MATH 202 - Applied Informatics Credits: 3**

An introduction to discipline-specific applications of informatics including basic mathematical/statistical models, algorithms, and problem-solving with software. Students complete an informatics project that is strongly related to their major. Prerequisites: MATH 102, and INFO 101.

**MATH 215 - Matrix Algebra Credits: 2**

An introduction to systems of linear equations, matrices, and determinants with applications to linear mathematical problems. Prerequisites: MATH 115 or MATH 123 or consent.

**MATH 225 - Calculus III \* (COM) Credits: 4**

A continuation of the study of calculus, including an introduction to vectors, vector calculus, partial derivatives, and multiple integrals. Prerequisites: MATH 125. Notes: \* Course meets SGR #5

**MATH 253 - Logic, Sets, and Proof Credits: 3**

Topics include logical connectives, quantifiers, and arguments; set operations, index sets, relations, functions, cardinality, and proof techniques. These topics will be introduced with an emphasis on using them to read, understand, evaluate, and create Mathematical Proofs. Prerequisites: Math 123 Corequisites: MATH 125

**MATH 261 - Geometry for Teachers Credits: 3**

Axiomatic development of Euclidean and other geometries, coordinate geometry in two or three dimensions, transformational geometry, and informal Non-Euclidean geometry. Required of majors and minors planning to teach. Prerequisites: MATH 125 and EDFN 338.

**MATH 291 - Independent Study Credits: 1-4****MATH 292 - Topics (COM) Credits: (1-5)****MATH 315 - Linear Algebra (COM) Credits: 4**

Course topics include: the theory and applications of systems of linear equations, matrices, determinants, vector spaces, linear transformations and applications. Prerequisites: MATH 253

**MATH 316 - Discrete Mathematics (COM) Credits: 3**

Selected topics from Boolean algebra, set theory, logic, functions and relations, difference equations, recurrence relations, application of

algorithms, finite graphs, trees, paths and modeling. Prerequisites: MATH 253.

**MATH 321 - Differential Equations (COM) Credits: 3**

Selected topics from ordinary differential equations including development and applications of first order, higher order linear and systems of linear equations, general solutions and solutions to initial-value problems using matrices. Additional topics may include Laplace transforms and power series solutions. Prerequisites: MATH 125.

**MATH 331 - Advanced Engineering Mathematics Credits: 3**

Fourier series, vector analysis, matrices, determinants, and topics selected from: complex variables, partial differential equations, numerical methods. Prerequisites: MATH 321.

**MATH 355-355L - Methods of Teaching Mathematics and Lab Credits: 3, 1**

Techniques, materials and resources for teaching mathematics to junior high school and high school students. Required of majors and minors planning to teach. May not be used for upper division math elective for majors not in Secondary Teaching Option. Prerequisites: MATH 125, MATH 261, EDFN 338. Corequisites: MATH 355L-MATH 355.

**MATH 361 - Modern Geometry (COM) Credits: 3**

In this course topics will be chose from: axiomatic systems, finite geometries, Euclidean plane geometry, transformational geometry, three dimensional geometry, and non-Euclidean geometries. Prerequisites: MATH 125.

**MATH 371 - Technology for Mathematics Educators Credits: 3**

Students pursuing the BS in Mathematics with Teacher Education Specialization will gain experience with mathematics instructional technology devices commonly used in K12 mathematics classrooms. Prerequisite: permission of instructor.

**MATH 373 – Intro to Numerical Analysis (COM) Credits: 3**

This course is an introduction to numerical methods. Topics include elementary discussion of errors, polynomial interpolation, quadrature, nonlinear equations, and systems of linear equations. The algorithmic approach and efficient use of the computer will be emphasized. Prerequisites: MATH 125, and CSC 150 or CSC 213.

**MATH 374 - Scientific Computation I Credits: 3**

An introduction to the use of computers for solving mathematical problems originating in scientific application areas. Topics will include a discussion of rounding errors, and practical aspects of writing programs for problems such as solving nonlinear equations, approximating integrals and finding local minima. Fall semester Prerequisites: CSC 150-150L and MATH 125 and either MATH 215 or MATH 315 OR CSC 218 and MATH 125 and either MATH 215 or MATH 315

**MATH 392 - Topics (COM) Credits: (1-5)****MATH 401 Senior Capstone & Advanced Writing (AW) Credit: 1**

Two semester course: In the first semester, students will carry out activities which are designed to refresh mathematics skills and develop skills such as research, writing, and presenting which will prepare them for the second semester in which they will write a major paper under faculty supervision and give a presentation based on that paper.

**MATH 411-511 - Theory of Numbers (COM) Credits: 3**

Properties of integers, divisibility, primes, congruencies, Diophantine equations, quadratic residues, continued fractions and the distribution of primes. Prerequisites: MATH 125.

**MATH 413 - Abstract Algebra I (COM) Credits: 3**

Introduction to the theory and applications of algebraic structures including groups, rings, and fields. Prerequisites: MATH 315.

**MATH 414 - Abstract Algebra II (COM) Credits: 3**

This is a continuation of topics from MATH 413. Prerequisites: MATH 413.

**MATH 425 - Real Analysis I (COM) Credits: 3**

Properties of real numbers, sequences, and series of real numbers, limits of functions, uniform continuity, differentiation, sequences and series of functions, uniform convergence, and theories of integration. Extensions of  $\mathbb{R}^n$  may be considered. Prerequisites: MATH 125 and MATH 315.

**MATH 426 - Real Analysis II (COM) Credits: 3**

This is continuation of MATH 425. Prerequisites: MATH 425.

**MATH 433 - Capstone: Mathematics Education Credits: 3**

In this course, prospective teachers examine high school mathematics topics from an advanced point of view. The topics include, but are not limited to: real and complex numbers, functions, equations, mathematical induction, and trigonometry. Required of majors planning to teach. May not be used for upper division math elective for majors not pursuing Secondary Teaching Option. Prerequisites: MATH 125, 315, EDFN 338.

**MATH 435 - Complex Variables I Credits: 3**

Algebra of complex numbers, classifications of functions, differentiation, integration, mapping, transformations, infinite series. Prerequisites: MATH 225.

**MATH 440-540 - Mathematics of Finance Credits: 3**

Prerequisites: STAT 381. Notes: Dual listed with MATH 440.

**MATH 441-541 - Applied Probability Theory Credits: 3**

Topics in probability including an introduction to the axiomatic development of probability, random variable and distributions with emphasis on the exponential, binomial and Poisson distributions. Applications to discrete stochastic processes such as Markov chains and queuing theory are covered in some detail. Prerequisites: MATH 381 or consent or STAT 381.

**MATH 450 - History of Mathematics (COM) Credits: 3**

A general presentation of historical topics in mathematics including contributions to mathematics from ancient civilizations; developments leading to the creation of modern geometries, calculus and modern algebra; and contributions of outstanding mathematicians. Prerequisites: MATH 125

**MATH 461-561 - Introduction to Topology (COM) Credits: 3**

Introduction to topological and metric spaces with specific emphasis on topology of the real line. Prerequisites: MATH 225.

**MATH 471-571 - Numerical Analysis I (COM) Credits: 3**

Analysis of rounding errors, numerical solutions of nonlinear equations, numerical differentiation, numerical integration, interpolation and approximation, numerical methods for solving linear systems. Prerequisites: MATH 225.

**MATH 474-574 - Scientific Computation II Credits: 3**

A continuation of Scientific Computation I. Topics will include computational methods used for mathematical modeling, such as numerical methods for solving linear systems, and methods for solving initial value problems. Numerical methods will be applied to mathematical models. Simulation and validation of models will be discussed. Prerequisites: MATH 321 and MATH 374 Notes: Spring semester only.

**MATH 475-575 - Operations Research Credits: 3**

An introductory overview of the field of operations research including topics from linear programming, simplex methods, network models, nonlinear programming, game theory, Markov Chains, introduction to dynamic programming, queuing theory and simulation. Prerequisites: MATH-315 OR MATH-281 and MATH-125

**MATH 490-590 - Seminar (COM) Credits: 1****MATH 491-591 - Independent Study (COM) Credits: (1-4)****MATH 492-592 - Topics (COM) Credits: (1-3)****MATH 494 - Internship (COM) Credits: (1-3)****MATH 496 - Field Experience Credits: (1-3)****MATH 497 - Cooperative Education Credits: (1-3)****MATH 498 - Undergraduate Research/Scholarship Credits: 1-3****MATH 541 - Applied Probability Theory Credits: 3****MATH 716 - Theory of Algebraic Structures I Credits: 3****MATH 717 - Theory of Algebraic Structures II Credits: 3****MATH 725 - Advanced Calculus I****MATH 732 - Ordinary Differential Equations Credits: 3****MATH 733 - Complex Variables I Credits: 3****MATH 741 - Measure and Probability Credits: 3****MATH 742 - Partial Differential Equations Credits: 3****MATH 771 - Numerical Analysis II Credits: 3****MATH 774 - Advanced Scientific Computation Credits: 3****MATH 775 - Operations Research II Credits: 1****MATH 788 - Research Paper Credits: (1-2)****MATH 790 - Seminar Credits: 1****MATH 791 - Independent Study Credits: (1-3)****MATH 792 - Topics Credits: (1-3)****MATH 798 - Thesis Credits: (1-7)****MCOM (Mass Communication)****MCOM 109 - First Year Seminar\*\* Credits: 2**

First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\*Course meets IGR #1

**MCOM 144 - Media Production Environments I Credits: 1**

Credit earned by active participation in media production activities. Prerequisites: Consent. – Section I: Radio. – Section II: Television. – Section III: Film.

**MCOM 145 - Media Literacy and Ethics Credits: 3**

Media Literacy is the ability to access, analyze, evaluate and communicate information in a variety of formats. This class explores how the mass media help construct social reality and how media use identifiable techniques to communicate messages. Topics include media theories, ethical principles associated with media programming and the roles of media producers and consumers. A key component for the course is to determine where social responsibility lies in relationship to the mass media.

**MCOM 151 - Intro to Mass Communication \* (COM) Credits: 3**

A comprehensive look at the mass media in the United States and the world. Includes discussions of newspapers, magazines, radio, television, books, movies, recordings, advertising and public relations. Also studies mass media rights and responsibilities, ethics and censorship. Notes: \* Course meets SGR #4

**MCOM 155 - Information Gathering Credits: 2**

An introduction to the basics of gathering information ethically and legally from a variety of sources and analyzing and presenting information in a journalistic format.

**MCOM 160 - Introduction to Film \*\*\* Credits: 3**

Film as art; themes and inventions; films and society; introduction to the camera. Notes: \* Course meets SGR #4 and \*\* IGR #2

**MCOM 161-161L Fundamentals of Desktop Pub. & Lab Credits 3**

Fundamental design principles, techniques, and technology of electronic layout and production. Accompanies MCOM 161.

**MCOM 210-210L Basic Newswriting & Studio (COM) Credits: 3**  
Introduces students to gathering, evaluating and writing news. Accompanies MCOM 210. Prerequisites: ENGL 101.

**MCOM 215 - Sportswriting Credits: 3**  
Interviewing, reporting, writing, and editing sports stories combined with an exploration of sportswriting as a career.

**MCOM 220-220L - Introduction to Digital Media and Lab Credits: 3**  
An introduction to the basics of digital imagery and design for the news media, and hands-on application of the basics of news media digital communication. Corequisites: MCOM 220L-220

**MCOM 225-225L Intro to Digital Production and Lab Credits: 2**  
An introduction to the basics of digital audio and video for the news media. Hands-on application of the basics of news media digital audio and video. Corequisites: MCOM 225L-MCOM 225.

**MCOM 243 - Public Relations Principles Credits: 3**  
An introduction to the theory and practice of public relations, emphasizing its publics, management function, writing skills, communication processes, tools and professional ethics.

**MCOM 265-265L - Basic Photography & Studio Credits: 2**  
Beginning camera and darkroom techniques, including processing, printing, and digitizing black and white photographs. Survey of the field of photography and its uses. Accompanies MCOM 265.

**MCOM 266-266L – Photojournalism and Studio Credits: 2**  
Photography as it relates to the media and the public. Emphasis on the content and design of photo essays, legal and ethical aspects of photography. Accompanies MCOM 266. Prerequisites: MCOM 265, or MCOM 161 and MCOM 210.

**MCOM 311-311L - News Editing and Editing Lab Credits: 3**  
The evaluation and editing of news stories, with an examination of editing problems, copy reading techniques, page makeup and design, headlines, picture usage, legal and ethical issues. Comprehensive experience in a laboratory setting with editing techniques. Students work with associated press wire service copy, electronic page design and layout techniques, picture editing and page composition. Prerequisites: MCOM 210. Corequisites: MCOM 311.

**MCOM 316 - Magazine Writing and Editing Credits: 3**  
Includes overview of the magazine industry, how to write and submit freelance articles. Students write and submit articles for publication and edit a departmental magazine

**MCOM 317 - News Gathering Credits: 1-3**  
Builds on the skills and concepts introduced in Basic Newswriting by providing practical experience in beat coverage, initiating story ideas, news judgment, verifying and developing information, and writing news stories for publication. Prerequisites: MCOM 210

**MCOM 331-331L - Video Production and Lab (COM) Credits: 3**  
Includes preparation and presentation of talks, interviews, discussion and extension and community services for broadcast. Accompanies MCOM 331.

**MCOM 332-332L - Broadcast Writing & Reporting & Studio Credits: 3**  
Radio news reporting, writing, editing and producing. Lab practice in writing, audio tape, and delivery. Prerequisites: MCOM 210 Corequisites: MCOM 332L-MCOM 332.

**MCOM 333-333L Television News Reporting & Studio Credits: 3**  
TV news videography, reporting, writing and video editing. Lab practice with videotape. Prerequisites: MCOM 210, MCOM 332. Corequisites: MCOM 333L-MCOM 333.

**MCOM 339-339L - Publication Design and Lab Credits: 3,0**  
This course covers the principles of page design including the editing of photos, typography and graphics for print and online publications. Prerequisites: MCOM 161 or 220 or 265. Corequisites: MCOM 339L-339.

**MCOM 340-340L - Broadcast Announcing and Performance and Lab Credits: 3**  
Junior-level required course that emphasizes presentations before cameras and microphones. This includes the fundamentals of voice and articulation for effective on-air performance on both radio and television. Other topics addressed are audience perception, delivery styles and on-camera appearance. Corequisites: MCOM 340L-MCOM 340.

**MCOM 343 - Strategies for Public Relations Credits: 3**  
Problem-solving strategies and principles of message design for developing public relations campaigns. Students will explore ways to create strategy-driven public relations plans that enable organizations to reach specific audiences with both traditional and new media. Prerequisites: MCOM/ADV 243 Cross-Listed: ADV 343

**MCOM 344 - Media Production Environments II Credits: 1**  
Credit earned by active participation in media production activities. Prerequisites: Consent. – Section I: Radio – Section II: Television – Section III: Film.

**MCOM 359-359L - Desktop Publishing Projects & Lab Credits 3**  
This course applies desktop publishing principles to a series of increasingly complex projects. Prerequisites: MCOM 161 or 220. Corequisites: MCOM 359L-359.

**MCOM 365-365L - Advanced Photography & Studio (COM) Credits: 2-3**  
Exploration of photojournalism and electronic photojournalism. Emphasis on putting together a professional photojournalism portfolio including black and white and color. Accompanies MCOM 365. Prerequisites: MCOM 265.

**MCOM 366 - Film Narrative Credits: 3**  
Myths, values and beliefs as expressed in selected films; forms, styles, and directors.

**MCOM 371-371L - Advertising Copy & Layout & Studio (AW) Credits: 3**  
Discussion of principles and techniques for developing creative campaigns. Laboratory assignments apply thinking, design, and writing skills to creative problems for different media and different targets. Encompasses creative development for all advertising media. Accompanies MCOM 371. Cross-Listed: ADV 371-371L

**MCOM 375-375L Intermediate Media Production & Lab Credits: 3**  
Concepts, theories and technical skills of digital media production. Corequisites: MCOM 375L-MCOM 375.

**MCOM 410 - Advanced Reporting (COM) Credits: 3**  
Political, scientific, and social issues in in-depth reporting for magazines and newspapers.

**MCOM 413-513 - International Media (COM) Credits: 3**  
This course is a survey of international media systems, news and related issues, the role and characteristics of international journalists, and issues facing media around the world.

**MCOM 415 - Opinion Writing Credits: 3**  
Opinion function of periodicals; great editorials and editorial writers; writing editorials; shaping policy.

**MCOM 416 - Mass Media in Society (G) Credits: 3**  
Rights and responsibilities of the press; relation of the media to individuals and society; role of media in a free society.

**MCOM 417 - History of Journalism (G) Credits: 3**

Development, impact and importance of individual journalists and media in U.S.

**MCOM 419-519 - Women in Media Credits: 3**

This course examines contributions of women to the mass media from colonial era to present. It also studies the portrayal of women by the news media and by advertising, and it studies the roles currently played by women in the media and in supporting areas of advertising and public relations. Cross-Listed: WMST 419.

**MCOM 420-520 - International Women's Issues Credits: 3**

A seminar on how the news media cover (or fails to cover) personal, social, political, and economic issues important to women across the world. Cross-Listed: WMST 420

**MCOM 430-530 - Media Law (COM) Credits: 3**

Study of the sources, processes, content and application of law and regulation in the mass communication context and of the ethics of communications practitioners.

**MCOM 431-431L - Advanced Media Production and Lab Credits: 3**

Capstone of Media Production specialization. Integrates multiple aspects of media production and online delivery of media content. Prerequisites: MCOM 425. Corequisites: MCOM 431L-MCOM 431.

**MCOM 433-433L - Advanced TV News Reporting and Lab (AW) Credits: 3**

In-depth analysis of television news reporting, writing, videography and video editing techniques. Major emphasis on out of class assignments. Prerequisites: MCOM 331, 332, 333 Corequisites: MCOM 433L-MCOM 433.

**MCOM 438-438L - Public Affairs Reporting and Studio (COM) (AW) Credits: 3**

Covering and writing news on legislation, public policy, and social issues at the local, county, and state level. Includes discussion of freedom of information guidelines. Accompanies MCOM 438. Prerequisites: MCOM 210. Corequisites: MCOM 438.

**MCOM 453 - Mass Communication Teaching Methods Credits: 3**

Techniques, materials and resources for teaching mass communication in the classroom and supervising student media for secondary school or college instructors and publication advisors.

**MCOM 474-574 - Media Admin. and Management Credits: 3**

Business practices, newspaper, magazine, & broadcast management.

**MCOM 482 - Travel Studies Credits: (1-5)**

This travel study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators of other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

**MCOM 485-585 - Science Writing Credits: 3**

This class explores the process of science writing and examines various kinds of science writing through readings, guest speakers, and writing assignments. A key emphasis is how to present scientific information to a lay audience.

**MCOM 490 - Seminar (COM) Credits: 1****MCOM 491 - Independent Study (COM) Credits: (1-4)****MCOM 492-592 - Topics (COM) Credits: (1-5)****MCOM 494 - Internship (COM) Credits: (1-12)****MCOM 505 - Theories of Communication Credits: 3****MCOM 615 - Opinion Writing Credits: 3****MCOM 616 - Mass Media in Society Credits: 3****MCOM 617 - History of Journalism Credits: 3****MCOM 653 - Mass Comm. Teaching Methods Credits: 1-4****MCOM 682 - Travel Studies Credits: 3****MCOM 691 - Independent Study Credits: 1-3****MCOM 692 - Topics Credits: 1-3****MCOM 693 - Workshop Credits: (1-4)****MCOM 705 - Intro to Master of Mass Communication Credits: 3****MCOM 710 - Cross-Platform Storytelling Credits: 3****MCOM 730 - Media Law Case Study Credits: 3****MCOM 742 - Health Campaigns Credits: 3****MCOM 746 - Cross-Platform Campaigns Credits: 3****MCOM 760 - Social Marketing Credits: 3****MCOM 785 - Health Journalism Credits: 3****MCOM 786 - Conducting Professional Research Credits: 3****MCOM 787 - Research Methods in Communications Credits: 3****MCOM 788 - Master's Research Problems/Projects Credits: 2-3****MCOM 791 - Independent Study (COM) Credits: (1-3)****MCOM 794 - Internship Credits: 3****MCOM 798 - Thesis (COM) Credits: (1-6)****ME (Mechanical Engineering)****ME 240 - Introduction of Mechanical Design Credits: 3**

Introduction to the design process, statement of problem, modeling, research, interaction of system components. Economic, social, environmental and manufacturing constraints. Factors of safety, reliability. Utilization of graphics and vector methods in mechanical design. Design project. Prerequisites: EM 214

**ME 241 - Engineering Materials Credits: 3**

Structure of materials, including atoms, perfect and imperfect crystals and phases. Diffusion mechanisms. Mechanical properties, dislocations and strengthening mechanisms. Failure theory. Phase diagrams and phase transformations in metals, including development of microstructure and alteration of mechanical properties. Applications and processing of metal alloys, ceramics, polymers and composites. Prerequisites: MATH 123, CHEM 112.

**ME 311 - Thermodynamics I Credits: 3**

Thermodynamic properties of gases, vapors and mixtures. Zeroth, First and Second Laws of Thermodynamics. Entropy. Availability and irreversibility. Prerequisites: PHYS 211, MATH 125.

**ME 312 - Thermodynamics II (COM) Credits: 3**

Thermodynamic power cycles (using vapors and gases). One-dimensional compressible flow. Energy analysis. Refrigeration cycles. Moistures and psychrometry. Maxwell's relations. Combustion and thermochemistry. Prerequisites: ME 311, MATH 321.

**ME 314 - Thermodynamics Credits: 3**

Terminal course for non-mechanical engineering students. Fundamental equations of thermodynamics. Properties of gases and vapors. Thermodynamic cycles. Introduction to heat transfer. Prerequisites: PHYS 211, MATH 125.

**ME 315 - Analytical Thermodynamics Credits: 3**

Thermodynamic properties and laws, statistical thermo-dynamics, kinetic theory and transport phenomena. Irreversible thermodynamics, applications to direct energy conversion devices. Prerequisites: PHYS 331, MATH 321.

**ME 321 - Fundamentals of Machine Design Credits: 3**

Analysis of motion and design of linkages, cams, gears, gear trains, planetary gear trains. Analytic and graphical solution of positions, velocities, accelerations, static and dynamic forces. Balancing of engine mechanism, flywheels analysis. Synthesis of planar mechanisms and introduction to spatial mechanisms. Computer applications. Prerequisites: EM 215, ME 240.

**ME 323 - Vibrations Credits: 3**

Free and forced vibration of single-degree-of-freedom system. Vibration measurement. Vibration transmission and isolation. Multi-degree-of-freedom systems, matrix methods, vibration control and damping treatments. Introduction to continuous systems. Prerequisites: EM 215, EM 321, MATH 321.

**ME 341-341L - Metallurgy and Lab Credits: 3**

Crystalline structure and physical properties of metals, phase transformation diagrams, effect of mechanical or thermal treatment on grain structure of ferrous and non ferrous alloys. Laboratory demonstrates fundamental principles and presents necessary techniques of metallography. Prerequisites: ME 241 Corequisites: ME 341L-341.

**ME 361 Methods of Engineering & Work Measurement Credits 2**

Work methods design and measurement of industrial enterprises. Rigorous engineering approach to work methods design. Methods of setting time standards including stop watch time study, work sampling, predetermined motion times, and standard data. Prerequisites: ME 362

**ME 362 - Industrial Engineering Credits: 3**

Modern industrial engineering. Planning, organizing and directing industrial enterprises. Quantitative analysis of management problems in production planning and control, quality control, reliability, facility planning, project economics and PERT. Applications and examples from realistic situations. Prerequisites: MATH 381 or consent.

**ME 376-376L - Measurements and Instrumentation and Lab Credits: 2**

Instruments for measuring pressure, temperature, flow, strain, vibration and sound. Experimental data analysis for accuracy, error and uncertainty. Corequisites: ME 376L-376, EM 321, EM 331.

**ME 381 - Mechanical Equipment of Buildings Credits: 3**

Heating, ventilation and air conditioning systems, control and servicing. Refrigeration, plumbing systems and their maintenance. Fire and explosion prevention in buildings. Prerequisites: ME 311

**ME 410 - Principles of HVAC Engineering Credits: 3**

Comfort and health requirements for space conditioning. Psychrometrics, steady-flow processes involving air-vapor mixtures. Heating and cooling load calculations. Basic air conditioning systems. Emphasis on systems design approach. Prerequisites: ME 312 or ME 314, EM 331. Corequisites: ME 415 or consent.

**ME 412 - Internal Combustion Engines Credits: 3**

Theory, design and operation of spark ignition and compression-ignition engines. Performance characteristics and efficiencies; combustion and thermochemistry of fuel-air mixture exhaust emissions as they pertain to air pollution. Prerequisites: ME 312, EM 331.

**ME 413 - Turbomachinery Credits: 3**

Theory, design, operation and energy transfer in Turbo-machines. Steam, gas and hydraulic turbines. Pumps, fans and centrifugal and axial flow compressors. Prerequisites: P, ME 312, EM 331.

**ME 414/514 - Air Pollution Control Credits: 3**

Control of particulates and gaseous pollutants. Design and operating characteristics of gravity settlers, cyclones, electrostatic precipitators, fabric filters, scrubbers, incinerators, adsorption beds and absorption towers. Prerequisites: ME 311

**ME 415 - Heat Transfer Credits: 3**

Basic principles of steady and unsteady conduction, convection of heat and mass transfer and thermal radiation. Computational methods of heat transfer. Prerequisites: ME 311, EM 331, MATH 321, or consent.

**ME 416-516 - Renewable Energy Systems Credits: 3**

Students will learn to apply the principles of energy conversion, energy conservation, and value engineering to the analysis of energy conversion systems, renewable energy generation equipment and systems. Students will become familiar with energy consumption requirements for conventional systems and the applications of renewable energy systems to provide alternative energy sources. Energy efficiency and global environmental sustainability are emphasized. A background in basic thermodynamics is assumed. Prerequisites: ME 311 or ME 314 or PHYS 341

**ME 4/517-4/517L Computer-Aided Engineering & Lab Credits: 3**

Introduction to applied structural and thermal design and analysis using the ANSYS finite element software package. One-, two- and three-dimensional static structural problems modeled using the direct generation method as well as solid modeling techniques. Steady-state and transient thermal analysis are performed. Thermally-induced stressed and displacements that occur in non-uniform temperature structures, solutions of two- or three-dimensional fluid mechanics problems, and optimization techniques are discussed. Prerequisites: Competence in Fortran programming or consent. Corequisites: ME 417L-417.

**ME 418 - Design of Thermal Systems Credits: 3**

Systems approach to design, mathematical modeling, simulation and optimization of systems, with particular emphasis on thermal systems. Prerequisites: ME 312, ME 415, EM 331.

**ME 421 - Design of Machine Elements Credits: 3**

Fundamentals of mechanics. Energy methods. Working stresses and failure in materials. Design considerations of basic machine elements – shafts, springs, belts, clutches, brakes, chains, gear, bearings, fasteners and flywheels. Lubrication. Classification of engineering materials. Prerequisites: ME 321, EM 321.

**ME 431 - Aerodynamics Credits: 3**

Airfoil characteristics, wing shapes, static and dynamic forces, viscosity phenomena, boundary layer theory, flaps and slots, propellers, stability, control and performance. Prerequisites: EM 331.

**ME 433-533/433L-533L - Non-Destructive Testing and Evaluation and Lab Credits: 3**

Various non-destructive testing techniques will be introduced with emphasis on ultrasound techniques. For ultrasound, physical principles of acoustic waves in solid media will be introduced, and acoustic sensor design and properties will be discussed. For other techniques, including eddy current techniques, X-ray techniques, acoustic emission, etc., basic physics of the method and modern applications will be introduced. Experiments and demonstrations will be conducted to enhance students' understanding of the concepts and applications. Prerequisites: MATH 321, EM 215, EM 321

**ME 437/537 - Gas Dynamics I Credits: 3**

Objectives, applications, and scope of the subject. Methods of fluid dynamics and thermodynamics. Compressible flow in ducts, nozzles and diffusers. Propagation of plane waves; shock dynamics, characteristics, interaction of waves. General theorems of gas dynamics. Prerequisites: EM 331, MATH 331

**ME 438-438L - Machine Design-Case Studies and Lab Credits: 3**

Study of stress and strain as applied to mechanical engineering problems. Residual stresses and dynamic loading. Theories of failure. Design of components that form a complete working system. Design analysis of various current case studies. Prerequisites: EM 321 Corequisites: ME 438L-438.

**ME 439-439L - HVAC System Design and Lab Credits: 3**

Analysis of heating, ventilating and air conditioning requirements. Design of heating, ventilating and air conditioning systems. Economic, energy and environmental considerations. Use of computers as design aids. Prerequisites: ME 410 or consent. Corequisites: ME 439L-ME 439.



**ME 440/540 - Computer-Aided Design Credits: 3**

The use of digital computer as a design tool. Techniques and algorithms which increase the rationality of the design process. Design principles and optimization theory. General approach to constrained optimization. Probabilistic approaches to design. Computer-aided design to reliability specification. Application of computer graphics to engineering design. The emphasis is on extending the designer's potential and not on automating those activities. Prerequisites: Competence in FORTRAN programming and consent.

**ME 442-542 - Applications of Computational Fluid Dynamics Credits: 3**

This course provides a background and working knowledge of software analysis tools, techniques and methodologies utilized in modern engineering practice in computational fluid dynamics (CFD). The course builds upon fundamental concepts of thermodynamics, fluid mechanics, and computer-aided design and analysis and applies these principles within high-fidelity computational models to solve theoretical and practical problems commonly encountered with thermal fluid and energy systems. This course provides students with team-centered collaborative opportunities to practice CFD analysis in engineering design applications. Prerequisites: MATH 321, EM 331, ME 311

**ME 451 - Automatic Controls Credits: 3**

Modeling of mechanical, electrical, hydraulic and pneumatic systems. Laplace transform and system response. Transfer functions; control systems and frequency response. System analysis using polar, logarithmic and Root locus plots. System compensation. Introduction to nonlinear controls. Prerequisites: EE 300, EE 300L, or consent Corequisites: ME 323.

**ME 452 - Dynamic Systems Lab Credits: 1**

Experiments in mechanical vibration, control and robotics. Force and acceleration measurements, free and forced vibrations of systems, response of mechanical systems, stability of a feedback control system, performance of compensators. Prerequisites: ME 323. Corequisites: ME 451.

**ME 461 - Analysis and Design of Industrial Systems Credits: 3**

Problems in product design and development, marketing, forecasting, capacity evaluation, plant layout, materials handling from standpoint of interrelated and integrated systems. Prerequisites: ME 362.

**ME 476 - Thermo-Fluids Lab Credits: 1**

Experiments in fluid mechanics, thermodynamics and heat transfer. Single and multi-stage compressors. Heat pumps and air conditioning. Blowers and flow measurements in ducts. Prerequisites: ME 376, ME 312, EM 331, ME 415.

**ME 478 - Mechanical Systems Design I Credits: 2**

A systems approach to design, covering need analysis, design phases, design processes, economics, optimization, and success criteria. Students will design, build, and test an independent project which must be different than any previous design they have attempted. Prerequisites: ME 421, MATH 331 or MATH 471.

**ME 479-479L - Mechanical Systems Design II and Lab (COM) (AW) Credits: 2**

The second semester continuation of Mechanical Systems Design. Integrates concepts from all areas in Mechanical Engineering into a practical design project. Detailed design and analysis, manufacturing, and assembly will be the focus. Accompanies ME 479.

**ME 490/590 - Seminar Credits: 1-2**

A highly focused, and topical course. The format includes student presentations and discussions of reports based on literature, practices, problems, and research. Seminars may be conducted over electronic media such as internet and are at the upper division graduate levels. Enrollment is generally limited to few than 20 students.

**ME 491 - Independent Study Credits: (1-5)****ME 492/592 - Topics Credits: (1-5)****ME 493 - Workshop Credits: 1-3****ME 494 - Internship Credits: (1-3)****ME 496 - Field Experience Credits: (1-3)****ME 497 - Cooperative Education Credits: (1-3)****ME 498 - Undergraduate Scholarship/Research Credits: 1-3****ME 690 - Seminar Credits: 0****ME 691 - Independent Study Credits: (1-5)****ME 692 - Topics Credits: (1-3)****ME 700 - Graduate Colloquium Credits: 0****ME 703 - Thermo-Fluid Energy Systems Credits: 3****ME 706 - Statistical Thermodynamics Credits: 3****ME 711 - Advanced Heat Transfer I Credits: 3****ME 712 - Convection Heat Transfer Credits: 3****ME 721 - Viscous Flow I Credits: 3****ME 728 - Gas Dynamics II Credits: 3****ME 731 - Advanced Analytical Methods Credits: 3****ME 735-735L - Modeling and Simulation and Lab Credits: 3****ME 739 - Advanced Metallurgy Credits: 3****ME 741 - Advanced Stress Analysis in Mech. Design Credits: 3****ME 745 - Advanced Machine Design Credits: 3****ME 760 - Quality Control Credits: 3****ME 761 - Operations Research Credits: 3****ME 763 - Topics in Reliability Engineering Credits: 3****ME 765 - Systems Analysis Credits: 3****ME 767 - Decision Theory Credits: 3****ME 787 - Research Credits: (1-9)****ME 788 - Research or Design Paper Credits: (1-2)****ME 790 - Seminar Credits: 1****ME 791 - Independent Study Credits: (1-3)****ME 792 - Topics Credits: (1-3)****ME 798 - Thesis Credits: (1-7)****MGMT (Management)****MGMT 310 - Business Finance Credits: 3**

Business finance is an overview of financial theory including the time value of money, capital budgeting, capital structure theory, dividend policies, asset pricing, risk and return, the efficient markets hypothesis, bond and stock valuation, business performance evaluation and other financial topics. Prerequisites: ACCT 211 Cross-Listed: BADM 310

**MGMT 325 - Management Information Systems Credits: 3**

Introduction to the application of information technology in organizations, roles of managers and staff professionals in developing and using information systems with current and future technology. Cross-Listed: CSC 325

**MGMT 360 - Organization and Management Credits: 3**

This course is a study of management, including the planning, direction, controlling and coordinating of the various activities involved in operating a business enterprise. Cross-Listed: BADM 360

**MGMT 460 - Human Resource Management Credits: 3**

This course provides a survey of managerial practices with respect to the management of the human resource function and an introduction to the topic of human resource management as an occupational choice. Major areas of inquiry include recruitment and selection, training and development, compensation and benefits administration and work force integration and maintenance. Cross-Listed: BADM 460

**MGMT 464 - Organizational Behavior (COM) Credits: 3**

This course is a study of individuals and groups. Traditional organization theory and concepts are presented and study is given to motivation, group dynamics, and methods of coordination, change and adaptation within an organization. Prerequisites: BADM 360

## MLS (Medical Laboratory Sciences)

### **MLS 201 - Understanding Medical Laboratory Science Credits: 2**

Provides an overview of the allied Health profession in Medical Laboratory Science including an introduction to the interdisciplinary emphasis in Hematology, Microbiology, Immunohematology, Chemistry, Urinalysis, Molecular, Hemostasis, Hematology and Laboratory Practice. Provides an introduction into the professional levels of practice within the medical laboratory science field. Prerequisites: Acceptance into MLS professional program Notes: MLS professional program acceptance required.

### **MLS 301-301L - Hematology I and Lab Credits: 3**

Normal maturation, morphology, and function of blood cells. Application of manual and automated methods/techniques in hematology. Corequisites: MLS 301L-MLS 301. Notes: MLS professional program acceptance required.

### **MLS 311 - Clinical Chemistry I Credits: 4**

Principles and theory of clinical chemistry including metabolism of biochemical molecules, metabolic disease/dysfunction, electrolyte balance, acid-base balance, instrumentation, quality control, and quality assurance. Prerequisites: CHEM 108-108L or equivalent Notes: MLS professional program acceptance required.

### **MLS 321 - Hemostasis Credits: 1**

Mechanisms of hemostasis and clotting; hereditary and acquired defects of the hemostatic mechanism. Notes: MLS professional program acceptance required.

### **MLS 341-341L - Diagnostic Microbiology I and Lab Credits: 3, 2**

Focuses on the principles and methodologies for the recovery of bacteriological agents from complex biological specimens, biochemical identification, general practices in infection control and the laboratory's role in developing policies and procedures during global events and new threats from emerging pathogens. Supervised laboratory instruction in the principles and methods for the analysis and identification of bacteriological agents from complex biological specimens utilizing various technical applications, instrumentation, and applications in quality control and quality assurance. Prerequisites: MICR 231-231L or MICR 233-233L Corequisites: MLS 341L-341 Notes: MLS professional program acceptance required.

### **MLS 368 - Medical Laboratory Science Technical Training Credits: 20-42**

Designed to facilitate transfer of students who have completed a one or two year regionally or nationally accredited or certified program in medical laboratory science, clinical laboratory science and /or technician. The purpose is to provide transfer of previous work into an upward mobility option for students who have a commitment to medical laboratory science. Notes: MLS professional program or MLS upward mobility program acceptance required.

### **MLS 401 - Hematology II Credits: 2**

Advanced study of the hematopoietic system and blood cells, including morphology and disease states, such as leukemias, lymphomas, and myeloproliferative disorders. Notes: MLS professional program acceptance required.

### **MLS 402L - Advanced Hematology & Hemostasis Lab Credits: 1**

Fundamentals of examining blood and bone marrow slides. Laboratory methods for evaluating hemostatic function. Corequisites: MLS 401. Notes: MLS professional program acceptance required.

### **MLS 403-403L - Diagnostic Immunology Credits: 4**

Discussion of the principles for immunologic mechanisms and serological concepts to the theory of laboratory procedures for the diagnosis of disorders of infectious and immunologic origin, including analysis and evaluation of advanced immunopathology, and supervised laboratory experience in the principles and methods for the study of the immune system, antigen-antibody reactions and

associated clinical laboratory diagnostics. Notes: MLS professional program acceptance required.

### **MLS 411-411L - Clinical Chemistry II and Lab Credits: 3, 1**

The principle and theory of clinical chemistry including clinical endocrinology, clinical toxicology, therapeutic drug monitoring, and assessment of metabolic disease/dysfunction using clinical analysis. Methods of analysis in the clinical laboratory; instrumentation, quality control, and quality assurance. Corequisites: MLS 411L-411 Notes: MLS professional program acceptance required.

### **MLS 412-412L - Laboratory Methods and Lab Credits: 2, 1**

Anatomy and physiology of vascular system; and techniques for obtaining blood specimens (phlebotomy) including dermal, syringe and vacutainer systems. In addition the course will include specimen processing, infection control, laboratory safety and instruction in good general laboratory practices required within the medical laboratory science field. Laboratory course to accompany MLS 412. Notes: MLS professional program acceptance required.

### **MLS 431-431L - Principles of Immunohematology and Laboratory Credits: 2, 1**

The study of red blood cell antigens and their antibodies, including blood grouping and typing, antibody detection and compatibility testing, blood donor screening and component preparation, immunologically related diseases, transplantation, and principles of antigen-antibody based tests. Supervised laboratory experience in the principles and methods for the study of red blood cell antigens and antibodies, includes blood grouping and typing, antibody detection and compatibility testing and blood donor screening. Prerequisites: MLS 403 or equivalent Corequisites: MLS 431-431L Notes: MLS professional program acceptance required.

### **MLS 441-441L - Diagnostic Microbiology II & Lab Credits: 3, 2**

Focuses on the principles and methodologies for the recovery of bacteria, fungal, parasitic and viral agents from complex biological specimens, biochemical identification, and advanced principles in clinical sensitivity and specificity. Supervised laboratory instruction in the principles and methods for the analysis and identification of bacterial, fungal, parasitic and viral agents from complex biological specimens utilizing various technical applications, instrumentation and applications in quality control and quality assurance. Corequisites: MLS 441L- 441 Notes: MLS professional program acceptance required.

### **MLS 451-451L - Immunohematology II Credits: 2, 1**

Advanced laboratory in immunohematology including complex incompatibilities, trouble shooting, transfusion medicine, clinical correlations and advanced laboratory methods in immunohematology. Notes: MLS professional program acceptance required. Students enrolled in MLS prior to Fall 2012 will take MLS 451 - Urine and Body Fluid Analysis

### **MLS 461 - Intro. to Management & Education (AW) Credits: 2**

Basic concepts in laboratory management and education. Building critical thinking, problem solving, and professional skills. Notes: MLS professional program acceptance required.

### **MLS 468 Advanced Supervised Clinical Experience I Credits: 1-5**

Off campus supervised clinical experiences administered in conjunction with clinical faculty in SDSU affiliated health care institutions. Emphasis will be on advanced hematology, hemostasis, phlebotomy and immunology. Prerequisites: Acceptance into the MLS upward mobility program or instructors permission.

### **MLS 469 Advanced Supervised Clinical Experience II Credits: 1-5**

Off campus supervised clinical experiences administered in conjunction with clinical faculty in SDSU affiliated health care institutions. Emphasis will be on advanced chemistry, urinalysis, body fluids, diagnostic microbiology and molecular diagnostics. Prerequisites: Acceptance into the MLS Upward Mobility program or

permission of the instructor. Notes: MLS professional program acceptance required.

**MLS 471-471L - Advanced Medical Diagnostics Credits: 2, 1**

Advanced laboratory including clinical correlations, total quality management, general operations, and analysis of patient samples in complex disease states utilizing a simulated laboratory experience.

Prerequisites: MLS 371L-371 Notes: MLS professional program acceptance required. Students enrolled in the MLS program prior to Fall 2012 will take the course as MLS 471 - Molecular Diagnostics

**MLS 480 - Molecular Diagnostics Clinical Practice Credits: 1**

Supervised clinical practice in molecular diagnostics to include nucleic acid purifications, amplifications and interpretation of clinical results. Notes: Senior status in the MLS professional program and clinical placement required.

**MLS 481 - Chemistry, Urinalysis and Body Fluid Analysis Clinical Practice Credits: 4**

Supervised clinical practice in chemistry, urinalysis and body fluid analysis. Notes: Senior status in the MLS professional program and clinical placement required.

**MLS 482 - Hematology & Hemostasis Clinical Practice Credits: 4**

Supervised clinical practice in hematology and coagulation. Notes: Senior status in the MLS professional program and clinical placement required.

**MLS 483 - Senior Capstone Clinical Practice Credits: 2**

Students will complete a formal analysis of patient data at the clinical affiliate site and submit in a clinical case study format as a comprehensive experience. In addition, students will be required to successfully complete an interdisciplinary comprehensive program exam. Notes: Senior status in the MLS professional program and clinical placement required. Students enrolled in MLS program prior to Fall 2012 will take MLS 483 - Clinical Immunology Clinical Practice.

**MLS 484 - Clinical Immunohematology Clinical Practice Credits: 4**

Supervised clinical practice in the blood bank. Prerequisites: MLS 431. Notes: Senior status in the MLS professional program and clinical placement required.

**MLS 485 - Diagnostic Microbiology Clinical Practice Credits: 5**

Supervised clinical practice in the clinical microbiology laboratory. Notes: Senior status in the MLS professional program and clinical placement required.

**MLS 486 - Coagulation Clinical Practice Credits: 1**

Supervised clinical practice in the coagulation laboratory. Prerequisites: MLS 321, 402L.

**MLS 487 - Elective Clinical Practice Credits: 1-4**

Supervised clinical experience in an area outside a large clinical laboratory (rural laboratory, research laboratory, or clinic laboratory). Notes: MLS professional program acceptance required.

**MLS 488 - Urinalysis & Clinical Microscopy Clinical Practice Credits: 2**

Supervised clinical practice in the analysis of urine and biological fluids. Prerequisites: MLS 411.

**MLS 489 - Phlebotomy Clinical Practice Credits: 1**

Supervised clinical practice in phlebotomy. Notes: Senior status in the MLS professional program and clinical placement required.

**MLS 490 - Seminar Credits: 1**

Senior Capstone Clinical Practice. Students will complete a formal analysis of patient data at the clinical affiliate site and submit in a clinical case study format as a comprehensive experience. In addition, students will be required to successfully complete an interdisciplinary comprehensive program exam.

**MLS 494 - Internship Credits: (8-16)**

Students are to register for this course during the summer, fall and spring semesters of their internship year. Credit is given by SDSU for coursework completed at affiliated hospital programs. The course descriptions below are common to most hospital programs. Register for a total of 40 credits. Clinical Microscopy/Urinalysis-Lecture, supervised laboratory instruction, quality control, instrumentation, computer applications and experience in body fluids and urine in regard to chemical and cellular composition. Anatomy and physiology, theory of renal function in health and disease. Clinical Hematology/Coagulation-Lecture, supervised laboratory instruction, quality control, instrumentation, computer applications and experience in the analysis of cellular elements of the blood and bone marrow, both normal and abnormal, and on the homeostatic mechanisms of the blood. Clinical Microbiology-Lecture, supervised laboratory instruction, quality control, instrumentation, computer applications and experience in the isolation and identification of pathogenic organisms and their susceptibility to anti-microbial agents. Includes Bacteriology, Mycology, Parasitology, and Virology. Clinical Serology/Immunology-Lecture on antigen/antibody structure-function-interactions, supervised laboratory instruction, quality control, instrumentation, computer applications, and experience in applying the principles of immunology to serologic diagnosis. Clinical Chemistry/Radiobioassay/Body Fluids-Lecture, supervised laboratory instruction, quality control, computer applications and instrumentation, and experience in medically oriented biochemistry as applied to normal and abnormal physiology and analysis of body constituents. Includes analyses of special body fluids such as amniotic, synovial, cerebrospinal, gastric and pleural fluids. Includes special procedures utilized for toxicology, endocrinology and radiobioassay. Clinical Immunohematology-Lecture, supervised laboratory instruction, quality control, instrumentation, computer applications and experience in theory and practice of immunohematology as applied to blood transfusion, component therapy, autoimmune diseases, immunologic diagnostic procedures and blood component preparation and administration. Specialized Units Management/Education/Research/-Lectures and/or seminars on theory and techniques of laboratory oriented practice; principles of education and teaching methodologies; and research, scientific writing or projects in specialty areas of medical technology.

**MFL (Modern Foreign Languages)**

**MFL 101 Intro to Foreign Language & Culture I\*(G) Credits 4**

Fundamentals of the language and introduction to the culture where the language is spoken. Class work may be supplemented with required aural/oral practice outside of class. Notes: SGR #4

**MFL 102 - Introduction to Foreign Language and Culture II \* (COM) (G) Credits: 4**

Fundamentals of the language and introduction to the culture where the language is spoken. Class work may be supplemented with required aural/oral practice outside of class. Notes: SGR #4

**MFL 196 - Field Experience Credits: (1-3)**

**MFL 292 - Topics Credits: (1-5)**

**MFL 292L - Topics Lab Credits: 0**

**MFL 296 - Field Experience Credits: 1-12**

**MFL 396 - Field Experience (G) Credits: (1-12)**

**MFL 399 - Orientation for Study Abroad Credits: 1**

This course will have the purpose to prepare students who plan to study abroad with an SDSU program or independently. The course will be country (or at least language)-specific and will cover: socio-historical background on the target country, cross-cultural communication issues, culture-shock, practical issues involved in travel abroad (such as what to pack, visa requirements etc), as well as safety rules and behavioral expectations for students as representatives of SDSU abroad.

**MFL 420 - K-12 Foreign Language Methods (COM) Credits: 3**  
Methods and materials for teaching modern languages in high school.

**MFL 460-560 -Topics in French, German, or Spanish Literature Credits 1-4**

An intensive examination of a significant writer(s), period or theme in French, German, or Spanish literature. This course may be repeated for credit if topic is different.

**MFL 490 - Seminar Credits: (1-3)**

**MFL 491-591 - Independent Study Credits: (1-3)**

**MFL 492-592 - Topics (COM) Credits: 3**

**MFL 494 - Internship (COM) Credits: (1-12)**

**MFL 496-596 - Field Experience (G) Credits: (1-12)**

**MFL 595 - Practicum Credits: (1-3)**

## **MICR (Microbiology)**

**MICR 231-231L - General Microbiology and Lab (COM) Credits: 4** Principles of basic and applied microbiology. Laboratory experience that accompanies MICR 231. Prerequisites: CHEM 106 or CHEM 112. Corequisites: MICR 231L-MICR 231.

**MICR 233-233L Introductory Microbiology and Lab Credits 4, 0** Introductory microbiology course for biology, microbiology and biotechnology majors. Basics of microbial cell structure and function; viral structure; microbial diversity and evolution; interactions between microbes and plants/animals; biogeochemical cycling; microbial growth; and control of microorganisms. The laboratory will include aseptic technique; use of bright-field microscopes; common staining techniques; cultivation of various microbes; investigations of diversity; metabolic characteristics; microbial growth and control of microbial growth/metabolism. Prerequisites: Completion of BIOL151 AND 6 credits college chemistry Corequisites: MICR 233L-233

**MICR 290 - Seminar Credits: 1**

Cross-Listed: BIOL 290

**MICR 310-310L - Environmental Microbiology and Lab Credits: 4**

Microbiology of water, air and surfaces in the environment. Standard methods for detecting and controlling pathogens and non pathogens. Laboratory experience that accompanies MICR 310. Prerequisites: MICR 231-231L or MICR 233-233L Corequisites: MICR 310L-MICR 310.

**MICR 311-311L - Food Microbiology and Lab Credits: 4**

Microbiology of fresh and processed meats, dairy products, vegetables and modern convenience foods. Laboratory quality study of food preservation, processing and spoilage. Laboratory experience that accompanies MICR 311. Prerequisites: MICR 231-231L or MICR 233-233L Corequisites: MICR 311L-MICR 311.

**MICR 332 - Microbial Physiology Credits: 2**

Cytology, nutrition, metabolism, and growth of microorganisms. Prerequisites: MICR 231-231L or MICR 233-233L

**MICR 332L - Microbial Physiology Lab Credits: 2**

Media preparation, sterilization, microscopy, assay of microbial enzymes, DNA purification.

**MICR 414-414L Anaerobic Microbiology and Lab Credits: 3**

Anaerobic metabolism and ecology of bacteria, culturing techniques for anaerobic microorganisms. Laboratory experience that accompanies MICR 414-514. Prerequisites: MICR 231-231L or MICR 233-233L Corequisites: MICR 414L-MICR 414/MICR 514L-MICR 514.

**MICR 4/521-4/521L Soil Microbiology and Lab Credits: 3**

Microbial species of agricultural soils, environmental factors affecting their numbers and activity, and biochemical changes brought about by these organisms. Laboratory course to accompany

MICR 421-521. Prerequisites: BIOL 151-151L and BIOL 153-153L, or BOT 201-201L. Corequisites: MICR 421L-MICR 421/MICR 521L-MICR 521. Cross-Listed: PS 421-521.

**MICR 424-524 - Medical and Veterinary Virology Credits: 3**

Basic course discussing the characterization, structure, and replication of viruses and the pathogenesis of viral disease in man and animals. Prerequisites: MICR 433 Cross-Listed: Crosslisted with VET 424-524.

**MICR 433-533 - Medical Microbiology (COM) Credits: 3**

Principles of medical microbiology including a survey of the most clinically significant bacterial, fungal, parasitic, and viral diseases in the world, with an emphasis on those most prevalent in North America. Case studies will address: morphology, physiology, and virulence of the microbes and the epidemiology, treatment, and prevention of the diseases they cause. Prerequisites: CHEM 106 or 112 and MICR 231-231L or MICR 233-233L

**MICR 436 - Molecular and Microbial Genetics Credits: 4**

A basic course in molecular genetics. Examples to illustrate genetic principles are drawn from all forms of life. Prerequisites: BIOL 204 or BIOL 371.

**MICR 438L Techniques in Molecular Bio Laboratory Credits: 2**

This laboratory course will provide hands-on experience for the students interested in basic molecular biology techniques, including gene amplification by polymerase chain reaction (PCR), DNA isolation and modification, bacterial transformation, protein expression and detection (Western Blot). Prerequisites: Completion of MICR 436 or enrollment in the course

**MICR 439-539 - Medical and Veterinary Immunology Credits: 3**

This course covers the theory and mechanisms of immune-responses as they relate to human and veterinary medicine. Prerequisites: MICR 231 and BIOL 204.

**MICR 440L - Infectious Disease Lab Credits: 3**

This course will involve individualized hands-on training in molecular, cellular, bacteriological, and immunological techniques frequently used in the diagnosis of infectious diseases. Students will be provided with information on principles and fundamentals of various techniques followed by hands-on experience in the lab. Prerequisites: MICR/VET 424 or MICR 433 or MICR 439

**MICR 450 - Applied Microbiology and Biotechnology Credits: 3**

The rapid development of biotechnology techniques and their commercial application continues to be a major economic driver in the twenty-first century. Biotechnology uses living cells or their enzymes to produce chemicals, biomaterials, pharmaceuticals, and energy from renewable biomass feedstocks. This interdisciplinary course will examine theoretical and practical aspects of cell metabolism, metabolic engineering, fermentation and fermentor design, product recovery, process control, energy balances, and economics as related to several current bioprocesses. This course will integrate principles from microbiology, biochemistry, and engineering to provide students with the skills needed to fill roles in research, operations and commercialization. Prerequisites: MICR 231-231L or MICR 233-233L

**MICR 490 - Seminar (AW) Credits: 1**

**MICR 491 - Independent Study Credits: (1-3)**

**MICR 492-592 - Topics Credits: (1-4)**

**MICR 492L-592L - Topics Lab (COM) Credits: 0**

**MICR 494 - Internship Credits: (1-12)**

**MICR 497 - Cooperative Education (COM) Credits: (1-12)**

**MICR 498 - Undergraduate Research/Scholarship Credits: 1-4**

**MICR 788 - Research Problems Credits: (1-3)**

**MICR 790 - Seminar Credits: 1**

**MICR 791 - Independent Study Credits: (1-4)**

**MICR 792 - Topics Credits: (1-4)**

**MICR 798 - Thesis Credits: (1-7)**

## **MLED (Middle Level Education)**

### **MLED 593 - Workshop Credits: (1-3)**

## **MNET (Manufacturing Engineering Technology)**

### **MNET 131-131L - Machining Technology and Lab Credits: 3**

An introduction to machine tools used in industry and their usage, principles of operations, and production methods. Hands-on laboratory activities provide the students with the opportunity to use various machining equipment, become familiar with various cutting tools, and perform measurement using precision measuring devices. Corequisites: MNET 131L-MNET 131.

### **MNET 231-231L - Manufacturing Processes I & Lab Credits: 3**

The topics in this course cover the fundamentals of traditional and nontraditional manufacturing processes including mass reducing, mass conserving, joining, material treatment, and surface treatment processes. Hands-on experiences in laboratories provide the class participants with basic skills in machining and welding processes. Corequisites: MNET 231L-MNET 231.

### **MNET 232-232L - Manufacturing Processes II & Lab Credits: 3**

This course is designed to provide students with the opportunity to expand on the topics covered in MNET 231. The course extends the manufacturing processes topics to include effects on work materials properties, tool materials and geometry and analysis of factors effecting the output of various processes. The second course will include numerous local industry tours that include plastics, metal fabrication, electronics, wood, etc. Prerequisites: MNET 231. Corequisites: MNET 232L and Lab.

### **MNET 241 - Applied Mechanics Credits: 3**

Basic statics, dynamics, and two-dimensional analysis of stress and strain. Fundamental principles of structural and machine elements. Prerequisites: MATH 102 or higher and 1 course from PHYS Cross-Listed: GE 241

### **MNET 243-243L – Intro. to Materials Science & Lab Credits: 3**

Basic concepts presented in relation to common engineering materials. Topics include physical and mechanical properties of materials. Laboratories utilize common materials science apparatus and relate to common industrial practices. Prerequisites: CHEM 106. Corequisites: MNET 243L-MNET 243.

### **MNET 251-251L - Electricity & Electronics I & Lab Credits: 3**

The course is designed to provide students with a background and understanding of the essential topics in AC/DC circuits, electrical circuit materials, electrical energy and sources of electricity, basic circuits and their analysis, magnetism, and applications of motors, generators, and power distribution. Lab for ET/MNET 251 Prerequisites: 1 course from subject MATH, except courses MATH 021, MATH 101, MATH 100T, or MATH 102 Corequisites: ET/MNET 251L-251 Cross-Listed: ET 251-251L

### **MNET 252-252L - Electricity & Electronics II & Lab Credits: 3**

This course is the continuation of 251 and is designed to provide students with a background and understanding of the essential topics in semiconductor devices, semiconductor power supply and technology, and semiconductor amplifiers and their applications. Other topics include digital logic, integrated circuits, oscillators, AM/FM communications, TV signal transmissions, and computer structure and operations. Prerequisites: ET/MNET 251-251L Corequisites: ET/MNET 252L-252 Cross-Listed: MNET 252-252L

### **MNET 260 Principles of Production & Operations Mgmt Credits: 3**

A broad analytical 'systems' viewpoint is used to develop competency in management decision-making and problem solving in operations setting in various businesses and especially manufacturing. This course involves the study of the production end of business, where resources are transferred into goods and services,

and the management of operations through effective planning, implementing, and monitoring for continuous improvement. Prerequisites: One Math course except 021, 095, 101, 100T Cross-Listed: BADM 260

### **MNET 291 - Independent Study Credits: (1-3)**

### **MNET 292 - Topics Credits: (1-3)**

### **MNET 292L - Topics Lab Credits: 0**

### **MNET 293 - Workshop Credits: 1-3**

Special, intense sessions in specific topic areas. Approximately 45 hours of work is required for each hour of credit. Workshops may vary in time range but typically use a compressed time period for delivery. They may include lectures, conferences, committee work, and group activity.

### **MNET 296 - Field Experience Credits: (1-3)**

### **MNET 320-320L Computer Aided Design/Drawing & Lab Credits: 3**

Major course emphasis will be on creating 3-Dimensional solid models using current design software. Course will include the basic concepts of a feature-based parametric design, and the generation of mass properties, part drawings, assembly drawings and documentation. Prerequisites: GE 120 or GE 123. Corequisites: MNET 320L-MNET 320.

### **MNET 334-334L - CAM/CNC and Lab Credits: 3**

This course focuses on Computer Numerical Control (CNC) machines programming and operations. Automatic programming of CNC machines using Computer Aided Manufacturing (CAM) software is also the focus of this course. Corequisites: MNET 334L-MNET 334 Cross-Listed: 334L.

### **MNET 338-338L - Industrial Plastics and Lab Credits: 3**

Study of plastic materials and processes including characteristics and properties and various manufacturing processes used for production of plastic products. Prerequisites: MNET 231, MNET 243. Corequisites: MNET 338L-MNET 338.

### **MNET 343-343L - Properties of Materials and Lab Credits: 3**

Material properties are studied and related to various phenomena that occur in metals, composites, plastics, and ceramics. Topics include bonding, strengthening mechanisms, fracture mechanics, casting processes, powder metallurgy, corrosion and surface engineering. Prerequisites: MNET 243. Corequisites: MNET 343L-MNET 343.

### **MNET 367-367L - Production Strategy and Lab Credits: 3**

Analysis and design of facilities and material handling systems. Lean applications used to reduce waste and increase productivity. Prerequisites: MNET 231 Corequisites: MNET 367L-367

### **MNET 436-436L - Production Tooling Methods and Measurement and Lab Credits: 3**

An overview of machine tool design, application, manufacture and general measurement techniques. Subject includes jigs, fixtures, molds, tools and dies in various production settings. Also included are material selection, precision machining, related manufacturing processes, manufacturing inspection equipment and techniques, dimensional metrology and geometric conformance, and surface texture and integrity. Prerequisites: MNET 334, MNET 320. Corequisites: MNET 436L-MNET 436.

### **MNET 453-453L - Manufacturing Automation & Lab Credits: 3**

The course offers advanced topics in manufacturing automation including automation hardware/software, system design and integration, and management techniques for improving design and manufacturing operations. Hand-on lab activities provide the students the opportunity to develop and program automated systems. Prerequisites: MNET 451. Corequisites: MNET 453L-MNET 453. Cross-Listed: ET 453.

**MNET 460-560 - Manufacturing Cost Analysis Credits: 3**

Cost estimating for processes and products related to various manufacturing operations; engineering economics; analysis; evaluation; and budget justification for capital expenditures. Prerequisites: MNET 231

**MNET 468 - Manufacturing Plant Management Credits: 3**

A case-oriented capstone course designed to integrate the technical, managerial, analytical, and communication skills which have been acquired. Prerequisites: MNET 367, MNET 463.

**MNET 471-471L -Capstone Experience and Lab (AW) Credits: 1**

Technical projects developed in Project Management are completed. Student teams present results in a public venue. Prerequisites: Project Management Corequisites: OM/MNET/ET 471L-471 Cross-Listed: ET/OM 471-471L

**MNET 491 - Independent Study Credits: (1-3)****MNET 492 - Topics Credits: 1-3****MNET 492L - Topics Lab Credits: 0****MNET 493 - Workshop Credits: 1-3****MNET 496 - Field Experience Credits: (1-3)****MNET 497 - Cooperative Education Credits: (1-3)****MRCH (Merchandising)****MRCH 510 - Consumer Behavior in Merchandising Credits: 3****MRCH 520 Professional Advmt. in Merchandising Credits: 3****MRCH 530 Product Design, Development, & Eval. Credits: 3****MRCH 540 - Promotional Strategies in Merchandising Credits: 3****MRCH 550 - Retail Theory and Current Practice Credits: 3****MRCH 580 - Travel Studies Credits: 1-5****MRCH 591 - Independent Study Credits: (1-3)****MRCH 592 - Topics Credits: (1-3)****MRCH 610 - Historical & Contemporary Issues in Trade Credits: 3****MRCH 620 - International Merchandise Management Credits: 3****MRCH 630 - Research Methods in Merchandising Credits: 3****MRCH 640 - Financial Merchandising Implications Credits: 3****MRCH 650 - Strategic Planning in Merchandising Credits: 3****MRCH 690 - Seminar Credits: (1-2)****MRCH 695 - Practicum Credits: (1-3)****MRCH 788 - Master's Research Problems/Projects Credits: (1-3)****MRCH 798 - Thesis Credits: (1-3)****MSL (Military Science Leadership)****MSL 101 - Leadership and Personal Development Credits: 1**

Make your first peer group at college one committed to performing well and enjoying the experience. Increase self-confidence through team study and activities in basic drill, physical fitness, rappelling, leadership reaction course, first aid, making presentations and basic marksmanship. Learn fundamental concepts of leadership in a profession in both classroom and outdoor laboratory environments.

**MSL 102 - Introduction to Tactical Leadership Credits: 1**

Learn and apply principles of effective leadership. Reinforce self-confidence through participation in physically and mentally challenging exercise with upper-division ROTC students. Develop communication skills to improve individual performance and group interaction. Relate organizational ethical values to the effectiveness of a leader.

**MSL 201 - Innovative Team Leadership Credits: 2** Learn/apply ethics-based leadership skills that develop individual abilities and contribute to the building of effective teams of people. Develop skills in oral presentations, writing concisely, planning events, coordination of group efforts, advanced first aid, land navigation, and basic military tactics. Learn fundamentals of ROTC's leadership assessment program.

**MSL 202 - Foundation of Tactical Leadership (COM) Credits: 2**

Introduction to individual and team aspects of military tactics in small unit operations. Includes use of radio communications, making safety assessments, movement techniques, planning for team safety/security and methods of pre-execution checks. Practical exercises with upper-division ROTC students. Learn techniques for training others as an aspect of continued leadership development.

**MSL 294 - ROTC Summer Leadership Internship Credits: 4**

Applied, monitored and supervised, field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and or directed plan of study. A higher level of supervision is provided by the instructor in these courses than is the case with field experience courses.

**MSL 301-301L - Adaptive Team Leadership and Lab Credits: 4**

Series of practical opportunities to lead small groups, receive personal assessments and encouragement, and lead again in situations of increasing complexity. Uses small unit tactics and opportunities to plan and conduct training for lower division students both to develop such skills and as vehicles for practicing leadership. Provides the student with practical experience to supplement and reinforce classroom instruction. Subjects include drill and ceremonies, physical training instruction techniques and leadership, which will complement the student's preparation for camp. Corequisites: MSL 301L-MSL 301.

**MSL 302-302L - Leadership in Changing Environment and Lab Credits: 4**

Continues methodology of MSL 301. Analyze tasks; prepare written or oral guidance for team members to accomplish tasks. Delegate tasks and supervise. Plan for and adapt to the unexpected in organizations under stress. Examine and apply lessons from leadership case studies. Examine importance of ethical decision making in setting a positive climate that enhances team performance. Accompanies MSL 302. Corequisites: MSL 302L-302.

**MSL 401-401L Developing Adaptive Leaders and Lab Credits: 4**

Introduces formal management skills including problem analysis, planning techniques, and the delegation and control of activities, providing an understanding of the command and staff organization used in the modern army and creating a forum for discussing professional and ethical decisions faced by commissioned officers. Designed to accompany MSL 401. Corequisites: MSL 401L-MSL 401.

**MSL 402-402L Leadership in a Complex World & Lab Credits: 4**

Provides information for transition to active or reserve commissioned service, developing administrative controls essential in managing a military organization, introducing the management of financial and personal affairs, and allowing time for discussion and analysis of the ethical decision-making process. Designed to accompany MSL 402. Corequisites: MSL 402L-MSL 402.

**MSL 492 - Topics Credits: (1-3)****MSL 494 -Leader Development and Assessment Course Credits 4****MSL 495 - ROTC Nurse Summer Training Program Credits: 3****MUAP (Applied Music)****MUAP 100-101 - Applied Music - Voice Credits: 1-4**

One to two hours credit for private lessons is given for half-hour lesson per week. Music majors studying in the major performance area may elect two half-hour lessons per week for two to four hours of credit. Adequate preparation through practice is expected of all students.

**MUAP 102 - Class Instruction- Voice Credits: 1****MUAP 110-111 - Applied Music- Keyboard Credits: 1****MUAP 115-116 - Class Instruction- Keyboard Credits: 1****MUAP 120-121 - Applied Music- Woodwinds Credits: 1**

**MUAP 130-131 - Applied Music- Brass Credits: 1**  
**MUAP 140-141 - Applied Music- Percussion Credits: 1**  
**MUAP 150-151 - Applied Music- Strings Credits: 1**  
**MUAP 181 - Piano Accompanying (COM) Credits: 1**

**MUAP 200-201 - Applied Music - Voice Credits: 1-4**  
One to two semester hours of credit for private lessons is given for on half-hour lesson per week. Music majors studying in the major performance area may elect two half-hour lessons per week for two to four hours of credit. Adequate preparation through practice is expected of all students.

**MUAP 210-211 - Applied Music- Keyboard Credits: 1**  
**MUAP 220-221 - Applied Music- Woodwinds Credits: 1**  
**MUAP 230-231 - Applied Music- Brass Credits: 1**  
**MUAP 240-241 - Applied Music- Percussion Credits: 1**  
**MUAP 250-251 - Applied Music- Strings Credits: 1**

**MUAP 300-301 - Applied Music - Voice Credits: 1-4**  
One to two hours credit for private lessons is given for half-hour lesson per week. Music majors studying in the major performance area may elect two half-hour lessons per week for two to four hours of credit. Adequate preparation through practice is expected of all students.

**MUAP 310-311 - Applied Music- Keyboard Credits: 2**  
**MUAP 320-321 - Applied Music- Woodwinds Credits: 2**  
**MUAP 330-331 - Applied Music- Brass Credits: 2**  
**MUAP 340-341 - Applied Music- Percussion Credits: 2**  
**MUAP 350-351 - Applied Music- Strings Credits: 2**  
**MUAP 355 - Class Instruction in Strings Credits: 2**

**MUAP 400-401 - Applied Music - Voice Credits: 1-4**  
One to two hours credit for private lessons is given for half-hour lesson per week. Music majors studying in the major performance area may elect two half-hour lessons per week for two to four hours of credit. Adequate preparation through practice is expected of all students.

**MUAP 410-411 - Applied Music- Keyboard Credits: 2**  
**MUAP 420-421 - Applied Music- Woodwinds Credits: 2**  
**MUAP 430-431 - Applied Music- Brass Credits: 2**  
**MUAP 440-441 - Applied Music- Percussion Credits: 2**  
**MUAP 450-451 - Applied Music- Strings Credits: 2**  
**MUAP 483 - Public Recital (COM) Credits: 0**

## **MUEN (Music Ensembles)**

**MUEN 100-300 - Concert Choir \*\* (COM) Credits: 0-2**  
An ensemble performing accompanied and unaccompanied literature for mixed voices. Membership determined by instructor's permission and audition only. Notes: \*\*Course meets IGR #2

**MUEN 102-302 - Men's Choir \*\* (COM) Credits: 1**  
An ensemble performing accompanied and unaccompanied literature. Notes: \*\*Course meets IGR #2

**MUEN 103-303 - Women's Choir \*\* (COM) Credits: 1**  
An ensemble performing accompanied and unaccompanied literature. Notes: \*\* Course meets IGR #2

**MUEN 107-307 - Opera Workshop \*\* (COM) Credits: 1-2**  
Notes: \*\*Course meets IGR #2

**MUEN 110-310 - Orchestra (COM) Credits: 1**  
A joint enterprise of the University and interested area musicians. The orchestra studies and performs standard orchestra literature and presents public concerts.

**MUEN 120-320 - Marching Band \*\*(COM) Credits: 1**

Active during the fall, the marching band performs at all home football games. Notes: \*\*Course meets IGR #2

**MUEN 121-321 - Symphonic Band \*\*(COM) Credits: 1**  
Members are selected by audition to perform the finest in original and transcribed literature in concert performances on and off-campus. Notes: \*\*Course meets IGR #2

**MUEN 122-322 - Concert Band \*\*(COM) Credits: 0-1**  
A joint enterprise open to university students and interested area musicians. Includes rehearsals and performance of band literature culminating in a public performance. Notes: \*\*Course meets IGR #2

**MUEN 140-340 - String Ensemble Credits: 1**

**MUEN 150-350 - Woodwind Ensemble Credits: 1**  
A select woodwind instrument group which performs music composed or arranged for this medium.

**MUEN 160-360 - Brass Ensemble Credits: 1**  
A select group of brass instrumentalists who perform music composed or arranged for this medium.

**MUEN 170-370 - Percussion Ensemble \*\* Credits: 1**  
A select group of percussionists who perform music composed or arranged for this medium. Notes: \*\*Course meets IGR #2

**MUEN 180-380 - Jazz Ensemble\*\* Credits: 1**  
Gives students the opportunity to experience and perform music in the popular idiom and to relate it to practical use in secondary school music programs. Notes: \*\*Course meets IGR #2

## **MUS (Music)**

**MUS 100 - Music Appreciation \*\*\* (COM) Credits: 3**  
A non-technical discussion designed to increase the enjoyment and appreciation of music. Fulfills the music requirement in the general education program. Notes: \* Course meets SGR #4 or \*\* IGR #2

**MUS 109 - First Year Seminar\*\* Credits: 2**  
First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\* Course meets IGR #1

**MUS 110 - Basic Music Theory I (COM) Credits: 4**  
An integrated study and application of tonality, melody, harmony, texture and form, from music notation through modulation. Includes sight singing, ear training and dictation. Introduction to composition and arranging, i.e. instrument ranges, transposition, tessitura and preliminary score analysis.

**MUS 110L - Basic Music Theory I Lab (COM) Credits: 0**  
Students will be taught sight singing and dictation skills that will prepare them to "see with their ears and hear with their eyes." Students will learn simple to advanced applications of writing down music from aural performance, and learn to quickly analyze melodies by singing them at sight.

**MUS 111 - Basic Music Theory II (COM) Credits: 4**  
An integrated study and application of tonality, melody, harmony, texture and form, from music notation through modulation. Includes sight singing, ear training and dictation. Introduction to composition and arranging, i.e. instrument ranges, transposition, tessitura and preliminary score analysis. Prerequisites: MUS 110.



**MUS 111L - Basic Music Theory II Lab (COM) Credits: 0**  
Students will be taught singing and diction skills that will prepare them to “see with their ears and hear with their eyes.” Students will learn simple to advanced applications of writing down music from aural performance, and learn to quickly analyze melodies by singing them at sight.

**MUS 130 - Music Literature and History I \* Credits: 2**  
An introductory course of music cultures of the world. Emphasis on developing a fundamental knowledge of distinctive and unique music of different nations, especially non-Western music. Notes: \* Course meets SGR #4

**MUS 131 - Music Literature and History II \* Credits: 3**  
Ancient through Baroque music literature – analysis of style, form and context, study of historical development and significance, comparison to similar works in other periods of music history. Emphasis on listening and score study. Notes: \* Course meets SGR #4

**MUS 185 - Recital Attendance (COM) Credits: 0**  
Designed to expose students to a large and varied body of music through attendance at recitals, forums, solo classes, concerts, and other performances. Required of all music majors each semester they are enrolled in applied music. Student teaching semesters and internships excepted. S/U grade.

**MUS 201 - History of Country Music \* Credits: 3**  
An in-depth exploration of Country Music, beginning with Scotch-Irish folk music of the late 1600’s, through the “New Traditionalists” of the 1990’s. Notes: \* Course meets SGR #4

**MUS 202 - The Music Industry Credits: 3**  
This course examines the many facets of the music industry; songwriting, music publishing, copyright, licensing, unions and guilds, concert promotion, music and theatre, music product merchandising, arts management, and career options in music.

**MUS 203 - Blues, Jazz, and Rock \* Credits: 3**  
This course examines the origins and developments of three uniquely American musics and their cultural impact upon, and within, American society. Notes: \* Course meets SGR #4

**MUS 210 - Advanced Music Theory I (COM) Credits: 4**  
A more advanced continuation of MUS 110, 111 with similar objectives and organization. A continuation of vocal/instrumental arranging and composition. Prerequisites: MUS 111.

**MUS 210L - Advanced Music Theory I Lab (COM) Credits: 0**  
Students will be taught sight singing and diction skills that will prepare them to “see with their ears and hear with their eyes.” Students will learn simple to advanced applications of writing down music from aural performance, and learn to quickly analyze melodies by singing them at sight.

**MUS 211 - Advanced Music Theory II (COM) Credits: 4**  
A more advanced continuation of MUS 110, 111 with similar objectives and organization. A continuation of vocal/instrumental arranging and composition. Prerequisites: MUS 210.

**MUS 211L - Advanced Music Theory Lab II (COM) Credits: 0**  
Students will be taught sight singing and diction skills that will prepare them to “see with their ears and hear with their eyes.” Students will learn simple to advanced applications of writing down music from aural performance, and learn to quickly analyze melodies by singing them at sight.

**MUS 270 - Pedagogy I Credits: (1-2)**  
Pedagogical considerations in teaching music. Methods and concepts in specialized areas: Section 1: Voice; Section 2: Strings; Section 3: Keyboard; Section 4: Clarinet and Flute; Section 5: Double Reeds and Saxophone; Section 6: High Brass; Section 7: Low Brass;

Section 8: Percussion; Section 9: General Instrument for Vocal Majors; Section 10: General Voice for Instrument Majors. Section 1 offered even years only; Section 3 offered odd years only; Section 9 and 10 offered on demand.

**MUS 271 - Pedagogy II Credits: (1-2)**  
Continuation of MUS 270 sections 1-8 as in 270. Voice offered odd years only; Keyboard even years only.

**MUS 280 - Explore Music in Western Europe Credits: 3**  
An intensive three-week period of rehearsals, performances, lectures, attendance at plays and concerts, educational touring, and travel in a mix of West European countries.

**MUS 280L - Explore Music in Western Europe Ensemble Credits: 0**  
Corequisites: MUS 280.

**MUS 292 - Topics (COM) Credits: (1-5)**

**MUS 302 - Introduction to Recording Industry Credits: 2**  
This course explores the music business system; the scope of the recording industry; record markets; artists’ recording contracts; record production; promotion, distribution and retailing; studios and pictures and television and career options and development. Off-campus speakers will be utilized in their specialty areas.

**MUS 311 - Counterpoint (COM) Credits: 3**  
Analysis and composition in contrapuntal techniques, with a concentration on the music of J.S. Bach. Prerequisites: MUS 211.

**MUS 313 - Form and Analysis (COM) Credits: 3**  
Analysis of music in the student’s major performance area. The course is normally completed under the direction of the student’s major applied teacher. Prerequisites: MUS 210 or 211.

**MUS 351 - Elementary School Music Methods (COM) Credits: (2-3)**  
This course provides methods and materials for guiding elementary students’ musical growth.

**MUS 355 - Computer Based Technology and Learning for Music Educators Credits: 2**  
This course prepares music students to integrate computers into the curriculum by exploring the evolving uses and expectations of technology and learning tools. Course objectives are based on ISTE standards and the requirements of the discipline.

**MUS 360-360L - Conducting (COM) Credits: 2, 0**  
General conducting focuses on the basic fundamentals of instrumental and choral conducting. The techniques of interpretation, score reading, rehearsal techniques, and the art of developing basic conducting techniques are addressed in the course. Accompanies 360 Prerequisites: MUS 111. Corequisites: 360L-360

**MUS 361-361L - Music Education II: Conducting and Lab Credits: 2**  
Section 1: Instrumental music methods and materials. Emphasis on rehearsal Prerequisites: Techniques, conducting and study of appropriate materials. Section 2: Choral music methods and materials. Emphasis on rehearsal and conducting techniques through study of appropriate materials. Corequisites: MUS 361L-MUS 361.

**MUS 362-362L - Music Education III: Methods & Materials Credits: 2**  
Section 1: Instrumental Music Methods and Materials. Emphasis on lesson, solo and ensemble materials and pedagogy for the school instrumental music teacher. Teaching techniques for individual, class, small and large instrumental music ensembles are offered. Students participate in supervised on-site teaching experiences at the elementary instrumental music and general music class levels. Section 2: Vocal Music Methods and Materials. Emphasis on choral teaching materials and teaching concepts and techniques for individual, class and ensembles for the school vocal teacher. Students

participate in supervised on-site teaching experiences in choral music and general music classes. Corequisites: MUS 362L-MUS 362.

**MUS 365-365L - Music Education IV: Supervision and Administration of School Music and Lab Credits: 2**

A goal and objective approach to developing student skills in managing the total school music program, including choral and instrumental at the elementary and high school levels. Organizational and administrative skills are offered with hands-on opportunities for practical application. Units are also offered in music education history and philosophy. Corequisites: MUS 365L-MUS 365.

**MUS 370 - Pedagogy III Credits: (1-2)**

Continuation of MUS 271, section 1-8 as in 270. Voice offered odd years only; Keyboard even years only.

**MUS 371 - Pedagogy IV Credits: (1-2)**

Continuation of MUS 370, sections 1-8 as in 270. Voice offered even years only; Keyboard odd years only.

**MUS 391 - Independent Study Credits: (1-3)**

**MUS 420 - Orchestration and Arranging (COM) Credits: 3**

A study of instruments alone and in combinations. Orchestration and arranging for instrumental and vocal ensembles. Preparation of parts and participation in the conducting and performing of works scored.

**MUS 433 - Music Literature and History III (AW) Credits: 3**

Classical, Romantic, and Modern music literature – analysis of style, form, and context; study of historical development and significance, comparison to similar works in other periods of music history. Emphasis on listening, score study, and research methods in the field of music.

**MUS 465 - Music Education V: Practical Applications Credits: 2**

Emphasis on in-depth development of skills required for teaching music in the secondary schools. Section I: Advanced rehearsal skills for leading bands, specific techniques for marching bands, jazz ensemble rehearsal and organization, and instrument repair. Section II: Advanced rehearsal skills for leading choirs, specific techniques for vocal ensembles other than choirs, and literature selection.

**MUS 491-591 - Independent Study Credits: (1-3)**

**MUS 492-592 - Topics (COM) Credits: (1-5)**

**MUS 494 - Internship Credits: 3-12**

Prerequisites: Consent of department program coordinator.

## NE (Nuclear Engineering)

**NE 337 - Foundations of Health Physics Credits: 3**

Health Physics studies the risk to health from radiation and the measures to assess and reduce that risk. This course is an introduction to several aspects of health physics including radiation quantities, limits and risk assessment, external and internal dosimetry, biological effects of radiation, interactions of radiation with matter, radioactive decay, radiation detection, and various applications of radiation. Prerequisites: MATH 123 or MATH 121-121L AND PHYS 113-113L or PHYS 213-213L Corequisites:

**NE 435 - Introduction to Nuclear Engineering Credits: 3**

This course considers the design of nuclear fission and fusion reactors and particle accelerators including discussion of basic nuclear properties, the fission process and reactor control, fusion reactors, environmental effects and nuclear waste management. Prerequisites: PHYS 331 or consent.

**NE 494 - Internship Credits: 1-3**

**NE 498 - Undergraduate Research/Scholarship Credits: 1-3**

## NFS (Nutrition & Food Science)

**NFS 111 - Food, People and the Environment\*\* Credits: 3**

The survey of global food cultures, their stewardship of natural resources, and their impacts on the environment. It will also explore the ethical issues of choices in post-harvest food processing and their interactions with the environment. The course will also cover topics related with the Land-Grant philosophy. Notes: \*\* Course meets IGR Goal #2

**NFS 141-141L - Foods Principles and Lab Credits: 4**

Scientific investigation of basic foods used to maintain optimum nutrition. Corequisites: NFS 141L-141.

**NFS 220 - Health, Safety & Nutrition of Young Child Credits: 3**

Exploration of school health, safety, first aid/CPR, disease control and nutrition; development of health and nutrition policies and standard in early childhood settings based on current public policy; creating a healthy and safe school environment for young children; exploration of materials and methods for teaching health, safety and nutrition in early childhood.

**NFS 221 - Survey of Nutrition Credits: 3**

Fundamentals of nourishing the body properly and the role that food plays in meeting the nutritional requirements of individuals. Designed for the student who lacks a science background but wishes to study human nutrition in some detail.

**NFS 251 - Food Safety and Technology Credits: 3**

Fundamentals of food safety and the technology of conversion of agricultural raw material into finished food products suitable for food consumption. World and domestic food needs, chemical additives and current food safety issues will be discussed.

**NFS 291 - Independent Study Credits: (1-3)**

**NFS 292 - Topics Credits: 3**

**NFS 295 - Practicum Credits: (1-3)**

**NFS 298 - Undergraduate Research/Scholarship Credits: (1-3)**

**NFS 315 - Human Nutrition Credits: 3**

The science of food, the nutrients and other substances therein, their action, interaction, and balance in relation to health and disease and the processes by which the organism ingests, digests, absorbs, transports, utilizes and excretes food substances. Prerequisites: CHEM 106 and 108, or CHEM 112 and 114.

**NFS 322-322L - Assessment and Counseling Skills in Nutrition and Lab Credits: 4**

Study of the nutritional assessment, cultural and therapeutic dietary modifications, interviewing and counseling, documentation in the medical record, and quality assurance. Review of principles of dietetics and the role of the professional dietitian. Prerequisites: NFS 315 Corequisites: NFS 322L-322.

**NFS 323 - Nutrition Across the Life Cycle Credits: 3**

In depth study of the nutritional needs throughout the lifecycle from embryo to old age. Physiological and biochemical principles and current research are used to build a foundation for exploration of nutrition across the stages of reproduction, growth and development, and maturation and aging. Prerequisites: NFS 315

**NFS 341-341L - Food Science and Lab Credits: 4**

Study of physical/chemical factors affecting food quality resulting from preparation and processing methods. Students will become familiar with techniques in sensory evaluation and basic principles of food analysis. Prerequisites: NFS 141, CHEM 120. Corequisites: NFS 341L-341.

**NFS 351-351L - Principles of Food Processing & Lab Credits: 3**

Study of physical/chemical principles and approaches used in heat processing, freezing, dehydration, and fermentation of foods. Current processing methods will be considered in terms of preparation,

processing, packaging, and quality control of food products. Prerequisites: NFS 251 and CHEM 106 or 114 Corequisites: NFS 351L-351.

**NFS 360-360L - Food Chemistry and Lab Credits: 4**

The study of chemical properties of basic food constituents and chemical changes occurring during storage and processing. Prerequisites: NFS 251 and CHEM 106 or 114 Corequisites: NFS 360L-360.

**NFS 380 - Foodservice Operations & Purchasing Mgmt Credits 3**

A managerial and systems approach to foodservice operations and purchasing. Cross-Listed: HMG 380.

**NFS 381-381L - Quantity Food Production & Service & Lab Credits: 4**

Application of foodservice management principles in quantity food production, purchasing, and service. Lab to accompany NFS/HMG 381. Prerequisites: NFS 141-141L, HMG 251 (or concurrently), HMG 380. Corequisites: NFS/HMG 381L-381. Cross-Listed: HMG 381-381L.

**NFS 422-522 - Advanced Human Nutrition Credits: 4**

Principles of physiological chemistry and physiology applied to nutrition. Prerequisites: NFS 315, BIOL 221, BIOL 325, and CHEM 108 or 112

**NFS 4/523-4/523L-Medical Nutrition Therapy I & Lab Credits: 3**

This course introduces the role of nutritional intervention in pathological conditions. Students will demonstrate the ability to screen for nutritional risk, collect data for nutritional assessment and calculate and/or define diets for common conditions. Prerequisites: NFS 422. Corequisites: NFS 423L-423/523L-523.

**NFS 424-424L/524-524L - Community Nutrition & Lab Credits 3**

Application of learning principles, teaching methods and knowledge of nutrition in community nutrition education programs and outpatient nutrition counseling. Prerequisites: NFS 315 and NFS 323. Corequisites: NFS 424L-424/524L-524.

**NFS 4/525-4/525L Medical Nutrition Therapy II & Lab Credits 3**

Continuation of NFS 423-523. Prerequisites: NFS 423/523 Corequisites: NFS 425L-425/525L-525.

**NFS 450-450L/550-550L - Food Analysis and Lab Credits: 4**

Principles and techniques of physical and chemical analysis of food products. It will include proximate analysis of moisture, protein, lipid, and carbohydrates and chemical or instrumental analysis of vitamins, minerals and food additives. Prerequisites: NFS 360 Corequisites: NFS 450L-450/550L-550.

**NFS 4/551-4/551L New Food Product Devlpmt & Lab Credits: 4**

This course is designed as a capstone course for undergraduate Food Science students and an introductory course for graduate students in food-related majors. The principles and technologies of food storage, process and packaging will be discussed in depth. Emphasis will be placed in the development of new food products. Prerequisites: NFS 351 and MICR 311 Corequisites: NFS 451L-451L/551L-551.

**NFS 480/580 - Travel Studies Credits: 1-5**

This travel-study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators at other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

**NFS 481 - Food Science, Dietetics, and Hospitality Human Resources Management Credits: 3**

This course is the capstone experience for students in Nutrition, Food Science and Hospitality. Course will integrate knowledge with

breakout sessions for the different subject matter areas in NFSH. Professionalism and professional ethics, management and employment principles, diversity issues, leadership styles, networking and mentoring will be discussed. Cross-Listed: HMG 481.

**NFS 487 - Transition to Professional World Credits: 1**

Transition to the professional world will identify expectations for the world of work. Emphasis on effective written and verbal communication skills as related to work experiences, issue analysis, and goal setting for the future. Students will prepare for professional experiences such as internships, graduate school and professional positions upon graduation. Prerequisites: Dietetics major and Junior or Senior Standing

**NFS 490/590 - Seminar (AW) Credits: (1-2)**

**NFS 491/591 - Independent Study Credits: 1-6**

**NFS 492 - Topics Credits: 1-3**

**NFS 493-593 - Workshop Credits: 1-3**

**NFS 494 - Internship Credits: (1-7)**

**NFS 495 - Practicum Credits: 2**

**NFS 498 - Undergraduate Research/Scholarship Credits: 1-3**

**NFS 634 -634L - Techniques in Food and Nutrition Research and Lab Credits: 3, 0**

**NFS 660 - Maternal and Child Nutrition Credits: 3**

**NFS 662 - Sociocultural Aspects of Nutrition Credits: 2**

**NFS 702 - Macronutrients in Human Nutrition Credits: 3**

**NFS 704 - Phytochemicals Credits: 3**

**NFS 705 - Functional Foods for Chronic Disease Prevention Credits: 3**

**NFS 706 - Nutrition and Immunology Credits: 3**

**NFS 708 - Evidence Based Analysis Credits: 3**

**NFS 710 - Dietary and Herbal Supplements Credits: 3**

**NFS 723 - Nutrition Focus on Life Stages Credits: 3**

**NFS 724 - Nutrition Education in the Community Credits: 3**

**NFS 725 - Nutrition and Human Performance Credits: 3**

**NFS 726 - Nutrition and Wellness Credits: 3**

**NFS 727 - Obesity Across the Lifespan Credits: 3**

**NFS 728 - Pediatric Clinical Nutrition Credits: 3**

**NFS 729 - International Nutrition/World Hunter Credits: 3**

**NFS 730 - Nutritional Aspects of Oncology Credits: 3**

**NFS 734 - Research Methods in Dietetics Credits: 3**

**NFS 735 - Current Trends in Dietetics Practice Credits: 3**

**NFS 741 - Grant Writing in Dietetics Credits: 3**

**NFS 750 - Transdisciplinary Childhood Obesity Prevention I Credits: 3**

**NFS 751-751L - Transdisciplinary Childhood Obesity Prevention II and Lab Credits: 4**

**NFS 760 - Vitamins and Minerals in Human Nutrition Credits: 3**

**NFS 761 - Nutrition of Aging Credits: 3**

**NFS 765 - Dietetic Accounting Concepts Credits: 3**

**NFS 769 - Healthcare Administration for Dietetics Credits: 3**

**NFS 770 - Food Writing for Professionals Credits: 3**

**NFS 775 - Nutrigenomics and Health Credits: 3**

**NFS 782 - Epidemiology Credits: 3**

**NFS 795 - Practicum Credits: 3**

## **NRM (Natural Resource Management)**

**NRM 109-109L - First Year Seminar and Lab\*\* Credits: 1, 1**

First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Laboratory course to accompany NRM 109 Corequisites: NRM 109-109 L Notes: \*\*Course meets IGR #1

**NRM 110 - Environmental Conservation \*\* (G) Credits: 3**  
Ecological approach to conservation; human's past and present impact on world environments; wise use of natural resources, including soil, water, air, forests, rangelands, energy, wildlife, and fisheries. Notes: \*\*Course meets IGR #2

**NRM 311-311L - Principles of Ecology and Lab Credits: 3, 1**  
Basic principles of ecology including the sub disciplines of physiological ecology, population ecology, community ecology, evolutionary ecology, and ecosystems ecology from both a theoretical and applied aspect; Laboratory experience that accompanies NRM 311. Cross-Listed: BIOL 311-311L Notes: NRM 311L is an optional, stand-alone lab.

**NRM 440-440L - Restoration Ecology and Lab Credits: 4**  
Scientific principles involved in restoration of natural ecosystems on degraded and disturbed lands. An understanding of ecological principles is recommended prior to enrollment. Laboratory to accompany NRM 440 Corequisites: NRM 440L-440 Cross-Listed: BIOL/LA 440-440L

**NRM 457-557 - Ecological Modeling Credits: 3**  
An introduction to ecological modeling. Topics will include modeling methodology, auto-ecological models, population models, biotic communities, ecosystem level models, global modeling. Prerequisites: MATH 121 or 123. Cross-Listed: MATH 457-557

**NRM 464-564 - Ecosystem Ecology Credits: 3**  
Study of energy and material flows through the living (plants, animals, microbes) and non-living (soils, atmosphere) components of ecological systems. Discussion of the major element cycles and patterns of energy flow through ecosystems, including how those fluxes and their controls differ for different ecosystems. Linkages between ecosystem structure and function will be emphasized. Prerequisites: BIOL//NRM 311

**NRM 466-566 - Environmental Toxicology & Contaminants Credits: 3**  
This course will prepare students in the area of Ecological Effects of Toxic Substances and other contaminants. Wildlife toxicology and impacts of agriculture on the Northern Plains will be emphasized. Topics covered will include pesticides, heavy metals, aquatic and terrestrial ecotoxicity and other topics related to Wildlife Toxicology. Cross-Listed: BIOL 466-566

**NRM 706-706L - Landscape Ecology and Lab Credits: 3**  
**NRM 743 - Geospatial Analysis Credits: 3**  
**NRM 767 - Fire and Ecosystems Credits: 3**  
**NRM 790 - Seminar Credits: 1**

## **NURS (Nursing)**

**NURS 109 - First Year Seminar\*\* Credits: 2**  
First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\*Course meets IGR #1

**NURS 201 - Medical Terminology Credits: 1**  
Study of definition and use of medical terms common to many health-related disciplines. Enrollment limited to freshmen and sophomores, or with permission of the instructor.

**NURS 215 - Professional Nursing Credits: 2**  
Introduction to the profession of nursing within the context of a changing healthcare system. The professional nursing values of human dignity, altruism, integrity, autonomy, and social justice are explained with emphasis on human dignity. The professional nursing roles of provider of care, designer/manager/coordinator of care and

member of the profession are described. Corequisites: NURS 265-265L, 280-280L, 323.

**NURS 222 - Transition to BS in Nursing Credits: 1**  
Introduces the RN student to the nature of baccalaureate nursing education. Students participate in self-assessment of strengths within the various professional nursing roles. Includes an overview of the curriculum concepts as applied to RN education as well as an overview of The Essentials of Baccalaureate Education for Professional Nursing Practice document with related values and concepts. Includes an introduction to nursing informatics as a tool for lifelong learning.

**NURS 265-265L - Health Assessment and Interventions and Lab Credits: 4**  
Introduces health assessment skills and selected nursing interventions at the novice nursing student level. Emphasis is on the role of nurse as provider of care and a member of the profession. Prerequisites: MICR 231 or 233, BIOL 325, NFS 315, HDFS 210; 3 credits from SOC 100, 150, 240, 250 or 440. Corequisites: NURS 265L-NURS 265, NURS 215, NURS 280-NURS 280L, NURS 323. Notes: This course has additional charges for student access to electronic health record system used in the program.

**NURS 280-280L - Professional Communication and Lab Credits: 3**  
Focus is on communication skills essential to the profession of nursing. Emphasis is placed on professional communication of the nurse with clients and colleagues. Prerequisites: PSYC 101. Corequisites: NURS 280L-NURS 280, NURS 215, NURS 265-NURS 265L, NURS 323.

**NURS 293 - Workshop Credits: 1-3**  
Special, intense sessions in specific topic areas. Approximately 45 hours of work is required for each hour of credit. Workshops may vary in time range but typically use a compressed time period for delivery. They may include lectures, conferences, committee work, and group activity.

**NURS 310-310L - Introduction to Public Health and Population-based Nursing and Lab Credits: 4**  
Focuses on an introduction to public health and population-based nursing care. Public health principles are applied to the health promotion, risk reduction and disease prevention needs of clients. Clinical application occurs with children and adults in community settings. Prerequisites: NURS 215, 265-265L, 280-280L, 323. Corequisites: NURS 310L-NURS 310, NURS 325-NURS 325L, PHA 321.

**NURS 323 - Introduction to Pathophysiology Credits: 3**  
This course covers topics which will provide a current understanding of the major disease processes across the lifespan. The course will lay the foundation for the study of pharmacological mechanisms of action of drugs and their rational clinical use. Of interest will be the linkage of relevant modern biology to the different disease states, attention to gender differences, especially regarding epidemiology and pathological changes, and the integration of health promotion and disease prevention, by emphasizing risk factors, nutritional requirements, and other relevant therapeutic practices. Prerequisites: 3rd year Pharmacy standing or Nursing major; BIOL 325

**NURS 325-325L - Beginning Nursing Care of the Client with Health Problems and Lab Credits: 6**  
Focuses on nursing core knowledge and core competencies to provide beginning nursing care to clients with health problems. Clinical application occurs with clients across the life span experiencing health problems. Emphasis will be on the nursing care of the adult client. Prerequisites: NURS 215, 265-265L, 280-280L, 323. Corequisites: NURS 310-NURS 310L, NURS 325L-NURS 325, PHA 321.

**NURS 355 - Research: Appraisal and Utilization Credits: 2**  
Terminology and steps in the research process are reviewed and the role of theory and ethical issues involved in the conduct of research is explored. Research as a basis for evaluation of nursing and healthcare

outcomes is appraised and research utilization related to essential knowledge for the practice of professional nursing is analyzed. Prerequisites: NURS 310-310L, 325-325L. Corequisites: NURS 365-365L, 380-380L.

**NURS 365-365L - Nursing Care of the Client with Health Problems and Lab Credits: 6**

Focuses on the application of nursing core knowledge and core competencies to provide nursing care to clients with health problems. Clinical application occurs with clients across the life span experiencing health problems. Emphasis will be on the nursing care of the pediatric client. Prerequisites: NURS 310-310L, 325-325L, PHA 321. Corequisites: NURS 365L-NURS 365, NURS 380-NURS 380L.

**NURS 380-380L - Nursing Care of the Childbearing Family and Lab Credits: 5**

Focuses on the application of nursing knowledge and competencies regarding childbearing and family health to provide nursing care to individuals and families. Prerequisites: NURS 264, 265-265L, 280-280L, 282, 323. Corequisites: NURS 320L-NURS 320, NURS 304, NURS 330, and PHA 321.

**NURS 381 - Family and Communication Credits: 3**

This course focuses on communication as an intervention with family as client. The student will be exposed to major family and communication theories. Emphasis is on holistic family assessment and interventions. The professional value of "Autonomy" or the patient's right to self-determination is the value-based behavior central to this course. Corequisites: NURS 222

**NURS 385 - Health Assessment, Clinical Decision-Making and Nursing Interventions Credits: 5**

This course concentrates on the deliberative process utilized by the baccalaureate prepared nurse. The course will build upon the assessment intervention skills acquired in the student's previous education and will emphasize clinical decision making and use of research based interventions. Includes a practicum component in which the nursing process is applied to families and clients across the age continuum in the home setting. The professional value of "Human Dignity" or respect for the inherent worth and uniqueness of individuals and populations is value-based behavior central to this course. Prerequisites: NURS 222, NURS 381, RN License.

**NURS 410-410L - Advanced Nursing Care of the Client with Health Problems and Lab Credits: 6**

Expands on previous knowledge and skills to provide advanced nursing care to clients with complex health problems. Prerequisites: NURS 355, 365-365L, 380-380L. Corequisites: NURS 410L-NURS 410, NURS 420-NURS 420L, HSC 445 or STAT 281.

**NURS 416 - Community Health Nursing (AW) Credits: 5**

Introduces the RN to the concept of community as client by examining community health issues and the role of nursing in providing care to populations. Emphasis is on community assessment, health education, program planning and evaluation. Practice experiences will include rural and/or urban community settings. The professional value of "Altruism" or concern for the welfare and wellbeing of others is the value-based behavior central to this course. Prerequisites: NURS 222, NURS 381, NURS 385, RN License.

**NURS 420-420L - Nursing Care of the Client with Mental Health Problems and Lab Credits: 5**

Focuses on the application of nursing knowledge and competencies to provide nursing care to clients experiencing mental health problems. Prerequisites: NURS 355, 365-365L, 380-380L. Corequisites: NURS 410-NURS 410L, NURS 420L-NURS 420, HSC 445 or STAT 281.

**NURS 425 - Nursing Leadership Credits: 3**

Emphasizes professional role synthesis through development of leadership and management skills. The professional value of social

justice is integrated with leadership development. Prerequisites: NURS 410-410L, 420-420L, STAT 281 or HSC 445. Corequisites: NURS 495, 480-480L.

**NURS 454 - Leadership and Management Credits: 3**

This course focuses on three areas: management theory, leadership theory and political and economic issues within professional nursing practice. Resource management, change theory, organization and other group behavior will be discussed. Conflict resolution, negotiation, and group process skills are also addressed. The professional value of "Social Justice" or upholding moral, legal, and humanistic principles is the value-based behavior central to this course. Prerequisites: NURS 222, NURS 381.

**NURS 460 - Preparation for RN Licensure Credits: 1**

This course is designed to assist nursing students with preparation for the National Council Licensure Examination for Registered Nurses (NCLEXRN) Computer Adaptive Testing (CAT). Students will answer test questions and discuss rationale for the answers using a cooperative learning group approach to prepare for the NCLEX-RN licensure examination.

**NURS 465-565 - Introduction to the Clinical Academic Partner Role Credits: 3**

This course will introduce registered nurses to a mentoring model to prepare them for clinical teaching-learning experiences with nursing students and/or new nursing employees.

**NURS 474 - Nursing Research and Nursing Theory Credits: 3**

Prepares the baccalaureate nurse to analyze, critique, and apply nursing research in a practice environment and to utilize selected nursing theories. Various models of research utilization will also be presented and discussed. The professional value of "Integrity" or acting in accordance with an appropriate code of ethics and accepted standards of practice is the value-based behavior central to this course. Prerequisites: NURS 222, NURS 381, Stat 281 OR HSc 445

**NURS 480-480L - Advanced Population based Nursing Practice and Lab (G) Credits: 4**

Apply multi-faceted, evidenced based, interdisciplinary systems thinking to solve public health problems in a variety of arenas. Prerequisites: NURS 410-410L, 420-420L, STAT 281 or HSC 445. Corequisites: NURS 425, NURS 495, NURS 480L-NURS 480.

**NURS 491 - Independent Study Credits: (1-3)**

**NURS 492 - Topics Credits: (1-4)**

**NURS 495-495L - Practicum and Clinical Lab (AW) Credits: 6**

Prerequisites: NURS 410/410L, 420/420L, HSC 445 or Stat 281  
Corequisites: NURS 425, 480/480L, 495L

**NURS 497 - Cooperative Education Credits: (1-4)**

**NURS 615 Advanced Nursing Practice Intro to Roles & Issues Credits: 3**

**NURS 623 - Pathophysiology Across the Lifespan - Application to Advanced Practice Nursing Credits: 4**

**NURS 626 Research Methods for Advanced Practice Nursing Credits: 3**

**NURS 631-631L Advanced Assessment: Lifespan & Lab Credits: 3-4**

**NURS 635 - Dying, Death & Bereavement Credits: (2-3)**

**NURS 641 - Leadership Principles in Clinical Settings Credits: 3**

**NURS 642 - Advanced Concepts of Nursing Care Credits: 3**

**NURS 643 - Clinical Nurse Leader I Credits: 3**

**NURS 644 - Clinical Nurse Leader II Credits: 5**

**NURS 670 - Health Policy, Legislation, Economics & Ethics Credits 3**

**NURS 675 - Cultural Competence in Health Care Credits: 3**

**NURS 690 - Seminar Credits: (1-4)**

**NURS 691-691L - Independent Study & Clinical Credits: (1-3)**

**NURS 692 - Topics Credits: (1-3)**

**NURS 710 - Curriculum Dvlpmt & Instruction in Nursing Credits: 3**

**NURS 720 - Tech-Based Instruction for Nurse Educators Credits: 3**

**NURS 750 - Transformational Leadership Credits: 3**

**NURS 760-760L Adv. Health Promo. & Dis. Prvtn & Lab Credits: 3**

**NURS 765 - Family Nursing Practitioner: Practicum I Credits: 6**

**NURS 771 - Family Nursing Practitioner: Practicum II Credits: 7**

**NURS 774-774L - Nurse Administrator: Practicum & Lab Credits: 6**

**NURS 776 Family Nursing Pract III: Small Group Instruction Credits: 3**  
**NURS 777 - Family Nursing Practitioner III: Internship Credits: 3-9**  
**NURS 778-778L - Nursing Education: Practicum & Lab Credits: 5**  
**NURS 788 - Problems in Nursing Research Credits: (1-2)**  
**NURS 790 - Seminar Credits: (1-3)**  
**NURS 795 - Practicum in Adv. Health Concepts for Nrs. Ed. Credits: 3**  
**NURS 798 - Thesis Credits: (1-7)**  
**NURS 810 - Doctoral Seminar Credits: 1**  
**NURS 815 - Philosophical Basis for Nursing Credits: 3**  
**NURS 820 - Theory Development in Nursing Credits: 3**  
**NURS 825 - Qualitative Research Methods in Nursing Credits: 3**  
**NURS 830 – Quant. Methods in Nursing Research Credits: 3**  
**NURS 835 - Ethical Issues Influencing Practice & Research in Health Disciplines Credits: 3**  
**NURS 840 - Health Promotion Theory & Research in Underserved Populations Credits: 3**  
**NURS 845 - Instrument Construction and Evaluation with Underserved Populations Credits: 3**  
**NURS 850 - Philosophical & Theoretical Foundations for Evidence-Based Care Credits: 3**  
**NURS 860 Health Ops & Fin. Mgmt for Nrs Managers Credits: 3**  
**NURS 865 - DNP Capstone Credits: 6**  
**NURS 870 - DNP Innovation Project Credits: 1-6**  
**NURS 895 - Practicum Credits: 1-3**  
**NURS 898 - Dissertation Research Credits: 1-24**

## OM (Operations Management)

**OM 425 - Production/Operations Management Credits: 3**  
 This course studies the basic tools of operations management with emphasis on decision-making models in production and planning. Such topics as decision theory, production planning and control, inventory control, materials requirement planning, project management, and quality control are covered.

**OM 462-562 - Quality Management Credits: 3**  
 Course focus is on managerial philosophies and techniques of quality planning and control. This includes quality improvement tools, reliability, cost of quality, and human factors that effect the quality initiatives. Prerequisites: STAT 281.

**OM 463-563 - Supply Chain Management Credits: 3**  
 Study and analysis of activities in the flow of materials from the supplier to the consumer. These include physical supply, operations planning and control, storage and warehousing, and physical distribution. Prerequisites: MNET 231

**OM 465 - Quality Control Applications Credits: 3**  
 Quality control theory applied to problems in production systems, including probability concepts, control chart concepts, sampling inspection plans; mean time between failure; and, application of statistics for quality control in discrete-item manufacturing systems.

**OM 469-569 - Project Management Credits: 2**  
 Basic theory, application, and techniques of project management applied to technical projects. A team-oriented, collaborative approach to building and testing products, developing and managing processes, and/or conducting applied research. Prerequisites: Instructor consent

**OM 471-471L - Capstone Experience and Lab (CI) Credits: 1**  
 Technical projects developed in Project Management are completed. Student teams present results in a public venue. Prerequisites: OM-469 or GE-469 Corequisites: OM/MNET/ET 471L-471 Cross-Listed: ET/MNET 471-471L

**OM 494 - Internship (AW) Credits: 1-3**  
 Applied, monitored and supervised, field based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and or directed plan of study. A higher level of supervision is provided by the instructor in these courses than is the case with field experience courses.

**OM 660 - Operations Management Credits: 3**  
**OM 665 - Quality Control Applications Credits: 3**  
**OM 670 - Research Methods in Management Credits: 3**  
**OM 690 - Seminar Credits: 1**  
**OM 788 - Master's Research Problems/Projects Credits: 1-2**  
**OM 789 - Thesis Credits: 1-7**

## PE (Physical Education)

**PE 100 - Activity Courses (COM) Credits: 0.5-1**  
 Activities stressing individual physical fitness and lifetime activities according to student needs and interest.

**PE 170 - Fundamental Movement (COM) Credits: 1**  
 Defining, analyzing, and evaluating fundamental locomotor, non-locomotor (axial) and manipulative skills progressions in skill development.

**PE 180 - Foundations of HPER/A (COM) Credits: 2**  
 A survey of the historical background, sociological implications, and philosophical basis and professional opportunities of HPER/A professions. This course includes a review of the modern principles and related concepts which are applicable to physical activity.

**PE 192 - Topics Credits: .5-1.5**

**PE 200 - Professional Preparation: Fitness (COM) Credits: 1**  
 Knowledge and skills necessary to enable students to lead, analyze, and prescribe improvements for skills and activities which are part of lifetime fitness development.

**PE 201 - Professional Preparation: Gymnastics (COM) Credits: 1**  
 Knowledge and skills necessary to enable students to lead, analyze, and prescribe improvements for skills and activities which are part of gymnastic and tumbling activities.

**PE 202 - Professional Preparation: Individual and Dual Activities (COM) Credits: (1-2)**  
 Knowledge and skill necessary to enable students to lead, analyze and prescribe movement skills and activities involved in participating in individual and dual sport and game activities. Focus will be on activities appropriate for school settings, leading to personal skill development.

**PE 203 - Professional Preparation: Team Activities (COM) Credits: 1**  
 Knowledge and skills necessary to enable students to lead, analyze, and prescribe improvements for skills and activities associated with participating in team sports and game activities. Focus will be placed on activities appropriate for school settings, leading to person skill development.

**PE 204 - Professional Preparation: Rhythm and Dance Credits: 1**  
 Knowledge and skills necessary to enable students to lead, analyze, and prescribe improvements for skills and activities associated with participating in rhythm and lifetime dance activities. Focus will be placed on activities appropriate for school settings which contribute to personal development.

**PE 252-252L - Fundamentals of Motor Learning and Development and Lab (COM) Credits: 2**  
 Course content deals with characteristic motor development patterns in children with concentration on fundamental locomotor, non-locomotor, and manipulative skills and perceptual-motor development and practical applications of research and knowledge to physical education classroom teaching. Accompanies PE 252. Corequisites: PE 252.

**PE 300 - Applied Sport and Exercise Science Credits: 3**  
 This course is an introduction to exercise and sport physiology, designed to allow health professionals to learn and understand the basic scientific foundations of exercise and sport. Special emphasis will be in understanding the basics of exercise physiology consistent with NASPE guidelines.

**PE 320-320L - Lifeguard Training and Lab (COM) Credits: 1-2**  
The course focuses on skills and knowledge to properly assume responsibilities of lifeguards at swimming pools and non-surf beaches. Corequisites: PE 322 Lifeguard Instructor PE 320.

**PE 321-321L - Water Safety Instructor and Lab(COM) Credits: (1-2)**  
Method of instruction and evaluation of water safety techniques. Successful students may earn American Red Cross water safety instructor certification. Corequisites: PE 321L-PE 321

**PE 322 - Lifeguard Instructor (COM) Credits: 1**  
Certification as a lifeguard instructor will qualify an individual to teach basic water safety, emergency water safety and the lifeguard training course. Prerequisites: PE 320, consent of instructor.

**PE 335 - Assisting Teaching Credits: 1**  
Application of movement analysis, prescription knowledge and skills to an activity setting in a basic physical activity course. Prerequisites: Consent, admission to PETE program.

**PE 341 - Curriculum Development and Evaluation (COM) Credits: 2**  
Philosophy, theory, and application of current curriculum foundations in K-12 physical education, including curriculum theory, organization, design, and assessment. Prerequisites: PE 180.

**PE 350 - Exercise Physiology (COM) Credits: (2-3)**  
Study of physiological responses and adaptations to exercise related to human performance limitations, training effects, and health-related benefits. Prerequisites: BIOL 221, BIOL 325.

**PE 352 - Adapted Physical Education (COM) Credits: 2**  
Students are exposed to those impairments addressed in IDEA as they relate to physical education. Assessments, IEP development, and other elements necessary to successful inclusion are addressed. In addition, physical activities for special populations outside the school setting are also addressed.

**PE 354-354L Prevention & Care of Athletic Injuries & Lab Credits 2**  
Course teaches general and emergency treatment of athletic injuries, competitive or noncompetitive. Emphasis is placed on practical preventive and rehabilitative exercises and taping/bandaging/wrapping. Accompanies PE 354. Corequisites: PE 354.

**PE 360-360L K-8 Physical Education Methods & Lab Credits 2, 0**  
Needs, characteristics, capacities of elementary-aged children (grades K-8); curriculum planning; methods and materials essential to program progression for developmentally appropriate activity in basic skills, games, rhythms, dance, and fitness activities; integrating movement activity on a school-wide basis as part of program efforts to enhance overall student wellness and academic readiness; Lab that accompanies PE 360. Corequisites: PE 360L-360

**PE 367 - Health and Human Performance Credits: 3**  
This course is designed to apply the concepts of exercise physiology for health, fitness and athletic performance. The course will give special emphasis to principles specific to resistance training and program design using a variety of methods for various populations. Prerequisites: PE 350.

**PE 395 - Practicum (COM) Credits: 3**

**PE 400-400L - Exercise Test and Prescription and Lab (COM) Credits: 3**  
This course is designed to provide the student with the knowledge, skills, and abilities to assess different areas of physical fitness and prescribe individual exercise programs based on these objective measures. This course will provide hands-on experience in the laboratory to supplement the theoretical classroom discussion in PE 400 and will prepare the student to take entry-level certification such as the American College of Sports Medicine Health and Fitness Instructor Certification. Prerequisites: PE 350 and consent Corequisites: PE 400-400L.

**PE 440 Organization & Admin of HPER/Athletics (COM) Credits: 2**  
Administrative policies and procedures of physical education and athletics, including intramural and interscholastic activity and athletics. Consideration is given to programming, leadership, budget, facilities, public relations, and related matters.

**PE 450-550 - Clinical Exercise Physiology Credits: 3**  
This course is designed to provide the clinical exercise physiology student with assessment and prescription techniques appropriate to special populations. Prerequisites: PE 350

**PE 451-451L - Tests and Measurements and Lab (COM) Credits: 2**  
This course will include use of various tests and instruments used for measuring progress in physical education and how statistical concepts apply to testing in physical education. Development of the knowledge and ability to utilize both formative and summative assessments for psychomotor, cognitive, and affective domains. Additionally, techniques to evaluate one's own teaching performance and make adjustments to enhance subsequent teaching and program effectiveness will be discussed.. Accompanies PE 451. Prerequisites: MATH 102 or 115 or 120, or 121 or 123 or 125 or 281. Corequisites: PE 451.

**PE 453 - Sport Psychology (COM) Credits: (2-3)**  
This course examines the effects of psychological factors, such as personality, motivation, group dynamics, psychomotor activity, and other psychological aspects of sports on participation and performance, as well as examining the effects of participation on the psychological make-up of the individual. Notes: (May be taught on demand.)

**PE 454-454L - Biomechanics and Lab Credits: 3**  
This course emphasizes the mechanical principles of human movement (including muscular and skeletal principles) during physical education, wellness, and sport; This laboratory course is designed to facilitate hands-on application of the major biomechanical principles discussed in PE 454. Students will gain experience with various instrumentation and methodology techniques used in biomechanics laboratories and other career settings. Prerequisites: PE 250/250L and 353, or PE 345 and 346, or BIOL 221. Corequisites: PE 454L-454

**PE 454L - Biomechanics Lab Credits: 0**  
This laboratory course is designed to facilitate hands - on application of the major biomechanical principles discussed in PE 454. Students will gain experience with various instrumentation and methodology techniques used in biomechanics laboratories and other career settings. Corequisites: PE 454

**PE 455-555 - ECG and Clinical Stress Testing Credits: 3**  
This course is designed to fill the needs of students who desire the ability to interpret the normal and abnormal, resting and exercise ECG, as well as provide opportunities to learn and practice the basic components of maximal stress testing during a variety of exercise conditions. Since clinical stress testing and ECG interpretation is a vital component of the laboratory skills needed by today's exercise physiologist, emphasis in this course will be focused on understanding and interpreting ECG tracings and related pathophysiology, preparation of the exercise 12-lead ECG, and interpretation of maximal stress test results regarding exercise tolerance for various clinical populations and comparing them to normal individuals. In addition, an overview of other diagnostic procedures that involve the use of exercise will be given. Prerequisites: consent

**PE 467-467L - Coaching Swimming and Lab(COM) Credits: 2**  
Theory and practice of individual fundamentals and team strategies. Organization and management procedures specific to swimming. (May be taught on demand.)Accompanies PE 467. Corequisites: PE 467.

**PE 469-469L Coaching Baseball/Softball & Lab Officiating Credits: 2**  
Course studies the theory and practice of individual skill fundamentals, team strategies, organization, and management principles. The students conduct an intensive analysis of game



strategies and will execute playing skills. This laboratory experience accompanies PE 469 and focuses on the knowledge, skills, and techniques (including positioning, responsibilities, and rules) necessary to accurately, fairly, and effectively officiate baseball/softball competition. Corequisites: PE 469.

**PE 470-470L - Coaching Basketball and Lab (COM) Credits: 2**  
Fundamental techniques and strategies with emphasis on offensive and defensive skills, developing and using player personnel for basketball. Focuses on the knowledge, skills, and techniques (including positioning, responsibilities, and rules) necessary to accurately, fairly, and effectively officiate basketball competition. Corequisites: PE 470.

**PE 471-471L - Coaching Football and Lab: Officiating Credits: 2**  
Fundamental techniques and strategies with emphasis on offensive and defensive skills, developing and using player personnel for football. This laboratory experience accompanies PE 471 and focuses on the knowledge, skills, and techniques (including positioning, responsibilities, and rules) necessary to accurately, fairly, and effectively officiate football competition. Corequisites: PE 471.

**PE 472-472L - Coaching Golf and Lab (COM) Credits: 2**  
The teaching of fundamental skills and rules in competitive golf. Accompanies PE 472. Corequisites: PE 472.

**PE 473-473L - Coaching Track and Field/Cross Country and Officiating Country (COM) Credits: 2**  
Study of the techniques of teaching fundamentals of track and field/cross country skills, scientific training methods, rules, and event techniques. This laboratory experience accompanies PE 473 and focuses on the knowledge, skills, and techniques (including positioning, responsibilities, and rules) necessary to accurately, fairly, and effectively officiate track and field and cross country competitions. Corequisites: PE 473.

**PE 474-474L - Coaching Wrestling and Officiating (COM) Credits: 2**  
The teaching of fundamental skills in competitive wrestling. Skills, fundamentals, and basic moves will be discussed and demonstrated with class participation. Strategy for individual wrestler on the mat and for team situations will be included. This laboratory experience accompanies PE 474 and focuses on the knowledge, skills, and techniques (including positioning, responsibilities, and rules) necessary to accurately, fairly, and effectively officiate wrestling competition. Corequisites: PE 474.

**PE 475-475L - Coaching Volleyball and Officiating (COM) Credits: 2**  
Fundamental techniques and strategy with emphasis on offensive and defensive skills, developing and using player personnel for volleyball. This laboratory experience accompanies PE 475 and focuses on the knowledge, skills, and techniques (including positioning, responsibilities, and rules) necessary to accurately, fairly, and effectively officiate volleyball competition.

**PE 476-476L - Coaching Gymnastics and Officiating (COM) Credits: 2**  
The teaching of fundamental skills in competitive gymnastics. Teaching and spotting of advanced skills needed for competition. Review of high school, national, and international rules. This laboratory experience accompanies PE 476 and focuses on the knowledge, skills, and techniques (including positioning, responsibilities, and rules) necessary to accurately, fairly, and effectively officiate gymnastics competition. Corequisites: PE 476.

**PE 480-480L - 7-12 Methods of Teaching PE Credits: 3, 0**  
In this course, students develop an understanding of the tools of inquiry of 7-12 education, the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to 7-12 physical education; the ability to assess student learning in 7-12 physical education; and to

apply these knowledge, skills, and attitudes to real life situations and experiences; Lab that accompanies PE 480. Prerequisites: Consent. Corequisites: PE 480L-480

**PE 485/585 - Travel Studies Credits: 1-5**  
This travel course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators of SDSU or other institutions. Students will participate in hands-on activities and design educational activities for presentations at selected locations. Includes pre-travel orientation, post-travel exit interview, and a written report.

**PE 490 - Seminar (AW) Credits: (1-3)**  
Prerequisites: Consent.

**PE 491 - Independent Study (COM) Credits: (1-4)**  
**PE 492 - Topics (COM) Credits: (1-3)**  
**PE 493-593 - Workshop (COM) Credits: 1-3**  
**PE 496 - Field Experience (COM) Credits: (1-12)**  
**PE 730 - Physical Education Teacher Education Credits: 3**  
**PE 732 - Analysis and Strategies of Teaching and Supervising Physical Education and Sports Credits: 3**  
**PE 745 - Applied Biomechanics Credits: 3**  
**PE 750 - Advanced Exercise Physiology Credits: 3**  
**PE 751-751L - Lab Techniques in Exercise Physiology & Lab Credits: 2**  
**PE 755 - Applied Exercise Physiology Credits: 3**  
**PE 770 - Sport/Recreation Administration and Marketing Credits: 3**  
**PE 771 - Curriculum Trends in HPER and Athletics Credits: 3**  
**PE 772 - Financial Aspects of Sports Management Credits: 3**

## PHA (Pharmacy)

**PHA 109 - First Year Seminar - Pharmacy\*\* Credits: 2**  
First-year experience course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\*Course meets IGR #1

**PHA 201 - Medications and Wellness Credits: 2**  
Principles of drug action, examination of medical and legal aspects of use and misuse of prescription, non-prescription and illicit drugs.

**PHA 320 - Introduction to Pathophysiology Credits: 3**  
Pathophysiology of significant and more common diseases will be discussed at a systems level with limited discussion at the cellular level. Appropriate patient information will also be integrated for each disease. Prerequisites: P1 year Pharmacy standing or Nursing major, and BIOL 325.

**PHA 321 - Pharmacology Credits: 3**  
Basics of pharmacology and therapeutics for nurses and others. Prerequisites: CHEM 108 or CHEM 114, BIOL 325, NURS 323.

**PHA 323 - Pharmaceutical Biochemistry Credits: 4**  
Chemical structure, function, biosynthesis and catabolism of biomolecules in order to understand the biochemical basis of disease and the metabolism and mechanism of action of medicinal agents. Prerequisites: P1 year standing.

**PHA 324 - Biomedical Science I Credits: 4**  
Properties, activities, mechanism of action and therapeutic use of biologics (e.g., monoclonal antibodies, vaccines, therapeutic proteins) and technologies involved in their production. Prerequisites: P1 year standing, PHA 323.

**PHA 331 - Pharmaceutics I Credits: 3**

Theory, preparation and application of pharmaceutical dosage forms and drug delivery systems. Prerequisites: P1 year standing.

**PHA 332-332L - Pharmaceutics II and Lab Credits: 4**

Theory, preparation and application of pharmaceutical dosage forms and drug delivery systems. Prerequisites: PHA 331 Corequisites: PHA 332L-332.

**PHA 340-340L - Medicinal Chemistry I and Lab Credits: 4**

Principles of medicinal chemistry leading to the clear understanding of pharmacotherapy Prerequisites: P1 year standing. Corequisites: PHA 340L-PHA 340.

**PHA 341-341L - Medicinal Chemistry II and Lab Credits: 4**

Principles of medicinal chemistry leading to the clear understanding of pharmacotherapy. Prerequisites: PHA 340 Corequisites: PHA 341L-PHA 341.

**PHA 367-367L - Pharmacy Practice I and Lab Credits: 2**

The fundamental concepts of pharmacy practice are introduced. Pharmaceutical calculations, principles of pharmaceutical care and professional communication skills are introduced. Prerequisites: P1 standing. Corequisites: PHA 367L-PHA 367.

**PHA 368-368L - Pharmacy Practice II and Lab Credits: 3**

This is a continuation of Pharmacy Practice I. The fundamental concepts of pharmacy practice are further taught and developed. Pharmaceutical calculations, principles of pharmaceutical care and professional communication skills are expanded and reinforced. Drug information topics of effective retrieval, evaluation and dissemination of medication information are introduced. Prerequisites: PHA 367 Corequisites: PHA 368L-368.

**PHA 410 - Introductory Practice Experience I Credits: 3**

Students apply the academic and theoretical knowledge they have acquired in didactic courses to practical situations within a pharmacy setting. Drug distribution activities of the pharmacist will be an emphasis of the course. Notes: Pass/Fail Grading

**PHA 415 - Biopharmaceutics and Pharmacokinetics Credits: 4**

The study of physicochemical properties of drug formulations in relation to the bioavailability of drugs. Principles and application of various approaches to estimate pharmacokinetic parameters for designing drug dosage regimens. Prerequisites: P2 year standing.

**PHA 425 - Biomedical Science II Credits: 3**

Continuation of Biomedical Science I involving properties, activities, mechanism of action and therapeutic use of biologics (e.g. antibodies, vaccines, therapeutic proteins) and technologies involved in their production. Pathophysiology of microbial infections. Prerequisites: P2 year Standing, PHA 324.

**PHA 430 - Pharmacy Practice Law Credits: 3**

State and federal laws and regulations. Prerequisites: P2 year standing.

**PHA 442 - Pharmacology I Credits: 5**

Principles of pharmacology leading to the clear understanding of pharmacotherapy. Prerequisites: P2 year standing.

**PHA 443 - Pharmacology II Credits: 4**

Principles of pharmacology leading to the clear understanding of pharmacotherapy. Prerequisites: PHA 442.

**PHA 444 - Toxicology Credits: 2**

Basic principles of the understanding of poisoning and its prevention and treatment. Prerequisites: P2 year Standing, PHA 442. Corequisites: PHA 443.

**PHA 445 - Pharmacotherapeutics I Credits: 2**

Discussion of pharmacotherapeutic principles for the development of patient specific drug regimens in patients with acute and chronic disease states and conditions. Prerequisites: P2 year standing - Completion of all PHA 300 level courses and PHA 109

**PHA 446 - Pharmacotherapeutics II Credits: 3**

This course is the continuation of PHA 445, Pharmacotherapeutics I, with an emphasis on the discussion of pharmacotherapeutic principles for the development of patient specific drug regimens in patients with acute and chronic disease states and conditions. Prerequisites: PHA 445 Notes: (Begins Spring 09.)

**PHA 467-467L - Pharmacy Practice III and Lab (AW) Credits: 3**

This is a continuation of Pharmacy Practice II. The fundamental concepts of pharmacy practice are further taught and developed. Practice skills developed in Pharmacy Practice I and II are expanded and reinforced. Drug information topics of effective retrieval, evaluation and dissemination of medication information are expanded and concepts of formulary management, monitoring and prevention of adverse drug effects are introduced. Topics including critical assessment of the medical literature, and elements of clinical research design are introduced. The principles of provision of pharmacy services in institutional and community settings are taught. Prerequisites: P2 standing (PHA 324, 332, 341, 368 and STAT 281) Corequisites: PHA 467L-PHA 467.

**PHA 468-468L - Pharmacy Practice IV and Lab (AW) Credits: 3**

This is a continuation of Pharmacy Practice III. The concepts of pharmacy practice are further taught and developed. Practice skills developed in Pharmacy Practice I-III are expanded and reinforced. Topics in drug information evaluation and retrieval, as well as clinical research design and evaluation are further developed and reinforced. The principles of provision of pharmacy services in institutional and community settings are continued from Pharmacy Practice III. Prerequisites: P2 standing. Corequisites: PHA 468L-PHA 468. (Begins Spring 09.)

**PHA 487 - Research Problems Credits: (1-3)**

Students may elect research problems in one of the pharmaceutical sciences, biopharmaceutics, pharmaceuticals, pharmaceutical chemistry, or pharmacology; or in an appropriate area of pharmacy practice. Prerequisites: Consent.

**PHA 491 - Independent Study Credits: (1-3)****PHA 492 - Topics Credits: (1-3)****PHA 610 - Introductory Practice Experience II Credits: 3****PHA 645 - Pharmacotherapeutics Across the Lifespan: Application to Advanced Practice Credits: 2-4****PHA 647 - Pharmacological Issues in Mental Health Counseling Credits:3****PHA 650 - Intro to Advanced Concepts in Pharmaceutical Sci Credits: 3****PHA 700 - Directed Studies Practice Experience Credits: 5****PHA 701 - Home Health/Hospice Practice Experience Credits: 5****PHA 702 - Indian Health Services Practice Experience Credits: 5****PHA 703 - Pharmacy Administration Practice Experience Credits: 5****PHA 704 - Nutrition Support Practice Experience Credits: 5****PHA 705 - Clinical Research Practice Experience Credits: 5****PHA 706 - Critical Care Practice Experience Credits: 5****PHA 707 - Infectious Disease Practice Experience Credits: 5****PHA 708 - Surgery Practice Experience Credits: 5****PHA 709 - Nephrology Practice Experience Credits: 5****PHA 710 - Pharmacokinetics Practice Experience Credits: 5****PHA 711 - Oncology Practice Experience Credits: 5****PHA 712 - Nuclear Pharmacy Practice Experience Credits: 5****PHA 713 - Managed Care Practice Experience Credits: 5****PHA 714 - Community Pharmacy Practice Experience Credits: 5****PHA 715 - First Steps in Pharmacy Care Practice Experience Credits: 4****PHA 716 - Hospital/Institutional Pharmacy Practice Experience Credits: 5**

**PHA 717 - Community Health and Patient Monitoring Practice Experience Credits: 5**  
**PHA 720 - Advanced Medicinal Chemistry Credits: 3**  
**PHA 723 - Ethics in Healthcare Practice Credits: 2**  
**PHA 725 - Topics in Medicinal Chemistry Credits: 3**  
**PHA 727 - Professional Resource Management Credits: 3**  
**PHA 729 - Advanced Pharmacy Marketing and Management Credits: 2**  
**PHA 741-741L - Public Health and Wellness and Lab Credits: 2**  
**PHA 742-742L - Patient Assessment & Self Care & Lab Credits: 2**  
**PHA 744 - End of Life Care Credits: 1**  
**PHA 746 - Professional Pharmacy Leadership Skills Credits: 1**  
**PHA 747 - Advanced Clinical Nutrition Credits: 1**  
**PHA 748 - Topics in Neonatal & Pediatric Pharmacotherapy Credits: 1**  
**PHA 749 - Care of the Geriatric Patient Credits: 1**  
**PHA 750 - Critical Care Therapeutics Credits: 2**  
**PHA 752 - Drugs of Abuse and Addiction Credits: 2**  
**PHA 753 - Women and Children's Health Credits: 2**  
**PHA 754 - Complementary and Alternative Medicine Credits: 1**  
**PHA 755 - Forensic Pharmacology Credits: 2**  
**PHA 756 - Pharmacotherapeutics III Credits: 4**  
**PHA 757 - Pharmacotherapeutics IV Credits: 4**  
**PHA 761 - Pharmacotherapeutics V Credits: 5**  
**PHA 762 - Pharmacotherapeutics VI Credits: 5**  
**PHA 765 - Topics in Pharmaceutics Credits: 3**  
**PHA 767-767L - Pharmacy Practice V and Lab Credits: 3**  
**PHA 768-768L - Pharmacy Practice VI and Lab Credits: 3**  
**PHA 770 - Pediatrics Practice Experience Credits: 5**  
**PHA 771 - Geriatrics Practice Experience Credits: 5**  
**PHA 772 - Internal Medicine I Practice Experience Credits: 5**  
**PHA 773 - Internal Medicine II Practice Experience Credits: 5**  
**PHA 774 - Ambulatory Care Practice Experience Credits: 5**  
**PHA 775 - Psychiatry Practice Experience Credits: 5**  
**PHA 780 - International Pharmacy Practice Experience Credits: 5**  
**PHA 790 - Seminar Credits: 1**  
**PHA 791 - Independent Study Credits: (1-3)**  
**PHA 792 - Topics Credits: (1-3)**  
**PHA 798 - Thesis Credits: (1-7)**  
**PHA 820 - Advanced Concepts in Medicinal Chemistry Credits: 3**  
**PHA 825 - Topics in Advanced Medicinal Chemistry Credits: 3**  
**PHA 840 - Advanced Concepts in Pharmacology Credits: 3**  
**PHA 845 - Topics in Advanced Pharmacology Credits: 3**  
**PHA 846 - Techniques in Pharmaceutical Research Credits: 3**  
**PHA 847 - Grantsmanship & Academic Development Credits: 3**  
**PHA 859 - Advanced Concepts in Pharmaceutics Credits: 3**  
**PHA 865 - Topics in Advanced Pharmaceutics Credits: 3**  
**PHA 890 - Seminar Credits: 1**  
**PHA 898 - Dissertation Credits: 1-10**

## PHIL (Philosophy)

**PHIL 100 - Introduction to Philosophy \* (COM) Credits: 3**  
 Introduces competing philosophical views of reality, perception, learning, and values, emphasizing their relevance to the contemporary world. Notes: \* Course meets SGR #4

**PHIL 200 - Introduction to Logic \* (COM) Credits: 3**  
 Introduces the formal study of argumentation, including forms of logic, inductive and deductive reasoning, proofs, refutations, and fallacies. Notes: \* Course meets SGR #4

**PHIL 215 - Intro to Social-Political Philosophy \* Credits: 3**  
 The search for order for society; major political and social theories from Socrates to the present and critical analysis of these theories. The relation of theories of human nature, metaphysics, epistemology, and ethics to the order in society. Notes: \* Course meets SGR #4

**PHIL 220 - Introduction to Ethics \* (COM) Credits: 3**  
 Examines the major currents and components of ethical theory from classical times to the present, investigating problems arising from

specific theories, as well as critically analyzing the validity of these theories for current ethical concerns. Notes: \* Course meets SGR #4

**PHIL 313 - Great Philosophers Credits: 2-3**  
 Explores the thinking of a selected philosopher. Seeks to understand the ideas behind the philosopher's thinking and their implication for the modern world. Notes: May be repeated for a total of 9 hours.

**PHIL 320 - Professional Ethics Credits: 3**  
 The study of major normative ethical theories and their application to concrete ethical situations likely to arise in the professional workplace. Emphasis placed on potential conflicts between the goals of the professions and the imperatives of the ethical life, and possibilities for resolution of such conflicts.

**PHIL 331 - Philosophy of Science Credits: 3**  
 An investigation into the nature of science from the perspectives of the scientific disciplines themselves and from the study of the history of scientific development. Inquiry into the structure of scientific method, the scope and limitations of scientific knowledge, and the implications of competing paradigms of scientific world view.

**PHIL 383 - Bioethics \*\* (G) Credits: 4**  
 Ethical, social and policy dilemmas in medicine and biology. Cross-Listed: BIOL 383 Notes: \*\* Course meets IGR Goal #2.

**PHIL 423 - Early Political Philosophy (AW) Credits: 3**  
 Focus on classical Greek and Roman political thought. Basis on which these theories rest and the explanatory power of the various thought structures. Includes Plato, Aristotle. Cross-Listed: POLS 461

**PHIL 454-554 - Environmental Ethics \*\* (COM) Credits: 3**  
 Presents humanity's relationship to the environment, its responsibility to nature, and its obligations to future generations, attending to both theory and applications, including the debate over causes of environmental crisis, the value of endangered species, the wilderness, and natural objects; the seriousness of the growing global population and obligations to feed the poor, the feasibility of sustaining an ecological responsible society. Cross-Listed: REL 454-554 Notes: \*\* Course meets IGR Goal #2

**PHIL 462 - Modern Political Philosophy (AW) Credits: 3**  
 The course studies political theory since the Renaissance, including Locke, Rousseau, and others. Cross-Listed: POLS 462.

**PHIL 470-570 - Philosophy of Religion \*\* (COM) Credits: 3**  
 Presents critical inquiry concerning the concept of faith and its relation to reason and belief, the nature of religious experience, concepts of the sacred and the divine, and problems of cross-cultural understanding. Notes: \*\* Course meets IGR Goal #2

**PHIL 480 - Ethics of Globalization\*\* Credits: 3**  
 A writing intensive, critical, and rigorous examination of the ethical bases and moral philosophical foundations which underpin, support, and justify globalization theory and practice. Cross-Listed: GLST 480. Notes: \*\* Course meets IGR Goal #2

**PHIL 491-591 - Independent Study (COM) Credits: 1-4**  
**PHIL 492-592 - Topics (COM) Credits: 1-5**  
**PHIL 494 - Internship Credits: 1-12**

## PHTH (Physical Therapy)

**PHTH 142 - Introduction to Physical Therapy and Occupational Therapy Credits: 1**  
 Introduces students to the professions of physical and occupational therapy. Notes: Pass/Fail grading

**PHTH 491 - Independent Study Credits: (1-3)**  
**PHTH 494 - Internship Credits: (1-12)**  
**PHTH 496 - Field Experience (COM) Credits: (1-12)**

## PHYS (Physics)

### **PHYS 101-101L - Survey of Physics \* (COM) and Lab Credits: 4**

This is a one-semester conceptual course, designed to cover a broad range of physics topics. Critical thinking skills are developed as students apply topics to various problem situations. Students are encouraged to relate concepts learned to personal areas of interest. Topics include mechanics, states of matter, wave motion, sound and electricity magnetism. Credit will not be allowed in both PHYS 101 and PHYS 111-113 or PHYS 211-213. Corequisites: PHYS 101L-101. Notes: \* Course meets SGR #6.

### **PHYS 109 - First Year Seminar\*\* Credits: 2**

First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\*Course meets IGR #1

### **PHYS 111-111L - Intro to Physics I and Lab\* (COM) Credits: 4**

This is the first course in a two semester algebra-level sequence, covering fundamental concepts of physics. The sequence is appropriate for pre-professional majors requiring two semesters of physics. Topics include classical mechanics, thermodynamics, and waves. Prerequisites: Take one of the following: MATH 102, 115, 120, 121, 123, 125, 281, or consent. Corequisites: PHYS 111L-PHYS 111. Notes: \* Course meets SGR #6.

### **PHYS 113-113L - Intro to Physics II and Lab\* (COM) Credits: 4**

This course is the second course in a two semester algebra-level sequence, covering fundamental concepts of physics. Topics include electricity and magnetism, sound, light, optics, and some modern physics concepts. Prerequisites: PHYS 111. Corequisites: PHYS 113L-PHYS 113. Notes: \* Course meets SGR #6.

### **PHYS 185-185L - Intro to Astronomy I & Lab\* (COM) Credits: 3**

This is a descriptive course that introduces students to solar system astronomy. Emphasis is placed on the development of astronomy, optical instruments and techniques, and solar system objects. Corequisites: PHYS 185L-PHYS 185. Notes: \* Course meets SGR #6.

### **PHYS 187-187L - Intro to Astronomy II & Lab\* (COM) Credits: 3**

This course is a descriptive course that introduces stellar astronomy. Emphasis will be placed on stars, nebulae, galaxies, and cosmology. Corequisites: PHYS 187L-PHYS 187. Notes: \* Course meets SGR #6.

### **PHYS 211-211L - University Physics I & Lab\* (COM) Credits: 4**

This is the first course in a two semester calculus-level sequence, covering fundamental concepts of physics. This is the preferred sequence for students majoring in physical science or engineering. Topics include classical mechanics and thermodynamics. Prerequisites: MATH 123 or MATH 125. Corequisites: PHYS 211L-PHYS 211. Notes: \* Course meets SGR #6.

### **PHYS 213-213L University Physics II & Lab \* (COM) Credits: 4**

This course is the second course in a two semester calculus-level sequence, covering fundamental concepts of physics. This is the preferred sequence for students majoring in physical science or engineering. Topics include electricity and magnetism, sound, light, and optics. Prerequisites: PHYS 211. Corequisites: PHYS 213L-PHYS 213. Notes: \* Course meets SGR #6.

### **PHYS 291 - Independent Study (COM) Credits: (1-3)**

### **PHYS 292 - Topics (COM) Credits: (1-3)**

### **PHYS 316-316L - Measurement Theory and Experiment Design and Lab (AW) Credits: 2**

This course looks at accuracy, precision and uncertainty and how these quantities propagate as experimental laboratory measurements are converted to experimental results. Laboratory portion of PHYS 316. Prerequisites: PHYS 213 or PHYS 113. Corequisites: PHYS 316L-PHYS 316.

### **PHYS 318 - Advanced Laboratory I Credits: 1**

Students perform selected experiments in classical and modern physics which illustrate principles and the development of physics, and emphasize experiment design and data analysis. Prerequisites: PHYS 316 and PHYS 331 or consent.

### **PHYS 331 - Introduction to Modern Physics (COM) Credits: 3**

This course concentrates on observations and theories of the 20th Century that carried the physicists' world-view beyond the classical. Prerequisites: PHYS 213 or PHYS 113 or consent.

### **PHYS 337 - Foundations of Health Physics Credits: 3**

Health Physics studies the risk to health from radiation and the measures to assess and reduce that risk. This course is an introduction to several aspects of health physics including radiation quantities, limits and risk assessment, external and internal dosimetry, biological effects of radiation, interactions of radiation with matter, radioactive decay, radiation detection, and various applications of radiation. Prerequisites: MATH 123 or MATH 121-121L And PHYS 113-113L or PHYS 213-213L

### **PHYS 341 - Thermodynamics (COM) Credits: 2**

This course is an intermediate level thermodynamics course dealing with systems from a macroscopic perspective. Topics include the first and second laws of thermodynamics, phase diagrams, and equilibria. Prerequisites: PHYS 213 and MATH 225.

### **PHYS 343 - Statistical Physics (COM) Credits: 2**

This course provides a systematic introduction to the use of statistical principles applied to the study of thermodynamic systems. Prerequisites: PHYS 331, PHYS 341, and MATH 321 or consent.

### **PHYS 361 - Optics (COM) Credits: 3**

This is an intermediate level study of geometrical and physical optics. Topics include analysis of refraction phenomena, thick lenses, wave nature of light, interference, diffraction, and polarization. Prerequisites: PHYS 213 or PHYS 113 and MATH 225.

### **PHYS 418 - Advanced Lab II Credits: 1**

Students perform selected experiments in modern physics: gamma ray spectroscopy, half-life, beta decay, positron annihilation, neutron capture, bubble chamber events, nuclear statistics, etc. Prerequisites: PHYS 316 or consent.

### **PHYS 421-521 - Electromagnetism (COM) Credits: 4**

This is a course in the principles of electricity and magnetism, with applications to dielectric and magnetic materials. Topics include the development of Maxwell's equations, and applications. Prerequisites: PHYS 213 and MATH 321.

### **PHYS 433-533 - Nuclear and Elementary Particle Physics (COM) Credits: 3**

This course covers fundamental topics in nuclear physics and elementary particles. Topics include radioactivity, nuclear spectra and structure, nuclear models, elementary particle theories and high energy physics. Prerequisites: PHYS 331 or 471.

### **PHYS 439-539 - Solid State Physics (COM) Credits: 4**

This course looks at solid materials from a microscopic level. Topics include basic crystal structure; mechanical and thermal properties; and electronic processes with reference to electrical properties of metals, semiconductors, and insulators. Prerequisites: PHYS 331 and MATH 321.

**PHYS 451-551 - Classical Mechanics (COM) Credits: 4**

This is a systematic introduction to classical mechanics emphasizing motion in three dimensions. Topics include central forces, harmonic oscillations, non-inertial reference frames, rigid body motion, and Lagrangian and Hamiltonian Mechanics. Prerequisites: MATH 321.

**PHYS 464 - Senior Design I Credits: 1**

This is the first course of the departmental capstone senior design sequence. The student will write the specifications for a design project and complete the initial design phase for this project addressing economic, environmental, social and success criteria. Prerequisites: Senior standing in the Physics Department.

**PHYS 465-465L - Senior Design II and Lab Credits: 2**

This course completes the departmental capstone senior design project. The student will construct, assemble, and test the project that they designed in PHYS 464. This is the laboratory portion of PHYS 465 where the design developed in PHYS 464 is built, tested, and made to work. Prerequisites: PHYS 464. Corequisites: PHYS 465L-PHYS 465.

**PHYS 469-569 - Photonics Credits: 3**

Photonics refers to the practical application of the electromagnetic spectrum lying in the visible and near visible range, in particular, the devices that inherently utilize that portion of the electromagnetic spectrum. This course will present a fundamental overview of modern photonics. The basic concepts (both mathematical and physical) behind state-of-the-art devices such as solid state lasers, semiconductor lasers, photo-sensors, fiber optics, electro-optic switching, other similar elements will be considered. Background overview of classical optical elements such as lenses, gratings, and polarizers as well as applications and inherent engineering issues are an essential part of the course.

**PHYS 471-571 - Quantum Mechanics (COM) Credits: 4**

This is a systematic introduction to quantum mechanics, emphasizing the Schrodinger equation. Topics include simple soluble problems, the hydrogen atom, approximation methods and other aspects of quantum theory. Prerequisites: PHYS 331, MATH 321 or consent.

**PHYS 481-581 - Mathematical Physics (COM) Credits: 4**

This course looks at mathematical methods used to formulate and solve problems in various fields of physics. Topics are chosen from: series solutions, special functions, computational methods, complex variables, multivariate methods, transform methods, and other areas of mathematical applications to physics. Prerequisites: MATH 321.

**PHYS 485 - Introduction to Astrophysics Credits: 3**

This course entails the study of stars, star clusters and galaxies. This will include the application of the principles of atomic structure and radiation laws to the interpretation of stellar and nebular spectra, energy generation by thermonuclear reactions and nucleosynthesis, theoretical and observational aspects of stellar evolution and the constituents and structure of stellar systems. Prerequisites: PHYS 185, PHYS 331, MATH 321.

**PHYS 490-590 - Seminar (COM) Credits: (1-3)****PHYS 491-591 - Independent Study (COM) Credits: (1-4)****PHYS 492-592 - Topics (COM) Credits: (1-4)****PHYS 494 - Internship (COM) Credits: (1-4)****PHYS 496 - Field Experience (COM) Credits: (1-4)****PHYS 497 - Cooperative Education (COM) Credits: (1-4)****PHYS 498 - Undergraduate Research/Scholarship Credits: 1-12****PHYS 683 - Mathematical Physics II Credits: 3****PHYS 691 - Independent Study Credits: (1-3)****PHYS 692 - Topics Credits: (1-3)****PHYS 721 - Electrodynamics I Credits: 3****PHYS 723 - Electrodynamics II Credits: 3****PHYS 739 - Condensed Matter Physics I Credits: 3****PHYS 743 - Statistical Mechanics Credits: 3****PHYS 749 - Condensed Matter Physics II Credits: 3****PHYS 751 - Theoretical Mechanics Credits: 3****PHYS 771 - Quantum Physics I Credits: 3****PHYS 773 - Quantum Physics II Credits: 3****PHYS 775 - Tensors and General Relativity Credits: 3****PHYS 779 - Group Theory in Quantum Mechanics Credits: 3****PHYS 781 - Nuclear and Particle Physics Credits: 3****PHYS 783 - Quantum Field Theory Credits: 3****PHYS 785 - Astrophysics and Cosmology Credits: 3****PHYS 787 - Research Credits: (1-9)****PHYS 788 - Research or Design Paper Credits: (1-2)****PHYS 791 - Independent Study Credits: (1-3)****PHYS 792 - Topics Credits: (1-3)****PHYS 798 - Thesis Credits: (1-7)****PLAN (Planning)****PLAN 471-571 - Principles of State, Regional and Community Planning Credits: 3**

Purpose, structure, and dynamics of the planning process. Identification of different types of planning. Inter-dependencies among persons who contribute to the planning process and are trained in separate academic disciplines. Basic techniques employed within different phases of the planning process.

**PLAN 472-572 - Techniques of State, Regional and Community Planning Credits: 3**

Brief review of basic approaches, procedures and methods employed within different phases of the planning process. Coordination required among persons trained in separate academic disciplines in order to carry out these basic techniques. Exercises in the practical application of selected techniques and review of their applications in ongoing to completed planning efforts. Prerequisites: PLAN 471-571.

**POLS (Political Science)****POLS 100 - American Government \* (COM) Credits: 3**

A study of the basic principles of the American system of government with emphasis on problems relating to governmental structure and policies. Notes: \* Course meets SGR #3

**POLS 102 - American Political Issues \* (COM) Credits: 3**

Provides an in-depth exploration of a particular problem or issue, such as environmental control, minorities or poverty. Students learn the basic skills needed to succeed as a political science major. Notes: \* Course meets SGR #3

**POLS 141 - Governments of the World (COM) Credits: 3**

An introduction to political systems of the world emphasizing political philosophy and comparative government. The course focuses on democratic systems other than the United States, authoritarian systems and third world systems.

**POLS 165 - Political Ideologies \* Credits: 3**

Ideas defending communism, fascism, and democracy, including variations such as democratic socialism, Christian democracy, capitalism, liberalism, New Left, neo-conservatism, liberation theology. Practice of ideology. Concepts of comparative analysis. Notes: \* Course meets SGR #3

**POLS 210 - State and Local Government \*\*\* (COM) Credits: 3**

An analysis of the legal status, powers and functions, intergovernmental relations and political problems of state and local governments. Notes: \* Course meets SGR #3 or \*\* IGR Goal #2

**POLS 253 - Current World Problems \*\*\* (G) Credits: 3**

An examination of several current world problems with a focus on creating world order. Course content varies to accommodate current issues. Notes: \* Course meets SGR #3 or \*\*IGR Goal #2

**POLS 280 - Political Inquiry Credits: 3**

An investigation into the basic concepts, principles, and techniques employed to study politics.

**POLS 299 - Introduction to Comparative Politics Credits: 3**  
Description and analysis of the principal types of modern political systems, including types of democracies and dictatorships found in Western systems, Eastern systems, and the Third World. Deals both with structures and major policy problems confronting these political systems and other topics of relevance.

**POLS 305 - Women and Politics Credits: 3**  
This course explores a variety of perspectives in feminist political thought. Particular emphasis is placed on barriers women face in gaining access to political power in public and private institutions, both in American society and in global contexts. Cross-Listed: WMST 305.

**POLS 316 - South Dakota Legislative Issues (COM) Credits: 1-3**  
An analysis of the issues confronting the state legislature, with attention to political, economic, and sociological dimensions, emphasizing the role of party leaders, interest groups, and communication media.

**POLS 320 - Public Administration (COM) Credits: 3**  
This course uses simulations and public management cases, as well as contemporary public administration literature, to introduce students to the theory and practice of public administration. Students work in teams to resolve issues and problems common to the public service environment.

**POLS 330 - Civil Rights and Liberties Credits: 3**  
Individual First Amendment guarantees, constitutional rights of the accused in the criminal process and equal protection of the law as interpreted through U.S. Supreme Court decisions. Cross-Listed: CJUS 330

**POLS 341 - Europe Democratic Government (COM) Credits: 3**  
Comparative study of selected governments of West Europe, especially Britain, France, Germany, and Italy; decision-making institutions; political culture; political parties.

**POLS 343 - Russian Politics Credits: 3**  
Study of government, politics, and some aspects of society in Russia and the region; emphasis on current politics.

**POLS 350 - International Relations (COM) Credits: 3**  
How nations/states behave and why they behave as they do in their relations with each other.

**POLS 352 - European Union Credits: 3**  
An interdisciplinary offering which examines integration theory and the structures and politics of the European Union. The theme of the course's content will vary from offering to offering in order to accommodate the availability of cooperating instructors from other disciplines.

**POLS 391 - Independent Study (COM) Credits: (1-3)**

**POLS 400 - The President and The Congress Credits: 3**  
In this study of the manner in which the President and the Congress share political power in the formation of public policy, the origins and functions of executive and legislative institutions will be explored, as well as the conflictual state of presidential-congressional relations. Prerequisites: POLS 100 .

**POLS 417 - American Indian Government and Politics Credits: 3**  
An in-depth investigation of Federal, State and tribal laws, and the historical development and status of treaties, legislation, court decisions, and tribal governments. Cross-Listed: AIS 417

**POLS 430 - Constitutional Law (COM) Credits: 3**  
A study of the interpretation of the federal Constitution through leading decisions of the supreme court.

**POLS 435 - Political Parties and Campaigns (COM) Credits: 3**  
United States political parties; functions, organization, techniques and significance of parties; varieties of state and local systems; and behavior of the electorate and interest groups.

**POLS 436 - The Mass Media and Politics Credits: 3**  
Perspectives on the relationship between the press and American politics, including the media as a political institution, press relations with Congress and the presidency, and media effects on public opinion. Both traditional media outlets (print and broadcast) and New Media sources (e.g., cable TV and the web) will be examined.

**POLS 447 - Latin American Politics Credits: 3**  
This course surveys the political history and current domestic politics of Latin America. The class is designed to provide a comparative analysis of the political institutions, social movements and patterns of change, political culture, civil-military relations, and development strategies for a wide subsection of Latin American countries.

**POLS 453 - American Foreign Policy (COM) Credits: 3**  
An analysis of the formulation and execution of American foreign policy. Emphasis will be placed on national security issues and American policies with regard to particular regions and countries.

**POLS 454 - International Law & Organization (COM) Credits: 3**  
This course examines the development and application of the rules and norms that govern the relations between countries. Special attention will be paid to international law on the use of force, the law of the sea, and jurisdiction. The course will also look at international tribunals beginning with Nuremberg and concluding with the International Criminal Court.

**POLS 461 - Early Political Philosophy (COM) (AW) Credits: 3**  
Focus on classical Greek and Roman political thought. Basis on which these theories rest and the explanatory power of the various thought structures. Includes Plato, Aristotle. Cross-Listed: PHIL 423.

**POLS 462 - Modern Political Philosophy (COM) (AW) Credits: 3**  
The course studies political theory since the Renaissance, including Locke, Rousseau, and others. Cross-Listed: PHIL 462

**POLS 482-582 - Travel Studies Credits: (1-5)**  
This travel study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and administrators of other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

**POLS 490 - Seminar (COM) Credits: (1-3)**  
**POLS 491-591 - Independent Study (COM) Credits: (1-3)**  
**POLS 492-592 - Topics (COM) Credits: (1-5)**  
**POLS 494-594 - Internship Credits: 1-12**

## **PR (Park Management)**

**PR 301 - Park Interpretation Credits: 3**  
Principles and methods employed to promote resource awareness and communicate information about natural, cultural, and managerial features of parks and recreation areas to park visitors and resource users. The planning, development and use of interpretive techniques and media such as personal services, public relations, publications, audio-visual programs, exhibits, and environmental education activities. Prerequisites: PRM 101, PRM 202

**PR 401-401L - Advanced Park Management and Lab Credits: 3**  
Current philosophies, advanced techniques, and synthesis of park management principles. Prerequisites: PRM 101, PRM 202, PRM 300 and PR 301 Corequisites: PR 401L-PR 401.

## **PRM (Park & Recreation Management)**

### **PRM 100 - Introduction to Park and Recreation Credits: 1**

Introduction to the discipline and exploration of professional careers, historical development of the profession, expectations and opportunities in park and recreation services.

### **PRM 101 - Parks and Society Credits: 3**

Introduction to park and recreation resource management including fundamentals governing public park and recreation agencies. Includes administrative organization, history, types and benefits of parks.

### **PRM 202-202L - Outdoor Recreation Resource Management and Lab Credits: 3**

Development and management of outdoor recreation areas and resources including planning, administration, and management practices as they relate to parks, forests, land and water resources, wildlands, and private areas. analysis of participation trends, opportunities, and resource supply. Prerequisites: PRM 101 Corequisites: PRM 202L-202

### **PRM 300-300L - Park and Recreation Facility Management and Lab Credits: 3**

Principles and practices of park and recreation operations and facility management including planning, fiscal and personnel management, regulations, liability, visitor safety and control, and the maintenance and protection of natural resources, equipment, and related indoor and outdoor facilities. Students will gain experience and demonstrate proficiency in written, oral and interpersonal communication. Prerequisites: PRM 101, PRM 202 or consent. Corequisites: PRM 300L-PRM 300.

### **PRM 302 - Commercial Recreation and Tourism Credits: 3**

Exploration of the commercial recreation and tourism aspects which have become the world's number one industry. Areas of examination include the history, trends, supply, demand, relationships to tourism, management, development and technical assistance in this rapidly expanding industry. Prerequisites: PRM 101, PRM 202 or by consent.

### **PRM 360 - Recreation and Outdoor Programming Credits: 3**

Development of the various methods, fundamentals, and materials using modern techniques needed for planning, developing, implementing, and evaluating recreation and outdoor programs for diverse populations in representative service areas.

### **PRM 491 - Independent Study Credits: 1-2**

### **PRM 492 - Topics Credits: 1-4**

### **PRM 494 - Internship Credits: 1-12**

Select either (a) or (b): (a) Field Work Experience. Summer work experience with department approved park or recreation system, agency, or institution. One credit per semester or equivalent time unit. (b) Professional Internship. A supervised on-the-job practical experience program. P, junior standing and must have completed 2 years of the Park and Recreation Management curriculum, or consent of adviser. 3-12 credits per semester.

### **PRM 496 - Field Experience Credits: 1-12**

Applied, monitored and supervised, field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and or directed plan of study established between the student, instructor and field experience supervisor. Due to the presence of a field experience supervisor, a lower level of supervision is provided by the instructor in these courses than is the case in an internship or practicum course.

### **PRM 497 - Cooperative Education Credits: 1-12**

Applied, monitored and supervised, field-based learning experience for which the student may or may not be paid. Students gain practical experience; they follow a negotiated and or directed plan of study established between the student, instructor and field experience

supervisor. Due to the presence of a field experience supervisor, a lower level of supervision is provided by the instructor in these courses than is the case in an internship or practicum course.

### **PRM 498 - Undergraduate Research/Scholarship Credits: 1-3**

Includes Senior Project, and Capstone Experience. Independent research problems/projects or scholarship activities. The plan of study is negotiated by the faculty member and the student. Contact between the two may be extensive and intensive. Does not include research courses which are theoretical.

## **PS (Plant Science)**

### **PS 103-103L - Crop Production and Lab Credits: 3**

Practices and principles; crop distribution; growth processes; response to environment. Grain and forage crops, including their distribution, use, improvement, growth, harvesting, and marketing. Corequisites: PS 103L-PS 103.

### **PS 109 - First Year Seminar\*\* Credits: 2**

First-year experience course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\*Course meets IGR #1

### **PS 200-200L - Weed Mgmt for Horticulture and Lab Credits: 2**

An introduction to common weeds found in horticultural settings (Turf, nursery, food crops, etc.). The use of cultural, biological, chemical and physical methods of weed management will be discussed. Weed identification, control methods and related activities will be handled in the laboratory. Corequisites: PS 200L-PS 200. Cross-Listed: HO 200-200L

### **PS 213-213L - Soils and Lab \* \*\* Credits: 2, 1**

Development and classification of soils; physical, biological, and chemical properties; management aspects, including water, fertility, and erosion; soils in the environment. Prerequisites: CHEM 106-106L or CHEM 112-112L. Corequisites: PS 213L-PS 213. Notes: \* Course meets SGR #6 or \*\* IGR #2.

### **PS 222-222L - Fundamentals of Turf Mgmt & Lab Credits: 3**

Introduction to basic maintenance and culture of turfgrass for utility turf, home lawns, and commercial grounds. Prerequisites: HO 111-111L or PS 103-103L or consent Corequisites: HO/PS 222L-222 Cross-Listed: HO 222-222L

### **PS 223-223L - Principles of Plant Pathology and Lab Credits: 3**

Principles underlying cause, spread, symptomology, diagnosis, and control of plant diseases. Principles exemplified by detailed study of specific diseases. Laboratory stresses diagnosis and experimental elucidation of principles. Prerequisites: BIOL 103-103L or BIOL 153-153L or BOT 201-201L. Corequisites: PS 223L-PS 223.

### **PS 243 - Principles of Geology\* Credits: 3**

The earth's land and natural resources, their characteristics and economic uses together with the water and energy resources contained in them are examined under the principle of stewardship. A fundamental emphasis using information derived from the scientific method to arrive at intelligent stewardship perspectives and practices prevails through the course. Prerequisites: CHEM 106 or CHEM 112 or equivalent. Notes: \* Course meets SGR #6

### **PS 244 - Geological Resources of South Dakota Lab Credits: 1**

The geology laboratory consists of a field study across South Dakota and back observing how our land and natural resources are being economically and aesthetically utilized and discussing their future



from a stewardship perspective. Most of South Dakota's mining and extractive industries together with groundwater utilization and possibilities for contamination will be studied. Prerequisites: PS 243.

**PS 303-303L - Seed Technology and Lab Credits: 3**

Seed testing; history, testing methods, and seed testing organizations. Seed development, maturation, anatomy, physiology, dormancy, and aging processes. Identification and classification of crop and weed seeds. Prerequisites: PS 103-103L or HO 111-111L. Corequisites: PS 303L-PS 303.

**PS 305-305L - Insect Biology and Lab (COM) Credits: 3**

An introduction to the general biology and classification of insects. Course emphasis placed on taxonomy, methods of identification, and ecological role of insects. Students will become familiar with basic insect anatomy and morphology, classification at the order level with exemplary families that include taxa of agricultural or environmental interest, and acquire an ability to sight recognize particular species that have agricultural, environmental, wildlife, and human and livestock health importance. Field trips and a collection are required. Prerequisites: MATH 102 or higher, and one of following: BIOL 103-103L, BOT 201-201L, or BIOL 153-153L. Corequisites: PS 305L-PS 305. Cross-Listed: ZOOL 305.

**PS 307-307L - Insect Pest Management and Lab Credits: 3**

Covers the major insect pests of the Northern Great Plains with emphasis on field biology, recognition, field scouting, and economic thresholds. Pest management strategies of insects affecting row crops, small grains, hayland and rangeland will be included. Pesticide application methods and safety are included. Prerequisites: BIOL 101-101L, or BIOL 151-151L. Corequisites: PS 307L-PS 307.

**PS 308-308L - Grain Grading and Lab Credits: 2**

Grain grading, crop and weed seed identification. Grain market grading and quality determinations. Plant identification of field crops and weeds of major importance in the United States. Prerequisites: PS 103-103L. Corequisites: PS 308L-PS 308.

**PS 310-310L - Soil Geography and Land Use Interpretation and Lab\*\* (G) Credits: 3**

Relationship of soil characteristics and soil classification to land use interpretations. Laboratory exercises involve field and laboratory procedures used in soil survey investigations. Studio to accompany PS/GEOG 310 Prerequisites: GEOG 132-132L, or PS 213-213L, or consent of instructor. Corequisites: PS 310L-310 Cross-Listed: GEOG 310-310L Notes: \*\* Course meets IGR #2.

**PS 312 - Grain and Seed Production and Processing Credits: 3**

Distribution, adaptation, and culture of grain crops. Production and harvesting of seed crops. Seed processing, cleaning procedures, machinery, conditioning drying, storage, and marketing; production of certified and hybrid seed crops. Prerequisites: PS 103-103L or HO 111-111L.

**PS 313 - Forage Crop and Pasture Management Credits: 3**

Grasses and legumes; their establishment, management, and use for hay, pasture, and silage. Prerequisites: BIOL 101 or BIOL 151. Field trips required.

**PS 320 - Crop Judging Credits: (1-2)**

Advanced course in seed and plant identification of crops and weeds, seed analysis and grain grading. Students are expected to enroll in Grain Grading (PS 308) the preceding spring semester and to enroll in PS 320 during the fall semester to compete in regional and national contests. PS 103-103L, PS 308-308L.

**PS 321 - Soil Judging Credits: 1**

Practical experience in evaluating the physical and chemical properties of soils important in soil judging and in making land use decisions. Soil forming factors, soil classification, land use interpretations, and soil morphology. Participation in regional intercollegiate soil judging contests and field trips. May be repeated for a maximum of 3 credits. Prerequisites: PS 213-213L.

**PS 323 - Soil Fertility & Plant Nutrient Management Credits: 3**

Soil fertility management and its effects on the growth of crops, including evaluation, uptake, and utilization of specific ions by plants, use of fertilizer elements to alter soil fertility, importance of crop residue management to maintain and improve productivity, and chemical composition of fertilizers and their characteristics. Prerequisites: PS 213-213L.

**PS 324 - Horticulture Pests I: Entomology Credits: 2**

A survey of integrated pest management principles and practices on horticultural systems. The commodities covered include turfgrass, urban forestry, vegetables, fruits and ornamentals both in open and protected (e.g. greenhouse, high tunnel) systems. Cross-Listed: HO 324

**PS 325 - Horticulture Pests II: Diseases Credits: 2**

A survey of abiotic and biotic diseases of horticultural systems. The commodities covered include turfgrass, urban forestry, vegetables, fruits and ornamentals both in open and protected (e.g. greenhouse, high tunnel) systems. Cross-Listed: HO 325

**PS 333-333L - Diseases of Field Crops and Lab Credits: 3**

Extensive survey of diseases affecting major food, fiber, and oilseed crops of the world. Emphasis is on diagnosis and disease management strategies. Prerequisites: PS 223-223L. Corequisites: PS 333L-PS 333.

**PS 343-343L - Weed Science and Lab Credits: 3**

Fundamentals of mechanical, cultural, biological and chemical weed control practices and factors affecting control. Herbicide classification and mechanism of action. Plant and seed identification of common weeds of North Central States and their interaction with desirable plants. Prerequisites: Take PS 103/103L or HO 111/HO111L; and take CHEM 108/108L or CHEM 120/120L or CHEM326/326L. Corequisites: PS 343L-PS 343.

**PS 362-362L - Environmental Soil Management and Lab \*\* Credits: 3**

Management systems designed to maintain soil productivity and environmental quality are examined. Soil problems important in production systems and environmental management including compaction, erosion, and nonpoint pollution are analyzed based on underlying environmental and agronomic principles. Computer simulation models are used and applied to soil problems. Prerequisites: PS 213-213L. Corequisites: PS 362L-PS 362. Notes: \*\* Course meets IGR #2.

**PS 383-383L - Principles of Crop Improvement and Lab (AW) Credits: 3**

Evaluation of crop species, reproduction in crop plants, use of genetic variability, traits of interest, breeding programs, designs and management. Heritability, plant introduction, vegetative propagation, hands-on lab demonstrations. Prerequisites: Take PS 103/103L or HO 111/HO111L; and take BIOL 103/103L or BIOL 153/153L or BOT 201/201L Corequisites: PS 383L-PS 383 Cross-Listed: HO 383-383L

**PS 390 - Seminar (AW) Credits: 1**

**PS 412-512 - Environmental Soil Chemistry Credits: 3**

Fundamentals of soil chemical properties and processes important for the sound management of soil resources. Topics include sorption/desorption of inorganic and organic compounds, bioavailability of nutrients and contaminants, oxidation/reduction, phase equilibria, soil organic matter, soil mineralogy, ion exchange, and saline/sodic soils. Prerequisites: PS 213-213L and CHEM 108-108L, or CHEM 120-120L.

**PS 415-415L/515-515L - Mycology and Lab Credits: 3**

Comprehensive taxonomic survey of the Kingdom Fungi; reproductive biology, physiology, genetics, and ecology of fungal organisms; relationship of fungi to human affairs. Laboratory experience that accompanies PS 415-415L/515-515L Prerequisites: BIOL 101 or BIOL 151 Corequisites: PS 415L-PS 415/PS 515L-PS 515 Cross-Listed: BIOL 415-415L-515-515L.

**PS 421-421L/521-521L - Soil Microbiology and Lab Credits: 3**  
Microbial species of agricultural soils, environmental factors affecting their numbers and activity, and biochemical changes brought about by these organisms. Laboratory course to accompany PS 421  
Prerequisites: BIOL 151-151L and BIOL 153153L, or BOT 201-201L. Corequisites: PS 421L-PS 421/PS 521L-PS 521. Cross-Listed: MICR 421.

**PS 423-523 - Turfgrass Stress Physiology Credits: 3**

The focus of this course is the physiological response to abiotic stress in perennial grass systems, including environmental, cultural, and traffic stress. Prerequisites: Senior or graduate student status or consent  
Cross-Listed: HO 423-523

**PS 431-531 - Insect Ecology and Biological Control Credits: 3**

This course will examine the ecological relationships between insects and their environment. Topics will include natural history, behavior, population dynamics, interactions between insects and their food plants, predators, and diseases; insect evolutionary ecology, and insect agroecology. These topics will also be explored in the context of the biological control of arthropod and weed pests by natural enemies

**PS 440-440L - Crop Mgmt with Precision Farming & Lab Credits: 3**

Principles of precision farming for crop production will be the focus. An integrated approach to crop management based on global positioning, geographic information systems, soil testing and fertility recommendations, spatial data storage, and data interpretation for farming and land use decisions will be covered. The use of spatial statistics to make site specific management recommendations will be discussed. Prerequisites: PS 223-223L; PS 305-305L, or PS 307307L; PS 323; PS 343-343L; and STAT 281. Corequisites: PS 440L-PS 440.

**PS 446-546 - Agroecology (G) Credits: 3**

Agroecology is the study of the ecological principles important in agricultural systems. Topics in this course will include energy flow and nutrient cycling, population and community ecology, weed and insect ecology, and water and nutrient conservation.

**PS 4/550-4/550L Field Study of Plant Disease Diagnosis & Lab Credits 2**

Diagnosis of diseases in field and horticultural crops; observing and studying the relationships among hosts, pathogens, and their environments. Emphasis on field disease recognition and laboratory diagnostic techniques. Alternate years. Prerequisites: Consent. Corequisites: PS 450L-PS 450/PS 550L-PS 550.

**PS 453-553 - Advanced Genetics Credits: 3**

Procedures in genetic studies as they relate to molecular and classical genetic applications. Prerequisites: BIOL 202, or BIOL 204, or BIOL 371  
Cross-Listed: BIOL 453-553.

**PS 4/573-4/573L Rural Real Estate Appraisal and Lab Credits: 3**

Principles and practices of rural real estate appraisal. Principles of soils valuation and their application for farmland appraisal. Cost, market data, and income approaches to farmland and building appraisal. Tax loan and other specialized rural appraisal procedures. Half-day field trips to area farms are required. Prerequisites: PS 213-213L or AGEC 271-271L  
Corequisites: PS 473L-473/573L-573  
Cross-Listed: AGEC 473-473L

**PS 483 - Irrigation – Crop and Soil Practices Credits: 3**

Problems of irrigated agriculture. Soil salinity and salt-affected soils, water quality, management of irrigated crops; cropping systems; water, fertility requirements of irrigated agriculture, water movement, storage, and release in soils. Prerequisites: PS 213-213L and MATH 102, or MATH 115, or MATH 123.

**PS 490 - Seminar Credits: .5-1**

Prerequisites: Registration in, Enrollment in, or completion of PS 494  
Notes: May be repeated for a total of 1 credit

**PS 491 - Independent Study Credits: (1-5)**

**PS 492-592 - Topics Credits: 1-3**

**PS 492L-592L - Topics Lab Credits: 0**

**PS 494 - Internship Credits: 0.5-2**

Prerequisites: Consent  
Notes: May repeat course for a total of 2 credits

**PS 498 - Undergraduate Research/Scholarship Credits: 1-4**

**PS 543 - Bioenergy Feedstock Production Systems Credits: 3**

**PS 580 - Environmental Stress Physiology Credits: 3**

**PS 664 - Molecular Plant Physiology Credits: 6**

**PS 704-704L - Viral and Bacterial Diseases of Plants Credits: 4**

**PS 714-714L - Genetics of Disease Resistance and Host-Plant**

**Pathogen Interaction and Lab Credits: 4**

**PS 721 - Advanced Integrated Crop Pest Management Credits: 3**

**PS 723 Simulation Models in Research Mgmt & Policy Credits 3**

**PS 732 - Field Studies in Pedology Credits: 2**

**PS 733 - Advanced Soil Genesis Credits: 3**

**PS 741 - Crop Breeding Techniques Credits: 1**

**PS 743 - Physical Properties of Soil Credits: 3**

**PS 744 - Soil N, P, and K Credits: 3**

**PS 746 - Plant Breeding Credits: 3**

**PS 753 - Soil Water Quality in Bioenergy Feedstock Production Systems Credits: 3**

**PS 756 - Quantitative Genetics Credits: 3**

**PS 761-761L - Taxonomy of Insects and Lab Credits: 4**

**PS 763 - Crop Physiology Credits: 3**

**PS 781 - Plant Science Graduate Seminar Credits: 1**

**PS 785-785L - Soil and Plant Analysis and Lab Credits: 3**

**PS 787 - Advanced Plant Breeding Credits: 3**

**PS 788 - Master's Research Problems Credits: 1-3**

**PS 791 - Independent Study Credits: (1-5)**

**PS 792 - Topics Credits: (1-3)**

**PS 798 - Thesis Credits: (1-7)**

**PS 898D - Dissertation-PhD Credits: (1-7)**

## PSYC (Psychology)

**PSYC 101 - General Psychology \* \*\* (COM) Credits: 3**

This course is an introduction survey of the field of psychology with consideration of the biological bases of behavior, sensory and perceptual processes, learning and memory, human growth and development, social behavior and normal and abnormal behavior. Notes: \* Course meets SGR #3 or \*\* IGR Goal #2

**PSYC 202 - The Psychology Major Credits: 3**

This course is designed to familiarize psychology majors with career activities, writing in psychology, elementary introduction to psychological research methods, and ethics in psychology. Prerequisites: Psychology Major, Psc 101 (C or better); Engl 101 (C or better)

**PSYC 210 - Introduction to Biopsychology Credits: 3**

This course is an introduction to the scientific study of the biology of behavior and mental processes. It encompasses topics ranging from the origins of movement to the origins of cognitive processes, and descriptions of the basic functions of cells within the nervous system to theorizing about the ways these functions come together to create the human experience. Biopsychology effectively describes aspects of changes within the nervous system that occur during learning, development, psychological disorders, therapies, and virtually every other content area housed within psychology. Prerequisites: PSYC 101.

**PSYC 244 - Environmental Psychology \*\* Credits: 3**

This course surveys the empirical and theoretical work on the influence of the physical environment on human behavior and experience. Topics include the use of space, stressors and esthetics as related to human beings, the optimum design of buildings, homes and institutions, and the effect of humans on the natural environment. Designed for both psychology majors and non-majors. Prerequisites: PSYC 101 or 102. Notes: \*\* Course meets IGR #2.

**PSYC 267 - Psychology of Personal Adjustment (COM) Credits:3**

This course covers the dynamics of normal human personality and behavior with an emphasis on the mechanisms used to promote effective personal and interpersonal behavior.

**PSYC 287 - Controversial Issues in Psychology Credits: 3**

This course involves an intensive look at the branches of and topics in psychology with particular emphasis on critical thinking applied to controversial issues. Critical thinking is clear, accurate, and defensible thinking; thus, this course is designed to help students develop the intellectual tools they need to learn from and analyze information independently. Prerequisites: PSYC 101 or 102.

**PSYC 289 - Pseudoscience and Psychology Credits: 3**

Pseudoscience and Psychology will identify the characteristics of conventional sciences versus what is called pseudoscience, and critically examine disputed areas in psychology and human behavior. Special emphasis is placed on how to critically evaluate anecdotes and published reports of anomalous human behavior, beliefs, and experiences. Prerequisites: PSYC 101 or 102

**PSYC 301 - Sensation and Perception (COM) Credits: 3**

This course is a study of the bases of sensation and perception including the physics and physiology of sensory receptor function, central nervous system functions in information processing, and cognitive and attentional factors in perception. Prerequisites: PSYC 101 or 102.

**PSYC 301L - Sensation and Perception Lab Credits: 1**

This course provides laboratory experience and demonstration in evaluating sensory function and activity as well as perceptual demonstrations. Prerequisites: PSYC 376 Corequisites: PSYC 301

**PSYC 305 - Learning and Conditioning (COM) Credits: 3**

This course covers traditional conditioning experimentation and phenomena, primarily as revealed through animal research. Principles of reinforcement and factors which influence the conditioning process are discussed in detail. Prerequisites: PSYC 101 or 102.

**PSYC 305L - Learning and Conditioning Lab Credits: 1**

This course provides laboratory experience in the application of methods and principles of learning and conditioning. Prerequisites: PSYC 376. Corequisites: PSYC 305.

**PSYC 324 - Psychology of Aging Credits: 3**

Focuses on the theories, research and practice concepts relevant to psychological factors in the aging process. Topics covered include cognition, personality, and death and dying. Prerequisites: PSYC 101 or 102.

**PSYC 327 - Child Psychology \*\* (COM) Credits: 3**

This course covers the physical, social, emotional and intellectual aspect of child development. Prerequisites: PSYC 101 or 102. Notes: \*\* Course meets IGR Goal #2

**PSYC 331 - Industrial and Organizational Psychology (COM) Credits: 3**

This course covers the application of psychological principles to such problems as employee selection, supervision, job satisfaction, and work efficiency. Prerequisites: PSYC 101 or 102.

**PSYC 357 - Psychological Therapies Credits: 3**

Traditional and contemporary methods of psychotherapy. Interviewing techniques and the professional assistant's role. Prerequisites: PSYC 101 or 102 and PSYC 451 or 461.

**PSYC 358 - Behavior Modification Credits: 3**

Principles of learning applied to human behavior modification. Prerequisites: PSYC 101 or 102.

**PSYC 364 - Cross Cultural Psychology\*\* Credits: 3**

This course provides an overview of cross-cultural psychology which is the comparative study of the effects of culture and diversity on

human psychology. Students learn about ways that psychologists may engage in more culturally sensitive and inclusive scholarship, research, and practice. In doing so, students also increase awareness of self and others. Students are introduced to key theories, research methods, scientific findings, and applications of cross cultural psychology while challenged to engage in critical thinking. Prerequisites: PSYC 101. Notes: \*\*Course meets IGR #2

**PSYC 367 - Psychological Gender Issues Credits: 3**

This course surveys the current theoretical and research issues in the development of gender and explores the impact of gender on the lives of women and men. Topics include societal and biological influences on psychological development, achievement, motivation, sex roles, stereotyping, socialization, sexuality, and personality. Prerequisites: PSYC 101 or 102. Cross-Listed: WMST 367. Notes: This course meets IGR Goal 2.

**PSYC 367L - Psychological Gender Issues Laboratory Credits: 1**

This course provides laboratory experience in the application of methods and principles in the development and impact of gender. Prerequisites: PSYC 376. Corequisites: PSYC 367 .

**PSYC 375-375L - Research Methods in Psychology & Lab Credits: 4**

PSYC 375: An introduction to the theory and practice of research methods in psychology with an emphasis on descriptive designs. Topics include logic and philosophy of psychological research, conceptualizing research questions, hypothesis testing, data collection and analysis strategies used by researchers in psychology, and introduction to using statistical software for data analysis.

PSYC 375L: This course provides laboratory experience in application of methods and principles of psychological research and data analysis. Prerequisites: MATH 102 (C or better); PSYC 202 (C or better) Corequisites: PSYC 375L; 375.

**PSYC 376-376L - Research Methods II and Lab (AW) Credits: 4**

This course provides further exploration of the theory and practice of research methods in psychology with an emphasis on experimental designs and inferential statistical procedures. Laboratory includes performance of experiments, data analysis, and preparation of research reports. Prerequisites: PSYC 375-375L . Corequisites: PSYC 376L-376.

**PSYC 390 - Seminar Credits: 1****PSYC 406 - Cognitive Psychology (COM) Credits: 3**

This course is a survey of recent research and theory in cognitive process concerning the representation, storage, retrieval and interactions of units of thought. It considers adaptability, intelligence and knowledge from an experimental point of view. Prerequisites: PSYC 101 or 102.

**PSYC 406L - Cognitive Psychology Laboratory Credits: 1**

This course provides laboratory experience in the application of methods and principles in cognitive psychology. Prerequisites: PSYC 376. Corequisites: PSYC 406 .

**PSYC 409 - History and Systems of Psychology (AW) (G) Credits: 3**

This course is a survey of the origin and development of psychology. Special attention is given to the systems of thought that have emerged since the founding of psychology as an empirical science. Prerequisites: PSYC 375

**PSYC 411 - Physiological Psychology Credits: 3**

Role of physiological mechanisms in behavior. Nervous, biochemical and muscular systems that control or modify human and animal adjustment. Prerequisites: PSYC 101 or 102.

**PSYC 414 - Drugs and Behavior (COM) Credits: 3**

The psychobiological bases of the use/abuse of alcohol, drugs and other substances are covered in this course along with current theory, research approaches and findings. Prerequisites: PSYC 101 or 102.

**PSYC 417 - Health Psychology \*\* (COM) Credits: 3**

This course is an investigation of the psychological aspects of health and of physical disorders and disease processes. It will explore psychological interventions targeted at prevention as well as those focusing on the resolution or management of disorders. Prerequisites: PSYC 101 or 102. Notes: \*\*Course meets IGR #2

**PSYC 427 - Child Psychopathology Credits: 3**

Child Psychopathology is an introduction to the study of abnormal child psychology viewed from the perspective of psychological science. The course focuses on developing familiarity with specialized topics within the field of child psychopathology. Students will learn to distinguish among categories of mental disorders of childhood according to the DSM-IV-R and will gain knowledge of typical signs, symptoms and associated features of these disorders. Epidemiological findings, contemporary hypothesis regarding etiology and psychological and biological treatment interventions and prevention relevant to each disorder will be examined. The course emphasizes the scientific basis of child psychopathology and examines the research methods used to test hypotheses regarding etiology and treatment/prevention outcomes. Prerequisites: PSYC 101 or PSYC 102, and PSYC 327, and PSYC 451.

**PSYC 440-540 - Forensic Psychology Credits: 3**

Forensic Psychology is the application of the science and profession of psychology to questions and issues relating to law and the legal system. This course is a state-of-the-art survey of central topics at the interface of psychology, and the law. The field of forensic psychology encompasses contributions made in a number of different areas – research, clinical practice, public policy, and teaching/training – from a variety of orientations within the field of psychology, such as developmental, social, cognitive, industrial-organizational and clinical. Prerequisites: PSYC 101 or 102.

**PSYC 441 - Social Psychology \*\* (COM) Credits: 3**

This course covers basic principles of social psychology including concepts and methods utilized in analyzing individual and group interactions. Prerequisites: PSYC 101. Notes: \*\* Course meets IGR Goal #2

**PSYC 441L - Social Psychology Laboratory Credits: 1**

This course provides laboratory experience in the application of methods and principles in social psychology. Prerequisites: PSYC 376. Corequisites: PSYC 441 .

**PSYC 451 - Psychology of Abnormal Behavior \*\* Credits: 3**

This course is a comprehensive survey of abnormal personality and behavior. It includes an examination of the origins, symptoms and treatment of psychological disorders. Prerequisites: PSYC 101. Notes: \*\* Course meets IGR Goal #2

**PSYC 461 - Theories of Personality (COM) Credits: 3**

Students will learn about the role of philosophy and science and their contributions to the development of personality theory. Students will examine, in depth, the theoretical contributions made in the areas of psychoanalytic, behavioristic, and humanistic personality theories. The students will be able to articulate their own beliefs concerning the development of human personality. Prerequisites: PSYC 101.

**PSYC 477 - Psychology Testing and Measurement (COM) Credits: 3**

Test theory is covered in this course along with principles of construction and analysis of psychological tests. Prerequisites: PSYC 101 and STAT 281.

**PSYC 477L - Psychology Testing and Measurement Lab. Credits: 1**

This course provides laboratory experience in the application of measurement theory and principles of construction and analysis of psychological tests. Prerequisites: PSYC 376 . Corequisites: PSYC 477 .

**PSYC 482-582 - Travel Studies (G) Credits: (1-4)**

This travel study course is designed to provide extra-mural educational experiences, as approved by and under the direction of a faculty member, and may be in cooperation with faculty and

administrators of other institutions. Students will participate in hands-on activities and design educational activities for presentation at selected locations. Includes pre-travel orientation, post-travel self-evaluation, and a written report.

**PSYC 491 - Independent Study (COM) Credits: (1-3)****PSYC 492-592 - Topics (COM) Credits: (1-4)****PSYC 494 - Internship (COM) Credits: (1-12)****PSYC 496 - Field Experience (COM) Credits: (1-12)****PSYC 498 - Undergraduate Research/Scholarship Credits: 1-12****PSYC 591 - Independent Study Credits: (1-4)****RANG (Range Science)****RANG 105-105L - Intro to Range Management & Lab Credits: 3**

Basic principles and application of range science including ecosystem structure, function and management. Water and nutrient cycles, energy flow, plant physiology, grazing management and grazing systems will be discussed. Identification and management of important range plants in the Northern Great Plains are included. Range improvements such as seeding, fertilization, brush control and prescribed burning will be introduced. Corequisites: RANG 105L-RANG 105.

**RANG 210-210L - Range Plant Identification and Lab Credits: 2**

Instruction and practice in the recognition of important native and introduced range plants of North America. Corequisites: RANG 210L-RANG 210.

**RANG 215 - Intro to Integrated Ranch Management Credits: 3**

This course introduces the basic principles of ranching and the food and fiber system. Students will be exposed to the complexities of modern agricultural production systems. Topics include: natural resources as the basis for successful ranching; the family as the major supplier of labor and capital; animal and agronomic production systems; economic and financial forces; risk and opportunity; agricultural policy and law; the decision making process; and stress as the driving force of change. Students will incorporate outside readings into discussions and practice planning exercises held during lab sessions. Cross-Listed: AS 215

**RANG 321 - Wildland Ecosystems Credits: 3**

Structure, function and multiple-use management of the major wildland ecosystems of North America. Ecological concepts and renewable resource management strategies will be examined.

**RANG 400 - Judging Teams Credits: 1**

Section 4 – Range Plant ID: Instruction and practice in identification of important range plants of North America. Section 5 – URME Instruction and practice: in general range science knowledge and problem solving. Participation in the national Undergraduate Range Management Exam (URME) contest. Prerequisites: Consent of instructor.

**RANG 415-415L - Range Improvements and Grazing Management and Lab Credits: 4**

Management of rangelands with fire, herbicides, biocontrol agents, mechanical treatment, and livestock grazing. Grazing systems and their impact on vegetation management, weed control, livestock production, wildlife habitat improvement, soil protection and watershed improvement. Laboratory sessions to complement lecture material from RANG 415. Field trips to area range sites will be included. Corequisites: RANG 415L-RANG 415.

**RANG 421-521 - Grassland Fire Ecology Credits: 3**

The course is designed to describe the ecological effects of fire on grassland ecosystem components, from soil and vegetation to wildlife and cattle. It also provides insight into the history of fires, the people who use them and why, the parts of a fire, how fires behave in relation to fuel and weather, and the procedures for safely conducting prescribed burns. Cross-Listed: WL 421-521

**RANG 425-425L/525-525L Rangeland Assessment and Monitoring Lab Credits: 3**

Principles and practical application of the assessment and monitoring of rangeland plant communities. Course will be offered in a hybrid format. In the online portion of the course, students will learn how to set objectives, determine parameters to measure, select appropriate techniques, and analyze quantitative data. The laboratory portion is a 1-week intensive field session held in late summer, providing substantial field experiences including performing a wide variety of sampling techniques, collection and analysis of assessment and monitoring data, and learning how state and federal agencies assess and monitor rangelands. Students will also work in teams to develop a monitoring plan for a specific property, collect and analyze initial data, and present the plan and results to the land owner. Prerequisites: STAT 281 Corequisites: RANG 425L-425/525L-525

**RANG 485-485L Advanced Integrated Ranch Mgmt & Lab Credits 3**

A capstone course that requires students to integrate knowledge from previous coursework and experiences. Focus is on decision-making, analysis, and planning with respect to ranching enterprises. A key component of the course will be an extensive ranch planning exercise, which integrates the many factors influencing ranch sustainability and which incorporates the use of decision-support tools to evaluate management strategies. Prerequisites: RANG 215, senior standing or consent. Corequisites: RANG 485L-RANG 485 Cross-Listed: AS 485-485L

**RANG 491-591 - Independent Study Credits: 1-3**

**RANG 492-592 - Topics Credits: 1-4**

**RANG 494 - Internship Credits: 1-12**

**RANG 497 - Cooperative Education Credits: 1-12**

**RANG 510 - Grassland Monitoring and Assessment Credits: 2**

**RANG 520 - Watershed Management Credits: 3**

**RANG 530 - Ecology of Invasive Species Credits: 3**

**RANG 540 - Grassland Plant Identification Credits: 2**

**RANG 710 - Principles of Forage Quality Credits: 3**

## **READ (Reading)**

**READ 41 - Reading for College Success Credits: 3**

This course provides students with reading strategies necessary for making the transition to collegiate level reading. The course will present students with multiple strategies to promote comprehension skills, develop vocabulary and enhance metacognition to become strategic readers. This course will be required for students with ACT score in Reading at 17 or below (or a comparable COMPASS score).

## **RECR (Recreation)**

**RECR 140 - Introduction to Recreation Credits: 3**

To introduce the student to recreation and leisure literature, philosophies, theories, history, basic concepts and professional organizations. This course offers an introduction to leisure from the viewpoint of the individual as a consumer and of agencies as providers. You can expect to better understand and appreciate the importance of leisure to your own and society's well being. Also, because leisure is a major industry in the world, the course provides an overview of the management of valuable recreation, park, sport and tourism resources. Notes: (May be taught on demand.)

**RECR 260 - Fundamentals of Recreation Leadership Credits: 3**

Philosophy and interpretations of leadership as it relates to recreational activities.

**RECR 330 - Therapeutic Recreation (COM) Credits: 3**

Theoretical and philosophical foundations of therapeutic recreation, behavioral, therapeutic use of activity; recreative interaction-intervention techniques, survey of major services and agencies.

**RECR 342 - Recreational Sports Programs and Administration (COM) Credits: 3**

Organization and administration of intramural sports on elementary, secondary, college, and university levels. Program planning, facilities, equipment and financing of intramural sports program. Notes: (May be taught on demand.)

**RECR 350 - Recreational Facilities and Area Design (COM) Credits: 3**

An introduction to the principles and practices of planning, financing, management and maintenance of recreation facilities.

**RECR 362 - Recreation Across the Lifespan Credits: 3**

Exploration of relevant issues affecting the role of recreation and leisure on human development and its impact on healthy fetal development from conception until death. Examination of the diverse, multicultural perspectives on recreation and leisure, its centrality throughout history and influence on how civilizations define themselves.

**RECR 395 - Practicum (COM) Credits: (1-3)**

**RECR 410 - Current Issues in Recreation (AW) Credits: 3**

Individual reports and group discussions on recent research and management developments in recreation employment opportunities and procedures for employment. Taken before the internship. Prerequisites: Senior Class standing.

**RECR 415/515 - Recreation and Sport Facility Mgmt Credits: 3**

Advanced study of recreation and sport operations and facility management including planning and design, fiscal and personnel management (including fundraising), legal considerations, safety and control, maintenance, and equipment, as these relate to indoor and outdoor recreation/sport facilities. Notes: PRM 300 (for undergraduate)

**RECR 440 - Administration of Leisure Services (COM) Credits: 3**

Organization and administration of community recreation, program planning and recreational program areas.

**RECR 491 - Independent Study (COM) Credits: (1-9)**

**RECR 494 - Internship (COM) Credits: (1-12)**

**RECR 496 - Field Experience (COM) Credits: (1-12)**

## **REL (Religion)**

**REL 213 - Introduction to Religion \* Credits: 3**

An introduction to the academic study of religion, focusing on the variety of methods which can be used to facilitate discussion about religion issues in public and pluralistic setting. Notes: \* Course meets SGR #4

**REL 224 - Old Testament \* (COM) Credits: 3**

Surveys the sources and development of the peoples and literature of the Old Testament. Notes: \* Course meets SGR #4

**REL 225 - New Testament \*(COM) Credits: 3**

Presents the history, writings, and theological themes of the New Testament. Notes: \* Course meets SGR #4

**REL 237 - Religion in American Culture \* Credits: 3**

Examines both the diversity of religious expression and tradition found within American culture (from Adventism to Zen) and the impact of American culture upon those traditions. Religious dimensions of selected features of the American enterprise: popular culture; politics; construction of the landscape; war and peace; social conflict; race, ethnicity, and gender. Notes: \* Course meets SGR #3

**REL 238 - Native American Religions Credits: 3**

A survey of Native American religious traditions and their relation to both traditional and contemporary cultures. Focus on ritual, myth and practice in traditional settings, as well as forms of religious resurgence in the 20th century. Cross-Listed: AIS 238 Notes: Course meets SGR #4

**REL 250 - World Religions \* (COM) (G) Credits: 3**

Introduces the major religions of humankind, examining the function and diversity of religious expression in human experience, and the role of these religions in international relations. Meets SGR #4

**REL 331 - Women and Religion Credits: 3**

The course examines what women have to say about religion and what religions have had to say about women, including a critical examination of traditional theological areas from the perspective of feminist theologians. Areas covered include women in the Bible, church history, and contemporary church. Cross-Listed: WMST 331

**REL 353 - Geography of Religion Credits: 3**

This course examines the diversity of religious practice and belief from a geographical perspective. Each offering of the course will emphasize a different region of the world, with standard areas of study being North America & Europe, Middle East & Africa, South & Central America, and South & East Asia. The course will examine specific religious traditions (Christianity, Islam, Buddhism, etc.) as they occur in a geographical region, the relationship between religion and place, and how religions change and adapt to new locales. The course may be repeated up to four times. Cross-Listed: GEOG 353.

**REL 360 Moral & Ethical Perspectives on Death & Dying Credits: 3**

Attitudes and issues that focus on death and dying in society, the religious and moral dimensions of these attitudes and issues.

**REL 370 - Philosophy of Religion (COM) Credits: 3**

Critically studies such issues as the nature and existence of God, the relations of reason to faith and man to the divine, plus non-western theologies. Cross-Listed: PHIL 470 Notes: Meets IGR Goal 2.

**REL 401-501 - History of Western Religious Thought I Credits: 3**

This course surveys important issues in western religious thought from first century Christian origins through the "great medieval synthesis" of the thirteenth century. While both Jewish and Islamic developments are examined, emphasis is placed upon emergence and growth of Christian doctrine and ecclesiology. Cross-Listed: HIST 401.

**REL 402-502 - History of Western Religious Thought II Credits: 3**

This course surveys important issues in western religious thought from "great medieval synthesis" of the thirteenth century through the Reformation and Counter reformation of the sixteenth century. While both Jewish and Islamic developments are examined, emphasis is placed upon the development of Christian doctrine. Cross-Listed: HIST 402.

**REL 454-554 - Environmental Ethics Credits: 3**

Presents humanity's relationship to the environment, its responsibility to nature, and its obligations to future generations, attending to both theory and applications, including the debate over causes of environmental crisis, the value of endangered species, the wilderness, and natural objects; the seriousness of the growing global population and obligations to feed the poor, the feasibility of sustaining an ecological responsible society. Cross-Listed: PHIL 454-545 Notes: This course meets IGR Goal 2.

**REL 491-591 - Independent Study (COM) Credits: 1-3**

**REL 492-592 - Topics Credits: 1-5**  
**REL 494 - Internship Credits: 1-12**

**RUS (Russian)****RUSS 101 - Introductory Russian I \* (COM) Credits: 4**

Fundamentals of language, enabling the student to understand, speak, read and write simple Russian. Emphasis on practical usage. Notes: \* Course meets SGR #4

**RUSS 102 - Introductory Russian II \* (COM) Credits: 4**

Fundamentals of language, enabling the student to understand, speak, read and write simple Russian. Emphasis on practical usage. Prerequisites: RUSS 101. Notes: \* Course meets SGR #4

**RUSS 201 - Intermediate Russian I (COM) Credits: 3**

Continuation of first year Russian. More intensive drill of both grammar and conversation. Emphasis on conversation, grammar review, and the short story. Prerequisites: RUSS 102.

**RUSS 202 - Intermediate Russian II (COM) Credits: 3**

Continuation of first year Russian. More intensive drill of both grammar and conversation. Emphasis on conversation, grammar review, and the short story. Prerequisites: RUSS 201.

**RUSS 393 - Workshop (COM) Credits: (1-4)**

Special, intense sessions in specific topic areas. Approximately 45 hours of work is required for each hour of credit. Workshops may vary in time range but typically use a compressed time period for delivery. They may include lectures, conferences, committee work, and group activity.

**SE (Software Engineering)****SE 291 - Independent Study Credits: (1-5)****SE 292 - Topics Credits: (1-5)****SE 294 - Internship Credits: (1-8)****SE 298 - Undergraduate Research/Scholarship Credits: 1-3****SE 305 - Foundation of Software Engineering Credits: 3**

This course covers the basics of software engineering principles including different software development techniques, requirement analysis, project planning, software design and management. The user interface issues, specification and implementation of components, design quality and basic support tools are also covered. Corequisites: CSC 300.

**SE 320 - Software Requirements and Formal Specifications (AW) Credits: 3**

An in-depth coverage of software requirements analysis and formal specification Topics include requirements specification and definition; requirements prototyping; functional requirements specification; nonfunctional requirements specification; and legacy systems. The course also covers formal methods applicable to software development with an emphasis on methods such as transformational techniques, logic-based formalisms, algebraic and model-based specifications. Prerequisites: SE 305 and CSC 300.

**SE 330 - Human Factors and User Interface (G) Credits: 3**

This course covers the major frameworks, methods, and approaches to designing, engineering, implementing, and testing user interfaces. It also covers human-machine interaction, design requirements, task analysis, and implementation of the user-interface. Prerequisites: SE 305.

**SE 340 - Software Architecture Credits: 3**

The fundamental building blocks and patterns for construction of software systems are examined. The course covers the fundamental elements of software systems in the context of the design process. The conceptual, module interconnection and execution architecture of software are also discussed. The conceptual architecture describes the system in terms of its major design elements and the relationships among them. Prerequisites: SE 320.

**SE 391 - Independent Study Credits: (1-5)****SE 392 - Topics Credits: (1-5)****SE 398 - Undergraduate Research/Scholarship Credits: 1-3****SE 410 - Software Test and Quality Assurance Credits: 3**

This course covers the importance of software quality assurance and configuration management. Software process improvement and software reliability are emphasized. Topics include software process metrics and their use in Quality Assurance, testing approaches, methods and techniques. Development of Quality Assurance plans, reviews, inspections and audits, and formal testing will be discussed.

**SE 420 - Software Project Management Credits: 3**

This course focuses on organizational and technical roles in software engineering management. Models of software engineering life cycle, unit development, maintenance, software reuse and metrics are discussed. Software maturity framework, strategies of implementing software, software process assessment, project planning principles and tools, software configuration management, managing software quality and usability, leadership principles, ethical and legal issues are also covered. Prerequisites: SE 340

**SE 440 - Embedded Systems Credits: 3**

This course focuses on modern methods, techniques, and tools for specification, design, and implementation of embedded systems. An overview of the platforms, tools, and processes used in developing software for embedded systems. A hands-on approach experimenting with real-time embedded systems programming. Prerequisites: SE 410 EE 347 EE 348.

**SE 464 - Senior Design I Credits: 2**

This is a capstone senior design team project. Students will work as part of a team to develop solutions to problems posed by customers. The project may require considerable software development or evolution and maintenance of existing software products. Students will write the specifications and complete the initial design. Oral and written reports are required. Prerequisites: SE 420.

**SE 465 - Senior Design II Credits: 2**

The objective of this course is to produce, test and present the design specified in Senior Design I. Each team will deliver a final working product, formal software development documentation, and give a final presentation on the project. Prerequisites: SE 464.

**SE 490 - Seminar Credits: (1-3)****SE 491 - Independent Study Credits: 1-5****SE 492-592 - Topics Credits: 1-5****SE 494 - Internship Credits: (1-3)****SE 496 - Field Experience Credits: (1-3)****SE 497 - Cooperative Education Credits: (1-5)****SE 498 - Undergraduate Research/Scholarship Credits: 1-3****SE 591 - Independent Study Credits: 1-3****SE 791 - Independent Study Credits: (1-3)****SE 792 - Topics Credits: (1-3)****SE 794 - Internship Credits: (1-3)****SEED (Secondary Education)****SEED 314 - Supervised Clinical/Field Experience Credits: 1**

Supervised students will observe and practice various teaching strategies in lab setting, middle schools, and high schools. Prerequisites: EDFN 338 or SEED 287, EDFN 475. Corequisites: EPSY 302, SEED 450.

**SEED 400 - Curriculum and Instruction in Middle and Secondary Schools Credits: 4**

Planning units and semester plans for use in student teaching. Includes goal-setting and evaluation/measurement methods. Admission to Professional Semester III. Required for Certification. Prerequisites: EDFN 338 or SEED 287; EDFN 475, EPSY 302, SEED 450, SEED 314. Corequisites: SEED 410 and 488.

**SEED 410 - Social Foundations, Management and Law Credits: 2**

Focus on management strategies and models as vehicles for maintaining an effective learning environment. Law and foundations relevant to the classroom teacher. Admission to Professional Semester III. Required for Certification. Prerequisites: EDFN 338 or SEED 287; EDFN 475, EPSY 302, SEED 450, SEED 314. Corequisites: SEED 400 and 488.

**SEED 411 - 7-12 Speech Methods (COM) Credits: (2-3)**

Students develop and understanding of the tools of inquiry of 7-12 speech; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning

resources, materials, technologies, and state and national curriculum standards appropriate to 7-12 speech; the ability to assess student learning in 7-12 speech; and to apply these knowledge, skills, and attitudes to real life situations and experiences.

**SEED 413 - 7-12 Science Methods (COM) Credits: 3**

Students develop an understanding of the tools of inquiry of 7-12 sciences; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to 7-12 science, the ability to assess student learning in 7-12 science; and to apply these knowledge, skills, and attitudes to real life situations and experiences.

**SEED 415 - 7-12 Social Science Methods (COM) Credits: 3**

Students develop an understanding of the tools of inquiry of 7-12 social science; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to 7-12 social science; the ability to assess student learning in 7-12 social science; and to apply these knowledge, skills, and attitudes to real life situations and experiences.

**SEED 418 - 7-12 Mathematics Methods (COM) Credits: (2-3)**

Students develop an understanding of the tools of inquiry of 7-12 math; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to 7-12 math; the ability to assess student learning in 7-12 math; and to apply these knowledge, skills, and attitudes to real life situations and experiences.

**SEED 418L - 7-12 Mathematics Methods Lab Credits: 0**

Corequisites: SEED 418.

**SEED 420-420L - 5-12 Teaching Methods and Lab Credits: 2, 0**

This course is designed to provide general teaching methods and strategies for effective middle level and secondary education to prepare professionals for the 21st century who are caring, competent, and confident. It prepares prospective teachers to plan and develop instruction respecting learner differences as well as preparing appropriate methods for assessing student achievement. The nature of this course creates opportunities for prospective teachers to individualize the course content and learning activities to be responsive to the different education majors. The learning projects are built around the integration of technology, media, other instructional aids, and various resources relevant to the uniqueness of each content major. Corequisites: SEED 420L-420

**SEED 424 - 7-12 Language Arts Methods (COM) Credits: 3**

Students develop an understanding of the tools of inquiry of 7-12 language arts, integrating reading, writing, speaking, and listening; the ability to design, deliver, and evaluate a variety of instructional strategies and processes that incorporate learning resources, materials, technologies, and state and national curriculum standards appropriate to 7-12 language arts; the ability to assess student learning in 7-12 language arts; and to apply these knowledge, skills, and attitudes to real life situations and experiences.

**SEED 450 - 7-12 Reading and Content Literacy (COM) Credits: 2**

This course explores methods for teaching middle and high school students to read, write, think, and learn in ways that allow them to master the subject matter and meaningfully apply their understanding. Participants learn to plan lessons that teach content and nurture greater literacy. Pre-, during-, and post-reading strategies and writing strategies are explored, along with assessment methods that give students a continual view of their literacy progress and achievement. Classroom adaptations for culturally and linguistically diverse populations in the content areas are also addressed.



**SEED 488 - 7-12 Student Teaching (COM) Credits: (2-16)**  
Students preparing for teaching in the secondary school will observe, participate, and teach under the supervision of the regular classroom teacher in an approved elementary school. An additional "Mandatory Fee" applies to this course.

**SEED 491 - Independent Study Credits: (1-9)**

**SEED 492/592 - Topics (COM) Credits: (1-5)**

**SEED 493-593 - Workshop Credits: 1-3**

**SEED 496 - Field Experience Credits: (3-12)**

**SEED 497 - Cooperative Education Credits: (3-12)**

**SEED 690 - Seminar Credits: (1-3)**

**SEED 748 - Secondary Curriculum Practicum Credits: 1**

## **SOC (Sociology)**

**SOC 100 - Introduction to Sociology \* (COM) (G) Credits: 3**

Comprehensive study of society, with analysis of group life, and other forces shaping human behavior. Notes: \* Course meets SGR #3

**SOC 150 - Social Problems \* (COM) (G) Credits: 3**

A study of present day problems in contemporary societies, such as racism, sexism, ageism, alcoholism, drug addiction, physical and mental health, war and environmental issues – their significance and current policies and action. Notes: \* Course meets SGR #3

**SOC 240 - The Sociology of Rural America\* (COM) (G) Credits: 3**

Focus on rural society, rural communities, population composition and trends, social processes, social participation in rural organizations and agencies; American agriculture in a global context; and changing relationship between country and city in contemporary society. Notes: \* Course meets SGR #3

**SOC 250 - Courtship and Marriage \* (COM) Credits: 3**

Courtship and marriage period given special emphasis, as are problems of mate selection, marital adjustments, reproduction, child-parent relations, divorce, and later years of marriage. Notes: \* Course meets SGR #3

**SOC 270 - Introduction to Social Work (COM) Credits: 3**

A study of social services to children, family, aged, public welfare clients, mentally ill, and the criminal justice system, also includes history of social work methods. Prerequisites: SOC 100 or 150.

**SOC 271 - Social Work Skills and Methods I Credits: 3**

Basic concepts and methods common to all social service practice; focus on developing interactional skills. Prerequisites: SOC 270.

**SOC 286 - Service Learning Credits: (1-3)**

Opportunity to gain service learning and/or mentoring experience. Credit will not count toward credits for major or minor. (Limit of 4 credit hours.) Prerequisites: Major or minor, minimum GPA of 2.0 to enroll, SOC 100. Graded S/U.

**SOC 307 - Research Methods I Credits: 3**

The research process; selection and formulation of research problems; concepts, propositions and scientific theories; elementary research design; data collection procedures and computer applications. Course research projects when possible.

**SOC 308 - Research Methods II Credits: 3**

Method for data manipulation and presentation; discussion of principles for selection of analysis techniques; index and scale construction; tabular presentation and interpretation; and oral and written report development.

**SOC 325 - Domestic and Intimate Violence Credits: 3**

A seminar focusing on the problems associated with violent behaviors in American households. Special attention will be devoted to the structural, cultural and social-psychological factors contributing to the abuse and battering of family members. In addition, the use of force as a problem solving mechanism will be examined. Cross-Listed: WMST 325.

**SOC 330 - Self and Society (COM) Credits: 3**

A social psychological exploration of the factors linking self and society, with an examination of the social construction of reality. Prerequisites: SOC 100 or 150.

**SOC 350 - Race and Ethnic Relations (COM) (G) Credits: 3**

A survey of contemporary ethnic and racial groups and selected minorities in South Dakota, the United States and other countries; special attention will be given to sociological concepts and theories relevant to intergroup dynamics, social structures, and communication. Prerequisites: SOC 100 or 150.

**SOC 351 - Criminology (COM) Credits: 3**

Focuses on theories of crime, juvenile delinquency and justice, laws, systems of criminal behavior, victimization, and corrections. Prerequisites: SOC 100 or 150

**SOC 353 - Sociology of Work (COM) Credits: 3**

Focus on human behavior in work environments. Topics include social organization of work; managing human resources; management-labor relations; role of pay and benefits; problems of personnel adjustment; and work related social tensions and conflict. Prerequisites: SOC 100 or 150.

**SOC 354 - Victimology Credits: 3**

An up-to-date examination of the victim-offender relationship, including: characteristics of those victimized; forms of victimization; the role of the victim in contributing to their own injuries and losses; and, state and federal programs designed to ameliorate physical, emotional and economic suffering.

**SOC 382 - The Family (COM) Credits: 3**

Focus is on the development and maintenance of the family as a social institution with emphasis on comparative family systems and the contemporary American family from the standpoint of social class, ethnic background and family crises. Prerequisites: SOC 100 or 150.

**SOC 400 - Social Policy (COM) Credits: 3**

A review of social welfare legislation; current trends and issues in, and implementation and administration of, social policy in a variety of practice areas. Prerequisites: SOC 100 or 150 and SOC 270.

**SOC 402-502 - Social Deviance (COM) Credits: 3**

This course examines the nature of negatively evaluated behaviors and the process by which customs, rules and normative structure of society are constructed. Prerequisites: SOC 100 or 150.

**SOC 403 - Sociological Theory (COM) Credits: 3**

This is an introduction to the classics in social theory, various schools of social thought, and modern developments in the discipline. It also covers the major ideas of the classical and modern theorists, the social environment in which they wrote, and the implications of their contributions. Prerequisites: SOC 100 or 150.

**SOC 433-533 - Leadership and Organizations (COM) Credits: 3**

Emphasis is on the emergence of leadership patterns, group dynamics, small groups, and leadership in management. Prerequisites: SOC 100 or 150. Cross-Listed: LEAD 433.

**SOC 440 - Urban Sociology (COM) (G) Credits: 3**

A study of the urban community, focusing on its development, social structures and institutional patterns. Prerequisites: SOC 100 or 150.

**SOC 453 - Industrial Sociology Credits: 3**

An investigation of industrial societies with attention given to social trends creating industrialization, the development of organizations, the evolution of work-roles, international relations between industrial and non-industrial nations, and the future of industrial societies.

**SOC 455-555 - Juvenile Delinquency (COM) Credits: 3**

A study of the youthful offender and the causes and consequences of delinquent behavior; preventive and rehabilitation programs are also discussed. Prerequisites: SOC 100 or 150.

**SOC 456-556 - Community Corrections (COM) Credits: 3**

An examination of the history of adult and juvenile treatment and punishment. Emphasis is upon contemporary community based treatment as well as traditional prison-based incarceration. The process of sentencing, particularly the role of the pre-sentence investigation (PSI) is covered. Special attention is devoted to internship and career possibilities in the corrections arena. Prerequisites: SOC 351.

**SOC 460-560 - Advanced Criminology (COM) Credits: 3**

An extensive examination of major criminological issues and theories including sociological definitions of crime. Prerequisites: SOC 351.

**SOC 462-562 - Population Studies \*\* (COM) Credits: 3**

A study of human populations with respect to size, distribution, and structure, with emphasis on theories of population growth and decline, population policies, and impacts on the environment. Prerequisites: SOC 100 or 150. Notes: \*\*Course meets IGR #2

**SOC 483 - Sociology of Gender Roles (COM) (G) Credits: 3**

Female and male roles in relation to one another in a changing world are foci of this course. The nature of gender roles, their origin and maintenance, institutional features, and their variations over time and across cultures are examined. Prerequisites: SOC 100 or 150. Cross-Listed: WMST 383.

**SOC 490 - Seminar (COM) Credits: (1-3)****SOC 491 - Independent Study (COM) Credits: 1-3**

Prerequisites: Written permission

**SOC 492 - Topics (COM) Credits: (1-3)****SOC 494 - Internship Credits: 1-12**

Prerequisites: Written permission

**SOC 496 - Field Experience Credits: 1-12**

Prerequisites: Written permission

**SOC 497 - Cooperative Education Credits: 1-12**

Prerequisites: Written permission

**SOC 701 - The Research Process Credits: 3****SOC 702 - Sociological Inquiry Credits: 3****SOC 709 - Evaluation Research Credits: 3****SOC 710 - Research Methods Credits: 3****SOC 711 - Qualitative Research Methods Credits: 3****SOC 712 - Sociological Theory I Credits: 3****SOC 713 - Sociological Theory II Credits: 3****SOC 714 - Race, Class, Gender Intersections Credits: 3****SOC 720 -Scholarship of Teaching & Learning for Sociologists Credits:3****SOC 721 - Social Stratification Credits: 3****SOC 725 - Social Organization Credits: 3****SOC 740 - Rural Community Development Credits: 3****SOC 762 - Applied Demography Credits: 3****SOC 764 - Modern Demographic Theory Credits: 3****SOC 766 - World Population Issues Credits: 3****SOC 788 - Master's Research Problem/Project Credits: 1-3****SOC 790 - Seminar Credits: 1-4****SOC 791 - Independent Study Credits: 1-3****SOC 792 - Topics Credits: 1-6****SOC 794 - Internship Credits: 1-3****SOC 798 - Thesis Credits: 1-7****SOC 898D - Dissertation-PhD Credits: 1-12****SPAN (Spanish)****SPAN 101 - Introductory Spanish I \* (COM) (G) Credits: 4**

Introduces the fundamental elements of Spanish sentence structure and vocabulary. Promotes speaking, listening and writing within a cultural context. Class work may be supplemented with required aural/oral practice outside of class. Notes: \* Course meets SGR #4

**SPAN 102 - Introductory Spanish II \* (COM) (G) Credits: 4**

Introduces the fundamental elements of Spanish sentence structure and vocabulary. Promotes speaking, listening, and writing within a cultural context. Class work may be supplemented with required aural/oral practice outside of class. Prerequisites: SPAN 101. Notes: \* Course meets SGR #4

**SPAN 201 - Intermediate Spanish I \* \*\*(COM) Credits: 3**

Students use previously learned elements of fundamental Spanish to improve speaking, reading, writing, and listening skills. Authentic materials promote the understanding of Hispanic culture. Prerequisites: SPAN 102. Notes: \* Course meets SGR #4 and \*\* IGR #2

**SPAN 202 - Intermediate Spanish II \* \*\* (COM) Credits: 3**

Continuation of 201 with more emphasis on using grammar structures in an interactive way. Further study of the Hispanic world. Students planning to major or minor in Spanish are encouraged to take 212 concurrently. Prerequisites: SPAN 201 Notes: \* Course meets SGR #4 and \*\* IGR #2

**SPAN 211 - Intermediate Oral Practice I (COM) Credits: 2**

Conversational work, oral reports. May be taken concurrently with SPAN 201 or SPAN 202. Prerequisites: SPAN 102.

**SPAN 212 - Intermediate Oral Practice II (COM) Credits: 2**

Conversational work, oral reports. May be taken concurrently with SPAN 202 Prerequisites: SPAN 102.

**SPAN 296 - Field Experience Credits: (1-6)****SPAN 308 - Spanish for the Health Professions Credits: (2-3)**

The course will build on the student's knowledge of the Spanish language with a specific emphasis on the language a health professional will need when communicating with a patient. Medical terminology, anatomy, personal information and expressions of feelings will be at the core of the course. The course will also address related cultural issues. Prerequisites: This course will require two years of college Spanish or written permission from the Department.

**SPAN 310 - Practical Language Skills Credits: 3**

This course is required of all Spanish Majors and Minors. It focuses on many of the more difficult basic grammatical points (e.g., ser/estar, preterito/imperfecto and the uses of the subjunctive) as well as more advanced structures. Prerequisites: SPAN 202

**SPAN 330 - Reading and Writing for Communication Credits: 3**

Development of reading and writing proficiency through examination of writings from the Spanish-speaking world. Emphasis on vocabulary needed to read and discuss literary and authentic periodistic readings. Introduction to research methods will also be included. Prerequisites: SPAN 310 or concurrent.

**SPAN 340 - Phonetics Credits: 3**

Introduces the intermediate/advanced student of Spanish to the sound system of the language. Emphasis on developing the student's ability to understand and to produce sounds unique to the Spanish language. Prerequisites: SPAN 310 or concurrent.

**SPAN 350 - Spanish for Business Communication (COM) Credits: 3**

An introduction to the Spanish language of everyday business dealings and an overview of practical and relevant information necessary for people doing business in Spanish-speaking countries. Prerequisites: SPAN 202.

**SPAN 353 - Intro to Spanish Literature I (COM) Credits: 3**

Introduction to Spanish literature through reading and discussion. Prerequisites: SPAN 202.

**SPAN 355 - Introduction to Latin-American Literature I (COM) Credits: 3**

Introduction to Spanish American literature through readings with discussion in Spanish. Prerequisites: SPAN 202.

**SPAN 386 - Service Learning Credits: 1-4**

Service learning involves the integration of academic learning, relevant service with community partners, purposeful civic engagement and structured reflection for the purpose of enriching the learning experience and increasing student involvement in community service. Notes: Credit will count toward elective credits for major or minor.

**SPAN 396 - Field Experience Credits: (1-6)**

**SPAN 415 - Extensive Reading in Spanish Credits: 1** This course will allow students to do extensive reading at their own level and according to individual interests. The course will include writing, conversation and grammar review.

**SPAN 433 - Spanish Civilization and Culture (COM) (AW) Credits: 3**

Geography, history, politics, and arts of Spain.

**SPAN 435 - Latin American Civilization and Culture (AW) Credits: 3**

Geography, history, politics, and arts of Latin America. Prerequisites: SPAN 310.

**SPAN 437 - Topics in Film Studies Credits: 3**

Selected film studies topics in Spanish and/or Latin American Cinemas. The course is taught in Spanish and the films are generally viewed in Spanish with English subtitles. May be repeated as topics change.

**SPAN 443 - Linguistics Credits: 3**

An in-depth study of Spanish linguistics; may include advanced phonetics, syntax, aspects of the history of the Spanish language and the varieties of Spanish spoken throughout the world. Prerequisites: SPAN 310, SPAN 330, and another upper level Spanish course

**SPAN 444 - Introduction to Translation Credits: 3**

An introduction to the principles and practice of translating a variety of text types from Spanish to English and from English to Spanish. Prerequisites: SPAN 310, SPAN 330, and another upper division course

**SPAN 476 - 19th and 20th Century Spain Credits: 3**

Selected literary and cultural studies topics from 19th and 20th Century Spain. Topics may include themes, such as the Spanish Civil War; movements, such as Modernismo or the Movida; genres, authors, or artists. Prerequisites: SPAN 310, or consent. Notes: May be repeated as topics change.

**SPAN 484 - 19th and 20th Century Latin America Credits: 3**

Selected literary and cultural studies topics from 19th and 20th Century Latin America. Topics may include themes, such as the wars of independence; movements, such as the Boom; genres, authors, or artists. Prerequisites: SPAN 310, or consent. Notes: May be repeated as topics change.

**SPAN 486 - Early Modern Spain Credits: 3**

Selected literary and cultural studies topics from 16th and 17th century Spain. Topics may include themes, such as Muslims in Spain; movements, such as the Baroque; genres, authors, or artists. May be repeated as topics change.

**SPAN 491 - Independent Study (COM) Credits: (1-3)****SPAN 492 - Topics (COM) Credits: (1-3)****SPAN 496 - Field Experience Credits: (1-6)****SPAN 591 - Independent Study (COM) Credits: (1-3)****SPAN 592 - Topics Credits: (1-4)****SPCM (Speech Communication)****SPCM 101\* - Fundamentals of Speech (COM) Credits: 3**

Introduces the study of speech fundamentals and critical thinking through frequent public speaking practice, including setting, purpose, audience, and subject. Notes: \* Course meets SGR #2

**SPCM 109 - First Year Seminar - Communication Studies and Theatre\*\* Credits: 2**

First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\*Course meets IGR #1

**SPCM 201 - Interpersonal Communication (COM) Credits: 3**

Studies modes of interpersonal communication through readings, and experiential discussions of the role of interpersonal communications in common situations within our society.

**SPCM 205 - Communication Studies Credits: 3**

An overview of the communication discipline, theory, and practice. Prerequisites: Advanced Placement in Speech or consent.

**SPCM 215 - Public Speaking (COM) \* Credits: 3**

Sharpens students skills in platform speaking events, covering the preparation for and delivery of competitive speaking formats including oral interpretation, persuasive, expository, impromptu, extemporaneous, and after dinner speaking. Notes: \* Course meets SGR #2

**SPCM 222 - Argumentation and Debate (COM) \* Credits: 3**

Explores argument as a communication activity, construction sound arguments in a variety of venues and analyzing the contribution of argument to public dialogue on contemporary issues. Notes: \* Course meets SGR #2

**SPCM 281 - Speech and Debate Activities (COM) Credits: (1-4)**

Initiates active participation in competitive public speaking, including debate, oral interpretation, and non-competitive public performances.

**SPCM 305 - Communication Research (COM) (AW) Credits: 3**

An exploration of basic theoretical and practical principles of quantitative and qualitative research methods in the study of communication. Students learn to form research questions; work with resources such as academic journals, popular culture, and the internet; use recognized research formats and write research proposals.

**SPCM 320 - Communication in Interviewing (COM) Credits: 3**  
Provides an in-depth study of the interviewing process, including information gathering, persuasion, appraisal, and employment interviews, emphasizes theoretical knowledge from the perspectives of both the interviewer and interviewee, as well as skill development in interviewing techniques.

**SPCM 340 - Oral Interpretation of Literature (COM) Credits: 3**  
Examines the theory and practice of the performance of texts, the artistic, aesthetic, and carefully considered sharing of our personal understanding of literary selection, involving analysis, planning, rehearsing, and effective sharing of meaning with an audience.

**SPCM 405 - Theories of Communication (COM) Credits: 3**  
Examines communication theories and philosophies, emphasizing clarification through theory of daily communication processes, and relating theory to traditional and developing research methods.

**SPCM 410-510 - Organizational Communication (COM) (AW) Credits: 3**  
Explores communication processes in organizational contexts, theories of leadership, decision making and conflict, the application of principles that facilitate communication in organizations, and other selected topics.

**SPCM 415 - Communication and Gender (COM) Credits: 3**  
A study of gender theories as well as gendered communication practices within the contexts of interpersonal and organizational relationships and social and cultural forces. Cross-Listed: WMST 415

**SPCM 416-516 - Rhetorical Criticism (COM) Credits: 3**  
Evaluates American speakers from colonial to contemporary times.

**SPCM 417 - Political Communication (COM) Credits: 3**  
Studies the rhetoric of selected political figures, movements, and campaigns that have changed lives and culture. Students develop an understanding of rhetorical strategies and their cultural impact within public life.

**SPCM 434 - Small Group Communication (COM) Credits: 3**  
Explores prominent concepts and theories of human small group interaction, cultivating critical assessments of communication strategies in task, social, and therapeutic groups.

**SPCM 440-540 - Health Communication Credits: 3**  
This course will examine the contexts and processes of communication about health, focusing on how professionals, patients, and practitioners interact in ways that constitute and influence health and medicine.

**SPCM 441-541 - Health Communication Research Methods Credits: 3**  
Creation of evidence-based communication interventions to address the health needs of communities. The course requires students to identify contemporary health needs, select appropriate forms of health communication intervention, develop intervention messages and create a plan for assessing effectiveness of interventions. Students will also learn how to collect, analyze and interpret data using techniques such as surveying, interviewing, and moderating focus groups.

**SPCM 460 - Family Communication (COM) Credits: 3**  
Studies systems of relational communication in a variety of family contexts, with particular emphasis on stability, continuity and change. The role of family in personal, social, cultural development is studied, as well as changing family dynamics of power, myth, ritual, and connection.

**SPCM 465 - Capstone Course in Speech Communication Credits: 3**  
An in-depth, cumulative study of the theory, research and methods in the Speech Communication discipline. Incorporates intensive reflection, research and writing components to provide the student with an opportunity to demonstrate synthesis and mastery of discipline content, as well as the principles and practices of portfolio and resume building.

**SPCM 470 - Intercultural Communication (COM) (G) Credits: 3**  
A study of theoretical dimensions of intercultural communication as well as specific characteristics of intercultural study. Emphasis is placed on complex, mindful, creative and invitational communication, which welcomes diversity and its richness.

**SPCM 476 - 7-12 Speech Methods Credits: 3**  
Problems of the speech teacher. Curriculum, instructional materials, and methods.

**SPCM 482-582 - Travel Studies Credits: (1-5)**  
This travel study course is designed to provide extra-mural educational opportunities, approved and directed by a faculty member in Communication Studies Theatre. It may be in cooperation with faculty and administrators of other institutions. Students will be involved in hands-on activities and design educational activities for presentation at selected locations as well as SDSU. Includes pre-travel orientation, post travel self-evaluation, and a written report.

**SPCM 491-591 - Independent Study (COM) Credits: 1-3**  
**SPCM 492-592 - Topics (COM) Credits: (1-5)**  
**SPCM 494 - Internship (COM) Credits: (1-12)**  
**SPCM 605 - Current Approaches to Communication Credits: 3**  
**SPCM 700 - Instructional Methods in Communications Credits: 3**  
**SPCM 787 - Research Methods in Speech Communication Credits: 3**  
**SPCM 791 - Independent Study (COM) Credits: (1-2)**  
**SPCM 792 - Topics (COM) Credits: (1-3)**  
**SPCM 798 - Thesis (COM) Credits: (1-7)**

## **SPED (Special Education)**

**SPED 300 - Students With Exceptionalities (COM) Credits: 3**  
Characteristics and needs of exceptional individuals including review of special education legislation and special methods focusing on elementary level students with special needs.

**SPED 401 - Introduction to Educating Secondary Students with Disabilities (COM) Credits: 1**  
An introduction to the characteristics and needs of exceptional individuals including review of special education legislation and focusing on middle and secondary level students.

**SPED 405 Educating Secondary Students with Disabilities Credits: 2**  
An introduction to the entire field of education for children with exceptional needs and is required by all middle school and secondary school majors. Students will identify etiology, classification, and educational programming practices for individuals with any identified disabilities. Students will also determine which local, state, and national administrative and legislative provisions support children with these conditions. Computerized IEP forms and other productivity tools will be reviewed.

**SPED 450 - Gifted and Talented (COM) Credits: 3**  
This course focuses on the nature and needs of the gifted child.

**SPED 451 - Curriculum & Instruction in Gifted Credits: 3**  
This course focuses on curriculum, development and teaching strategies for the gifted.

**SPED 452 - Nature of Creativity and Assessment Credits: (2-3)**

This course focuses on the nature of creativity and assessment of creativity.

**STAT (Statistics)****STAT 281 - Introduction to Statistics (COM) Credits: 3**

A study of descriptive statistics including graphs, measures of central tendency and variability and an introduction to probability theory, sampling and techniques of statistical inference with an emphasis on statistical applications. Prerequisites: MATH 102 or 115 or 120 or 121 or 123 or 125.

**STAT 284 - Biostatistics for the Health Sciences Credits: 3**

Introduction to probability theory, discrete and continuous distributions, sampling distributions and the Central Limit Theorem with general principles for statistical inference and applications of random sampling to hypothesis testing, confidence limits, and regression, all in the context of the health sciences and practice. Prerequisites: MATH 121 and permission of instructor, or MATH 123 and permission of instructor.

**STAT 381 – Intro to Probability and Statistics (COM) Credits: 3**

Introduction to probability theory, discrete and continuous distributions, sampling distributions and the Central Limit Theorem with general principles for statistical inference and applications of random sampling to hypothesis testing, confidence limits, and regression. Prerequisites: MATH 125.

**STAT 410-510 - SAS Programming I Credits: 3**

Base SAS language and procedures for accessing data, manipulating data, creating data structures, managing data, producing graphs, producing reports, and error handling.

**STAT 412-512 - SAS Programming II Credits: 3**

Accessing data using SQL, macro processing, advanced programming techniques including hash objects and array processing, and data simulation. Prerequisites: STAT 410 or STAT 510.

**STAT 414-514 - R Programming Credits: 1**

An introduction to the R programming language. Topics will include the R programming language and environment, preparation and summarization of data, presentation of data, programming basics, and additional selected advanced topics. Prerequisites: CSC 150 (required for undergraduates only)

**STAT 435-535 - Applied Bioinformatics Credits: 2**

This practical course is designed for students with biological background to learn how to analyze and interpret genomics data. Topics include finding online genomics resources, BLAST searches, manipulating/editing and aligning DNA sequences, analyzing and interpreting DNA microarray data, and other current techniques of bioinformatics analysis. Prerequisites: STAT 281 or STAT 381.

**STAT 441-541 - Statistical Methods II Credits: 3**

Analysis of variance, various types of regression, and other statistical techniques and distributions. Prerequisites: STAT 281, or MATH/STAT 381

**STAT 445-545 - Nonparametric Statistics Credits: 3**

Covers many standard nonparametric methods of analysis. Methods will be compared with one another and with parametric methods where applicable. Attention will be given to: (1) analogies with regression and ANOVA; (2) emphasis on construction of tests tailored to specific problems; and (3) logistic analysis. Prerequisites: STAT 281, STAT 381.

**STAT 451-551 - Predictive Analytics I Credits: 3**

Introduction to Predictive Analytics. This course will examine the fundamental methodologies of predictive modeling used in financial and predictive modeling such as credit scoring. Topics covered will include logistic regression, tree algorithms, customer segmentation, cluster analysis, model evaluation, and credit scoring. Prerequisites: STAT 482-582 or STAT 786

**STAT 460-560 - Time Series Analysis Credits: 3**

Statistical methods for analyzing data collected sequentially in time where successive observations are dependent. Includes smoothing techniques, decomposition, trends and seasonal variation, forecasting methods, models for time series: stationarity, autocorrelation, linear filters, ARMA processes, non-stationary processes, model building, forecast errors and confidence intervals. Prerequisites: STAT 482/582.

**STAT 482-582 - Probability and Statistics II Credits: 3**

Introduction to statistical design, one-way completely randomized design, testing contrasts and multiple comparison procedures, simple and multiple linear regression, factorial designs, fractional factorial designs and mixed models. SAS software is used extensively. Prerequisites: MATH/STAT 381.

**STAT 490-590 - Seminar Credits: (1-2)****STAT 491-591 - Independent Study Credits: (1-3)****STAT 492-592 - Topics (COM) Credits: (1-3)****STAT 498 - Undergraduate Research/Scholarship Credits: 1-3****STAT 715 - Multivariate Analysis I Credits: 3****STAT 721 - Statistical Computing and Stimulation Credits: 3****STAT 731 - Biostatistics Credits: 3****STAT 736 - Bioinformatics Credits: 3****STAT 742 - Spatial Statistics Credits: 3****STAT 751 - Predictive Analytics II Credits: 3****STAT 756 - Quantitative Genetics Credits: 3****STAT 760 - Quality Control Credits: 3****STAT 761 - Design of Experiments I Credits: 3****STAT 762 - Design of Surveys Credits: 3****STAT 784 - Statistical Inference I Credits: 3****STAT 785 - Statistical Inference II Credits: 3****STAT 786 - Regression Analysis I Credits: 3****STAT 787 - Regression Analysis II Credits: 3****STAT 788 - Research Paper Credits: 1-2****STAT 790 - Seminar Credits: 1****STAT 791 - Independent Study Credits: (1-3)****STAT 792 - Topics Credits: (1-3)****STAT 798 - Thesis Credits: 1-7****THEA (Theatre)****THEA 100 - Introduction to Theatre \* (COM) Credits: 3**

Introductory course designed to enhance the student's enjoyment and understanding of the theatrical experience. Play readings, films, and demonstrations acquaint the students with the history and techniques of the theatrical art. Notes: \* Course meets SGR #4

**THEA 131 - Introduction to Acting \* (COM) Credits: 3**

Designed for the non-major interested in exploring acting as a means of improving communication skills and self-expression. Includes specific process for role development, text analysis, and opportunities to practice the craft and art of acting. Notes: \* Course meets SGR #4

**THEA 135 - Theatre Activities-Acting Credits: 1**

Credit earned by active participation in acting roles. May be repeated for a total of 8 credits. Prerequisites: Consent.

**THEA 145 - Theatre Activities-Technical Credits: 1**

Credit earned by backstage and crew work. May be repeated for a total of 8 credits. Prerequisites: Consent.

**THEA 191 - Independent Study Credits: 1**  
P, consent of instructor and department chair.

**THEA 240 - Stage Costuming (COM) Credits: 3**  
Introduction to the equipment, materials, and techniques of theatrical costuming. Includes practical projects in the use of stitching techniques, pattern making, fabric modification, and costume crafts.

**THEA 241-241L - Stagecraft and Lab (COM) Credits: 3**  
Theory and practical experience in theatre production. Lab work on two major theatre productions. Accompanies THEA 241. Corequisites: THEA 241L.

**THEA 243 - Make-Up (COM) Credits: 3**  
Principles of theatrical makeup techniques, including character analysis and practical application.

**THEA 250 - Play Analysis Credits: 3**  
Study and application of principles of playscript analysis and production conceptualization.

**THEA 351 - Directing (COM) Credits: 3**  
Introduction to the techniques and concerns of the stage director, including composition, movement, and tempo-rhythm. Script analysis and scene presentation form the core of the course.

**THEA 355 - Children's Theatre (COM) Credits: 3**  
Children's theatre is an art form. Students become proficient in organization, design, and presentation of a children's theatre program.

**THEA 375 - Theatre Arts Management Credits: 3**  
Emphasis on theory and practice of Arts Management as an important feature of the Theatre Arts discipline. Students will become proficient in the organization, promotion, budgeting, and operation of a performing arts program.

**THEA 435 History of American Musical Theater Credits: 3**  
History and development of American musical theatre from 1866 to the present.

**THEA 441 - Scene Design (COM) Credits: 3**  
Principles and practices of scenic design, including the scenic image, movement patterns, color, form, and rendering techniques.

**THEA 443 - Costume Design Credits: 3**  
Principles and practices of costume design, including the fundamentals of play analysis as applied to character statement, historical research, and rendering technique.

**THEA 445-445L - Lighting and Lab (COM) Credits: 3**  
Basic principles and practices of lighting design, including basic electricity, script analysis, color, and directionality. Accompanies THEA 445. Corequisites: THEA 445L-THEA 445.

**THEA 455 - Advanced Acting (COM) Credits: 3**  
Textual analysis, movement and acting styles for the theatre.

**THEA 460-560 - History of Theatre Credits: 3**  
Periods, theatres, and representative dramatic literature from the classical to the present day.

**THEA 470 - Portfolio and Resume Building Credits: 3**  
Principles and practices of portfolio and resume building for acting and technical theatre.

**THEA 480 - Summer Theatre Credits: (1-5)**  
Credit earned by participation with Prairie Repertory Theatre Company. May be repeated to a total of 10 credits, but only 5 may be applied to a minor. Prerequisites: Consent.

**THEA 491 - Independent Study (COM) Credits: 1-3**  
P, consent of instructor and department chair.

**THEA 492-592 - Topics (COM) Credits: 1-5**

**THEA 494-594 - Internship (COM) Credits: 0-12**  
P, consent.

**THEA 592 - Topics Credits: 1-3**

**THEA 791 - Independent Study Credits: 1-2**

## UC (University College)

**UC 011 - Strategies for Academic Success Credits: 1**

UC 011 is an early intervention course designed to assist students who have been readmitted following suspension to achieve greater success. Through utilization of strategies which strengthen skills required for academic, professional, and personal accomplishments, the course will empower students to become proactive, responsible self-advocates for their academic careers and personal goals.

**UC 102-102L - Exploratory Studies and Lab Credits: 2**

This course provides guidance and experiences in decision-making, self-assessment, academic exploration and career planning for students who are uncertain of their choice of major and are in the Exploratory Studies program. Both lecture and lab experiences are included with the goal of student selection of a major by the end of the first-year of study.

**UC 109 - First Year Seminar\*\* Credits: 2**

First-year seminar course designed to introduce students to academic success strategies including the development of critical thinking and study skills, identification of campus resources, guidance in academic planning and engagement, time management and goal setting. Students will also investigate wellness topics, contemporary issues, diversity, and the land-grant mission of SDSU. In addition, this course is designed to expose students to the discipline-specific careers and their role in society. Notes: \*\* Course meets IGR #1

**UC 143 - Mastering Lifetime Learning Skills Credits: 2**

Instruction to enhance learning in a college environment and throughout life. Topics include organizational and time management skills, strategies to improve learning, a recognition of learning styles and creating positive learning environments.

**UC 282 - Tutoring the College Student Credits: 1-3**

Instruction to train peer tutors on tutoring techniques, roles in the tutoring relationship, and peer leadership. Areas of emphasis include tutor and tutee responsibilities, confidentiality, leading tutoring sessions, communication skills, learning styles, tutoring diverse student populations, study skills, and tutoring skills. Prerequisites: Written consent (must be employed as a tutor at SDSU)

**UC 286 - Service Learning (COM) Credits: 1-12**

Service learning involves the integration of academic learning, relevant service with community partners, purposeful civic engagement and structured reflection for the purpose of enriching the learning experience and increasing student involvement in community service. The academic study may be in any discipline. Open to all majors.

**UC 299 - Transition Year Seminar Credits: 2-3**

Transition-year seminar course is designed to assist returning students (non-traditional, adult and transfer) with transitioning to the university. The course will address academic success strategies, identification of university resources, guidance in academic planning and engagement, on-going time management and

goal-setting. Students will also further investigate wellness topics, contemporary issues, diversity and the land-grant mission of SDSU.

**UC 382 -Theory & Practice of College Peer Tutoring Credits: 1-3**

Instruction to train peer tutors on advanced tutoring skills and techniques and on practices for facilitating peer helping relationships. Topics will build on those covered in the Level I tutor training course. Areas of emphasis include role modeling; intercultural communication; probing questions; referral skills; and using resources, critical thinking, educational theory, and leadership theory. Prerequisites: UC 282 AND Written consent (must be employed as a tutor at SDSU)

**UC 482 - Applied Leadership Training for Tutors Credits: 1-3**

Instruction to train peer tutors on tutoring techniques, roles in the tutoring relationship, and peer leadership. Areas of emphasis include mentoring new tutors, role modeling, leadership, assertiveness, group dynamics, group management, planning a workshop, and conducting meetings. Prerequisites: UC 382 and Written consent (must be employed as a tutor at SDSU)

**UC 489 - Transition to Careers Credits: 1**

Junior and Senior level students will learn strategies required to make a successful transition from student life to career. The course will include information on job search skills, resume development, professional ethics, lifelong learning, workplace behavior and diversity issues.

## VET (Veterinary Science)

**VET 103 - Introduction to Veterinary Medicine Credits: 1**

Information will be provided concerning various aspects of veterinary medicine including: pre-veterinary education requirements, veterinary colleges, professional opportunities in veterinary medicine, and allied fields associated with veterinary medicine, governmental regulations, animal welfare, future trends, and other topics.

**VET 183 - Veterinary Medical Terminology Credits: 1**

This course is a study of the technical language used in Veterinary Medicine and Animal Agriculture with a focus on learning the major components (prefixes, suffixes and combining root terms) of veterinary medical terms and how to put the components together to form useful medical terms. Species-specific terminology, along with organ system-specific terminology, is also presented. Students will be expected to learn and understand the definitions of the veterinary medical terms, and to write and interpret paragraphs containing veterinary medical terms.

**VET 223-223L - Anatomy and Physiology of Domestic Animals and Lab Credits: 4**

This course will familiarize students with the anatomical structures and physiological functions of the organ systems of domestic animals. Similarities in the structure and function of organ systems of various domestic animals will be emphasized. Prerequisites: CHEM 108 or 120 or 326. Corequisites: VET 223L-223.

**VET 403-503 - Animal Diseases and Their Control Credits: 3**

This course will discuss the various factors that contribute to the development of animal disease and how these factors can be manipulated to prevent or control disease. Emphasis will be placed on understanding disease control concepts and how production and management techniques influence the expression of disease in domestic animals and wildlife.

**VET 424-524 - Medical and Veterinary Virology Credits: 3**

Basic course discussing the characterization, structure, and replication of viruses and the pathogenesis of viral disease in man and animals. Prerequisites: MICR 433 Cross-Listed: MICR 424-524.

**VET 476-576 - Advanced Mammalian Physiology Credits: 4**

An advanced study of the physiological mechanisms utilized by mammals to regulate body functions with the nervous and endocrine systems, to acquire and use chemical energy from their environment, and to integrate the functions of the organs' systems to maintain the health of the animal. Emphasis is placed on applying physiological concepts and principles to solve problems. Previous courses in anatomy, physiology, and biochemistry are recommended. Prerequisites: BIOL 221 or VET 223 or Instructor written consent Cross-Listed: BIOL 476/576

**VET 491-591 - Independent Study Credits: (1-3)**

**VET 492-592 - Topics Credits: (1-3)**

**VET 493 - Workshop Credits: 1-4**

**VET 494 - Internship (COM) Credits: (1-12)**

**VET 496 - Field Experience (COM) Credits: (1-12)**

**VET 497 - Cooperative Education (COM) Credits: (1-12)**

**VET 498 - Undergraduate Research/Scholarship Credits: 1-4**

**VET 788 - Master's Research Problems Credits: (1-3)**

**VET 791 - Independent Study Credits: (1-4)**

**VET 792 - Topics Credits: (1-3)**

**VET 793 - Workshop Credits: (1-4)**

## WEL (Wellness)

**WEL 100-100L - Wellness for Life and Lab (COM) Credits: 2**

This course introduces the importance and holistic nature of the six dimensions of personal wellness and fitness. The course will provide the necessary knowledge and skills to make informed decisions which will lead to the development of a healthy lifestyle. Various issues related to the dimensions of wellness will be discussed. Students will have the opportunity to assess their current health status and identify potential risk factors. This laboratory experience applies wellness concepts taught in WEL 100 lecture. Students will gain a level of understanding about one's personal fitness level as well as learn a variety of skills to enhance personal wellness. Corequisites: WEL 100L-WEL100

**WEL 192 - Topics Credits: 1**

## WL (Wildlife & Fisheries Sciences)

**WL 190 - Seminar: Opportunities Credits: 1**

**WL 220 - Intro to Wildlife and Fisheries Management Credits: 3**

An introduction to the basic principles used in the management of wildlife and fish populations, their habitats, and their human users. The course is directed toward the presentation of general concepts that are integral to understanding the discipline.

**WL 230 - Wildlife and Fisheries Techniques Credits: 3**

Techniques involved with the collection and analysis of wildlife and fish population and habitat information and data analysis are the primary contents of the course. Prerequisites: WL 220.

**WL 291 - Independent Study Credits: (1-3)**

**WL 302 - Animal Behavior Credits: 3**

Animal behavior from many aspects, including communication, social organization, orientation, imprinting, courtship and mating, agonistic behavior, control systems, and the evolution of behavioral patterns. Prerequisites: BIOL 101 or BIOL 151 Cross-Listed: ZOO 302

**WL 355-355L - Mammalogy and Lab Credits: 3, 0**

Identification of game, fur bearing, and small mammals; taxonomy of these groups, life histories and habits, preparation of study skins and skeletons; special reference to those occurring in Northern Great



Plains area. Laboratory experience that accompanies WL 355. Prerequisites: BIOL-101 or BIOL-151 Corequisites: WL 355L-355L Cross-Listed: ZOO 355-355L

**WL 361 - Survey of Amphibians and Reptiles Credits: 2**

This course provides an overview of amphibians and reptiles; lecture topics will primarily focus on life history with some information provided on identification. Prerequisites: BIOL 101-101L\* or BIOL 151-151L\*

**WL 363-363L - Ornithology and Lab(COM) Credits: 4**

Identification of bird species; life histories, ecology, habits, and special structural and physiological adaptations of various groups. Laboratory experience that accompanies WL 363. Prerequisites: BIOL/NRM 311 Corequisites: WL 363L-363.

**WL 367-367L - Ichthyology and Lab Credits: 3**

Characteristics and relationships of fishes; adaptations, behavior, ecology, evolution, systematics, and zoogeography of fishes; and, identification and life histories of fishes. Corequisites: WL 367L-WL 367.

**WL 400-400L -Habitat Conservation and Restoration/Lab Credits:3**

An introduction to major land-use practices, how these practices and conservation programs influence wildlife production, and alterations or manipulations of habitat to achieve specific wildlife conservation and management goals. Emphasis will be placed on how the management of other resources can be integrated with those of wildlife. Prerequisites: WL 220 and WL 230. Corequisites: WL 400L-WL 400.

**WL 411-411L - Principles of Wildlife Mgmt and Lab Credits: 3**

Application of ecological principles of the management of wild birds, mammals, and herps. History and development of wildlife management as a science; characteristics of, and factors affecting wildlife populations; techniques and theories of management; and, wildlife conservation. Prerequisites: WL 363, ZOO 355 Corequisites: WL 411L-WL 411.

**WL 412-412L - Principles of Fisheries Mgmt and Lab Credits: 3**

Fisheries management as a science with an emphasis on freshwater fishes and ecosystems. Emphases include biota, habitat, and human management. Prerequisites: WL 220, WL 230 or department written consent. Corequisites: WL 412L-WL 412.

**WL 415-415L/515-515L - Upland Game Ecology and Management and Lab Credits: 3**

Upland game birds and mammals as components of ecosystems. Effects of farming; industry; social change; technology; and federal, state, and private programs on game and non-game species. Techniques for individual species management. Prerequisites: WL 363-363L Corequisites: WL 415L-415L/515L- 515.

**WL 417-417L/517-517L - Large Mammal Ecology and Management and Lab Credits: 3**

Large mammal life histories and distributions. Relationships of nutrition, reproduction, interspecific competition, and predation to management of large mammal habitat and harvest. Techniques for research and management of large mammals. Prerequisites: WL 355-355L Corequisites: WL 417L-417/517L-517.

**WL 419-419L/519-519L - Waterfowl Ecology and Management and Lab Credits: 3**

Analysis of ecological and socio-economic factors affecting waterfowl habitat and populations. State and federal programs affecting wetland drainage and preservation. Field inspection of waterfowl habitat in the north-central states. ( Prerequisites: Department written consent for WL 419 only). Corequisites: WL 419L-WL 419/WL 519L-WL 519.

**WL 420-420L - Wildlife Law and Enforcement & Lab Credits: 3**

Evolution of laws relating to fish and wildlife, enforcement of wildlife law, federal versus state jurisdiction, types of violations, tribal fishing and hunting rights, and other topics. Guest speakers from state, federal, and local law enforcement agencies. Prerequisites: WL 220 and WL 230 . Corequisites: WL 420-WL 420L. Notes: Offered Fall semester on even numbered years.

**WL 421/521 - Grassland Fire Ecology Credits: 3**

The course is designed to describe the ecological effects of fire on grassland ecosystem components, from soil and vegetation to wildlife and cattle. It also provides insight into the history of fires, the people who use them and why, the parts of a fire, how fires behave in relation to fuel and weather, and the procedures for safely conducting prescribed burns. Cross-Listed: RANG 421-521.

**WL 425-425L/525-525L - Wildlife Nutrition & Disease & Lab Credits: 3**

Emphasis is placed on nutrient requirements and acquisition, conditions and characteristics of important diseases, and their management implications. Focal areas include the biochemical, physiological, and ecological bases for studying nutrition and disease; nutrition and disease relationships to wildlife and habitat; protein, energy, vitamin, and mineral requirements and their relationships to diseases; and strategies for satisfying nutritional requirements. Prerequisites: (Department written consent for WL 425 only.) Corequisites: WL 425L-WL 425/WL 525L-WL 525.

**WL 427-427L/527-527L - Limnology of Lakes & Streams and Lab Credits: 4**

Physical, chemical, and biological characteristics of lentic and lotic freshwater ecosystems. Analysis of and methods for quantifying processes that function in freshwater systems. Prerequisites: Written consent. Corequisites: WL 427L-WL 427/WL 527L-527.

**WL 429-429L/529-529L - Fish Ecology and Lab Credits: 2**

Study of fish as an organism and the interrelations of fish with other organisms and with the environment. Prerequisites: Department written consent. Corequisites: WL 429L-WL429/WL 529L-WL 529.

**WL 430-430L - Human Dimensions in Wildlife and Fisheries and Lab (G) Credits: 3**

Interactions among various stakeholders, resource management agencies, and the wildlife and fisheries resources are studied. Topics such as public attitudes and expectations; agency structure, administration, and policy; tangible and intangible values of fishes, wildlife, and their habitats; the concept of biophilia as motivation for resource use; public relations; the philosophy and ethics of resource use and management; and, wildlife and fisheries law and its enforcement are included. Corequisites: WL 430L-WL 430.

**WL 431-431L - Advanced Fisheries Management and Lab Credits:2**

Management of small, public, and private water bodies through manipulation of habitat, organisms, and human users. The course will address water body design and construction, limnology, water quality, biological production, fish management, troubleshooting, and pond opportunities. Prerequisites: WL 412 Corequisites: WL 431L-WL

**WL 440-440L - Fisheries and Wildlife Biometrics & Lab Credits: 2**

Analysis and interpretation of fisheries and wildlife data that relate to assessment of research and management activities. Computer software application will be stressed. Prerequisites: STAT 281, or department written consent. Corequisites: WL 440L-WL 440.

**WL 490 - Seminar Credits: 1**

**WL 491 - Independent Study Credits: (1-3)**

**WL 492-492L/592-592L - Topics and Lab Credits: (1-3)**

**WL 494 - Internship Credits: (1-12)**

**WL 496 - Field Experience (COM) Credits: (1-12)**

**WL 497 - Cooperative Education (COM) Credits: (1-12)**  
**WL 712-712L - Wetland Ecology and Mgmt and Lab Credits: 3**  
**WL 713-713L - Animal Population Dynamics and Lab Credits: 3**  
**WL 714-714L - Fish Structure and Function and Lab Credits: 3**  
**WL 715-715L - Wildlife Research Design and Lab Credits: 3**  
**WL 717-717L - Aquatic Trophic Ecology and Lab Credits: 3**  
**WL 718-718L - Ecology of Aquatic Invertebrates and Lab Credits: 3**  
**WL 719-719L - Stream Ecology and Mgmt and Lab Credits: 3**  
**WL 720-720L - Quantitative Fisheries Science and Lab Credits: 3**  
**WL 721-721L - Natural Resource Modeling and Lab Credits: 3**  
**WL 722-722L - Natural Resource Policy and Admin & Lab Credits: 3**  
**WL 723-723L - Fisheries Ecology and Mgmt and Lab Credits: 3**  
**WL 790 - Seminar Credits: 1**  
**WL 791 - Independent Study Credits: (1-3)**  
**WL 792 - Topics Credits: (1-3)**  
**WL 798 - Thesis Credits: (1-7)**  
**WL 898D - Dissertation Credits: (1-12)**

## WMST (Women's Studies)

**WMST 101 - Introduction to Women's Studies \* \*\* Credits: 3**  
 Exploration of women's issues in both historical and contemporary contexts, including introduction to feminist theory. Notes: \* Course meets SGR #3 or \*\* IGR Goal #2.

**WMST 248 - Women in Literature \*\* Credits: 3**  
 Study of literature by and about women. Course materials may range from early times to the present and may also include non-American literature. Cross-Listed: ENGL 248. Notes: This course meets IGR Goal 2.

**WMST 250 - Development of Human Sexuality Credits: 3**  
 A basic course which explores the biological, behavioral, and cultural aspects of human sexuality. The course focuses on individual sexual development, interpersonal aspects of sexual behavior and social/cultural values and beliefs about sexuality and sex roles throughout the lifespan. Cross-Listed: HDFS 250.

**WMST 253 - Socio-Psychological Aspects of Dress Credits: 3**  
 Examination of clothing behavior from sociological, psychological and cultural perspectives. Cross-Listed: AM 253

**WMST 260 - Women's Health Issues Credits: 3**  
 This interdisciplinary course critically examines issues in women's health. Biological, socio-cultural, psychological, historical, and political processes that shape and define women's health and healthcare issues are explored.

**WMST 305 - Women and Politics Credits: 3**  
 This course explores a variety of perspectives in feminist political thought. Particular emphasis is placed on barriers women face in gaining access to political power in public and private institutions, both in American society and in global contexts. Cross-Listed: POLS 305.

**WMST 325 - Domestic and Intimate Violence Credits: 3**  
 A seminar focusing on the problems associated with violent behaviors in American households. Special attention will be devoted to the structural, cultural and social-psychological factors contributing to the abuse and battering of family members. In addition, the use of force as a problem solving mechanism will be examined. Cross-Listed: SOC 325.

**WMST 331 - Women and Religion Credits: 3**  
 The course examines what women have to say about religion and what religions have had to say about women, including a critical examination of traditional theological areas from the perspective of feminist theologians. Areas covered include women in the Bible, church history, and the contemporary church. Cross-Listed: REL 331

**WMST 349 - Women in American History Credits: 3**  
 This course will investigate the role of women in the history of the United States. It will attempt to discover what impact women had on the course of events. Selected women and their careers will be highlighted. Cross-Listed: HIST 349.

**WMST 350 - Women in World History Credits: 3**  
 This course will investigate the role of women in the history of the world beyond the US. It will attempt to discover what impact women had on the course of events. Selected women and their careers will be highlighted.

**WMST 362 - Indigenous Feminisms Credits: 3**  
 The course will examine feminism in indigenous communities around the world through the study of the personal and communal experiences of indigenous women. Topics will include colonial interactions with indigenous peoples and their impact on cultural concepts of gender roles, personhood, and leadership. Readings will draw from American Indian studies, critical pedagogy, education, gender studies, history, and literature. Cross-Listed: AIS 362

**WMST 367 - Psychological Gender Issues \*\* Credits: 3**  
 This course surveys the current theoretical and research issues in the development of gender and explores the impact of gender on the lives of women and men. Topics include societal and biological influences on psychological development, achievement motivation, sex roles, stereotyping, socialization, sexuality, and personality. Prerequisites: PSYC 101 or 102. Cross-Listed: PSYC 367. Notes: This course meets IGR Goal 2.

**WMST 392 - Topics Credits: 3**

**WMST 415 - Communication and Gender Credits: 3**  
 A study of gender theories as well as gendered communication practices within the contexts of interpersonal and organizational relationships and social and cultural forces.

**WMST 419-519 - Women in Media Credits: 3**  
 This course examines contributions of women to the mass media from colonial era to present. It also studies the portrayal of women by the news media and by advertising, and it studies the roles currently played by women in the media and in supporting areas of advertising and public relations. Cross-Listed: MCOM 419.

**WMST 420 - International Women's Issues Credits: 3**  
 A seminar on how the news media cover (or fail to cover) personal, social, political, and economic issues important to women across the world.

**WMST 483 - Sociology of Gender Roles Credits: 3**  
 Female and male roles in relation to one another in a changing world are the focus of this course. The nature of sex roles, their origin, and their variations over time and across cultures are examined. Cross-Listed: SOC 483.

**WMST 491 - Independent Study Credits: 1-4**  
 Prerequisites: WMST 101.

**WMST 492-592 - Topics Credits: 3**

## ZOOL (Zoology)

**ZOOL 305-305L - Insect Biology and Lab(COM) Credits: 3**  
 An introduction to the general biology and classification of insects. Course emphasis placed on taxonomy, methods of identification, and ecological role of insects. Students will become familiar with basic insect anatomy and morphology, classification of the order level with exemplary families that include Taxa of agricultural or environmental interest, and acquire an ability to sight recognize particular species that have agricultural, environmental, wildlife, and human/livestock

health importance. Field trips and a collection are required. Laboratory experience that accompanies ZOOLOGY 305. Prerequisites: MATH 102 or higher, and one of following: BIOL 103-103L, BOT 201-201L, or BIOL 153-153L. Corequisites: PS 305L-PS 305 or ZOOLOGY 305L-ZOOLOGY 305. Cross-Listed: PS 305-305L.

**ZOOLOGY 467-467L/567-567L - Parasitology & Lab Credits: 3**

The broad field of animal parasitology, including protozoa, helminths, and arthropods. Emphasis on identification, life histories, control, and economic and medical importance. Laboratory includes morphology and identification of representative groups of parasites, as well as techniques of diagnosis of parasitic disease. Laboratory experience that accompanies ZOOLOGY 467. Prerequisites: BIOL 101 or

BIOL 151. Corequisites: ZOOLOGY 467L-ZOOLOGY 467/ZOOLOGY 567L-ZOOLOGY 567. Cross-Listed: BIOL 467-567.

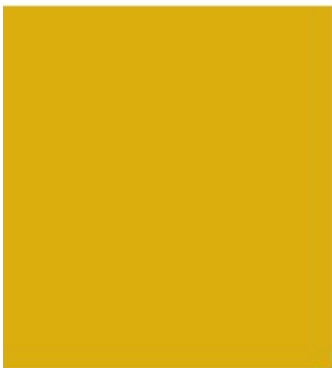
**ZOOLOGY 483-483L Developmental Biology & Lab Credits: 4**

Analysis of the processes of animal development beginning with the formation of female and male gametes (ova and sperm) and ending with organ differentiation. Evolutionary concepts of animal development, developmental genetics, and molecular biological approaches to the analysis of development. Laboratory experience that accompanies BIOL 483. Prerequisites: BIOL 151. Corequisites: ZOOLOGY 483L-ZOOLOGY 483.





# Student Services & Campus Facilities



- *Agricultural Experiment Station 352*
- *Alumni Association 352*
- *Animal Disease Research and Diagnostic Laboratory 352*
- *Crime Reports 353*
- *Diversity, Equity, & Community Office 353*
- *American Indian Education and Cultural Center 353*
- *Endowed Chairs 353*
- *Environmental Health & Safety Office 354*
- *Extension 354*
- *Facilities and Services 354*
- *Fees 354*
- *Tuition, Living, & Other Expenses 355*
- *Refunds 356*
- *Financial Assistance 356*
- *Foundation, SDSU 357*
- *Geographic Information Sciences Center of Excellence 358*
- *Information Technology Office 358*
- *Intercollegiate Athletics 358*
- *International Affairs Office 359*
- *Library, Hilton M. Briggs 359*
- *Logos, Seals, Caricatures, Wordmarks 359*
- *McCrary Gardens 360*
- *Museums/Collections 360*
- *Print Lab 360*
- *Student Affairs Division 360*
- *Teaching and Learning Center 364*
- *University Marketing and Communications 364*
- *Water & Environmental Engineering Research Center 365*
- *Water Resources Institute 365*



# Agricultural Experiment Station

---

The Agricultural Experiment Station is one of three activities at SDSU that define the Land-Grant University. The mission of the South Dakota Agricultural Experiment Station (SDAES) is to conduct research to enhance the quality of life in South Dakota through the beneficial use and development of human, economic, and natural resources.

Serving as South Dakota's Land-Grant Institution, SDSU is home to the premier research programs in the state. Research programs in SDAES directly support the teaching programs offered in the College of Agriculture and Biological Sciences and the educational programs delivered by the SD Cooperative Extension Service (SDCES). The SDAES extends the reach of the University through multi-state programs shared with other Land-Grant institutions that bring objective answers home to all South Dakotans. With an enduring mission of practical research, SDAES serves agriculture, enhances the quality of life, and brings economic development to South Dakota.

Research priorities are based in several theme areas relevant to South Dakota agriculture, including: biostress, agricultural production, natural resources and conservation, biotechnology, and biobased energy and industries.

SDAES provides a base of new knowledge and service to South Dakotans. This new knowledge is effectively used by farmers, ranchers, homemakers, industry, classroom instructors, and Extension educators throughout the state. Courses in the College of Agriculture and Biological Sciences and in the College of Education and Human Sciences are especially strengthened by this new knowledge.

## Alumni Association

---

The SDSU Alumni Association is an independent, not-for-profit corporation. This non dues association welcomes all graduates, former students, faculty, staff, friends of South Dakota State, as well as students, as members. The Alumni Association strives to direct and/or participate in an organized cooperative effort for the advancement, development, achievement, and honor of both South

Much of the SDAES research is done at Brookings; however, a considerable amount is conducted at several field stations and at the West River Agricultural Research and Extension Center at Rapid City. The field stations are maintained to conduct research designed to solve local or special problems. Beyond this, research on farms and ranches, in wildlife areas, in watersheds and with cooperating businesses and institutions results in scientific investigation being conducted in nearly every county of the state.

Research may be grouped in the following subject matter areas: livestock, crops and soils, community and public affairs, animal health, fertilizers, garden and orchard, home and consumer, water resources and irrigation, forestry, insects, farm machinery, marketing, business management, farm buildings, pollution, range and forages, fisheries, plant diseases, wildlife, sociology, and stress in plants, animals, and humans. Much of the research is integrated through the Biostress Mission.

Research is financed by State and Federal appropriations, industry grants, and Federal and State grants. Research results are published in Agricultural Experiment Station or Extension bulletins, scientific journals, and a quarterly publication, *Farm and Home Research*. Many of these publications are available from Extension Offices or the Experiment Station Bulletin Room on campus.

For information contact the Director, Daniel Scholl, Agricultural Experiment Station, SDSU, Box 2207, Brookings, SD 57007-0291, 605-688-4149 or e-mail: [sdsu.agexperimentstation@sdstate.edu](mailto:sdsu.agexperimentstation@sdstate.edu).

## Animal Disease Research and Diagnostic Laboratory

---

The South Dakota Animal Disease Research and Diagnostic Laboratory (ADRDL) is a public service laboratory that is totally integrated with the Veterinary and Biomedical Sciences Department. Career service personnel, professional diagnosticians and faculty operate the lab. The faculty is actively involved with the traditional roles of service (professional outreach), research and teaching/advising. State general funds and user fees pay for the Laboratory's operation. The Laboratory is a reference lab and only receives cases by referral from veterinarians or state officials. The ADRDL mission is to provide high quality veterinary diagnostic services and research as a means to promptly and accurately establish

Dakota State University and its more than 75,000 alumni. Each year the Alumni Association directs and/or participates in more than 125 events both on and off campus and publishes *STATE Magazine* which is distributed to their members at no cost. The Alumni Association can be reached at 605-697-5198, [alumni@statealum.com](mailto:alumni@statealum.com) or Box 515, Brookings, SD 57007. Or visit the web site at [www.statealum.com](http://www.statealum.com)

causes of animal health problems. Such diagnoses will aid attending veterinarians and health officials in the treatment, control, prevention, and surveillance of animal diseases to the benefit of the SD livestock industry, other animal owners, and society at large. The ADRDL is fully accredited by the American Association of Veterinary Laboratory Diagnosticians and is a member of the USDA National Animal Health Laboratory Network (NAHLN), as well as the Food Emergency Response Network (FERN). It is a select agent registered facility. The Director, David H. Zeman, can be contacted at 605-688-5172 or by e-mail: [david.zeman@sdstate.edu](mailto:david.zeman@sdstate.edu)

## Extension

---

SDSU Extension provides an off campus informal educational function of SDSU and encompasses the following broad areas of programming: Agriculture, Family, Youth, and Communities. The mission of SDSU Extension is to disseminate and encourage the application of research-generated knowledge and leadership techniques to individuals, families, and communities in order to improve agriculture and strengthen the South Dakota family and community.

Through the work of field specialists, SDSU Extension disseminates the findings of research and encourages the application of knowledge for solutions of problems and for opportunities encountered in everyday living. Much of the economic progress of families and communities can be traced to this unique type of non-formal, out-of-classroom learning opportunity provided to them for more than 90 years by SDSU in cooperation with the U.S. Department of Agriculture and county governments.

The Extension staff is dedicated to assisting individuals and groups meet the challenges of change in farming, ranching, marketing, the home, community, state, and nation. The press, radio, TV, satellite, interactive audio-visual, the Internet, educational publications, group methods and individual contacts are used to inform and teach. Students are encouraged to become acquainted with the staff on campus and take advantage of the information

available in Extension publications to enrich their course of study. Extension also offers rewarding career opportunities for graduates in agriculture, family and consumer sciences, natural resources, and other social sciences. For information contact the Director of SD Cooperative Extension Service, SDSU, Box 2207D, Brookings, SD 57007, or visit the <http://www.sdstate.edu/sdces/index.cfm>.

---

## Crime Reports

South Dakota State University publishes an annual report each fall in compliance with the Jeanne Clery Disclosure of Campus Security Policy and Campus Crimes Statistics Act. The report which describes policies, enforcement, statistics, and prevention information programs is distributed to all staff and students by accessing the web

at [www.sdstate.edu/campus/services/safety/crime/index.cfm](http://www.sdstate.edu/campus/services/safety/crime/index.cfm); click on "Student Life" and then "Safety and Security." The crime report is also available upon request from the office of the Vice President for Student Affairs.

---

## Diversity, Equity & Community

The purpose of the Office of Diversity, Equity & Community is to promote diversity in all its aspects by advising the university community, developing and implementing diversity enhancement programming, facilitating minority student recruiting and minority faculty and staff recruiting, and working to eliminate discrimination at SDSU. Diversity is defined as a stimulating environment generated by a variety of perspectives, opinions, values, knowledge, ideas, and personal histories represented on campus by people and programs. This variety is expressed through, but is not limited to, differences in ethnicity, race, gender, national origin, religion, sexual orientation, ability, class, and age.

suggestions and recommendations for diversity programming and questions or concerns relating to diversity issues on campus. For more information contact the Office of Diversity Enhancement at 605-688-6361 or go online to <http://www.sdstate.edu/ode/>.

### The American Indian Education and Cultural Center

South Dakota State University is committed to maintaining an environment which respects dignity and encourages members of the campus community to achieve their maximum potential, free from discrimination and harassment. Students and staff are encouraged to contact the Director of Diversity, Equity & Community with

The American Indian Education and Cultural Center is a welcoming home for American Indian students and visitors; a hub of innovative cultural, academic, student support and outreach programming; and a repository for American Indian cultural resources. The center, its people and programs, honor the heritage of the region's tribal people, serve as a catalyst for institutional change, and help fulfill the university's land grant mission. Additionally, the center includes a student lounge, computer laboratory and meeting/conference room.

---

## Endowed Chairs

An endowed chair is a prestigious faculty position supported entirely by private contributions. Individuals appointed to serve in such positions will be renowned in their fields of expertise and will add a special dimension of quality to the academic environment at South Dakota State University.

### Nutrition

An endowment fund established by the late Dr. Ethel Austin Martin, a 1916 SDSU graduate, has, for two decades, maintained an ongoing program of visiting professorships in human nutrition and now supports in perpetuity an endowed chair entitled the *Ethel Austin Martin-Edward Moss Martin Chair of Human Nutrition*.

The Chair of Human Nutrition was established at SDSU to ensure scholarly instruction in the broad aspects of the science of nutrition. This is a continuing campus position with faculty rank filled by a nutrition scientist selected for qualifications in the science of nutrition, and for understanding, skill and experience in advancing the multidisciplinary approach to nutrition education. This position is funded solely by the endowment.

The Visiting Professorships will continue to be conducted periodically as a major multidisciplinary function of the Chair Program. Typically, visiting professorships are for a period of days or weeks. Programs supported by the Ethel Austin Martin endowment have no administrative affiliation with any one college or department of SDSU.

The program is interdisciplinary and, therefore, is administered directly under the Vice President for Academic Affairs.

### Dairy Science

The Alfred Chair in Cheese Chemistry and Technology in Dairy Science has been established in recognition and in memory of the late Alfred Gonzenbach and Alfred Nef for their contributions to the cheese industry and economic development through establishment of Valley Queen Cheese Factory, Inc., in Milbank.

The Alfred Chair was created on July 1, 1991, and is funded by the SA Education Foundation in Watertown.

The Alfred Chair will be a continuing campus position with faculty rank filled by a dairy/food scientist with experience in cheese chemistry and technology. The addition of the Alfred Chair, a prestigious faculty appointment, is expected to maintain national prominence of the SDSU Dairy Science Department in the dairy processing profession.

### Electrical Engineering

The Hohbach Endowed Chair in Electrical Engineering was established through funds provided by Harold C. Hohbach, a Plankinton, SD, native and 1943 graduate of Electrical Engineering from SDSU. Mr. Hohbach is currently a patent attorney with offices in San Francisco and Palo Alto, California.

The purpose of the Hohbach Endowed Chair is to improve quality of education, research, and entrepreneurship. The primary focus is to develop applied research that will spur economic growth in the region, while supporting undergraduate and graduate teaching and promoting entrepreneurship among students.

The Hohbach Chair is a faculty rank position on campus within the Department of Electrical Engineering and is occupied by an

individual with an established reputation in electrical engineering or a closely related field.

### **Economics**

The Milton Nies Chair in Enterprise Economics was established by the late Milton Nies, who spent most of his professional life as a businessman in Bismarck, North Dakota. Mr. Nies was a native of Eureka, South Dakota and graduated from South Dakota State University with a degree in Economics in 1950. He had a strong interest in business planning and in assisting new business startups. He initially worked for United Accounts, a business he later owned. He was collaborating with the SDSU Foundation on the particulars of the Nies Chair prior to his death in 2003.

The purpose of the Nies Chair is to provide leadership in market research and analysis, business assistance, new enterprise development, and entrepreneurship. Regionally based products and industries will be emphasized through teaching, research, and outreach activities. This person will establish a close working relationship with the South Dakota Enterprise Institute at SDSU.

The Nies Chair is a faculty position that will be held by a nationally recognized leader in enterprise economics education and research who possesses skills in economics, business management and development, and entrepreneurship.

## **Environmental Health and Safety Office**

---

The primary function of the Environmental Health and Safety office is to assist campus personnel in making SDSU a safe learning and working environment for faculty, staff, and students. The EHS office is responsible for enforcing federal, state and local safety and environmental rules and regulations, including radiation, chemical, and biological safety; management of hazardous materials and conditions; management of indoor air quality in cooperation with Facilities and Services; recycling of electronics, batteries, and heavy metal containing light bulbs; disposal of hazardous wastes and other

functions relating to research, teaching and administrative duties. EHS provides training in the various areas listed above, not only to be in compliance with regulations, but to be sure that all SDSU students, staff and visitors, have an enjoyable and safe experience at SDSU.

For staff and students with questions concerning any of these functions contact EHS at: Environmental Health & Safety Avera Science Center 143; Box 2202, Brookings, SD 57007 Phone: 605-688-4264 E-mail: EHS@sdstate.edu

## **Facilities and Services**

---

The Facilities and Services Department is a service department established for the purpose of providing the necessary support to the teaching, research, and service missions of South Dakota State University. Facilities and Services works to ensure that the buildings and grounds are operated and maintained in an appropriate and safe manner. Facilities and Services must approve modifications in facilities and grounds, facilitating code interpretation.

Facilities and Services perform most building maintenance functions with in-house talents. South Dakota State University Electricians, Painters, Welders, Carpenters, Plumbers, and HVAC Technicians provide service every day to the campus. The

Engineering Section provides project management, master planning support, and maintenance support. The Customer Service Center processes all incoming and outgoing mail for SDSU departments.

Faculty and Staff are encouraged to note problems or deficiencies of areas of campus they use at 605-688-4136, SDSU.FacilitiesAndServices@sdstate.edu. To find on-line service guides, customer forms, facilities information, maps, contact information for Facilities and Services personnel, please contact Facilities and Services at: <http://www.sdstate.edu/facserv/>. For additional questions, comments or concerns please contact the office at 605-688-4136.

## **Fees**

---

Tuition and Fees listed below are approved for the 2013-2014 academic year – 2013 Summer, 2013 Fall and 2014 Spring terms. Minnesota Reciprocity tuition rates are effective for 2013 Fall, 2014 Spring & 2014 Summer terms. Rate schedules are subject to change without notice. For current information see the Web site: [www.sdstate.edu/admissions/financing/undergrad/cost/index.cfm](http://www.sdstate.edu/admissions/financing/undergrad/cost/index.cfm) or <http://www.sdbor.edu/students/documents/FY14TuitionFeesSchedule.pdf>

### **Application Fee**

Nonrefundable charge assessed to all degree seeking applicants for initial admission unless you have previously attended South Dakota State University or another South Dakota public university. Students re-admitted after a lapse of three consecutive terms are assessed the non-refundable charge.

### **General Activity Fee**

A fee of \$28.00 per credit is charged to support student health, student union and student activity programs such as: admission to plays, athletic events, athletic facilities, and partially funded judging, music and forensic programs.

### **University Support Fee**

A fee of \$90.30 per credit is charged to replace expendable supplies; defray cost of maintenance, repair, and replacement of equipment; provide testing and other instruction-related costs while providing additional services that benefit students, which are not funded from other sources. Fee is mandatory and is assessed on courses taught on-campus.

### **Late Fees**

If you do not pay tuition and fees at the regular established due dates, you will be assessed a late fee. A late charge may be assessed each time you fail to satisfy your financial obligations within established due dates. Failure to pay in a timely manner could result in you being administratively withdrawn from the University.

### **Field Trip Charge**

Students enrolled in selected courses that involve field trips may be assessed for transportation, group admission, and entry fees. The amount charged will vary per course.

### **Liability Insurance Charge**

Students enrolled in selected courses that involve internship, cooperative education, practicum, field and other experiences where students have contact with third parties are assessed a charge for liability insurance.

### **Animal Science Fees**

A fee of \$44.25 per credit is charged for courses in animal, range and veterinary sciences.

### **Architecture Fees**

A fee of \$293.30 per credit is charged for architecture courses. A fee of \$2,120.75 is charged per semester for students enrolled in the studio experience portion of the undergraduate and graduate Architecture programs.

### **Aviation Flight Training Fees**

Aviation students are assessed fees for flight training. This per hour fee is used to defray the costs of aircraft operations,



maintenance, simulators, and individual instruction. Fee costs vary depending on type of aircraft and hourly operating costs.

**Chemistry Fees**

A fee of \$22.05 per credit is charged for courses in chemistry.

**Dairy Science Fees**

A fee of \$80.20 per credit is charged for courses in dairy science.

**Economics Fees**

A fee of \$28.65 per credit is charged for undergraduate courses and a \$49.65 per credit is charged for graduate courses related to Economics, Business and Entrepreneurship.

**Education Fees**

Education students enrolled in selected Education courses are assessed a fee of \$164.35 per semester for Sophomore/Junior Field Experience, \$328.95 per semester for Senior Student Teaching, and \$164.35 for Master's Level Internships.

**Engineering Fees**

A fee of \$66.85 per credit hour is charged for courses in the College of Engineering and designated courses in mathematics, statistics, computer science, and physics. A fee of \$22.05 per credit hour is charged for remaining courses in mathematics, statistics, physics, and computer science.

**Equine Fees**

\$182.75 per designated course is charge to all equine experience classes. These funds are used for the care and maintenance of equine animals and equestrian equipment.

**Health and Nutrition Fees**

A fee of \$18.40 per credit hour is charged for courses in Athletic Training; Dietetics; Health Education; Hospitality Management; Nutrition and Food Science; Physical Education Teacher Education, and Sport, Recreation and Park Management.

**Engineering, Natural Sciences and Laboratory Fees**

\$56.40 per designated course is charged to all lab classes in engineering, mathematics, computer science, natural sciences and

selected laboratory experience courses. These funds are used for supplies and materials and to purchase equipment.

**Medical Laboratory Science Fees**

A fee of \$1,527.25 is charged per semester for students enrolled in the campus delivery of the professional portion of the Medical Laboratory Science program. Students enrolled in the MLS Upward Mobility program are assessed a fee of \$922.90 per semester.

**Nursing Fees**

Uniforms must be purchased by second year nursing students. Transportation must be provided by the student in Community Health Nursing and selected independent experiences. Students enrolled in undergraduate NURS and HSC courses are assessed a fee of \$95.70 per credit and graduate NURS and HSC courses are assessed a fee of \$210.30 per credit.

**Pharmacy Fees**

A fee of \$190.20 per credit is charged for courses in Pharmacy. Students in the PharmD program are assessed a \$55.00 annual charge for an electronic reference and a \$16.00 annual charge for malpractice insurance.

**Indebtedness**

If you are indebted to the University and do not satisfy financial obligations when due, you may be denied admission to the University. You may be administratively withdrawn from the University after notice from the University and you will not be permitted to register or receive a transcript of grades until the indebtedness is paid. This applies to your indebtedness to the University for tuition, fees, required deposits, room and board, financial aid, but not obligations due to student organizations.

All accounts that the University is unable to collect will be submitted for collection and forwarded to a credit reporting bureau. The University will recover from the debtor all collection fees and attorney's fees that result from collection of an account.

## Tuition, Living, and Other Expenses

**Tuition and Fees**

September 2013-May 2014.

	Resident	Non-Resident
Tuition		
Undergraduate on-campus per semester credit	\$139.00	\$209.00
Graduate on-campus per semester credit	\$210.40	\$445.30
University Support Fee - per credit	\$90.00	\$90.00
Activity Fee - per credit	\$28.00	\$28.00

See accompanying text for the descriptions of fees for Architecture, Business/Economics, Chemistry, Animal & Dairy Sciences, Engineering, Health & Nutrition, Nursing, Pharmacy, Medical Laboratory Science, Veterinary Science and other courses; Education students; and lab and equine experience course. All charges and procedures listed are subject to change pending Board of Regents action. For current information see the following web site: <http://www.sdstate.edu/admissions/financing/undergrad/cost/index.cfm>.

**Campus Room and Board Costs**

**Meal Plan**

Students have a choice of 7 Meal Plans ranging from \$799.30 to \$1,768.90 per semester. Visit the SDSU Dining Services website for more information regarding meal plans.

Plan	Cost
Premier	\$1,768.90
150 Block	\$1,419.60
75 Block	\$1,419.60
Gold Flex	\$1,768.90
Silver Flex	\$1,419.60
Bronze Flex	\$1,245.80
West Flex	\$799.30

**Residence Halls - per semester**

	Double	Single
Brown, Hansen, Waneta	\$1,501.80	\$2,164.65
Binnewies, Pierson, Young	\$1,657.25	\$2,211.25
Matthews	\$1,771.90	\$2,364.35
Jackrabbit Village, Caldwell	\$2,337.30	\$2,921.50
Meadows North/South	\$2,337.30	\$2,337.30
Ben Reifel, Honors, Hyde, Schultz	\$2,450.00	\$2,921.50

**Typical Education Expenses for Fulltime Undergraduate Semester**

	Resident	Non-Resident
Tuition - 15 credits	\$2,085.00	\$3,135.00
University Support & Activity Fees	\$1,770.00	\$1,770.00
Books (estimate)	\$450.00	\$450.00
Meal Plan (midpoint of range)	1,420.00	\$1,420.00
Residence hall cost	<u>1,505.00</u>	<u>1,505.00</u>
	\$7,230.00**	\$8,280.00**

\*\* Expenses will be higher if a student takes coursework requiring course, program or lab fees. See accompanying text on FEES.

**Online Billing and Payment of Tuition and Fees**

All tuition, fees, housing, food service and miscellaneous charges to student accounts will be on an electronic billing (eBilling) system and can be viewed on SDePay, a secured website via the Internet. Payment of the student account can also be made electronically (ePayment) through SDePay. Students can authorize parents, spouse and other individuals to view the eBill and make ePayment on their student account.

## Email Policy

E-mail messages sent by SDSU to students through University-assigned, jacks e-mail addresses will constitute an official means of communication. It is the student's responsibility and obligation to access official university email messages in a timely manner. As other e-mail accounts may be blocked by the SDSU firewall, SDSU is only able to monitor student e-mails coming from University-assigned e-mail accounts.

## Payment Process

By the day after census date, each student makes a full payment of charges based on the number of registered credits, residency status, and campus housing. Late fees will be assessed starting on the day after the established payment due date. SDSU encourages students to mail payments before the registration day. Payment of tuition and fees can be made by cash, check or electronic bank transfer directly to the University Cashier's Office SAD 136 PO Box 2201, Brookings, SD 57007-2098.

Payment of tuition & fees using a debit or credit card can only be made through SDePay, electronic billing & payment system.

# Refunds

SDSU processes student withdrawals in compliance with federal and Board of Regents policies. A petition process does exist for students or parents who feel that individual circumstances warrant exception from the published refund policy. Contact the Registrar, SAD 100, for information.

## Food Service and Room Rent Refunds.

Students with a room contract or food service contract will receive a refund based on the unused portion of the fee at the time of withdrawal up to the 60 percent point of the period.

## Federal Financial Aid Recipients.

The U.S. Department of Education requires institutions to use the Return of Title IV Funds policy for students withdrawing from school and who are receiving Federal Title IV student financial aid. Title IV funds refers to the federal financial aid programs authorized under the Higher Education Act of 1965 (as amended) and includes the following programs: Federal Stafford Direct Loan, Unsubsidized Stafford Direct Loans, Parent Loans for Undergraduate Students (PLUS), Federal Perkins Loans, Federal Pell Grants, and Federal Supplemental Grants. Also, the Federal Nursing Loans and Federal Health Professions Loans use the Return to Title IV Funds calculation.

A *student's withdrawal date* is 1) When the student began the withdrawal process or officially notified SDSU of intent to withdraw by contacting the SDSU Registrar's Office; or 2) The midpoint of the period for a student who leaves without notifying SDSU; or at SDSU's option, the student's last documented date of academically-related activity.

*Return of Title IV Funds* When a student receiving federal financial Title IV financial aid withdraws from SDSU during the enrollment period, the amount of the Title IV funds (not including

American Express, MasterCard and Discover cards are accepted by SDePay. Visa Card is not accepted. A 2.75 percent service fee is assessed by and payable to NelNet, host provider of SDePay. Authorized payers may view and pay the students' account by going to the South Dakota Public Universities Authorized Payer login at SDePay. Students may link to SDePay through their secure account on WebAdvisor.

## Campus Card Debit System-Hobo Dough

The student identification card is used as a debit card to access prepaid accounts. In addition to its extensive use in the food service system, the ID card accesses prepaid accounts, called Hobo Dough, for bookstore, campus vending, laundry, photo copying and printing, and selected off campus businesses. Upon graduation or leaving the University, these funds will be returned in full upon request. No service charges are assessed for active accounts. However, accounts inactive for six months or more are assessed a monthly service charge. If the service charge exceeds the account balance, the account is automatically closed.

Federal Work Study) that the student earned during the enrollment period is calculated as of the student's withdrawal date. Title IV funds are earned at a fixed rate on a per day basis up to the 60 percent point in the enrollment period. Title IV funds are 100 percent earned if the withdrawal date is after the 60 percent point in that period.

If the date a student withdraws from SDSU is prior to or on the 60% point of the semester, SDSU is required to determine the portion of the aid disbursed that was "earned" by the student before the withdrawal date. The "unearned" Title IV funds must be returned to the respective federal aid programs. Unearned aid is the amount of disbursed Title IV aid that exceeds the amount of Title IV aid earned based on attendance in the enrollment period.

For students who fail to officially withdraw when they stop attending classes and are assigned an "F" grade for all courses for the semester, the Return to Title IV Funds policy requires SDSU to calculate the "earned" amount based on the 50 percent point of the semester. Unearned federal aid must be returned as described above. If a student was disbursed aid after the 50 percent point of the semester, the student is assumed ineligible for those funds and will be required to return those funds.

*Responsibilities* of SDSU include providing information on the Return of Title IV Funds policy and procedure to students. This information is available at [www.sdstate.edu](http://www.sdstate.edu) and from the SDSU Financial Aid Office. SDSU is also responsible to complete calculations of the Return of Title IV Funds for federal financial aid recipients who are withdrawing from SDSU and to return any Title IV funds to the respective Title IV funds account. The student is responsible to repay any Title IV funds that the student was determined to be ineligible for via the Return to Title IV funds calculation.

# Financial Assistance

## General Information

Approximately 88% of the SDSU students attending full-time receive some type of financial assistance to help pay their educational costs. Financial assistance includes both need-based financial aid (grants, loans, work) as determined by the Free Application for Federal Student Aid (FAFSA), and other financial aid (scholarship, agency assistance, etc.) not based on need. Financial need is defined as the portion of educational costs not covered by family contributions. Average educational costs are determined by the Financial Aid Office and family contribution is a federal calculation from the FAFSA.

The SDSU award policy gives priority for Federal Supplemental Grant, and Work Study to students completing the FAFSA before March 10. However, the largest financial aid programs, the Federal Pell Grant and the Federal Stafford (Direct) Loan, do not have

priority processing dates. Students must reapply for federal financial aid every academic year. Please refer to the SDSU web page for eligibility, aid programs, consumer information, policies, and other financial aid related information: [www.sdstate.edu](http://www.sdstate.edu) (Keyword: financial aid).

## Federal Financial Aid Programs

### I. General eligibility requirements

1. Enrolled as a regular student in a SDSU degree program.
2. Enrolled as a full-time student to receive full award. Eligible students not enrolled full-time may be eligible for some aid programs based on a completed FAFSA.
3. United States citizen or eligible non-citizen.
4. Cannot be in default on a federal student loan or owe a refund to a federal student grant program.

5. Selective Service laws require male students born after December 31, 1959, to be registered with Selective Service.
  6. Maintain Satisfactory Progress as described in detail in the SDSU Satisfactory Progress Standards (on SDSU financial aid web page). Satisfactory Progress is the measurement of a student's academic performance (credits completed, cumulative grade point average, and maximum credits attempted) toward the completion of the student's degree program. Students not meeting Satisfactory Progress Standards will have their federal financial aid eligibility suspended and can appeal, as applicable.
- II. SDSU participates in all of the federal financial aid programs. Specific information, including other aid programs not listed below, is available at [www.sdstate.edu](http://www.sdstate.edu). A SDSU Financial Aid award letter identifies the specific awards and other information is enclosed for the financial aid recipient.
1. Grants are gift aid based on financial need.
    - A. Federal Pell Grant awards are determined by a federal formula for the student's first bachelor degree.
    - B. Federal Supplemental Educational Opportunity Grant awards are based on Pell Grant eligibility and available funds.
    - C. TEACH Grant for teacher education in "high need" fields and who agree to teach at a Title I school as defined by the U.S. Department of Education.
  2. Loans provide an opportunity to borrow money for educational expenses. Loans must be repaid. First time loan recipients are required to complete Entrance Loan Counseling at [www.studentloans.gov](http://www.studentloans.gov).
    - A. The Federal Direct Loan Program is the largest financial need-based loan program for eligible students. The Direct Loan requires a completed Master Promissory Note. The federal government pays the interest while the student is in school and during deferment periods. Interest and repayment begin six months after half-time enrollment ends. The Unsubsidized Federal Direct Loan can be used by students who are not eligible for need-based loans as determined by the FAFSA. The interest is paid by the student or capitalized if not paid.
    - B. The Federal PLUS (Parent Loan for Undergraduate Students): The SDSU PLUS Request Form is completed by a parent to start the process. A monthly payment may start beginning 60 days after the PLUS is disbursed. Interest rate is 7.9% and has loan fees (see MPN).
    - C. The Federal Perkins Loan is an SDSU award based on financial need and SDSU award policy. Interest (5%) and repayment begin nine months after half-time enrollment ends.
  - D. The Nursing Student Loan is for nursing majors based on financial need and SDSU award policy. Interest (5%) and repayment begin nine months after half-time enrollment ends or ending the nursing degree program.
    - E. The Health Professions Student Loan is for pharmacy majors based on financial need and SDSU award policy. Interest (5%) and repayment begin 12 months after full-time enrollment ends or ending the pharmacy degree program.
  3. Work opportunities may provide part-time employment for students.
    - A. The Federal Work Study financial aid awards are based on financial need, available funds, and SDSU award policy. Most jobs are on campus. There are some community service job opportunities.
    - B. Other employment opportunities may be available through the Career and Academic Planning Services and South Dakota Job Service.
4. State of South Dakota no-need aid program information available at [www.sdstate.edu](http://www.sdstate.edu) (Keyword: Scholarships).
  - A. South Dakota Opportunity Scholarship is for students who are South Dakota residents at the time of high school graduation who have a minimum ACT composite of 24 and met the Regents Scholar requirements.
  - B. Dakota Corps Scholarship for new high school graduates from South Dakota who will major in a degree that will prepare the student to work in a critical need occupation.
- III. **Scholarships** The SDSU scholarship programs have increased yearly with additional scholarships for new, continuing, and transfer students. SDSU awards over 4,700 scholarships to undergraduate students. There are approximately 1,400 new-freshman student scholarships. A single scholarship application available from SDSU or from your high school needs to be completed and returned to the SDSU Scholarship Office before January 25 for priority consideration for the new student academic scholarships.
1. Selected new freshman scholarships.
    - A. Renewable scholarships, upon meeting academic standards, include: Briggs; Lohr; May; Nichols; and many named Foundation scholarships.
    - B. Jackrabbit Guarantee (JG) eligibility for new, first-time freshman students who score a 24 or higher ACT composite score. Scholarship is renewable when academic requirements as defined by the JG program are attained. The \$1,000 minimum in scholarship assistance can be met by any academic SDSU scholarship award.
    - C. Many general, departmental, and talent awards are also available.
  2. Upper class student scholarships are awarded by the college/ department based on a student's academic record through an annual competitive scholarship application process.
  3. Talent and participation scholarship awards are available by contacting the specific areas: 4-H: County Agents or Program Leader, SDSU Air Force ROTC: Professor of Aerospace Studies, SDSU Army ROTC: Professor of Military Science, SDSU Music: Music Department, SDSU Theatre: Theatre Department, SDSU
  4. Local and national scholarship information and applications may be available through your high school, various organizations and groups.
    - A. Financial assistance may also be available through various agencies including Vocational Rehabilitation and other special services agencies.
    - B. SDSU is fully accredited for Veterans Assistance benefits for qualified students.
    - C. Please contact the SDSU Financial Aid Office, Box 2201, SAD 100, Brookings, SD 57007. Phone 605-688-4695, or e-mail: [sdsu.finaid@sdstate.edu](mailto:sdsu.finaid@sdstate.edu) for specific applications, forms, and information. Additional information can be accessed on the SDSU Home Page: [www.sdstate.edu](http://www.sdstate.edu)

## Foundation, SDSU

The SDSU Foundation is a private, non-profit corporation which seeks, accepts, and administers private gifts for the support of programs at South Dakota State University. The SDSU Foundation manages total assets valued at more than \$144 million, including an endowment of more than \$70 million. The work of the SDSU Foundation provides support that translates to nearly \$500,000 each week to assist the University in its missions of education, research and outreach.

Donations to the SDSU Foundation come in many forms including cash, marketable securities, real estate, equipment, personal property, and estate gifts. A volunteer board governs the activities of the Foundation. Steve Erpenbach is the Foundation's president and CEO. For information on making a gift to SDSU, contact the South Dakota State University Foundation at 1-888-747-SDSU (7378), [steve.erpenbach@sdsufoundation.org](mailto:steve.erpenbach@sdsufoundation.org), or [www.sdsufoundation.org](http://www.sdsufoundation.org)

# Geographic Information Sciences Center of Excellence

---

The study of the land surface and its modification over time is a major component of global change research. Land cover change impacts climate, biogeochemical cycles, ecosystem function, and the state of human welfare. To study large area land cover dynamics, satellite-based earth observations are required. The Geographic Information Science Center of Excellence (GIScCE) is a unique collaboration between SDSU and the US Geological Survey Center for Earth Resources Observation and Science (EROS) with a focus on the science of earth observation and monitoring. EROS is the world's largest repository of remotely sensed data sets and a renowned center of applied earth science studies. The GIScCE is a research partnership of SDSU faculty and EROS scientists that employs the capabilities of geographic information science (GISc), namely remote sensing, geographic information systems, digital mapping, and geostatistics, to document and understand the changing earth. To achieve this goal, an interdisciplinary center of study is required, one which utilizes engineering principles to efficiently and accurately process earth observation data, geographic principles to create meaningful thematic depictions of land cover and land use change,

and applications that focus on the resultant effects the geosphere, biosphere, and hydrosphere. Through the combined resources of many disciplines, the GIScCE seeks to investigate important questions regarding the dynamic earth system.

Students play an integral role in the research performed by the center. Undergraduates can earn recognition as a Center Scholar by completing a combination of courses, programs, and professional experiences. Center Scholars must have completed all Regental and University core classes with an undergraduate GPA of 3.0 in major and GISc coursework at time of graduation. Undergraduates must also have a cumulative GPA of 2.75 for all coursework at time of graduation. All Center Scholars will participate in a Center Internship, which will include the development of a scholarly study. Results from this study must then be presented to an appropriate professional meeting or accepted by a peer-reviewed science journal. The Center also coordinates the Ph.D. program in Geospatial Science and Engineering. For more information call 605-688-6591 or e-mail [geoffrey.henebry@sdstate.edu](mailto:geoffrey.henebry@sdstate.edu).

## Information Technology

---

The Office of Information Technology provides the technology, skills, and services that contribute to and support the land-grant mission of South Dakota State University and is committed to creating an environment in which faculty and students develop opportunities which will make them successful in their scholarship, research, and creative activities. In addition, OIT actively promotes the incorporation of technology as a means of effectively and efficiently conducting University business.

Under the direction of Dr. Mike Adelaine, the Vice President for Information Technology, programs, services, and support are provided to the university community.

**Classroom Technology Services (CTS)** - This unit is responsible for all technology-enhanced and DDN classrooms located on the University campus. This includes the initial installation of equipment, its maintenance, and upgrades. For more information, call 605-688-6312.

**Information Security** - This unit ensures University data security and establishes procedures to protect information, users, and the University. Questions or concerns should be reported to the Support Desk (688.6776) immediately. For more information, call 605-688-4988.

**IT Support Desk** - ITS serves as contact for students, faculty, and staff needing tech support through its operation of the Support

Desk. Equipment loan, repair, and the maintenance of general use computer labs are also the responsibility of ITS. For more information, call 605-688-6776.

**Instructional Design Services (IDS)** - This unit offers faculty services in instructional design, distributed learning, and the use of integrated media in the classrooms. They also provide faculty with training in a wide variety of software programs and applications, as well as instruction in the use of equipment. For more information, call 605-688-6312.

**Office of Web Development & Management** - This division fosters excellence throughout the university's web communication systems by ensuring their continual development, as well as providing leadership and direction for its web-related activities. The Office promotes, supports, and sustains the online distribution of the institution's academic, research, and Extension information and the conveyance of its messages to their respective audiences. For more information, call 605-688-6134.

**University Networking Systems and Services and Research (UNSS)** - UNSS provides the infrastructure upon which technology systems are built and assures Internet access to the campus community. In addition, they maintain the server farm, on which the majority of institutional software and applications are run. For more information, call 605-688-4988.

## Intercollegiate Athletics

---

South Dakota State University is a Division I, National Collegiate Athletic Association member and offers competition in eleven sports for women and ten sports for men. The National Collegiate Athletic Association (NCAA) governs competition for both women and men. Women compete in cross country, equestrian, indoor and outdoor track and field, volleyball, basketball, swimming, golf, tennis, softball and soccer. Men compete in cross country, indoor and outdoor track and field, football, basketball, swimming, golf, tennis, wrestling and baseball. South Dakota State athletic teams have experienced broad based success. They are recognized regionally and nationally each year for the athletic accomplishments and academic achievements for their student-athletes and coaches.

Every undertaking within South Dakota State University's Athletic Department is driven by a relentless commitment to excellence. We are committed to providing each and every student-athlete with a comprehensive collegiate experience. Academic achievement is important because it is the fundamental purpose of the student-athlete experience. Social responsibility is also a vital

component. We expect to contribute to the well-being of our campus, community and state. Positive student-athlete experiences and competitive success also define our program because they are integral to the student-athlete's growth. Our vision is to be a premier student-centered collegiate athletic program. We are working tirelessly to create a special place where student-athletes can develop life skills that lead not only to athletic success, but pave the way for victories long into their lives. The important work of creating that setting is the heart of our mission: to passionately and relentlessly create an environment, rooted in sportsmanship and ethical conduct, where motivated student-athletes can develop into lifelong champions. We are guided by a stringent set of values that will not be compromised: honesty, equity, academic integrity, fiscal integrity and social responsibility with the expectation of competing at the highest level.

For general athletic department information call 605-688-5625, for athletic ticket information call 605-688-5422, 1-866-GoJacks (465-2257), or e-mail [sdsu.tickets@sdstate.edu](mailto:sdsu.tickets@sdstate.edu)

# International Affairs

The Office of International Affairs (OIA) is the comprehensive home for international student and scholar services, international undergraduate admission, study abroad planning, and community connections programs. All services and activities are intended to help enrich the experience of international students here at SDSU and to help expand global engagement for all students, faculty and staff.

Formerly the Office of International Programs, the department was initially established in 1988 and was focused on creating a number of international education and research exchange partnerships. Today, OIA has educational partners on six continents and has expanded its focus to include international student services.

- Study abroad staff advise faculty in planning SDSU-based global educational options and advise students of their study abroad options.
- International student and scholars staff provide guidance and administrative support to hundreds of international students from over 60 countries.
- Staff members also support the International Relations Council and its events and outreach, as well as help connect the campus community with International students and global issues through its Connections programs.

OIA has a variety of partners and affiliates. For more information, refer to [www.sdstate.edu/international-affairs](http://www.sdstate.edu/international-affairs).

## Library, H. M. Briggs

Library services and collections are housed in the Briggs Library, which is named for President Hilton M. Briggs, who served the University from 1958 to 1975. Library collections consist of more than 667,000 bound volumes, 573,000 government documents, 18,000 e-Books, 32,000 online journals and other electronic resources.

Briggs Library users have access to book, periodical, archives, map and government documents collections as well as wireless networking, laptop loans and more than 70 public computer workstations providing access to the Internet, to library databases, and to software such as MS Word, Excel, PowerPoint and statistical packages. Briggs Library contains group study/conference rooms for student use, informal lounge areas, and photocopiers and scanners. Special collections of congressional papers, archival, state and local

history, and curriculum materials are available for students, faculty, and researchers. In addition, materials from thousands of other libraries worldwide are available through interlibrary loan. The Briggs Library building is also the home of International Affairs and Outreach and the Teaching Learning Center.

The faculty and staff of Briggs Library are proud of the services they offer to the SDSU community, as well as to distance students and faculty at Sioux Falls, Rapid City, Pierre and other locations throughout South Dakota and the U.S. Each year they teach hundreds of classes on information literacy and the use of library resources. They respond to thousands of information requests annually through personal contacts, via telephone at 605-688-5107, and by means of e-mail, online chat and texting. Look for the "Ask Us" link on the library homepage: <http://www.sdstate.edu/library/>.

## Logos, Seals, Caricatures, Wordmarks (Official Symbols)

University Marketing and Communications approves the use of the name or logo of South Dakota State University (in any form) for printed publication or for any type of merchandise, i.e., hats, t-shirts, mugs, etc., to be distributed. The merchandise items must also carry a corresponding club or event name. All SDSU logos, seals, caricatures, or wordmarks are licensed and cannot be used without permission.

Official Name: South Dakota State University or SDSU (no periods) Official School Colors: Blue (PMS 287) and Yellow (PMS 109) Athletic Teams Nickname: Jackrabbits or Jacks.

**These names (or wordmarks) are registered:**

South Dakota State University ®	Weary Willie TM	Beef Bowl®
SDSU®	Jackrabbits ®	You can go anywhere from here!®
SDSU Jackrabbits®	Jacks ®	Jackrabbit Guarantee®
South Dakota State TM	Cereal Bowl ®	Pride of the Dakotas®
Hobo Day ®	Oak Lake Field Station TM	Be Great. Start Here. TM
HoboTech ®	Midwest Market	The Campanile Line ®
SDSU Jacks®	Analysis TM	Campanile Records ®
Go Big. Go Blue. Go Jacks®	Garden Line TM	McCrorry Gardens ®
SD State®	Go Jacks®	iGrow TM
Dirty Lil TM	On Call®	Passionate. Relentless. Champions. ®
	Today's Ag®	

For information on usage, please contact University Marketing and Communications at [sdsu.ur@sdstate.edu](mailto:sdsu.ur@sdstate.edu) or 605-688-6161.



# McCrorry Gardens

---

McCrorry Gardens is recognized as one of the top small ornamental display and botanical gardens in the United States. It is operated by the Department of Plant Science, with operations primarily supported through private gifts of visitors, Friends of McCrorry Gardens, professional associations, and corporate donations. The gardens are used extensively for teaching, public education, and ornamental plant research. A new Education and Visitor's Center is a focal point for the gardens, offering information to visitors and a venue for educational programming and other

functions. Each year student gardeners are hired to help plant and maintain the gardens. It is composed of approximately 25-acres of public display area and a 45-acre arboretum.

The Gardens are open daily from dawn until dusk; no entry fee is charged but donations from visitors are encouraged. Trees, shrubs, ground covers, annuals, and perennials are featured throughout the gardens. The straw bale house is another popular attraction, which features a living roof. For more information, call 605-688-6253 or e-mail: david.graper@sdstate.edu

## Museum/Collections

---

**The South Dakota Art Museum's** collection of over 6,000 objects consists of paintings, photographs, textiles, sculptures and Native American art and artifacts. The Museum has a dynamic exhibition schedule featuring our permanent collection of paintings by Harvey Dunn, children's book author/illustrator Paul Goble, the Marghab Linen Collection, Native American art, in addition to rotating exhibits from outside sources. The museum is located on the Medary Avenue at Harvey Dunn Street. The museum is open Free to the public Monday through Friday from 10:00am to 5:00pm, Saturdays from 10:00 to 4:00 and Sunday's from noon to 4 pm. The museum is closed on Sunday's January – March and on all state holidays. Visit the museum store to find unique handmade gifts, books and music by regional artists, and an outstanding collection of books on Native American history and culture. For more information or to schedule a group tour, call 866-805-7590 or 605-688-5423,

email sdsu.sdam@sdstate.edu or visit the museum's webpage at [www.southdakotaartmuseum.com](http://www.southdakotaartmuseum.com).

**The Agricultural Heritage Museum's** collection of 100,000 objects interprets South Dakota agricultural history and rural heritage. The museum is concerned with human experiences that were shaped by the state's diverse environment. The museum is located on the northwest corner of Medary Avenue and 11th Street in the old Stock Judging Pavilion. The museum is open free to the public Monday through Saturday from 10:00 AM to 5:00 PM and Sundays from 1:00 to 5:00 PM. The museum is closed on Sundays January - March and on all state holidays. The museum gift shop is an excellent source of South Dakota history books, unique gifts, and the official SDSU Christmas ornaments. For further information or to schedule a group tour, call 605-688-6226, e-mail SDSU.agmuseum@sdstate.edu or visit <http://www.agmuseum.com>.

## Print Lab

---

The SDSU Print Lab, located in Yeager Hall, provides complete printing solutions for the campus community and its affiliates. With excellent service at competitive prices, our experienced professionals are dedicated to providing quality work for the SDSU community.

With the advent of desktop publishing programs, creating publications such as newsletters, brochures, posters, flyers, etc., has become much easier. Generally a publication designed in-house does not necessarily mean it is "print ready", nor does it mean it meets the graphic standards of university materials.

The Office of University Marketing and Communications is charged with overseeing logo usage and the consistent quality of publications, for both internal and external audiences. Other than reprint orders, business cards and variable data publishing, projects

being produced at the Print Lab must first be routed through University Marketing and Communications to be approved or files prepared for printing.

While University Marketing and Communications can provide files for static printing projects, the SDSU Print Lab offers variable data design and publishing, and can be the design starting point for projects utilizing variable data or versioning.

Services include: Prepress; Variable Data Publishing; Offset Printing (1, 2, full color) and Digital Printing, 4C Envelope Printing, Wide Format Printing, display rental, Bindery Operation

For more information on how we can service your office, department or organization, visit us on the first floor of Yeager Hall or call us at 688-5111, or e-mail [brenda.quam@sdstate.edu](mailto:brenda.quam@sdstate.edu)

## Student Affairs

---

The Division of Student Affairs provides services and activities that are designed to help students gain the greatest benefit from their University education. The following departments are included in Student Affairs: Admissions, New Student Orientation, Office of Enrollment Services (Financial Aid, Records and Registration, and Scholarships) Office of Student Conflict Prevention, Management, and Conduct Services, Residential Life, The Union, Office of Student Engagement (Student Organizations, Greek Life, Program Bound, Career Center), Multicultural Center/Student Support Services (Disability Services, Upward Bound, TRiO Student Support Services, Veterans Resource Center, African American, Latino, and GLBT student support), University Dining Services, and Wellness (Intramurals and Club Sports, Recreation, and Student Health & Counseling). If you have questions or need information about any of these areas, contact the Vice President for Student Affairs office in

SAD 312, phone 605-688-4493. The specific programs and services offered by the departments are listed in this section and elsewhere in this catalog.

### Admissions

The Admissions Office assists students in attaining their educational goals by providing quality services and accurate information that will enable them to make an informed and appropriate college choice. In addition, the Admissions Office processes all applications for admission and determines residency status for entering students. Questions concerning enrollment information, admission and transfer evaluation should be directed to Admissions Office, SAD 200, South Dakota State University, Box 2201, Brookings, SD 57007-0649, phone 605-688-4121.

## Dean of Students

The Dean of Students serves as the student Ombudsperson for the university, supervises the Student Conduct System, chairs the Clery Report Review Committee, and represents the division of Student Affairs on other university committees and special projects. In the role of the "Ombuds," the Dean of Students acts as a mentor or arbitrator rather than a conduct hearing officer. The goal is to help a student resolve an issue before it becomes a problem. For students in need of assistance or guidance, the Dean of Students office is an important resource. The office is located in AD 312, phone 605-688-4493.

**Office of Student Conflict Prevention, Management, and Conduct Service**, formerly Judicial Affairs, has developed into a point of contact for both faculty and staff on a variety of Student Affairs matters. The functions of this office are of service to all students. Serving as ombuds, mediators, and hearing officers, this office helps students in all stages of adjustment and adaptation. Upon request, the office assists faculty and staff to more comfortably and effectively address minor student concerns. The office also provides "train the trainer" information for individuals and organizations on matters of conflict prevention and mediation to more broadly serve students.

## Dining Services

Campus Dining is committed to providing a dining service program at SDSU that is of the highest quality at a reasonable cost. Students can choose from a variety of offerings including "all-you-care-to-eat" buffet meals, food courts, convenience stores, ice cream shops, delis, specialty coffee, salad and soup bars, grab and go areas, and much more. All SDSU students living on campus are required to purchase a meal plan. Weary Wil's and Einstein Bros. Bagels offer students special late night dining options.

## Enrollment Services

The Office of Enrollment Services is comprised of the Scholarship Office, Registrar's Office, and Financial Aid. The mission of the Office of Enrollment Services is grounded in excellent customer service. These units provide the resources to assist students in achieving a successful college experience and also provide high quality services to current students, alumni, staff, faculty, and the general public. The Enrollment Services office strives to make all services available to students where, when and how they need them. These offices work closely with other university offices to ensure that current information is provided to students. Staff members are committed to providing exceptional service while exhibiting accuracy and efficiency in our work, and maintaining integrity, professionalism and respect. For further information contact the Registrar's Office at 605-688-6195.

**Financial Aid** - The Financial Aid Office administers student financial assistance programs, including federal and state financial aid, and governmental agency awards. The phone number for Financial Aid is 605-688-4695.

**Records and Registration** - The Registrar's Office assists students in meeting their academic goals through a variety of services that include on-line registration, adding and dropping classes, accessing final grades, academic transcripts, and coordinating the semester course schedule. Records and Registration staff are available to help students to understand the variety of policies, procedures, and deadlines that are in place. The phone number for Records and Registration is 605-688-6195.

**Scholarships** - Students receiving the Jackrabbit Guarantee or the South Dakota Opportunity Scholarship may find information and advising on continuing scholarship eligibility, renewal, and retention. The phone number for Scholarships is 605-688-5201.

## Multicultural Center and Student Support Services

**Multicultural Center** - The Multicultural Center develops campus initiatives that demonstrate the valued practice and philosophy of multiculturalism within the University community. The office provides support to students of color by providing tutorial services, multicultural and diversity programming, advising cultural organizations, and coordinating the Minority Peer Mentor Program.

The Multicultural Center compliments the Division of Student Affairs' mission by broadening the social, cultural, educational, and recreational experience of students. Phone: 605-688-5585.

**Disability Services** - Disability Services coordinates services for students with a wide range of disabilities. Services include coordinating testing accommodations, the acquisition of alternative format texts, classroom accommodations, referral to other service agencies, and coordinating additional services based on the individual needs of the student. Direct Line: 605-688-4504 or Main Office: 605-688-5585.

**Veterans Resource Center** - The office is responsible for providing services and coordinating programs for veterans which includes coordinating orientation program for veterans, house the Federal Certifying Official to assist students with their financial aid, assisting veterans who are deployed while still enrolled at SDSU, provide additional support to the SDSU Veterans Club, collaborating with the city and county agencies that assist veterans, working with returning National Guard units and other active duty personnel to assist with their admission/ re-admission to SDSU. The office also works collaboratively with Financial Aid, Counseling Center, and Disability Services to provide services and support to SDSU Veterans. For more information please visit SSU 105 or Phone: 605-688-4986.

**TRiO Student Support Services** - TRiO Student Support Services is a federally funded TRiO grant program designed to support students in achieving academic success. To assist students' success at SDSU the following support services are available through the SSS Program: 1) individualized support in managing academic pursuits; 2) personalized financial, career, and social support services to ease transitions through college; 3) tutorial services in a variety of course areas (including math, English, and basic sciences); 4) referral assistance to other campus support services; and 5) priority registration at the beginning of each academic semester. Since services to students are individualized, participation in the program may substantially increase participants' chances for success at SDSU.

The ultimate goal of SSS is to increase the number of students who are retained and graduated from SDSU. To be eligible for services, a participant must fit one of the following criteria: 1) a first generation student - neither parents finished a 4-year college degree, 2) an individual with a documented disability that impacts ability to be successful in an academic program, and/or 3) an individual from an economically disadvantaged family who needs financial assistance to attend and be successful in college. For more information on Student Support Services, visit the office in SSU 065. Phone: 605-688-6653.

**TRiO Upward Bound** - Upward Bound is a Federally Funded program designed to support high school students in their preparation for successful college graduation. Upward Bound provides support in areas of tutoring, mentoring, cultural enrichment, college tours, personal development, and academic preparation. To participate, students must be either first-generation college-bound or parents meet the federal income guidelines; and be enrolled in one of the five participating high schools located in Sioux Falls and Flandreau, SD. Phone: 605-688-6653.

## Residential Life

Housing and Residential Life administers programs and facilities for all on-campus housing. Further information and policies are available in the on-line Residential Life Handbook and Family



Student Housing Information found on the department's website. Housing and Residential Life is located on the first floor of Caldwell Hall. The phone number is 605-688-5148.

**Residence Halls** - Residence Halls at SDSU are living units where students can study, meet other students, and be challenged to develop as individuals. Students who are within the first years beyond graduation from high school are required by the Board of Regents (BOR) to enter into residence hall and food service contracts with the University. Any exceptions to the BOR policy must be granted by Housing and Residential Life. Details on the Board of Regents' requirements can be reviewed at (website) or by contact Housing and Residential Life and/or are listed on the department's web pages. Currently, the rate for a residence hall double room ranges from \$1,502 to \$2,450 per semester, depending on the assigned hall per semester. Students who are not required to live in on-campus should contact the office for availability of campus housing or assistance in locating off-campus options.

**Residence Hall Confirmation Fee** - The Residence Hall Application Information is available to students following admission to the University. The housing application is available online at [www.sdstate.edu/reslife](http://www.sdstate.edu/reslife) by clicking on the housing application link. The link is also available after logging in at [mystate.sdstate.edu](http://mystate.sdstate.edu). Students who do not have access to the Internet should contact Housing and Residential Life to make other arrangements. A \$75 confirmation fee must be submitted before an assignment will be made. For first-time freshmen, \$65 will be credited toward the student's Hobo Dough account with the remaining \$10 used to fund the Student Success Inventory. Transfer and other non-first year students will have the full \$75 credited in Hobo Dough. Any person whose written request is granted for release from the residency requirement that is received on or before June 30 (November 30 for new spring semester applicants) will have the \$75 dollars refunded. Any person who is canceled at their request after these dates will forfeit the Confirmation Fee.

**Family Student Housing** - 78 unfurnished one-bedroom apartments and 6 unfurnished two-bedroom apartments are available for rent on campus. Currently, rent for the one-bedroom apartments ranges from \$315 to \$417 per month. Rent for the two bedroom apartments is \$497 per month. Each apartment includes a refrigerator, stove, and all utilities. To be eligible to reside in Family Student Housing students must have been accepted to SDSU, enrolled in the equivalent to full-time student status, and plan to reside with their spouse and/or at least one dependent in the apartment. Contact Housing and Residential Life for more information.

**University Apartments** - Four-bedroom apartments for upper division single students are available in the Meadows North and South apartment complexes. Monthly rent includes utilities, Internet, dishwasher, stove, refrigerator, and air conditioning. Contracts are for Nine-months and a \$75 confirmation fee must accompany all applications.

**Additional Information** - Students participating in an internship, required student teaching, Study Abroad, or other academic related experiences outside of the Brookings area may be released from their contract for the spring semester by submitting the Request for Release form.

## The Union

The Union provides an opportunity for student involvement with the campus community and a connection to the University. The department manages and operates the University Student Union, which includes services such as the Information Exchange, Outback Jacks, Blue Print Design Center, Central Reservations and State Technical Services. Students can cash checks, send faxes, play billiards, rent outdoor recreational equipment, reserve sound and lighting services for programs, and dine at the Market, Jacks' Place, Einstein Bros. Bagels and Weary Wil's Sports Grill. A full-service coffee, espresso and smoothie bar are also available at Java City. The department also facilitates the advising and support for student

organizations. The Office of Student Engagement works closely with the University Program Council (UPC), Greek Life, the recognition of student organizations, and career development/internships. The department also coordinates the New Student Orientation program for the summer, fall, and spring and is engaged in the Lead State and Meet State programs.

This Union is home to *The Collegian* student newspaper, Students' Association, Student Legal Services, KSDJ 90.7 campus radio station, Greek Life, Multicultural Student Organizations, University Program Council, Dining Services: the Market and Jacks', the Bookstore, Card Services/Hobo Dough, and fifteen meeting rooms including the Volstorff Ballroom which add to the already extensive list of student programs and services that work to build a great student experience at State. For more information regarding the Union call 605-688-4960.

## Center for Student Engagement

The Center for Student Engagement is located in the Union and links students to a variety of programs and initiatives designed to promote their success at South Dakota State University. The center is home to career development and internship staff, as well as staff focused on serving student organizations, leadership development programs and campus wide engagement initiatives. The University Program Council, Greek Life, the Students' Association and the New Student Orientation program also call the center home.

**Career Development and Internship Services** - Career Development staff promote student growth and development through variety of programming and services that facilitate the transition from student to professional and help students and employers connect. Students from all colleges and majors are welcome to take advantage of the support offered by the Career Center. Uncovering the best career opportunities takes time and the effort begins with the foundation of experience developed as early as the freshman year. Career inventories are available to help students assess their interests and abilities and connect them to careers. Whether searching for part-time or summer jobs, internships, or full-time employment, the Career Development staff offer assistance in learning effective job searching techniques. Services include individual coaching on resume writing, developing job search strategies, and improving interviewing skills, as well as special events such as practice interviews with area employers. In addition, the Career Center works with SDSU colleges to facilitate job fairs and on-campus interviews for the numerous employers that recruit SDSU students.

Students may register with Campanile Connections, [www.myinterfase.com/capcenter/student/](http://www.myinterfase.com/capcenter/student/) the free online career management system to search job listings, post resumes, sign up for on-campus interviews, research employers, and receive email notices regarding job listings. SDSU hosts an on-campus branch of the South Dakota Department of Labor and Regulations for the convenience of students searching for part-time and summer jobs in Brookings and the around the state. The Career Center can be contacted at 605-688-4425, [sdsu.careercenter@sdbor.edu](mailto:sdsu.careercenter@sdbor.edu), or for more information visit <http://www.sdstate.edu/careercenter/>.

**New Student Orientation** - NSO assists the transition process for students new to SDSU. NSO implements Orientation sessions for new, transfer, and readmit students throughout the year. At Orientation, students register for classes, attend informational sessions, and receive other important information about being a student at SDSU. After attending Orientation, students often feel much better prepared for life at SDSU.

## Wellness Center

The Wellness Center is dedicated to supporting academic success and personal development by promoting and encouraging healthy lifestyle for the members of the SDSU community. The Wellness Center houses state of the art fitness equipment, a variety of recreational and intramural programs, effective wellness education, and a student health clinic and counseling center. Services and

programs provided are detailed below. For further information about the Wellness Center is available at 605-688-6415, [sdsu.wellnesscenter@sdsu.edu](mailto:sdsu.wellnesscenter@sdsu.edu), or go online to <http://www.sdsu.edu/wellness-center/>.

## Community Fitness and Recreation

Community Fitness strives to provide current and diverse programming to enhance life-long health and well-being. Knowledgeable professionals serve the students, faculty and community to make appropriate decision about their fitness and nutritional desires. A varied menu of activities and programs are offered including: cardio and weight equipment; land, water and Spinning classes; walking/running track; pool; three gyms; a climbing pinnacle and bouldering wall. Staff provides personal orientation, personal fitness evaluations, and design a personal program to meet fitness goals.

Fitness and Recreation facilities are open Monday through Thursday 5:00 a.m.-12 a.m.; Friday 5:00 a.m.-10:00 p.m.; Saturday 8:00 a.m. - 8:00 p.m.; and Sunday 12:00 p.m.- 12 a.m.. Summer hours Monday through Friday 5:00 a.m. - 10:00 p.m.; Saturday 8:00 a.m. - 4:00 p.m.; and Sunday 12:00 p.m. - 8:00 p.m. For further information regarding the Wellness Center and its services, call 605-688-6415.

## Intramural & Recreational Sports & Sport Clubs

**Intramural Sports** - The Intramural Program provides the opportunity for all activity-fee-paying students, both undergraduate and graduate, to participate in organized and informal sports as regularly as their time and interests permit. SDSU faculty and staff, that are members of the SDSU Wellness Center, are also encouraged to join a student intramural team and/or start their own faculty/staff team and compete in the intramural program. Over 3,100 individual students participate each year with many in more than one intramural sport, with total participation numbers over 6,500 students annually. The program seeks to foster a life-long positive attitude toward physical activity in informal settings such as open swim and gyms and through league play. Activities are organized on an individual, team, and club basis. Leagues are established for women, men, and mixed (co-rec) competition activities. Students may manage, participate, and/or seek employment opportunities supervising and officiating. Residence hall, independent, and organizational groups may form teams. There are 30 recreational sports including flag football, 3-on-3 basketball, volleyball, basketball, softball and many more to choose from. Intramural registration is online at [www.imleagues.com](http://www.imleagues.com) and for more information contact the Recreation Program office at 688-4724.

**Sport Clubs** - Sport clubs offer specialized participation ranging from a social setting on campus, to instructional programming, to competition with clubs from other universities within the region. Eight club sports such as hockey, rugby, men's soccer, cricket, bowling, and ultimate Frisbee compete regionally giving SDSU students additional recreation opportunities.

All program offerings are governed by an elected intramural and sport club councils, and activities are scheduled and supervised by the intramural staff. Since there is inherent risk of injury involved with all physical activities, it is recommended that participants have their own medical insurance. For further information, contact the Intramural Office at 605-688-4724 or <http://www.sdsu.edu/wellness-center/>.

## Student Health Clinic and Counseling Services

The mission of Student Health Clinic and Counseling Services is to promote the health and wellness of the University Community, to enhance student retention, and to support academic and personal success. All SDSU students are eligible for services. Hours are Monday through Friday, 8 a.m.-5 p.m. when classes are in session.

During summer and academic breaks, appointments are scheduled from 8:30 a.m.-12:30 p.m., Monday, Tuesday, Thursday and Friday. (No appointments on Wednesdays.) Call 605-688-6146 or visit <http://www.sdsu.edu/wellness-center/counseling/index.cfm> for more information.

**Student Health Clinic** - The Health Clinic includes primary care for illnesses and injuries, laboratory diagnostics, reproductive health, physical examinations, immunizations, and nutritional counseling to SDSU students Spouses and dependents of students are eligible for services. For further information or to make an appointment call 605-688-4157. For more information, visit <http://www.sdsu.edu/wellness-center/shc/index.cfm>

**Jackrabbit Pharmacy** - The Pharmacy serves all eligible SDSU students, faculty/staff, their family members, and Family Planning patients. The SDSU Jackrabbit Pharmacy accepts prescriptions from doctors outside of the student health clinic. We offer competitively priced over-the-counter and prescription medications along with discounted birth control. For more information, call 605-688-5410 or visit <http://www.sdsu.edu/wellness-center/pharmacy/index.cfm>

**Brookings Family Planning** - The family planning services provide education, counseling, medical, & birth control services along with pregnancy testing and sexually transmitted Infections (STI) screenings. Cost of services is based on family income and size. Any student or non-student is eligible to receive these services. For more information or to make an appointment, call 605-688-6622 or visit <http://www.sdsu.edu/wellness-center/family/index.cfm>

**Counseling Center** - Counseling Services provide individual and group counseling to students and SDSU employees with emotional, behavioral, and/or academic concerns to promote retention and success at SDSU. Common issues include mood disorders, substance use/abuse, relationship concerns, and personal and professional growth. Counselors are available for emergencies after hours during the school year by contacting UPD at 688-5117, who will then contact the counselor on-call. For further information, call 605-688-6146.

**Drug and Alcohol Abuse Prevention Programs** - SDSU, through the Department of Student Health and Counseling Services, provides alcohol and drug abuse information and prevention programs to the campus community. Alcohol and drug abuse assessment is available on an individual basis. Counseling and medical services are available to students and referrals to other agencies are available to everyone on campus. For further information, call 605-688-6146 or 605-688-4157.

**Health Education and Prevention Services** - The Health Education and Prevention Services are sponsored by the Student Health Clinic and Counseling Center. The program emphasizes awareness, prevention, and response to sexual assault and date rape. Closely related issues of alcohol/drug abuse, STIs (including HIV/AIDS), and unplanned pregnancies are addressed. The Counseling Center supports student peer educators who are available to present awareness and prevention programs on the above topics for student organizations, classes when requested by the instructor and residence hall student staff training. The counseling staff is available for victim assistance and response in case of sexual assault or violence. A close working relationship is maintained with other community agencies involved in prevention and response to violence and sexual assault. Confidentiality is assured at all times for the student/victim. Individuals with questions or personal concerns are asked to call the Student Health Clinic and Counseling Center at 605-688-6146 for assistance or information.

Additional services include nutrition education and health promotion with a student-run organization advocating for healthy lifestyles – Helping Everyone Reach Optimal Health (HEROH).

# Teaching and Learning Center

The SDSU Teaching Learning Center assists students and faculty in arranging service-learning courses utilizing any of a variety of service sites and varying lengths of service. Supplemental service-learning course credits can be provided in accordance with the amount of study/service, and grades are based on the learning that takes place. Special costs are involved. Study may focus on a particular culture, social system, agency, skill set, or other chosen topic.

**Service Learning** - South Dakota State University provides service-learning opportunities for students through the SDSU

## University Marketing and Communications

The role of the Office of University Marketing and Communications is to serve as a reliable communications and marketing link between the general public and the state's largest higher education institution: South Dakota State University. The numerous services and activities performed by the office are designed to inform key stakeholders and promote the areas of excellence at SDSU, ranging from faculty and student achievements, research-based initiatives, and alumni accomplishments. University Marketing and Communications assists and works with the University's administration, colleges and departments and numerous student organizations in providing strategic marketing and communications functions to showcase the University's commitment as a land-grant institution to teaching, research, and outreach. The office maintains five primary areas of operations: news service, creative services, marketing & brand management, photography and licensing & merchandise.

### News Service

The News Service division is the official source for South Dakota State University news, information and expert sources and university-wide events. The division is committed to providing information to the public and university community about the quality and diversity of the learning environment at SDSU, the level of scholarship and research and the university's dedication to finding solutions to the challenges of today. The office responds to all media requests concerning issues, events and research happening at SDSU. Incoming reporter queries help determine experts who can most appropriately respond. University Marketing and Communications works closely with all branches of the news media to provide interview and information requests, University event publicity, news tips and advisories, distribution of University research information, and a wide variety of student-related announcements. South Dakota State University welcomes the media to campus and request they contact the office to schedule interviews and visits to campus. News Service representatives can be reached at 605-688-6161.

### Creative Services

The creative services division serves a vital communications role at SDSU. Creative services manages eight magazines and newsletters, which showcase students, faculty, and alumni as they carry State's message of opportunity to various audiences, both on and off campus.

The office produces the following magazines for the following colleges and organizations on campus:

- State Magazine (SDSU Alumni Association)
- Calling Home (magazine for parents)
- Impulse Magazine (College of Engineering)
- College of Nursing
- College of Pharmacy
- Rabbit Tracks (SDSU Athletics)
- College of Arts and Sciences
- College of Education and Human Sciences

Staff members regularly collaborate and consult with various campus departments and colleges about their communication needs. Professional and experienced staff make the various publications shine through the creative work of several graphic designers and

Teaching Learning Center. Service-learning combines meaningful service in the community with a formal educational curriculum and structured time for participants to reflect on their service and educational experience. A variety of SDSU departments have established service-learning courses and students are encouraged to contact specific departments for information. Assistance with this can be obtained from the Teaching Learning Center by calling 605-688-6413.

writers. In addition to magazines and newsletters, the creative services unit designs brochures, display banners, posters, programs, invitations and just about anything else that clients request. A key goal is to ensure that SDSU's name and logo is properly used in printing projects. University Marketing and Communications maintains the University's Graphic Identity Manual and monitor University logo usage.

### Marketing & Brand Management

The South Dakota State University marketing division provides strategic and tactical marketing services, including brand management, positioning and messaging and advertising. The division is also responsible for the development and implementation of the University's strategic marketing plan. The department aids the University in reaching its strategic and operational goals by building awareness, preference and loyalty among its current and prospective stakeholders.

### Brand Management

University Marketing and Communications also carries the responsibility of ensuring that SDSU's name and logos are properly used in printing projects. The University currently has three main marks: The Campanile with SDSU underneath serves as the institutional logo and is to be used for most publications; the Jackrabbit is the mascot of the University and is used by Athletics, the SDSU Alumni Association and student organizations; and the stretch SD is used by Athletics and for external marketing purposes.

There are a few basic rules that apply to each mark:

- All marks must be used in its entirety. Using only a portion of the mark is not allowed.
- All marks must be used in the proper colors, with no color substitutions or embellishments.
- Marks cannot be altered in any way, for example, the jackrabbit cannot wear a cowboy hat or be dressed in scrubs.
- Marks cannot be overprinted, and a ring of 3/16 inch clear space must surround them at all times.

In order to use any of the marks on printed publications, prior approval must be obtained from University Marketing and Communications. Call 605-688-4537 for logo usage approval.

### Licensing

The purpose of the South Dakota State University Trademark Licensing Program is to protect and promote the name, symbols, and other trademarks that are associated with the University on apparel and other merchandise for internal and external consumption.

The SDSU Trademark Licensing Program is charged with:

- Protecting and controlling use of the University name and marks;
- Developing cooperative relationships with licensees;
- Distribution and approval of artwork;
- Promotion of products and designs that are consistent with the University's image, reputation, and goals;
- Supporting the University's strategic brand development

Any product bearing the logos, trademarks, word marks, or having an implied association with South Dakota State University must be licensed with the South Dakota State University Trademark Licensing Program, which approves all products and designs and ensures proper labeling as appropriate. In addition, the South

Dakota State University Trademark and Licensing Program seeks to insure that all products and designs submitted for licensing are safe for consumers and project the proper image of the University. Contact the South Dakota State Trademark Licensing Office at 605-688-6161 with questions at [sdsu.ur@sdstate.edu](mailto:sdsu.ur@sdstate.edu) or 605-688-6161.

#### Photographic Services

University Marketing and Communications is home to SDSU's photography services and is responsible for meeting photo requests

across campus. Requests are varied ranging from the presidents office, campus events, conferences, SDSU's web pages, college publications, promotional and marketing items to intercollegiate athletic competition. SDSU photography services provides the university with high-quality images at reasonable rate. To schedule photography services please call 605-688-5913.

## Water and Environmental Engineering Research Center

The Water and Environmental Engineering Research Center (WEERC) is located in the College of Engineering at SDSU. Formerly named the Northern Great Plains Water Resources Research Center (NGPWRRRC), WEERC conducts research, education and outreach activities through principal investigators who are faculty members in the Engineering College. WEERC projects are funded by governmental agencies, cities, and industry, and are focused on engineering solutions to water resources and environmental problems. Recent project topics include municipal and industrial water and wastewater treatment, water supply and wastewater disposal systems, environmental remediation,

hydrological phenomena, and hydraulics of natural and engineered systems. These projects often involve collaboration with other SDSU departments or off-campus units. WEERC also maintains an environmental chemistry laboratory in Crothers Engineering Hall in conjunction with the Civil and Environmental Engineering Department. The laboratory supports research projects, environmental engineering courses, and outreach/service activities. For information, contact Director Delvin DeBoer, [delvin.deboer@sdstate.edu](mailto:delvin.deboer@sdstate.edu), 605-688-5210, or WEERC, SDSU, Box 2219, Brookings, SD 57007-0096.

## Water Resources Institute

The Water Resources Institute (WRI) supports and conducts research and training in agricultural and environmental water management of significance to South Dakota and the North Central Region at South Dakota State University and other affiliated educational institutions and agencies across the state. Examples of activities include agricultural water management such as irrigation and drainage, the role of agricultural nutrient management on water quality, phosphorous loss from agricultural fields and analysis interpretations of water suitability for domestic, livestock and irrigation use. WRI programs typically funds studies of local and regional concerns in collaboration with a range of stakeholders, including agricultural producers, commodity groups, policy makers, water management agencies and organizations and the public.

The WRI is committed to educating and training the water management decision-makers of tomorrow by involving students and stakeholders in research projects, teaching, outreach activities, conferences and meetings. Through these activities the students are exposed to current and future water-related issues and trained to formulate science-based solutions to water-based problems. A laboratory, open to students and researchers for use of lab equipment in conjunction with water research projects, is maintained by the Institute.

The Institute administers a grant program funded under the U.S. Department of the Interior, as made available through the Water

Resources Research Act of 1984. The funds are targeted for research, including research by students, directed toward solving state, regional, and national water problems.

The Water Resources Institute co-sponsors the annual Eastern South Dakota Water Conference held in Brookings. Water is an important part of the economic future of South Dakota, and this conference serves as an important avenue to exchange experiences and ideas, explore the latest research and share knowledge with other participants on this Resource. The WRI also co-sponsors the Big Sioux Water Festival in Brookings, SD, which has hosted more than 20,000 4th grade students since its beginning in 1993.

WRI provides a unique service to the public by identifying and provide solutions for water quality problems. This includes assistance with interpretation of the results from water analyzed by a laboratory, and providing informational materials related to the potential solution to those water quality problems. The Institute also provides a specific service to irrigators by providing recommendations on soil and water compatibility. These services are available to all South Dakotans at no cost.

WRI is located in the Agricultural Engineering building and is associated with the College of Agriculture and Biological Sciences. For more information, please contact the Water Resources Institute by phone at 605-688-4910, by e-mail: [sdsu.wri@sdstate.edu](mailto:sdsu.wri@sdstate.edu) or on the Web at <http://www.sdstate.edu/abe/wri>.





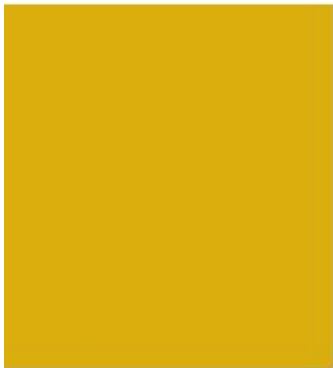




# University Organization, Administration & Staff



- *University Organization 336*
- *Accreditations & Affiliations 338*
- *General Administration 336*
- *Academic Deans 336*
- *Distinguished Professors 340*
- *Faculty, Staff 344*
- *Emeriti Faculty, Staff 339*
- *Academic Calendar, 410*
- *Map, Back cover*



# Organizations & Administration

Control of the educational institutions of the state is vested in the Board of Regents. The Faculty consists of the President, the Vice Presidents, the Deans and other administrative officers, teachers and researchers with rank of instructor or above. The faculty is responsible in general for academic standards and procedures and programs, including recommending to the Regents the candidates for degrees. Faculty business is conducted by the Faculty Senate, an elected body through which faculty express concerns for the welfare of the University and the university community, develop and disseminate communications, contribute to formation of general university policy, and perform those duties and functions allocated to or assumed by the faculty.

## Board of Regents

### *Honorable Dean Krogman*

President  
(Term expires March 31, 2015)  
Brookings

### *Honorable Randy Schaefer*

Vice President  
(Term expires March 31, 2015)  
Madison

### *Honorable Randall K. Morris*

Secretary  
(Term expires March 31, 2016)  
Spearfish

### *Honorable Terry Baloun*

(Term expires March 31, 2016)  
Highmore

### *Honorable Harvey C. Jewett*

(Term expires March 31, 2017)  
Aberdeen

### *Honorable Kathryn Johnson*

President  
(Term expires March 31, 2017)  
Rapid City

### *Honorable Joseph Schartz*

Student Regent  
(Term Expires July 1, 2015)  
Humbolt

### *Honorable Kevin Schieffer*

(Term expires March 31, 2019)  
Pierre

### *Honorable Bob Sutton*

(Term Expires April 1, 2019)  
Pierre

### *Honorable Jack R. Warner*

Executive Director  
Pierre

## General Administration

### President

David L. Chicoine, Ph.D.

### Provost and Vice President for Academic Affairs

Laurie Stenberg Nichols, Ph.D.

### Vice President for Information Technology and Security

Michael F. Adelaine, Ph.D.

### Vice President for Finance and Business/CFO

Wesley G. Tschetter, M.B.A.

### Vice President for Research

Kevin D. Kephart, Ph.D.

### Vice President for Student Affairs

Marysz Palczewski-Rames, Ed.D.

### Associate Vice President for Academic Affairs

Mary Kay Helling, Ph.D.

### Associate Vice President for Student Affairs

Douglas Wermedal, Ph.D.

### Associate Vice President for Research

James Doolittle, Ph.D.

### Assistant Vice President for Facilities and Services

Dean Kattelman, M.S.

### Assistant Vice President for Finance and Business/Controller

Jeff A. Siekmann, M.B.A.

### Assistant Vice President for Human Resources

Marc Serrett, M.S.

### Assistant Vice President for International Affairs and Outreach

Kathleen Fairfax, M.A.

## Deans/Associate and Assistant Deans

### *College of Agriculture and Biological Sciences*

Barry Dunn, Ph.D., Dean  
Donald M. Marshall, Ph.D., Associate Dean  
Daniel Scholl, Ph.D., Associate Dean

### *College of Arts and Sciences*

Dennis Papini, Ph.D., Dean  
Kathleen Donovan, Ph.D., Associate Dean

### *College of Education and Human Sciences*

Jill Thorngren, Ph.D., Dean  
Jane Hegland, Ph.D., Associate Dean  
CY Wang, Ph.D., Associate Dean

### *College of Nursing*

Nancy Fahrenwald, Ph.D., Dean  
Lynnette Stampler, Ph.D., Associate Dean  
Linda Herrick, Ph.D., Associate Dean  
Barbara Hobbs, Ph.D., Assistant Dean

### *College of Pharmacy*

Dennis Hedge, Pharm.D., Dean  
Jane Mort, Pharm.D., Associate Dean  
Daniel Hansen, Pharm.D., Assistant Dean

### *Jerome J. Lohr College of Engineering*

Lewis F. Brown, Ph.D., Dean  
Richard A. Reid, Ph.D., Associate Dean  
Dennis Helder, Ph.D., Associate Dean

### *University College*

Keith Corbett, Ed.D., Dean

### *Van D. and Barbara B. Fishback Honors College*

Timothy J. Nichols, Ph.D., Dean

### *Graduate School*

Kinchel Doerner, Ph.D., Dean

### *Library*

Kristi Tornquist, Ph.D., Chief University Librarian

### *Office of Student Affairs*

Samuel A. Jennings II, Ph.D., Dean of Students



# Organizations & Administration

## Directors

Academic Evaluation & Assessment  
Jo Ann Sckerl, Ed.D.

Academic Programs (College of AgBio)  
Donald M. Marshall, Ph.D.

Admissions  
Tracy Welsh, B.A.

Agricultural Experiment Station  
Daniel Scholl, Ph.D.

Agricultural Heritage Museum  
Barry Dunn, Ph.D., Interim

Alumni Association  
Matt Fuks, B.S., President

Animal Disease Research and Diagnostic  
Laboratory (ADRDL)  
Russell Daley, D.V.M., Interim

Athletics  
Justin Sell, M.S.

Bookstore, University  
Derek Peterson, B.S.

Capitol University Center-Pierre  
Ron Woodburn, M.S.

Center for Infectious Disease Research and  
Vaccinology  
David H. Francis, Ph.D.

Continuing and Extended Education  
VACANT

Dining Services  
JoLee Frederiksen, B.S.

Disability Services  
Nancy Crooks, M.S.

Diversity, Equity & Community  
Jaime Nolan-Andrino, M.A.

English as a Second Language  
Nathan Ziegler, Ph.D.

Enrollment Services and Registrar  
Aaron Aure, Ph.D.

Environmental Health & Safety  
Gary Yarrow, Ph.D.

Ethel Austin Martin Program in Human  
Nutrition  
Bonny Specker, Ph.D.

Financial Aid  
VACANT

First Year Advising Center  
Jody Owen, Ed.D.

Geographic Information Sciences Center  
of Excellence  
Geoffrey Henebry, Ph.D.

Grants and Contracts Administration  
Jacqueline Nelson, M.Ed., CRA

4-H Foundation  
Nancy Swanson, M.A.

Institutional Research and Budget  
Jacqueline Nelson, M.Ed., CRA

Marketing and Communications  
Mike Lockrem, M.Ed.

McCrary Gardens,  
David Graper, Ph.D.

Multicultural Center and Student Support  
Services  
C.D. Douglas, M.S.

North Central Regional Sun Grant Center  
Vance Owens, Ph.D., Interim

Oak Lake Field Station  
Nels Troelstrup, Ph.D.

Orientation  
Adam Karnopp, M.S.

Residential Life  
Jeffrey Hale, Ed.D.

South Dakota Art Museum  
Lynn Verschoor, M.S.

SDSU Extension Service  
Barry Dunn, Ph.D.

SDSU Foundation/Development  
Steve Erpenbach, B.S., President

SD EPSCoR  
James Rice, Ph.D.

Student Engagement  
Nick Wendell, M.S.

Teaching and Learnign Center  
Kevin Sackreiter, Ed.D.

Technology Transfer Service  
William Aylor, J.D.

University Student Union  
Jennifer Novotny, M.S.

Water and Environmental Engineering  
Research Center  
Chris Schmit, Ph.D.

Water Resources Institute  
Van C. Kelley, Ph.D.

Wellness Center  
Jeffrey Huskey, M.S.

West River Ag Center  
Dan Oedekoven, M.Ed.

## Department Heads (by college)

**Agriculture and Biological Sciences**  
Agricultural and Biosystems Engineering  
Van C. Kelley, Ph.D.

Animal Sciences  
Joseph Cassady, Ph.D.

Biology and Microbiology  
Volker Brozel, Ph.D.

Dairy Science  
Vikram V. Mistry, Ph.D.

Economics  
Eluned Jones, Ph.D.

Natural Resource Management  
David W. Willis, Ph.D.

Plant Science  
David Wright, Ph.D.

Veterinary and Biomedical Science  
Jane Christopher-Hennings, DVM

Water Resources  
Van C. Kelley, Ph.D.

**Arts and Sciences**  
Aerospace Studies  
Lt Col William C. Pleasants

Architecture  
Brian T. Rex, M.S.

Chemistry and Biochemistry  
James A. Rice, Ph.D.

Communication Studies and Theatre  
Laurie Haleta, Ph.D.

English  
Jason McEntee, Ph.D.

Geography  
George White, Ph.D.

History and Political Science  
April Brooks, Ph.D.

Journalism and Mass Communication  
Mary Peterson Arnold, Ph.D.

Military Science  
LTC Aaron C. Schultz, M.B.A..

Modern Languages and Global Studies  
Maria Ramos, Ph.D.

Music  
David Reynolds, D.M.A.

Physics  
Joel Rauber, Ph.D.

Psychology  
Bradley Woldt, Ph.D.

Sociology and Rural Studies  
Mary Emery, Ph.D.

Visual Arts  
Tim Steele, Ph.D.

## Education and Human Sciences

Consumer Sciences  
Jane E. Hegland, Ph.D.

Counseling and Human Development  
Jay Trenhaile, Ed.D.

Health and Nutritional Sciences  
Matthew Vukovich, Ph.D.

Teaching, Learning and Leadership  
Andrew Stremmel, Ph.D.

## Jerome J. Lohr College of Engineering

Civil and Environmental Engineering  
Nadim I. Wehbe, Ph.D., Interim

Electrical Engineering and Computer  
Science  
Steven Hietpas, Ph.D.

Engineering Technology and Management  
Teresa Hall, Ph.D.

Mathematics and Statistics  
Kurt Cogswell, Ph.D.

Mechanical Engineering  
Kurt Bassett, Ph.D.

## Nursing

Graduate Nursing  
Lynnette Stamler, Ph.D.

Nursing Research,  
Nancy Fahrenwald, Ph.D.

Nursing Student Services  
VACANT

Undergraduate Nursing  
Linda Herrick, Ph.D.

West River Nursing  
Barbara Hobbs, Ph.D.

## Pharmacy

Pharmacy Practice  
James Clem, Pharm.D.

Pharmaceutical Sciences  
Omathanu Perumal, Ph.D., Interim

# Accreditations and Affiliations

**South Dakota State University** holds institutional membership in a number of educational associations: the National Association of State Universities and Land-Grant Colleges (1307 New York Avenue, Suite 400, Washington, D.C. 20005-4701; Phone 202-478-4701) promotes the aims expressed in the Morrill Act of 1862, and in the subsequent acts of Congress relating to Land-Grant Colleges. Accredited by The Higher Learning Commission (HLC) of the North Central Association of Colleges and Schools (230 North LaSalle Street, Suite 7-500, Chicago, IL, 60604; Phone 800-621-7440).

**Agricultural Systems Technology:** The Agricultural Systems Technology Program is accredited by the American Society of Agricultural and Biological Engineering (2950 Niles Road, St. Joseph, MI 49085-9659; Phone: 269-429-0300).

**Animal Disease Research and Diagnostic Laboratory:** The Animal Disease Research and Diagnostic Laboratory is accredited by the American Association of Veterinary Laboratory Diagnosticians (PO Box 1522, Turlock, CA 95381; Phone 209-634-5837).

**Art Museum:** In 1977 the South Dakota Art Museum became the first South Dakota museum of any kind to be accredited by the American Association of Museums Accreditation Commission (1575 Eye St., NW, Suite 400, Washington, D.C. 20005; Phone 202-289-1818).

**Athletic Training:** The Athletic Training Program (undergraduate and graduate levels) is accredited by the Commission on Accreditation of Athletic Training Education (2201 Double Creek Drive, Suite 5006, Round Rock, TX 78664; Phone 512-733-9700).

**Chemistry:** The Chemistry program is certified by the American Chemical Society (1155 Sixteenth St., N.W., Washington, DC 20036; Phone 202-872-4589).

**Computer Science:** The Computer Science program is accredited by the Computing Accreditation Commission of ABET, <http://www.abet.org>.

**Construction Management:** The Construction Management program is accredited by the American Council for Construction Education (1717 North Loop 1604 East, Suite 320, San Antonio, TX 78232-1570; Phone 201-495-6161).

**Counseling and Human Resource Development:** The Counseling and Human Resource Development program is accredited by the Council for Accreditation of Counseling and Related Educational Programs (1001 North Fairfax Street, Suite 510 Alexandria, Virginia 22314; Phone 703-535-5990). The specialization in Rehabilitation and Mental Health Counseling is accredited by the Council on Rehabilitation Education (1699 E. Woodfield Road, Suite 300 Schaumburg, IL 60173; 847-944-1345).

**Dietetics:** The Dietetics program is accredited by the Accreditation Council for Education of Nutrition and Dietetics, the accrediting agency for Academy of Nutrition and Dietetics (120 South Riverside Plaza, Suite 2000, Chicago, IL 60606, 312-899-0040)

**Early Childhood Education:** The Early Childhood Education program is accredited as part of teacher education by the National Council for Accreditation of Teacher Education (2010 Massachusetts Ave., NW, Suite 500, Washington, D.C. 20036-1023; Phone 202-466-7496).

**Engineering:** The programs of Agricultural and Biosystems, Civil, Electrical, and Mechanical Engineering are accredited by the Engineering Accreditation Commission of ABET, <http://www.abet.org>.

**Extension:** The extension programs of Agricultural and Biosystems Engineering; Animal Science; Biology/Microbiology; Dairy Science; Economics; Experiment Station; Human Sciences; Plant Science; Range Science; Sociology; Veterinary Medicine; and Wildlife and Fisheries Sciences are reviewed by the United States Department of Agriculture, National Institute of Food and Agriculture (NIFA); 1400 Independence Avenue SW., Stop 2201, Washington, DC 20250-2201

**Exercise Science:** The Exercise Science Program is accredited by the Committee on Accreditation for the Exercise Sciences (401 W. Michigan St. Indianapolis, IN 46202, [www.coaes.org/home.html](http://www.coaes.org/home.html))

**Fishback Center for Early Childhood Education:** The Fishback Center for Early Childhood Education is accredited by the National Association for the Education of Young Children (1506 16th St., NW, Washington, D.C. 20036-1426; Phone 800-424-2460).

**Honors College:** The Honors College program is certified by the National Collegiate Honors Council (1100 Neihardt Residence Center 540 North 16th St. Lincoln, Nebraska 68588-0627, Phone: 402-472-9150, Email: [nchc@unl.edu](mailto:nchc@unl.edu))

**Interior Design:** The Interior Design program is accredited by the Council for Interior Design Accreditation (206 Grandville Avenue, Suite 350 Grand Rapids, MI 49503-4014; Phone: 616.458.0400).

**Journalism and Mass Communications:** The curriculum in Journalism and Mass Communications is accredited by the Accrediting Council on Education in Journalism and Mass Communication (School of Journalism and Mass Communications, University of Kansas, Lawrence, KS 66045; Phone 913-864-3986).

**Leadership & Management Non-Profit Organizations (LMNO):** The LMNO program is certified by the Nonprofit Leadership Alliance (1100 Walnut Suite 1900 Kansas City, MO 64106; 816-561-6415).

**Medical Laboratory Science:** South Dakota State University Medical Laboratory Science Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (5600 River Rd. Suite 720, Rosemont, IL 60018-5119).

**Music:** The Music programs are accredited by the National Association of Schools of Music (11250 Roger Bacon Drive, Suite 21, Reston, VA 22090; Phone 703-437-0700).

**Nursing:** The programs in the College of Nursing are accredited by the Commission on Collegiate Nursing Education (One Dupont Circle, NW, Suite 530, Washington, D.C. 20036-1120; Phone: (202) 887-6791 x252 Fax: (202) 887-8476).

**Pharmacy:** The curriculum in Pharmacy is accredited by the Accreditation Council for Pharmacy Education (20 North Clark Street, Suite 2500, Chicago, IL 60602-5109; Phone 312-664-3575).

**Range Sciences:** The curriculum in Range Science is accredited by the Society for Range Management (10030 W 27th Ave Wheat Ridge, CO 80215-6601; Phone 303-986-3309; Fax 303-986-3892).

**Teacher Education:** The preparation of teachers and other professional school personnel at both the undergraduate and graduate levels is accredited by the National Council for Accreditation of Teacher Education (2010 Massachusetts Ave., NW, Suite 500, Washington, D.C. 20036; Phone 202-466-7496).

## Affiliations

The University also holds membership in the American Council on Education, the American Council on Education's Internationalization Collaborative, the American Society for Information Science & Technology, the Council on International Educational Exchange (CIEE), the College Consortium for International Studies (CCIS), the Cooperative Center for Study Abroad (CCSA), the International Student Exchange Program (ISEP), the American Association of Colleges for Teacher Education, the American Association of University Women, the American Association of Colleges of Pharmacy, the American Society for

Engineering Education, the Association of Schools of Journalism and Mass Communication, the American Association of Colleges of Nursing, the American Library Association, Associated Western Universities, Inc., the Association of American Veterinary Medical Colleges, Association for Supervision & Curriculum Development, Council of Graduate Schools in the United States, Educause, National Association for Foreign Student Affairs, and several others which are concerned with more limited phases of college work. Through the Board of Regents, the University also participates in the Western Interstate Commission for Higher Education (WICHE).

The number immediately after the title of a member of the staff indicates the year when the person was first employed as a regular member of the university staff, the number following, if there is one, is the year of appointment to present rank.

## General Administration

**Chicoine, David L.**, President, Professor of Economics, Graduate Faculty, 2007; B.S., South Dakota State University, 1969; M.S., University of Delaware, 1971; M.A., Western Illinois University, 1978; Ph.D., University of Illinois, 1979.

**Nichols, Laurie Stenberg**, Provost and Vice President for Academic Affairs, Professor of Counseling and Human Development, Graduate Faculty, 1994, 2009; B.S., SDSU, 1978; M.Ed., Colorado State University, 1984; Ph.D., Ohio State University, 1988.

**Adelaine, Michael F.**, Vice President for Information Technology & Security, Graduate Faculty, 1990, 2003; B.S., Michigan State University, 1974; M.S., University of Nebraska, 1985; Ph.D., 1989.

**Kephart, Kevin D.**, Vice President for Research, Professor of Plant Science, Graduate Faculty, 1986, 2005; B.S., Montana State University, 1979; M.S., University of Wyoming, 1982; Ph.D., Iowa State University, 1987.

**Rames, Marysz Palczewski**, Vice President for Student Affairs, Graduate Faculty, 1987, 2004; B.S., University of Northern Colorado, 1982; M.A., 1986; Ed.D., University of South Dakota, 1997.

**Helling, Mary Kay**, Associate Vice President for Academic Affairs and Professor of Human Development, Graduate Faculty, 1978,

2003; B.S., SDSU, 1977; M.S., 1982; Ph.D., Purdue University, 1992.

**Doolittle, James J.**, Associate Vice President of Research & Sponsored Programs, Director of North Central Sun Grant Center, Professor of Plant Science, Graduate Faculty, 1991, 2012; B.S., Purdue University, 1982; M.S., Texas A&M University, 1986; Ph.D., 1991.

**Tschetter, Wesley G.**, Vice President for Finance and Business, 1982, 2000; B.S., SDSU, 1969; M.B.A., University of South Dakota, 1971.

**Fairfax, Kathleen**, Assistant Vice President for International Affairs and Outreach, 2011; B.S., DePauw University, 1984; M.A., Indiana University Bloomington, 1986.

**Kattelmann, Dean E.**, Assistant Vice President of Facilities and Services, 2002; B.S., Missouri State University, 1976; M.S., University of Missouri, 1989.

**Siekman, Jeffrey A.**, Assistant Vice President for Finance and Business/Controller, 1990; B.S., Northern State University, 1982; M.B.A., University of South Dakota, 1995.

**Wermedal, Douglas**, Associate Vice President of Student Affairs, 1998, 2007; B.S., SDSU, 1985; M.S.Ed., Eastern Illinois University, 1987; Ph.D., SDSU, 2008.

## Academic Deans

**Brown, Lewis F.**, Dean of the College of Engineering, Professor of Electrical Engineering, Graduate Faculty, 1992, 2000; B.S., SDSU, 1984; M.S., Iowa State University, 1986; Ph.D., 1988.

**Corbett, Keith W.**, Dean of the University College, Professor of Educational Leadership, Graduate Faculty, 1981, 2004; B.S., SDSU, 1976; M.Ed., 1987; Ed.D., University of South Dakota, 2001.

**Donovan, Kathleen**, Associate Dean of the College of Arts and Sciences, Professor of English, Graduate Faculty, 1994, 2000; B.A., Spalding College, 1968; M.A., University of Nebraska, 1988; Ph.D., University of Arizona, 1994.

**Doerner, Kinchel**, Dean of the Graduate School, Professor of Biology and Microbiology, Graduate Faculty, 2012, B.S., Southern Illinois University, 1986; M.S., University of Illinois, 1989; University of Illinois at Urbana-Champaign, 1992.

**Dunn, Barry**, Dean of the College of Agriculture and Biological Sciences, Professor of Animal Science, Graduate Faculty, 2000, 2010; B.S., SDSU, 1975; M.S., 1977; Ph.D., 2000.

**Fahrenwald, Nancy**, Associate Dean of Nursing, Associate Professor of Nursing, Graduate Faculty, 1995, 2006; B.S., SDSU, 1983; M.S., University of Portland, 1988; Ph.D., University of Nebraska, 2002.

**Hansen, Daniel J.**, Assistant Dean for Student Services, College of Pharmacy, Assistant Professor of Pharmacy Practice, 2007, 2010; B.S., SDSU, 2003; Pharm.D., 2005.

**Hedge, Dennis**, Dean of the College of Pharmacy, Professor of Pharmacy Practice, Graduate Faculty, 1992, 2009; Pharm.D., University of Kansas, 1991.

**Hegland, Jane E.**, Associate Dean of Education and Human Sciences, Professor and Head of Consumer Sciences, Graduate Faculty, 2001, 2006; B.A., Saint Olaf College, 1985; M.A., University of Minnesota, 1991; Ph.D., 1995.

**Herrick, Linda M.**, Associate Dean of undergraduate Nursing, 2012; B.S., Winona State University, 1979; M.S., University of Minnesota, 1991; Ph.D., University of Minnesota, 1998.

**Jennings II, Samuel A.**, Dean of Students, 2012; B.S., Lewis-Clark State College, 1996; M.S. Portland State University, 1999; Ph.D., Capella University, 2005.

**Marshall, Donald M.**, Associate Dean and Director of Academic Programs, College of Agriculture and Biological Sciences, Professor of Animal Science, Graduate Faculty, 1984, 2002; B.S., University of Missouri, 1979; M.S., Oklahoma State University, 1981; Ph.D., 1984.

**Mort, Jane R.**, Associate Dean for Academic Programs, College of Pharmacy, Professor of Pharmacy Practice, Graduate Faculty, 1986, 2010; Pharm.D., University of Nebraska, 1985.

**Nichols, Timothy J.**, Dean of the Honors College, Associate Professor of Sociology and Rural Studies, Graduate Faculty, 1994, 2008; B.S., Washington State University, 1986; M.A.Ed., 1993; Ph.D., SDSU, 2001.

**Papini, Dennis**, Dean of the College of Arts and Sciences, Professor of Psychology, Graduate Faculty, 2012; B.S., Western Illinois University, 1979; M.S., West Virginia University, 1982; Ph.D., West Virginia University, 1984.

**Reid, Richard A.**, Associate Dean of the College of Engineering, and Professor of Civil and Environmental Engineering, Graduate Faculty, 1995, 2004; B.S., The Citadel, 1981; M.S., Georgia Institute of Technology, 1987; Ph.D., 1995.

**Scholl, Daniel**, Associate Dean of the College of Agriculture and Biological Sciences, Ag Experiment Station Director, Professor, Graduate Faculty, 2000, 2010; B.S., University of California, 1985; D.V.M., University of California, 1987; M.P.V.M., University of California, 1988; Ph.D., State University of Utrecht (the Netherlands) 1992.

**Stamler, Lynnette**, Associate Dean of Graduate Nursing, Graduate Faculty, 2012; BSN, St. Olaf College; MEd, University of Manitoba; PhD, University of Cincinnati.

**Thorngren, Jill M.**, Dean of the College of Education and Human Sciences, 2011; B.A., Idaho State University, 1994; M.S., 1996; Ph.D., 1999.

**Tornquist, Kristi M.**, Chief University Librarian, Professor, Graduate Faculty, 2011; B.A. University of Minnesota - Morris, 1980; M.L.S., University of Wisconsin, 1982; Ph.D., University of Minnesota, 1992.

**Wang, C.Y.**, Professor and Associate Dean of the College of Education and Human Sciences, Graduate Faculty, 1993, 2002; B.S., Shenyang Agricultural University, 1985; M.S., Iowa State University, 1989; Ph.D., 1993.

## Regental Distinguished Professors

**Bailey, Harold S.**, Vice President for Academic Affairs Emeritus, Distinguished Professor of Higher Education, 1951, 1985; B.S., Massachusetts College of Pharmacy, 1944; M.S., 1948; Ph.D., Purdue University, 1951.

**Wagner, Robert T.**, President Emeritus, Professor Emeritus of Rural Sociology, Distinguished Regental Professor of Higher Education, 1970, 1997; B.A., Augustana College, 1954; M.Div., Seabury Western Theological Seminary, 1957; S.T.M., 1970; Ph.D., SDSU, 1972; L.H.D., Augustana College, 1994; D.P.S., SDSU, 1997; D.D., 2000.

## Distinguished Professors

**Brown, Michael L.**, Distinguished Professor of Natural Resource Management, Graduate Faculty, 1994, 2013; B.S., Arkansas Technical University, 1986; M.S., Texas A&M University, 1989; Ph.D., 1993.

**Johnson, James L.**, Distinguished Professor Emeritus of Communication Studies and Theatre, Director of Theatre, Graduate Faculty, 1973, 2001; B.S., Kansas State University, 1960; M.A., University of South Dakota, 1961; Ph.D., University of Kansas, 1973.

**Burns, Robert V.**, Distinguished Professor Emeritus of Political Science, Dean Emeritus of Honors College, Graduate Faculty, 1970, 1994; B.S., SDSU, 1964; M.A., University of Missouri, 1966; Ph.D., 1973.

**Johnson, W. Carter**, Distinguished Professor of Natural Resource Management, Graduate Faculty, 1989, 2006; B.S., Augustana College, 1968; Ph.D., North Dakota State University, 1971.

**Costello, William J.**, Distinguished Professor Emeritus of Animal and Range Sciences, 1965, 1991; B.S., North Dakota State University, 1954; M.S., Oklahoma State University, 1960; Ph.D., 1963.

**Malo, Douglas D.**, Distinguished Professor of Plant Science, Graduate Faculty, 1975, 1999; B.S., Iowa State University, 1971; M.S., North Dakota State University, 1974; Ph.D., 1975.

**Dwivedi, Chandradhar**, Distinguished Professor and Head of Pharmaceutical Sciences, Graduate Faculty, 1987, 2000; B.S., Gorakhpur University, 1964; M.S., 1966; Ph.D., Lucknow University, 1972.

**Mc Farland, Douglas C.**, Distinguished Professor of Animal Science, Graduate Faculty, 1986, 2007; B.A., Southern Connecticut State College, 1971; M.S., Washington State University, 1975; Ph.D., 1984.

**Evenson, Donald P.**, Distinguished Professor Emeritus of Biology and Microbiology, Graduate Faculty, 1981, 1996; B.A., Augustana College, 1964; Ph.D., University of Colorado, 1968.

**Muthukumarappan, K.**, Distinguished Professor and Graduate Coordinator of Agricultural and Biosystems Engineering, Graduate Faculty, 1997, 2013; B.S., University of Madras (India), 1981; B.E., Tamil Nadu Agricultural University (India), 1986; M.E., Asian Institute of Technology, 1988; Ph.D., University of Wisconsin, 1993.

**Flake, Lester D.**, Distinguished Professor Emeritus of Wildlife and Fisheries Sciences, Graduate Faculty, 1972, 1999; B.S., Brigham Young University, 1965; M.S., 1966; Ph.D., Washington State University, 1971.

**Pritchard, Robbi H.**, Distinguished Professor of Animal Science, Graduate Faculty, 1984, 2005; A.A.S., Black Hawk College, 1975; B.S., Southern Illinois University, 1977; M.S., 1978; Ph.D., Washington State University, 1983.

**Granholm, Nels H.**, Distinguished Professor Emeritus of Biology and Microbiology, Graduate Faculty, 1968, 2011; B.A., University of Massachusetts, 1964; Ph.D., Iowa State University, 1968.

**Ryder, Mary R.**, Distinguished Professor of English, Graduate Faculty, 1989, 2002; B.A., Monmouth College, 1972; M.A., Illinois State University, 1981; Ph.D., University of Illinois, 1987.

**Gritzner, Charles F.**, Distinguished Professor Emeritus of Geography, Graduate Faculty, 1980, 1995; B.A., Arizona State University, 1958; M.A., Louisiana State University, 1960; Ph.D., 1969.

**Schingoethe, David J.**, Distinguished Professor Emeritus of Dairy Science, Graduate Faculty, 1969, 2003; B.S., University of Illinois, 1964; M.S., 1965; Ph.D., Michigan State University, 1968.

**Hegge, Margaret J.**, Distinguished Professor Emerita of Nursing, Graduate Faculty, 1969, 1999; B.A. Gustavus Adolphus College, 1969; M.Ed., SDSU, 1972; Ed.D., University of South Dakota, 1983; M.S., University of Minnesota, 1984.

**Wahlstrom, Richard C.**, Distinguished Professor Emeritus of Animal and Range Sciences, 1952, 1988; B.S., University of Nebraska, 1948; M.S., University of Illinois, 1950; Ph.D., 1952.

**Helder, Dennis L.**, Associate Dean of Research and Distinguished Professor of Electrical Engineering, Graduate Faculty, 1983, 2011; B.S., SDSU, 1979; B.S., 1980; M.S., 1985; Ph.D., North Dakota State University, 1991.

**Willis, David W.**, Distinguished Professor and Head of Natural Resource Management, Graduate Faculty, 1987, 2002; B.S., University of North Dakota, 1977; M.S., 1978; Ph.D., Colorado State University, 1980.

**Hess, Donna J.**, Distinguished Professor and Head of Rural Sociology, Graduate Faculty, 1974, 1998; B.A., Marquette University, 1965; M.A., State University of New York, 1971; Ph.D., Michigan State University, 1974.

**Woodard, Charles L.**, Distinguished Professor of English, Graduate Faculty, 1975, 2002; B.S., Dakota State University, 1964; M.A., University of Nebraska, 1966; Ph.D., University of Oklahoma, 1975.

**Jenks, Jonathan A.**, Distinguished Professor of Natural Resource Management, Graduate Program Coordinator, Graduate Faculty, 1991, 2006; A.A., Unity College, 1982; B.S., 1984; M.S., University of Maine, 1986; Ph.D., Oklahoma State University, 1991.

**Wrage, Leon J.**, Distinguished Professor Emeritus of Plant Science, Extension Specialist, 1961, 1994; B.S., SDSU, 1961; M.S., 1964.

## Faculty, Staff

**Aamlid, Brian**, Assistant Athletic Director-Annual Giving, Intercollegiate Athletics; 2011; B.S., South Dakota State University, 2009; M.S., Belmont University, 2011.

**Aaron, David**, Assistant Professor of Physics, 1986; B.S., SDSU, 1975; M.S., University of Wisconsin, 1981.

**Abeln, Kristin**, Instructor of General Studies, 2010; B.A., Southwest Minnesota State University, 2003; M.S., SDSU, 2007.

- Abraham, Julie B.**, Instructor of English, 2002; B.A., Augustana College, 1990; M.A., SDSU, 2003.
- Abraham, Ross P.**, Professor of Mathematics and Statistics, Graduate Faculty, 1997, 2006; B.S., Augustana College, 1990; M.A., University of Montana, 1993; Ph.D., University of Houston, 1997.
- Ackman, John D.**, Professor of Communication Studies and Theatre, Graduate Faculty, 1978, 2002; B.S., SDSU, 1978; M.F.A., University of Montana, 1984.
- Adams, Wells E., Jr.**, Adjunct Assistant Professor of Natural Resource Management, 2011; B.S., Iowa State University, 2002; M.S., SDSU, 2004.
- Adamson, Dwight W.**, Associate Professor of Economics, Graduate Faculty, 1989, 1995; B.A., Washington State University, 1976; M.A., 1983; Ph.D., 1988.
- Adamyan, Luiza**, Instructor of Modern Language and Global Studies, 2012; B.A., University of Nebraska-Lincoln, 2009; M.A., 2012.
- Adolph, Eric**, Assistant Strength and Conditioning Coach; Intercollegiate Athletics; 2012; B.A., Dakota Wesleyan University, 2009; M.S. South Dakota State University, 2012.
- Aggabao, Kim**, Head Softball Coach, Intercollegiate Athletics; 2011; B.S., University of California, San Diego, 2004.
- Agostini, Thomas**, Assistant Professor of History, Political Science, Philosophy, and Religion, Graduate Faculty, 2009; B.A., Virginia Military Institute, 1990; M.A., James Madison University, 1993; Ph.D., Lehigh University, 2002.
- Aguiar, Gary G.**, Associate Professor of History, Political Science, Philosophy, and Religion, Graduate Faculty, 1999, 2003; B.A., Coe College, 1983; B.A., University of Hawaii, 1990; M.A., Indiana University, 1993; Ph.D., 1996.
- Ahmed, Patricia**, Instructor of Sociology and Rural Studies; Ph.D., University of California - Los Angeles, 2005.
- Ahrendsen, Wendy**, Instructor of Mathematics and Statistics, 1995; B.A., Wartburg College, 1995; M.S., SDSU, 1999.
- Ali, Shaukat**, Associate Professor of Plant Science, Graduate Faculty, 2012; M.Sc., University of Agriculture, Faisalabad (Pakistan), 1978; M.S., SDSU, 1993; Ph.D., North Dakota State University, 2001.
- Alsaker, William**, Instructor of Mathematics and Statistics, 2010; B.S., SDSU, 2008; M.S., SDSU, 2010.
- Alfson, Troy M.**, Assistant Director of Conference and Special Services, 2003, 2005; B.S., Bemidji State University, 1994; M.S., University of Wisconsin, 1996.
- Anand, Sanjeev**, Associate Professor of Dairy Science, Graduate Faculty, 2006; B.S., D.S. College (India), 1978; M.S., National Dairy Research Institute (India), 1981; Ph.D., 1986.
- Andersen, Brenda F.**, Associate Director of Student Health Services, 1982, 1984; B.S., SDSU, 1979; M.S., 1986.
- Anderson, Barbara**, Clinic Recruitment and Outreach Coordinator, EA Martin Program in Human Nutrition, 2010; B.A., SDSU, 1981
- Anderson, Carla L.**, Student Services Coordinator and Academic Advisor, College of Education and Human Sciences, 2004; B.S., SDSU, 2002; M.S., 2007; Ed.D., University of South Dakota, 2013.
- Anderson, Gary A.**, Professor of Agricultural and Biosystems Engineering, Graduate Faculty, 1987, 1999; B.S., SDSU, 1975; M.S., Iowa State University, 1985; Ph.D., 1987.
- Anderson, Jacob**, Manager, Dairy Plant, 2011; B.S., SDSU, 2004.
- Anderson, Jenn**, Assistant Professor of Communication Studies and Theatre, 2012; B.A., Truman State University, 2004; M.A., Miami University, 2008; Ph.D. Michigan State University, 2012.
- Anderson, Jill L.**, Assistant Professor of Dairy Science, 2012; B.S., University of Delaware, 2003; M.S., SDSU, 2005; Ph.D., 2012.
- Anderson, Randi**, Instructor of English, 2011; B.A., Black Hills State University, 2007; M.A., SDSU, 2011.
- Anderson, Randy**, Adjunct Professor, Plant Science, Graduate Faculty, 2004; B.S., SDSU, 1974; M.S., 1976; Ph.D., University of Wyoming, 1980.
- Anderson, Zach**, Student Affairs Fiscal and Facility Officer, 2012; B.S., SDSU, 2004; M.S., University of South Dakota, 2006.
- Anteau, Michael, J.**, Adjunct Assistant Professor of Natural Resource Management, 2011; B.S., University of Alaska Fairbanks, 1997; M.S., Louisiana State University, 2002; Ph.D., 2006.
- Arends, Robin**, Instructor of Nursing/Nurse Practitioner, 2011; B.S. Briar Cliff, 2001; M.S. SDSU, 2008.
- Arneson, Angela**, Instructor of Modern Languages and Global Studies, 2012; B.A., SDSU, 2001; M.A., Bowling Green State University, 2006; Ph.D., Texas Tech University, 2012.
- Arnold, Mary P.**, Professor and Head of Journalism and Mass Communication, Graduate Faculty, 2002, 2005; B.A., Dakota Wesleyan University, 1969; M.A., University of South Dakota, 1973; Ph.D. University of Iowa, 1994.
- Aro, Carlene D.**, Professor/Serials Librarian, 1989, 1998; B.A., Oregon State University, 1981; M.L.S., University of Michigan, 1982; M.Ed., SDSU, 1993.
- Arwood, Donald**, Professor of Sociology and Rural Studies, Graduate Faculty, 1986, 1999; B.S., SDSU, 1980, M.S., 1982; Ph.D., 1989.
- Atteberry, Anna**, Instructor/Advisor of Nursing, 2008, A.S., USD, 1994; B.S., SDSU, 1998, 1999; M.S., 2002.
- Auger, Donald L.**, Associate Professor of Biology and Microbiology, Graduate Faculty, 2003, 2008; B.A., Saint John's University, 1975; Ph.D., University of North Dakota, 1995.
- Austin, Jane E.**, Adjunct Assistant Professor of Natural Resource Management, 2003; B.S., University of Maine, 1980; M.S., University of Missouri, 1983; Ph.D., 1988.
- Aure, Aaron**, Director of Enrollment Services and Registrar, Student Affairs, 2010; B.S., University of Iowa, 1995; M.S., University of Northern Colorado, 1999; Ph.D., Colorado State University, 2003.
- Alyor, William W.**, Director of Technology Transfer, 2012; B.S., Frostburg State University, 2000; M.S., North Carolina State University, 2002; J.D., West Virginia University, 2005.
- Baggett, Marie-Pierre E.**, Professor of Modern Languages, Graduate Faculty, 1998, 2002; B.A., Université de Clermont (France), 1986; M.A., University of California, 1989; Ph.D., 1996.
- Baggett, Paul B.**, Assistant Professor of English, Graduate Faculty, 2002, 2008; B.A., University of California-Irvine, 1987; M.A., California State University- Long Beach, 1993; Ph.D., University of Miami, 1998.
- Bahr, Jr., Alvin M.**, Instructor of Mathematics and Statistics, 1998; B.A., SDSU, 1996; M.S., 2000.
- Bakker, Kristel K.**, Adjunct Assistant Professor of Natural Resource Management, 2003; B.S., SDSU, 1990; M.S., 1996; Ph.D., 2000.
- Ball, John J.**, Professor of Plant Science, 1991, 2001; B.S., Michigan Technological University, 1976; M.S., Michigan State University, 1979; Ph.D., 1982.
- Banik, Deborah K.**, Assistant Professor of Nursing, 1998, 2012; Diploma in Nursing, Trinity School of Nursing, 1973; B.S., SDSU, 1985; MPH, University of Minnesota, 1988, Ph.D., University of Nebraska-Omaha, 2002.
- Bartel, Billie**, Assistant Professor of Pharmacy Practice, 2011; B.S., South Dakota State University, 2007; Pharm.D., 2009.
- Bassett, Janine D.**, Associate Professor of Nursing, 2000, 2013; B.S., SDSU, 1992; M.S., 2004.
- Bassett, Kurt D.**, Professor and Head of Mechanical Engineering, Graduate Faculty, 2005, 2007; B.S., SDSU, 1981; M.S., 1983; Ph.D., North Dakota State University, 1996.
- Bassett, Susan D.**, Instructor of Nursing, 1992; B.S., SDSU, 1982; M.S., 1998.

- Baszler, Jared C.**, Head Coach, Women's and Men's Golf, 2003; B.A., Grinnel College, 2002.
- Barber, Christopher P.**, Postdoctoral Fellow, 2012; B.S., Richard Stockton College of NJ, 1997; Ph.D., South Dakota State University, 2012.
- Bayer, Michelle A.**, Instructor, University College, 2007; B.A., SDSU, 1995; M.ED., University of Nevada, 2005; Ed.D., University of South Dakota, 2012.
- Beare, Tianna M.**, Program Manager, 2002, 2006; EA Martin Program in Human Nutrition, B.S. SDSU, 2002.
- Beaudoin, Daniel**, Adjunct Assistant Professor of Aerospace Studies, 2012; B.S., United States Air Force Academy, 2007.
- Bebensee, Stephanie M.**, First Year Professional Advisor, 2001, 2012; B.S., SDSU, 2000; M.S., SDSU, 2008.
- Beck, Dwayne L.**, Research Manager of Dakota Lakes Field Station, Professor, Graduate Faculty, 1979, 1995; B.S., Northern State University, 1975; Ph.D., SDSU, 1983.
- Beck, Ruth**, Agronomy Crops Specialist, Plant Science, 2012; B.S., University of Manitoba, 1980; M.S., SDSU, 1990.
- Beckman, Eric**, Associate Professor of Consumer Sciences, 2013; B.S., University of North Carolina, 2003; B.S., Appalachian State University, 2010; M.B.A., Western Carolina University, 2005; M.S., Western Carolina University, 2006; Ph.D., University of Tennessee, 2010.
- Beeny, Martyn**, Instructor of History, Political Science, Philosophy, and Religion, 2012; B.A., University of Kent (England), 2000; Ph.D., 2011.
- Begley, Rick L.**, Assistant Professor of Military Science, 2008; B.S. California Polytechnic State University, 1977.
- Behl, Diana M.**, Assistant Professor of Visual Arts, 2005; B.F.A., Bowling Green State University, 2001; M.A., University of Iowa, 2004; M.F.A., 2005.
- Bell, Julie A.**, Assistant Professor and Academic Advisor, College of Education and Human Sciences, 1975, 1980; B.S., SDSU, 1970; M.S., 1976.
- Berg, Jr., Robert K.**, Manager, SESD Experiment Station Farm, Professor, Graduate Faculty, 1993, 1998; B.S., Oklahoma State University, 1981; M.S., 1982; Ph.D., Iowa State University, 1987.
- Bergmann, Peter J.**, Research Assistant II, Natural Resource Management, 1990; B.A., Gustavus Adolphus College, 1989; M.S., SDSU, 1992.
- Berzonsky, William A.**, Associate Professor of Plant Science, Graduate Faculty, 2008; B.S., University of Maryland, 1982; M.S., University of Delaware, 1984; Ph.D., University of Missouri, 1988.
- Bertolini, Katherine**, Assistant Professor of Teaching, Learning, and Leadership, 2011; B.A., Michigan State University, 1990; M.A., 1999; Ph.D., North Dakota State University, 2010.
- Bertolini, Ken**, Instructor of Construction and Operations Management, 2011; B.S. Michigan State University, 1991; M.S., 2000.
- Bertrand, Katie N.**, Assistant Professor of Natural Resource Management, Graduate Faculty, 2008; B.A., Gustavus Adolphus College, 2002; Ph.D., Kansas State University, 2007.
- Beutler, Martin K.**, Extension Specialist and Professor of Economics, Graduate Faculty, 1986, 1998; B.S., Utah State University, 1980; M.S., 1982; Ph.D., Purdue University, 1986.
- Bielfeldt, Darla**, Lecturer in English, 1996; B.A., Bethany College, 1990; M.A., Iowa State University 1993; M.F.A., Pacific University, 2010.
- Biesecker, Matthew J.**, Associate Professor of Mathematics and Statistics, Graduate Faculty, 2003; B.S., California State University at Chico, 1994; M.S., Utah State University, 1996; Ph.D., 2004.
- Biever, Nicole**, Instructor of English, 2007; B.A., SDSU, 2003; M.A., 2005.
- Bingen, Charles**, Lecturer of Mathematics and Statistics, 2009; B.S., University of South Dakota, 2003; M.A., 2006, EdD, 2012.
- Binkley, Mark R.**, First Year Professional Advisor, 1985; B.S., SDSU, 1978, B.S., 1987; M.Ed., 1986.
- Binkley, Teresa L.**, Assistant Professor of Health and Nutritional Sciences, Graduate Faculty, 1998, 2007; EA Martin Program in Human Nutrition; B.S. SDSU, 1988; M.S., 1997; Ph.D., 2007
- Birch, Carol**, Assistant Professor of Nursing, 1990; B.S.N., Loyola University, 1979; M.S., Northern Illinois University, 1981.
- Blackford, Carol M.**, Instructor of English, 2004; B.A., SDSU, 1980; M.A., 1984.
- Blackwell, Brian G.**, Adjunct Associate Professor of Natural Resource Management, 2001; B.S., SDSU, 1990; M.S., Texas A&M University, 1993; Ph.D., SDSU, 2001.
- Blaha, Bradley**, Coordinator of Recruiting and Academic Services for the College of Agriculture and Biological Sciences, 2009; B.S., SDSU., 2008.
- Blaseg, Karyl**, Adjunct Instructor of Nursing, 2002, 2006; B.A., Augustana, 1992; M.S., Clarkson College, 1997.
- Bleakley, Bruce H.**, Professor of Biology and Microbiology, Graduate Faculty, 1991, 2003; B.S., Michigan State University, 1978; M.S., 1981; Ph.D., University of Florida, 1986.
- Boe, Arvid A.**, Professor of Plant Science, Graduate Faculty, 1976, 1991; B.A., Pacific Lutheran University, 1972; M.A., University of South Dakota, 1976; Ph.D., SDSU, 1979.
- Boersma, Angela**, Lecturer of Consumer Sciences, 2009; B.S., SDSU, 2006; M.Arch, University of Minnesota, 2009.
- Bohn, Marlys**, Assistant Professor of Nursing, 2005; A., North Dakota State University-Fargo, 1986; B.S.N., Moorhead State University, 1988; M.S., University of North Dakota-Grand Forks, 1992. Ph.D., University of North Dakota-Grand Forks, 2008.
- Bommisetty, Venkateswara R.**, Associate Professor of Electrical Engineering, Graduate Faculty, 2004; B.S., Acharya Nagarjuna University (India), 1990; M.S., Govind Ballabh Pant University (India), 1993; D. Eng., University of Toyama (Japan), 2001.
- Bondalapati, Krishna D.**, Research Associate II, Plant Science, 2009; B.A., Nagarjuna University, 2002; M.S., Pondicherry University, 2004; M.S., SDSU, 2008.
- Bonnemann, Howard**, Instructor of Dairy Science and Research Manager, 1997; B.S., SDSU, 1982; B.S., 1987; M.S., 1984.
- Bono, Chris**, Head Wrestling Coach, Intercollegiate Athletics; 2012; B.S., Iowa State University, 1997.
- Bonvallet, Geoffrey A.**, Lecturer in Physics, 2005; B.A., College of Wooster, 2000; M.S., University of Wisconsin, 2002; Ph.D., 2005.
- Boone, Rachel**, Equestrian Barn Manager, Intercollegiate Athletics; 2012; B.S., South Dakota State University, 2012.
- Bott, Rebecca**, Assistant Professor in Equine Production and Management, Graduate Faculty, 2009; B.S., University of Missouri, 2003; M.S., University of Nebraska, 2005; Ph.D., Colorado State University, 2009.
- Boulware, Jeffrey S.**, Professor of Consumer Sciences, 2002; B.S., Montana State University, 1974; M.S., Embry-Riddle Aeronautical University, 1987.
- Bowen, Nicole**, First Year Professional Advisor, 2008; B.S., SDSU, 2002, M.S., 2009.
- Bowne, Mary**, Associate Professor of Teaching, Learning and Leadership, Graduate Faculty, 1999, 2012; B.S., SDSU, 1999; M.S., 2001; Ed.D., University of South Dakota, 2006.
- Boysen, Roxann K.**, Instructor of Nursing, 1989; P.N., Worthington Community College, 1974; A.A., University of South Dakota, 1979; B.S., SDSU, 1989; M.S., 1995.
- Brake, Derek**, Assistant Professor of Animal Science, 2013; B.S. The Ohio State University, 2006; M.S. Kansas State University, 2009; Ph.D. Kansas State University, 2012.
- Brandenburger, Michele (Shelly)**, Instructor of Health and Nutritional Sciences, 2009; B.S., Northwestern Health Sciences

- University, 1997; M.S., SDSU, 2007., D.C., Northwestern Health Sciences University, 1997.
- Brandenburger, Thomas**, Assistant Professor of Mathematics and Statistics, Graduate Faculty, 2009; B.A. SDSU, 1992; M.S., 1995; PhD, 2009.
- Brandt, Bruce E.**, Professor of English, Graduate Faculty, 1979, 1989; B.A., University of Denver, 1969; M.A., 1971; Ph.D., Harvard University, 1977.
- Brandt, Kevin L.**, Manager of University Networking Systems and Services, 1999, 2005; B.S., SDSU, 2001; M.S., 2009.
- Brawand, John E.**, Associate Professor of Music and Director of Orchestra, 1998, 2003; B.M., University of North Texas, 1978; M.M., 1980; D.M.A., University of Texas, 1985.
- Briddick, Hande**, Associate Professor of Counseling and Human Development, Graduate Faculty, 2002, 2009; B.S., Middle East Technical University (Turkey), 1991; M.S., Kent State University, 1995; Ph.D., Kent State University, 2004.
- Briddick, William C.**, Associate Professor of Counseling and Human Development, Graduate Faculty, 2002, 2010; B.A., Southern Illinois University, 1987; M.Ed., Vanderbilt University, 1989; Ph.D., Kent State University, 2005.
- Briese, Pamela**, Adjunct Assistant Professor of Chemistry and Biochemistry, 2004; B.S., University of South Dakota, 1979; M.S., 1996.
- Britzman, Darwin G.**, Adjunct Professor of Animal Science, 1999; B.S., SDSU, 1953; M.S., University of Minnesota, 1962; Ph.D., SDSU, 1964.
- Britzman, Mark J.**, Professor of Counseling and Human Development, Graduate Faculty, 1987, 2004; B.S., SDSU, 1982; M.Ed., 1984; Ed.D., University of South Dakota, 1987.
- Brokmeier, Susanne**, Instructor of Teaching, Learning and Leadership, 2005; B.S., Martin Luther College, 1987; M.Ed., SDSU, 2003.
- Brooks, April**, Professor and Head, Department of History, Political Science, Philosophy, and Religion, Graduate Faculty, 1993, 2002; B.A., Hunter College, 1966; M.A., Tulane University, 1968; Ph.D., 1974.
- Brost, Todd D.**, Instructor of Mathematics and Statistics, 1992; B.S., SDSU, 1990; M.S., 1993.
- Brown, Clint**, Assistant Football Coach, Intercollegiate Athletics, 1996; B.S., University of Nebraska-Lincoln, 1999; M.A., New Mexico State University, 2009.
- Brown, Kamerra**, Assistant Equestrian Coach, Intercollegiate Athletics; 2011; B.S., Delaware State University, 2010; M.S., South Dakota State University, 2012.
- Brown, Marilyn H.**, Instructor of English, 1985, 1993; B.A., Ohio State University, 1964; B.S., 1964; M.A., 1968.
- Brown, Michael L.**, Distinguished Professor of Natural Resource Management, Graduate Faculty, 1994, 2013; B.S., Arkansas Technical University, 1986; M.S., Texas A&M University, 1989; Ph.D., 1993.
- Brown, Robin J.**, Instructor of Nursing, 2012, B.S., SDSU, 1983; M.S., 1999.
- Brown, Stephanie R.**, Academic Advisor, College of Education and Human Sciences, 2012; B.S., University of Nebraska-Lincoln, 1996; M.S., South Dakota State University, 2012.
- Browning, Larry M.**, Professor of Physics, Graduate Faculty, 1990, 2000; B.S., Syracuse University, 1975; M.S., Purdue University, 1980; Ph.D., 1984.
- Brözel, Volker**, Professor of Biology and Microbiology, Graduate Faculty, 2003, 2009; B.S., University of Stellenbosch (South Africa), 1986; M.S., University of Pretoria (South Africa), 1990; Ph.D., 1993.
- Bruner, Eileen**, Instructor of Nursing, 1998; B.S.N., Mount Marty College, 1972; M.S., SDSU, 2006.
- Bruns, Kelly W.**, Professor of Animal Science, Graduate Faculty 1995; B.S., University of Nebraska, 1992; M.S., Michigan State University, 1995; Ph.D., SDSU, 2001.
- Bücking, Heike**, Associate Professor of Biology and Microbiology, Graduate Faculty, 2009; M.S., University of Bremen (Germany), 1991; Ph.D., 1995.
- Bultman, Gail A.**, Coordinator of Outreach, Teaching, Learning and Leadership, 2001, 2002; B.S., Minnesota State University, 1989.
- Burckhard, Suzette R.**, Professor of Civil and Environmental Engineering, Graduate Faculty, 1997, 2008; B.S., SDSU, 1986; M.S., Kansas State University, 1992; M.S., 1993; Ph.D., 1997.
- Burdette, Linda, K.**, Assistant Professor of Nursing, Aberdeen Accelerated Nursing Program Coordinator, Graduate Faculty, 2010; A.D.N., Presentation College, 1973; B.S., SDSU, 1985; M.S., 1988; FNP option, 1994; Ph.D., 2010.
- Burger, Donald**, Assistant Professor of Landscape Architecture, Plant Science, 2011; B.S., Utah State University, 2006; M.S., University of British Columbia, 2008.
- Burggraff, Cody**, Residence Hall Director, 2013; B.S. South Dakota State University, 2012.
- Burke, Shawn**, District Extension Director- West; B.S., University of South Dakota, 1987; M.S., Colorado State University, 1994.
- Burns, James**, Assistant Professor of Teaching Learning & Leadership, 2011; B.A., University of Maryland, 1995; M.A., University of Hawaii, 1997; Ed.D., George Washington University, 2011.
- Burrows, Rhoda L.**, Associate Professor of Plant Science, Graduate Faculty, 2001, 2006; A.A., Commercial College, 1979; B.A., Montana State University, 1983; M.S., University of Minnesota, 1987; Ph.D., 2001.
- Butler, III, Eugene**, Associate Professor of Biology and Microbiology, 2001; B.S., University of California, 1973; Ph.D., 1978.
- Butler, Jack**, Adjunct Associate Professor of Biology and Microbiology, Graduate Faculty, 2001; B.S., Southeastern Oklahoma State University, 1997; M.S., North Dakota State University, 1983; Ph.D., Texas A&M University, 1986.
- Buttolph, Anne M.**, Instructor of Nursing, 2012; B.S., University of Illinois, 1989; B.S., Saint Francis College of Nursing, 1992; M.S., University of South Alabama, 2007.
- Bwangoy-Bankanza, Jean-Robert B.**, Geospatial Analyst, 2009; B.S., Université Laval, 1989; M.S., University of Redlands, 2003.
- Cadwell, Elizabeth**, Residence Hall Director, 2013; B.A. DePaul University, 2011; M.E. University of St. Thomas, 2013.
- Caffe-Tremblé, Melanie**, Postdoctorate Research Associate, Plant Science, 2011; B.S., University of Sciences and Technology (France), 2002; M.S., National Institute of Agronomy of Toulouse (France), 2004; Ph.D., SDSU, 2010.
- Campanella, Danielle**, Residence Hall Director, 2012; B.S. Syracuse University, 2012.
- Carlile, Andrea**, Instructor of Communication Studies and Theatre, Director of Speech and Debate; B.A., Gustavus Adolphus College, 2007; M.S., SDSU, 2009.
- Carlisle, Kristen M.**, First Year Professional Advisor, 2004; B.S., Bemidji State University, 2004; M.S., SDSU, 2007.
- Carlson, C. Gregg**, Professor of Plant Science, Graduate Faculty, 1974, 1994; B.S., Western Illinois University, 1969; M.S., SDSU, 1972; Ph.D., 1978.
- Carson, Paula P.**, Associate Professor of Nursing, Graduate Faculty, 1983, 1995; B.S., SDSU, 1975; M.S.N., University of Minnesota, 1985; Ph.D., University of Arizona, 1992.
- Carton, Anthony**, Assistant Professor of Visual Arts, 2013; B.F.A., Southern Illinois University - Carbondale, 2007; M.F.A., University of Minnesota - Twin Cities, 2013.
- Cartrette, David P.**, Associate Professor of Chemistry and Biochemistry, Graduate Faculty, 2003; B.A., North Carolina State University, 1992; B.S., 1992; M.S., Western Carolina University, 1997; Ph.D., Purdue University, 2003.



- Casper, David P.**, Assistant Professor of Dairy Science, Graduate Faculty, 2012; B.S., University of Wisconsin, 1983; M.S., SDSU, 1985; Ph.D., 1989.
- Caspers-Graper, Mary**, Head of Technical Services/Professor, 1985, 2008; B.A., Luther College, 1979; M.A., University of Iowa, 1980; M.L.S., University of Arizona, 1985.
- Cassady, Joseph**, Professor and Head of Animal Science, 2013; B.S., Iowa State University, 1993; M.S., University of Nebraska-Lincoln, 1995; Ph.D., 1999.
- Cassel, E. Kim**, Extension Specialist and Professor of Health and Nutritional Sciences, 1989, 2000; B.S., Delaware Valley College, 1975; M.S., Cornell University, 1978; Ph.D., 1983.
- Cech, Holly**, Adjunct Lecturer of Nursing, 2004; A.A., Dakota Wesleyan University, 1996; B.S., SDSU, 2001.
- Cempellin, Leda**, Associate Professor of Visual Arts, 2006; Dottore in Lettere Moderne (Laurea), University of Padua, Italy, 1999; Dottore di Ricerca in Storia dell'Arte (Ph.D.), University of Parma (Italy), 2004.
- Chakravarty, Suvabrata**, Assistant Professor of Chemistry and Biochemistry, 2009, 2013; M.S., Indian Institute of Science (India), 1998; Ph.D., 2003.
- Chalmers, David**, Extension Associate in Plant Science, 2012; B.S., Michigan State University, 1974; M.S., Virginia Tech, 1978; Ph.D., University of Illinois, 1983.
- Chandler, Norma L Nusz.**, Instructor of Construction and Operations Management, 2001; B.S., S.D. School of Mines and Technology, 1982; M.S., SDSU, 2005.
- Chandrasekher, Gudiseva**, Associate Professor of Pharmaceutical Sciences, Graduate Faculty, 2008; B.S., Andhra University (India), 1977; M.S., 1979; Ph.D., University of Mysore (India), 1983.
- Chang, Jiyul**, Post-Doctoral Research Associate, Plant Science, 2003; B.S., Yonsei University (Korea), 1988; M.S., SDSU, 1997; Ph.D., 2002.
- Chang, Kuo-Liang**, Assistant Professor of Economics, Graduate Faculty, 2009; B.A., Tamkang University (Taiwan), 1992; M.A., University of Utah, 1999; Ph.D., 2007.
- Chase, Christopher**, Professor of Veterinary and Biomedical Sciences and Animal Disease Research and Diagnostic Laboratory, Graduate Faculty, 1992, 2001; D.V.M., Iowa State University, 1980; M.S., University of Wisconsin, 1987; Ph.D., 1990.
- Chase, Thomas E.**, Associate Professor of Plant Science, Graduate Faculty, 1990, 1995; B.S., State University of New York, 1979; Ph.D., University of Vermont, 1986.
- Cheesbrough, Thomas M.**, Professor and Interim Head of Plant Science, Graduate Faculty, 1990, 2000; B.S., University of Wyoming, 1976; M.S., 1978; Ph.D., Purdue University, 1982.
- Chevalier, Timothy J.**, Adjunct Instructor of Modern Languages, 2001; B.A., Augustana College, 1982; M.S., Western Maryland College, 1993.
- Chintala, Rajesh**, Research Associate, Plant Science, 2008; M.S., Andhra Pradesh Agricultural University (India), 2000; Ph.D., West Virginia University, 2008.
- Chipps, Steven R.**, Professor of Natural Resource Management, Graduate Faculty, 1999; B.S., Davis and Elkins College, 1990; M.S., West Virginia University, 1992; Ph.D., University of Idaho, 1997.
- Cho, Soo Hyun**, Assistant Professor of Consumer Sciences, Graduate Faculty, 2009; B.A., Korea University, 2003; M.S., 2005; Ph.D., Ohio State University, 2009.
- Choi, Jongwoo**, Post Doctoral Research Associate, 2009; B.S., Chungnam National University (South Korea), 1989; M.S., McGill University (Canada), 1996; Ph.D., University of Wisconsin - Madison, 2008.
- Choudhary, Ruplal**, Post Doctoral Research Associate, 2008; B.Sc., J. N. Agricultural University (India), 1991; M.S., Indian Institute of Technology (India), 1994; Ph.D., Oklahoma State University, 2004.
- Christensen, Cody**, Assistant Professor of Consumer Sciences, 2013; B.S.Ed., SDSU, 2005; M.Ed, 2006; Ed.D., University of South Dakota, 2013.
- Christensen, Jay**, Assistant Football Coach, Intercollegiate Athletics; 2011; B.S., University of Nebraska-Kearney, 1999; M.S., University of Nebraska-Kearney, 2011.
- Christensen, Joseph**, Instructor of Mathematics and Statistics, 2010; B.A., Augustana College, 1980; M.S., SDSU, 2006.
- Christensen, Mary**, Coordinator of Advising and Student Retention, 2009, B.S., SDSU, 2005; M.S., 2007.
- Christian, Michele**, Archivist and Special Collections Librarian/Assistant Librarian, 2013; B.A., University of Northern Iowa, 1995; M.L.I.S., University of Wisconsin – Milwaukee, 1998; M.A., History, University of Wisconsin – Milwaukee, 1998.
- Christianson, Steven**, Instructor of Construction and Operations Management, 2007; B.A. University of Minnesota, B.S. SDSU, 1978.
- Christie, Jill**, Instructor of Nursing, 1990; B.S., SDSU, 1976.
- Christopher-Hennings, Jane**, Professor and Head of Veterinary and Biomedical Sciences and Animal Disease Research and Diagnostic Laboratory, Graduate Faculty, 1990, 2007; B.S., University of Wisconsin, 1975; M.S., 1990; D.V.M., University of Minnesota, 1983.
- Cissell, Marie A.**, Instructor of Nursing, 2002; B.S.N., SDSU, 1984; M.N., University of Mary, 1995.
- Clapper, Jeffrey A.**, Professor of Animal Science, Graduate Faculty, 1997, 2007; B.S., Ohio State University, 1982; M.S., 1987; Ph.D., Purdue University, 1992.
- Clark, Marvin**, Manager of Classroom Technology Services, 1993, 2005; B.A., SDSU, 1992; M.Ed., 2002.
- Clark, Melissa**, Information Services Assistant Librarian, 2010, 2012; B.A., Truman State University, 2004; M.L.S., University of Missouri - Columbia, 2010.
- Clark, Randy**, Associate Professor of Visual Arts, Graduate Faculty, 2000; B.F.A., University of Utah, 1978; M.F.A., Utah State University, 2002.
- Clark, Sarah**, Instructor of Mathematics and Statistics, 2008; B.S., St. Cloud State University, 2000; M.S., SDSU, 2008.
- Clay, David E.**, Professor of Plant Science, Graduate Faculty, 1989, 2001; B.S., University of Wisconsin, 1976; M.S., University of Idaho, 1984; Ph.D., University of Minnesota, 1988.
- Clay, Sharon A.**, Professor of Plant Science, Graduate Faculty, 1989, 1998; B.S., University of Wisconsin, 1977; M.S., University of Idaho, 1982; Ph.D., University of Minnesota, 1986.
- Clem, James**, Professor and Head of Pharmacy Practice, Graduate Faculty, 1992, 2008; B.S., University of Iowa, 1989; Pharm.D., 1991.
- Cochrane, Mark**, Senior Research Scientist of Geographic Information Science Center of Excellence/Professor, Graduate Faculty, 2005; S.B.O., Massachusetts Institute of Technology, 1993; Ph.D., Pennsylvania State University, 1998.
- Cogswell, Kurt D.**, Professor and Head of Mathematics and Statistics, Graduate Faculty, 1997, 2006; B.S., Massachusetts Institute of Technology, 1978; M.S., North Dakota State University, 1991; Ph.D., Northwestern University, 1996.
- Colby, Julie**, Research Assistant, 2009; EA Martin Program in Human Nutrition; B.S. SDSU, 2001.
- Cole-Dai, Jihong**, Associate Professor of Chemistry and Biochemistry, Graduate Faculty, 2000; B.S., University of Science and Technology of China, 1982; M.S., University of Maryland, 1984; Ph.D., 1987.
- Contarino, Samantha**, Upward Bound Director, 2011; B.S.W., Temple University, 2003; M.S.W., Fordham University, 2004.

- Cooley, Brian**, Assistant Men's Basketball Coach, Intercollegiate Athletics, 2006; B.A., Nebraska Wesleyan University, 2009; M.S. South Dakota State University, 2009.
- Cooley, Jerry E.**, Instructor of Computer Science, 1983; B.S., SDSU, 1973; M.A., 1986.
- Cooper, Stephanie**, Research Coordinator, 2010; EA Martin Program in Human Nutrition; B.A. & B.S. SDSU, 2010
- Cortus, Erin**, Assistant Professor of Agricultural and Biosystems Engineering, Graduate Faculty, 2009; B.S., University of Saskatchewan (Canada), 2002; Ph.D., 2007.
- Costello, Leon**, Senior Associate Athletic Director, Intercollegiate Athletics, 2010; B.A., Loras College, 1998; M.S., Western Illinois University, 2002.
- Coughlin-O'Connell, Kate**, Professional Academic Advisor 2012; B.A., Northern State University 2003; M.S.Ed., Northern State University, 2007.
- Coull, James R.**, Instructor of Music and Associate Director of Bands, 1983, 1991; B.M.E., SDSU, 1980; M.Ed., 1985.
- Cowan, Jenna**, Research Assistant, 2010; EA Martin Program in Human Nutrition; B.S. SDSU, 2009.
- Craig, Gloria P.**, Professor of Nursing, Graduate Faculty, 1998, 2003, 2008; B.S.N., Buena Vista College, 1989; M.S.N., Drake University, 1993; Ed.S., 1996; Ed.D., 1997.
- Creal, Tim**, Adjunct Assistant Professor of Education and Human Sciences, Rapid City Site, Graduate Faculty, 2001; B.S., Black Hills State University, 1978; M.S., SDSU, 1990; Ed.S., University of South Dakota, 1994; Ed.D., 1996.
- Crego, Stephen**, Manager, Dairy Research and Training Facility, 2009; B.S., Cornell University, 1985.
- Cribbs, Joshua**, Instructor of Animal Science and Livestock Judging Coach, 2012; B.S., Texas Tech University, 2012.
- Crowe, Don**, Professor of Music, 1995, 2004; B.M.E., Furman University, 1976; M.M., Florida State University, 1979; D.M.A., University of Arizona, 1994.
- Cumber, Carol J.**, Professor of Economics, Graduate Faculty, 1990, 2003; B.A., North Dakota State University, 1979; M.B.A., 1984; Ph.D., SDSU, 1994.
- Currier, Jesse**, Assistant Football Coach, Intercollegiate Athletics; 2012; B.A., South Dakota State University, 2008; M.S.
- Cutler, Kay**, Professor of Teaching, Learning and Leadership, Graduate Faculty, 1997, 2002; B.A., University of Minnesota, 1989; Ph.D., University of Texas, 1995.
- Dailey, Rocky**, Assistant Professor of Journalism and Mass Communication, Graduate Faculty, 2012; B.S., SDSU, 1994; M.A., University of Memphis, 1998; Ed.D., Montana State University, 2012.
- Dalaly, Basil**, Professor of Health and Nutritional Sciences, Graduate Faculty, 2004; B.S., University of Baghdad, 1965; M.S., SDSU, 1967; Ph.D., University of Nebraska, 1970.
- Dalsted, Kevin J.**, Assistant Director of Water Resource Institute, 1977, 1998; B.S., North Dakota State University, 1974; M.S., 1977.
- Davis, Joshua**, Assistant Football Coach, Intercollegiate Athletics; 2010; B.S., South Dakota State University, 2006; M.S., South Dakota State University, 2008.
- Davis, Marc**, Football Operations Coordinator, Intercollegiate Athletics; 2012; B.S. University of Wisconsin-Eau Claire, 2009; M.A. University of St. Thomas, 2011.
- Daly, Russell**, Associate Professor of Veterinary and Biomedical Sciences and Extension Veterinarian, 2005, 2009; B.S., SDSU, 1988; M.S., SDSU, 2013; D.V.M. Iowa State University, 1990.
- Dangel, Julia**, Instructor of Nursing, 2008, 2011, L.P.N., St. Joseph School of Nursing, 1978; A.S., USD, 1989; B.S., SDSU, 1999; M.S., University of Phoenix, 2006.
- Daniels, Ann Michelle**, Extension Family Life, Parenting & Child Care Specialist/Associate Professor of Counseling and Human Development, Graduate Faculty, 1999, 2004; B.S., University of Arkansas, 1988; M.Ed., 1990; Ph.D., Kansas State University, 1999.
- Daniels, Doug**, Adjunct Instructor of Electrical Engineering, 2008; B.S., SDSU, 1993; M.S., Colorado Technical University, 1996.
- Danker, Kathleen A.**, Professor of English, Graduate Faculty, 1990, 2001; B.A., University of Nebraska, 1971; M.A., 1974; Ph.D., 1985.
- Darnall, Samantha**, Research Assistant, 2009; EA Martin Program in Human Nutrition; B.A. Luther College, 2009.
- Davidson, Charlotte E.**, Acting Director, American Indian Education & Cultural Center, 2012; Adjunct Faculty, Teaching, Learning, & Leadership Department; B.S., Haskell Indian Nations University, 2003; M.Ed., University of Illinois at Urbana-Champaign, 2007; Ph.D., University of Illinois at Urbana-Champaign.
- Davis, Alan**, Professor of Counseling and Human Development, Graduate Faculty, 2005; B.A., Western Washington University, 1978; M.R.C., University of Kentucky, 1980; Ph.D., Oregon State University, 1984.
- Davis, David E.**, Associate Professor of Economics, Graduate Faculty, 2005, 2009; B.S.B.A., University of South Dakota, 1993; M.A., University of Oregon, 1998; Ph.D., 1998.
- Davis, Jack B.**, Economics Field Specialist, Agricultural and Biological Sciences, 1994, 1999; B.S., SDSU, 1982; A.A., Dakota Wesleyan University, 1988; M.B.A., University of South Dakota, 1989.
- DeBates, Debra A.**, Associate Professor of Teaching, Learning and Leadership, Graduate Faculty, 1998; B.S., SDSU, 1974; M.S., 1993; Ph.D., Iowa State University, 1999.
- De Haven, Rodney**, Coordinator and Head Coach, Cross-Country/Track, 2004; B.S., SDSU, 1989.
- De Perno, Christopher S.**, Adjunct Associate Professor of Natural Resource Management, 2000; B.S., Central Michigan University, 1990; M.S., Purdue University, 1994; Ph.D., SDSU, 1998.
- Delfanian, Fereidoon**, Professor of Mechanical Engineering, Graduate Faculty, 1979, 2001; B.S., SDSU, 1977; M.S., 1980; Ph.D., North Dakota State University, 1995.
- Delfinis, Teresa M.**, Coordinator of Student Services, College of Pharmacy, 1986, 2007; B.S., SDSU, 1997; M.S., 2004.
- Demuth, Heidi**, Research Assistant, 2010; EA Martin Program in Human Nutrition; B.S. Southwest Minnesota State, 2008; M.S. SDSU, 2010.
- Deneke, Darrell L.**, IPM Coordinator, Plant Science, 1979, 1985; B.S., SDSU, 1979.
- Deutz, Betze**, Instructor of Chemistry and Biochemistry, 2010; B.S., SDSU, 2003.
- Devaraj, Chabitha**, Assistant Professor of Electrical Engineering, B.E., Bharathiyar University (India), 1999; M.S., Syracuse University, 2003; Ph.D., Rochester Institute of Technology, 2010.
- DeWald, Jerry M.**, Instructor of Construction and Operations Management, 2005; B.S., SDSU, 1965; M.B.A., University of Saint Thomas, 1980.
- Dey, Moul**, Associate Professor of Health and Nutritional Sciences, Graduate Faculty, 2009; B.S., University of Calcutta, 1994; M.S., 1996; Ph.D., 2002.
- Dianovsky, Michael**, Assistant Professor of Chemistry and Biochemistry, 2013, B.S., University of Illinois, 2003; M.S., 2007; Ph.D., 2007.
- Dickson, William**, Instructor of History, Political Science, Philosophy, and Religion, 2013; B.A., University of Alberta, 2001; B.S.W., McGill University, 2005; M.A., Wilfrid Laurier University, 2007; Ph.D., 2012.
- Diddle-Hildebrandt, Laura D.**, Professor of Music, 2003, 2012; B.M., Indiana University, 1989; M.A.T., 1991; Ph. D., University of South Carolina, 2005.

- Diersen, Matthew A.**, Extension Specialist and Professor of Economics, Graduate Faculty, 1999, 2009; B.A., University of Minnesota, 1993; M.S., North Dakota State University, 1995; Ph.D., University of Illinois, 1999.
- Dieter, Charles**, Professor of Natural Resource Management, Graduate Faculty, 1987, 2009; B.S., Concordia Teachers College, 1977; M.S., SDSU, 1987; Ph.D., 1993.
- Diischer, J. Matthew**, Residence Hall Director, 2013; B.M.E. South Dakota State University, 2004.
- Diischer, Rebecca**, Instructor of Mathematics and Statistics, 2010; B.S., SDSU, 2004; M.S., University of Iowa, 2007.
- Dill, Anastasia**, Admissions Counselor, 2012; B.S., B.A., South Dakota State University, 2009.
- Djira, Gemechis D.**, Associate Professor of Statistics, Graduate Faculty, 2007; B.S., Addis Ababa University, 1990; M.S., Addis Ababa University, 1994; M.S., Limburgs Universitair Centrum, 2001; M.S., Limburgs Universitair Centrum, 2002; Ph.D., University of Hannover, 2005.
- Dominguez, Brian**, Complex Director, 2011; B.S. Ball State University, 1993; M.S., Indiana University of Pennsylvania, 1996.
- Doolittle, James J.**, Professor of Plant Science, Graduate Faculty, 1991, 2001; B.S., Purdue University, 1982; M.S., Texas A&M University, 1986; Ph.D., 1991.
- Douglas, C. D.**, Executive Director, Executive Director for Multicultural Affairs and Student Support Services, 1998, 2001; B.A., Southwest State University, 1992; M.S., SDSU, 1998.
- Drake, E. Gayle**, Academic Program Coordinator, Capital University Center, 2003; B.A., Dakota Wesleyan University, 1988; M.A., University of South Dakota, 1991.
- Droke, Elizabeth**, Associate Professor of Health and Nutritional Sciences, Graduate Faculty, 2005; B.S., University of Illinois, 1985; M.S., Ohio State University, 1988; Ph.D., North Carolina State University, 1991.
- Du, Jikai**, Assistant Professor of Mechanical Engineering, Graduate Faculty, 2009; B.E., Tsinghua University, 1991; M.E., China Aerospace Materials Research Institute, 1994; Ph.D., Pennsylvania State University, 2008.
- Duan, Shanzhong**, Associate Professor of Mechanical Engineering, Graduate Faculty, 2004, 2008; B.S., Kunming Institute of Technology, 1982; M.S., Tianjin University, 1988; Ph.D., Rensselaer Polytechnic Institute, 1999.
- Dyer, Harriet**, Residence Hall Director, 2012; B.S. Central Michigan University, 2010.
- Eastman, April**, Native American Student Advisor, 2012; A.A., Sisseton Wahpeton College; 2002; B.A., University of Minnesota, 2005; M.S., South Dakota State University, 2010.
- Egorov, Alexey**, Geospatial Analyst, 2009; M.S., Yaroslavl State University, 1995.
- Eidenshink, Jeffery**, Adjunct Assistant Professor of Geography, 2002; B.S., SDSU, 1973; M.S., 1979; Ph.D., 2001.
- Eidsness, C. Eric**, Assistant Football Coach, Intercollegiate Athletics, 2010; B.A., University of Sioux Falls, 1992; M.S., SDSU, 2002.
- Eilers, Maggie**, Research Coordinator, 2009; EA Martin Program in Human Nutrition; B.S. SDSU, 2008; M.S. Indiana State University, 2009.
- Ekstrand, Renae J.**, Instructor of Teaching, Learning and Leadership, 2006; A.S., North Central Technical Institute, 1980; B.S., Bemidji State University, 1986; MS., Winona State University, 2000.
- Elliason, Susan**, Adjunct Professor of Chemistry and Biochemistry, 2003; B.A., Concordia College, 1979; M.D., University of South Dakota, 1993.
- Elliott Lisa**, Commodity Marketing Specialist and Assistant Professor of Economics, 2012; B.S., University of Missouri, 2006; M.S., 2009; Ph.D., 2011.
- Ellis, Andrew R.**, Instructor of Biology and Microbiology, 2001; B.S., SDSU, 2001; M.S., 2006.
- Elverson, Cynthia D.**, Assistant Professor of Nursing, NACC Coordinator, Graduate Faculty, 1992, 2004; 2008, B.S., University of Missouri, 1979; M.S., University of California, 1986, Ph.D., University of Nebraska, 2007.
- Emery, Mary**, Professor and Head of Sociology and Rural Studies; 2011, Ph.D., Rutgers University.
- Engdahl, Michael**, Head Tennis Coach, Intercollegiate Athletics; 2011; B.A., South Dakota State University, 2010.
- Enz, Molly K.**, Associate Professor of Modern Languages, 2007; B.A., Concordia College, 1996; M.A. 2000; Ph.D., University of Wisconsin Madison, 2005.
- Erdman Becker, Katherine**, Coordinator and Association Professor Interdisciplinary Studies, 1994, 2009; B.S., Mankato State University, 1989; M.S., 1994; Ed.D., University of South Dakota, 2004.
- Erickson, Alan K.**, Professor of Veterinary and Biomedical Sciences, Graduate Faculty, 1990, 2004; B.A., Minot State College, 1983; B.A., 1984; Ph.D., North Dakota State University, 1989.
- Erickson, Bradley L.**, Head Men's and Women's Swimming and Diving Coach, and Assistant Professor, Intercollegiate Athletics, 1974, 1994; B.S., SDSU, 1974; M.S., 1975.
- Erion, Ralph L.**, Professor of Teaching, Learning and Leadership, Graduate Faculty, 1985, 1996; B.A., Inter American University, 1972; M.A. Ed., 1975; Ph.D., Texas A&M University, 1985.
- Escondrillas, Macarena**, Instructor of Modern Language and Global Studies, B.A., University of Murcia, (Spain), 2010; M.A., West Virginia University, 2012.
- Evenson, Pamela M.**, Adjunct Instructor of Nutrition, Food Science and Hospitality, 2002; B.A., Moorhead State University, 1979; B.S., 1987; M.S., SDSU, 2001.
- Eynard, Anna**, Research Associate I, Plant Science, 1998; M.S., 1983; Ph.D., 1994; Ph.D., SDSU, 2001.
- Fahmy, Hesham**, Associate Professor of Pharmaceutical Sciences, Graduate Faculty, 2004, 2007; B.S., University of Alexandria (Egypt), 1987; M.S., 1990; Ph.D., 1993.
- Fan, Qi Hua**, Associate Professor of Electrical Engineering, Graduate Faculty, 2010; B.S., University of Electronic Science and Technology (China), 1984; M.S., 1989; Ph.D., University of Aveiro (Portugal), 1999.
- Fang, Ying**, Research Assistant Professor of Veterinary and Biomedical Sciences, and Biology and Microbiology, Graduate Faculty, 2005; B.S., Southwestern University, P. R. China, 1990; M.S., Iowa State University, 1997; M.S., South Dakota State University, 2000; Ph.D., South Dakota State University, 2004.
- Falco, Katie**, Assistant Women's Basketball Coach, Intercollegiate Athletics, 2003; B.A., University of Northern Iowa, 2005; M.Ed., Utah State University, 2008.
- Fanning, Robert**, Plant Pathology Specialist, Plant Science, 2012; A.S., North Dakota State University, 1974; B.S., 1976; M.S., 1987.
- Farrokh-Baroughi, Mahdi**, Assistant Professor of Electrical Engineering, Graduate Faculty, 2007; BS, Iran University of Science and Technology, 1997; MS, Sharif University of Technology, 2000; Ph.D., University of Waterloo, 2006.
- Farver, Debra K.**, Professor of Pharmacy Practice, Graduate Faculty, 1983, 2000; Pharm.D., University of Nebraska, 1983.
- Fausti, Scott W.**, Professor of Economics, Graduate Faculty, 1991, 2001; B.A., North Dakota State University, 1986; M.S., University of Illinois, 1988; Ph.D., 1991.
- Feng, Jiuhuan**, Research Associate II, Plant Science, 2009; B.S., Henan Normal University, 1986; M.S., Wuhan University, 1991; Ph.D., South China Agricultural University, 1998.

- Fennell, Anne**, Professor of Plant Science, Graduate Faculty, 1992, 2002; B.S., Iowa State University, 1979; M.S., University of Minnesota, 1982; Ph.D., 1985.
- Ferrell, Laurie Ann Troth**, Instructor of English, 2000; B.A., SDSU, 1997; M.A., 2002.
- Fincel, Mark J.**, Adjunct Assistant Professor of Natural Resource Management, 2012; B.S. Ball State University, 2004; M.S., Eastern Illinois University, 2006; Ph.D., SDSU, 2011.
- Fink, Patrick H.**, West River Nursing Student Services Coordinator, 2010; B.S., Black Hills State University, 2006; M.S., SDSU, 2008.
- Finn, Lynne A.**, Assistant Director of Facilities and Services, 1987, 1997; B.S., SDSU, 1993.
- Fischer, Janet**, Professor of Pharmacy Practice, 1986, 1996; Pharm.D., Creighton University, 1986.
- Fisk, Joy**, Project Assistant, Martin Endowed Human Nutrition Program, 2000, 2006; B.S., SDSU, 2000.
- Fixen, Paul E.**, Adjunct Associate Professor of Plant Science, 2000; B.S., SDSU, 1975; M.S., 1977; Ph.D., Colorado State University, 1979.
- Flint, Donna L.**, Professor and Assistant Head of Mathematics and Statistics, Graduate Faculty, 1999, 2004; A.A., Eastfield College, 1986; B.A., University of Texas at Arlington, 1992; M.S., 1994; Ph.D., 1999.
- Flynn, John**, Assistant Football Coach, Intercollegiate Athletics; 2012; B.A., University of Oklahoma, 2004; M.A., University of Oklahoma, 2008.
- Flynn, Nicole**, Assistant Professor of English, Graduate Faculty, 2012; B.A., Wellesley College, 1999; M.A., University of Chicago, 2004; Ph.D., Tufts University, 2012.
- Foerster, Becka J.**, Instructor of Nursing, 2008, 2012; B.S., SDSU, 2007; M.S., 2011.
- Fokken, Paul**, Associate Professor of Health and Nutritional Sciences, Graduate Faculty, 2004; B.S., University of Iowa, 1989; M.A., 1995; Ph.D., Indiana University, 2003.
- Foland, Kay L.**, Professor of Nursing, Graduate Faculty, 1982, 1999; B.S., SDSU, 1980; M.S.N., University of Nebraska, 1982; Ph.D., University of Texas, 1989.
- Forbes, Amy K.**, Instructor of Nursing, 2006; B.S.N., Augustana College, 2000, M.S., SDSU, 2006.
- Forcella, Frank**, Adjunct Professor of Plant Science, 2003; M.S., Montana State University, 1977; Ph.D., Oklahoma State University, 1979.
- Fosnight, Eugene**, Adjunct Associate Professor of Geography, 2004; B.S., Purdue University, 1972; M.S., University of Michigan, 1992; Ph.D., 2000.
- Foster, Neal R.**, Manager of Seed Certification Division, 2005; B.S., SDSU, 1998; M.S., Kansas State University, 1994; Ph.D., Montana State University, 2003.
- Fourney, Robert S.**, Associate Professor of Electrical Engineering, Graduate Faculty, 2003, 2009; B.S., Virginia Polytechnic Institute and State University, 1985; M.S., University of Maryland, 1989; Ph.D., 2001.
- Fox, Elizabeth**, Digital Information Services Librarian/ Professor, 1994, 2008; B.M.E., Lawrence University, 1987; M.L.S., University of Texas, 1991; M.Ed., SDSU, 1997.
- Francesa, Umberto**, Project Assistant, 2008; Agric. Tech., Colegio Agropecuario (Costa Rica), 1970; MVZ-UAT, Universidad of Tamaulipas (Mexico), 1976.
- Fredrickson, Leigh H.**, Adjunct Professor of Natural Resource Management, Graduate Faculty, 2002; B.S., Iowa State University, 1961; M.S., 1963; Ph.D., 1967.
- Fredrikson, Susan K.**, Career Development Specialist, 1994; B.A., SDSU, 1975; M.Ed., 1979.
- French, Bryan W.**, Adjunct Assistant Professor of Plant Science, 2000; B.S., Oklahoma State University, 1981; M.S., Brock University, 1986; Ph.D., Oklahoma State University, 1998.
- French, Jeannie K.**, Professor of Visual Arts, 1990, 1998; B.A., University of Wisconsin, 1974; M.F.A., 1983; M.S., SDSU, 1997.
- Frewaldt, Shannon**, Instructor of Visual Arts, 2007; B.A., Augustana College, 1999; M.F.A. University of Iowa, 2002.
- Friedrich, Christa**, Call Center Supervisor, 2009, 2010; EA Martin Program in Human Nutrition; B.S. SDSU, 2009.
- Froelich, Peter K.**, Assistant Professor of Sociology and Rural Studies, Graduate Faculty, 2008; B.S., SDSU, 1980, M.S., 1984; Ph.D., 1997.
- Fuller, Billy W.**, Professor of Plant Science, Graduate Faculty, 1988, 2000; B.S., Auburn University, 1976; M.Ed., Auburn University, 1978; M.S., Clemson University, 1982; Ph.D., Louisiana State University, 1987.
- Furois, Michael E.**, Adjunct Assistant Professor of Education and Human Sciences, Rapid City Site, 2001; B.S., Montana State University, 1990; M.S., Arizona State University, 1995; Ph.D., University of Northern Colorado, 2000.
- Gaalswyk, Colin J.**, Senior Mechanical Engineer, Facilities and Services, 1998, 2002; B.S., SDSU, 1994; M.S., 2000.
- Gab, Orville**, Assistant Professor of Geography, 1985; B.S., SDSU, 1975; M.S., 1979.
- Gallant, Alisa**, Adjunct Professor at the Geographic Information Science Center of Excellence and Geography, Graduate Faculty, 2011; B.A., Sonoma State University, 1997; M.S., Oregon State University, 1985; Ph.D., Colorado State University, 1997.
- Gallo, Kevin**, Adjunct Professor at the Geographic Information Science Center of Excellence, 2009; Graduate Faculty, 2006; B.S., Northern Illinois University, 1978; M.S., Purdue University, 1981; Ph.D. Purdue University, 1984.
- Galipeau, David W.**, Harold C. Hohbach Endowed Professor of Electrical Engineering, Graduate Faculty, 1992, 2001; B.E., University of Rhode Island, 1971; M.S., University of Maine, 1989; Ph.D., 1992.
- Gamradt, Kenneth A.**, Instructor of Computer Science, 1992; B.S., SDSU, 1985; B.S., 1992, M.S., 1994.
- Garcia, Alvaro D.**, Extension Specialist and Professor of Dairy Science, Graduate Faculty, 2001, 2010; D.V.M., University of Uruguay, 1983; M.S., University of Minnesota, 1987; Ph.D., 1997.
- Garry, Byron G.**, Associate Professor of Construction and Operations Management and Undergraduate Program Coordinator, 1981, 2002; B.S., SDSU, 1981; M.S., 1988.
- Garcia Fritz, Jessica**, Instructor of Architectural Studies, 2012; B.A., University of Minnesota, 2005; M.Arch., 2009.
- Garst-Santos, Christine**, Assistant Professor of Modern Languages, 1997; B.A., Colorado State University, 1994; M.A., 1997., Ph.D., University of Iowa, 2012.
- Gates, Roger N.**, Professor of Natural Resource Management /Extension Range Specialist, Graduate Faculty, 2002, 2005; B.S., Muhlenberg College, 1974; M.S., SDSU, 1978; Ph.D., University of Nebraska, 1985.
- Gautam, Pravin**, Postdoctoral Research Associate in Plant Science, 2011; B.Sc., Tribhuvan University (Nepal), 2001; M.S., SDSU, 2006; Ph.D., University of Minnesota, 2010.
- Gay, David**, Superintendent of Cottonwood Research Station, Animal Science, 2008; B.S., Oklahoma State University, 1985; M.S., 1995.
- Ge, Xijin**, Associate Professor of Mathematics and Statistics, Graduate Faculty, 2007; B.S., Beijing University of Science and Technology, 1994; M.S., 1997; Ph.D., The University of Tokyo, 2000.
- Gelderman, Ronald H.**, Manager of Soil Lab and Professor of Plant Science, Graduate Faculty, 1973, 1998; B.S., SDSU, 1972; M.S., 1976; Ph.D., University of North Dakota, 1987.
- Gengler, Mary**, Instructor and Senior Microbiologist, Health and Nutritional Sciences, 2007; B.S., SDSU, 1980; M.S., SDSU, 2007.

- Gent, Stephen**, Assistant Professor of Mechanical Engineering, Graduate Faculty, 2009; B.S., Iowa State University, 2003; M.S., 2006; Ph.D., 2009.
- Gessner, Heather J.**, Livestock Business Management Extension Field Specialist, 2001, 2011; B.S., SDSU, 1997.
- Giago, Doris J.**, Associate Professor of Journalism and Mass Communication, 1992, 1998; B.S., SDSU, 1989; M.S., University of Kansas, 1992.
- Gibbons, Jeanette G.**, Adjunct Instructor of Computer Science, 1987, 2000; B.S., SDSU, 1984; B.S., 1989; M.S., 2003.
- Gibbons, William R.**, Professor of Biology and Microbiology, Graduate Faculty, 1980, 1997; B.S., SDSU, 1980; B.S., 1980; M.S., 1982; Ph.D., 1987.
- Gibson, Nicole**, Assistant Professor of Nursing, 2009, 2013; B.S., SDSU, 2000; M.S., SDSU, 2005.
- Gibson, Susan A.**, Professor of Biology and Microbiology, Graduate Faculty, 1993, 2008; B.S., University of Oklahoma, 1974; M.S., 1981; Ph.D., 1989.
- Gigliotti, Larry M.**, Adjunct Assistant Professor of Natural Resource Management, Graduate Faculty, 1993, 2012; B.S., Pennsylvania State University, 1975; M.S., Michigan State University, 1983; Ph.D., 1989.
- Gilbertson, Bonnie**, Research Coordinator, 2008; EA Martin Program in Human Nutrition; B.S. USD, 1995.
- Gilbertson, Peter**, Recruitment Coordinator 2009, 2010; EA Martin Program in Human Nutrition; B.A. University of Minnesota at Morris, 2005; M.S. NDSU, 2009.
- Gilkerson, III, David L.**, Project Engineer, Finance and Budget, 1997, 2002; B.S., SDSU, 1976; M.S., 1999.
- Gilkerson, Deanna S.**, Professor of Teaching, Learning and Leadership, Graduate Faculty, 1980; B.S., SDSU, 1975; M.S., University of Nebraska, 1978; Ph.D., Iowa State University, 1993.
- Gillman, Sally A.**, International/Study Abroad Coordinator, 2003; B.S., University of Vermont, 1974; M.S., University of Illinois, 1994; Ph.D., 2003.
- Gilmanov, Tagir G.**, Professor of Natural Resource Management, Graduate Faculty, 1997, 2009; M.S., Moscow State University (Russia), 1972; Ph.D., 1976.
- Gloege, Laura**, Instructor of Teaching, Learning and Leadership, 2005; B.S., Dakota State University, 2002; M.S., SDSU, 2007.
- Glover, Karl D.**, Associate Professor of Plant Science, Graduate Faculty, 2002, 2006; A.A.S., Iowa Lakes Community College, 1991; B.S., SDSU, 1994; M.S., 1996; Ph.D., Kansas State University of Agriculture and Applied Sciences, 2000.
- Goheen, Robert**, Instructor of Teaching, Learning, and Leadership, 2010; B.S., Minnesota State University Mankato, 1972; M.M., 1977.
- Gonda, Michael**, Assistant Professor of Animal Science, Graduate Faculty, 2008; B.S., North Carolina State University-Raleigh, 1999; M.S., University of Wisconsin-Madison, 2003; Ph.D., University of Wisconsin-Madison, 2006.
- Gonzalez, Jose L.**, Associate Professor of Plant Science, Graduate Faculty, 2006; B.S., University of Navarra (Spain), 1991; Post Graduate, Mediterranean Agronomic Institute of Zaragoza, 1995; Ph.D., University of North Dakota, 2000.
- Goodfellow, Barbara**, Instructor of Teacher Education, 2009; M.E.D., SDSU, 1970.
- Grady, Kathleen A.**, Assistant Professor of Plant Science, 1980, 1991; B.S., University of Illinois, 1978; M.S., Iowa State University, 1980.
- Graeb, Brian D. S.**, Associate Professor of Natural Resource Management, Graduate Faculty, 2007; B.S., Colorado State University, 1998; M.S., University of Illinois, 2003; Ph.D., South Dakota State University, 2006.
- Graff, Geoffrey**, Instructor of Architectural Studies, 2011. B.A., Johns Hopkins University, 2001; M.Arch., Washington University, 2004.
- Grahek, Diane**, Adjunct Assistant Professor of Education and Human Sciences, Rapid City Site, 2003; B.A., Black Hills State University, 1995; M.S., SDSU, 2002; Ed.D., University of South Dakota, 2005.
- Grams, Michael**, Assistant Professor of Physics, 2008; B.S., Dakota State University, 1999; M.S., Arizona State University, 2001; Ph.D., 2005.
- Granbois, Connie L.**, Assistant Grants Administrator, 1997, 2000; B.A., Dakota Wesleyan University, 1981.
- Graper, David F.**, Director of McCrory Gardens and Professor of Plant Science, 1990, 2000; B.S., University of Wisconsin, 1983; M.S., Colorado State University, 1985; Ph.D., University of Maryland, 1990.
- Graves, Nicole A.**, Instructor of Counseling and Human Development, 2000; B.S., SDSU, 1997; M.S., 2002; Ph.D., North Dakota State University, 2011.
- Greene, Tracy A.**, University Counsel, 2012; B.S., University of Idaho, 2000; J.D., University of Idaho College of Law, 2003.
- Greve, Ronald J.**, Assistant Director of Technical Services, 1973, 1993; B.S., SDSU, 1969; M.S., 1972.
- Griffin, Jason**, Research Assistant, Animal Science, 2011; Kansas State University, 2001.
- Grings, Elaine**, Assistant Professor of Animal Science, Graduate Faculty, 2012; B.S., University of California, 1977; M.S., Colorado State University, 1979; Ph.D., Washington State University, 1986.
- Gritzner, Janet H.**, Professor of Geography, Graduate Faculty, 1980, 1996; B.A., University of Maryland, 1965; M.A., 1970; Ph.D., Louisiana State University, 1978.
- Grove, Nicole**, Lecturer of Chemistry and Biochemistry, 2013; B.S., SDSU, 1978; M.Ed., Colorado State University, 1984; Ph.D., Ohio State University, 1988.
- Grovenburg, Troy W.**, Assistant Professor of Natural Resource Management, 2012; B.A., Colorado State University, 1993; M.B.A., University of South Dakota, 1996; M.S., South Dakota State University, 2007; Ph.D., South Dakota State University, 2010.
- Grunzke, Brian**, Assistant Baseball Coach, Intercollegiate Athletics, 2011; B.S., University of Arkansas at Little Rock, 2007.
- Gu, Xingyou**, Associate Professor of Plant Science, Graduate Faculty, 2006; B.S., Yangzhou University (China), 1985; Ph.D., South China Agricultural University (China), 1997.
- Gu, ZhengRong**, Assistant Professor of Agricultural and Biosystems Engineering, Graduate Faculty, 2008; B.S., East China University of Science and Technology, 1997; M.S., 2000; Ph.D., Iowa State University, 2006.
- Guan, Xiangming**, Professor of Pharmaceutical Sciences, Coordinator of Graduate Studies, Graduate Faculty, 1995, 2005; B.S., Zhejiang Medical University, 1982; M.S., University of Kansas, 1988; Ph.D., 1991.
- Gums, Kathleen**, Research Assistant, 2010; EA Martin Program in Human Nutrition; B.S. SDSU, 2008; M.S., 2010.
- Gunaje, Jayarama**, Associate Professor of Pharmaceutical Sciences, Graduate Faculty, 2011; B.S., Mysore University (India), 1980; M.S., Mangalore University (India), 1982; Ph.D., Indian Institute of Science, Bangalore (India), 1989.
- Gustafson, Curtis O.**, Associate Professor of Economics, 1989, 2008; B.S., SDSU, 1976; M.P.A., University of South Dakota, 1986; Ed.D., 2004.
- Gutzman, Karen**, Research Assistant, 2009; EA Martin Program in Human Nutrition; B.S. SDSU, 2004; M.A. Luther Seminary, 2007.
- Gutzmer, Zachary**, Instructor of Civil and Environmental Engineering, 2008; B.S., SDSU, 2006; M.S., 2008.
- Haag, James**, Instructor of History, Political Science, Philosophy, and Religion, 2010; B.A., Augustana College, 1999.

- Haag, Lowell W.**, Coordinator of Yeager Media Center, Journalism and Mass Communications, 1986, 2011; B.S., SDSU, 1985; M.Ed., SDSU, 2002.
- Hacker, Patricia E.**, Professor of Teaching, Learning and Leadership, Graduate Faculty, 1991, 1995; B.Ed., Glenville State College, 1973; M.S., West Virginia University, 1983; Ph.D., University of Wyoming, 1988.
- Hadi, Buyung**, Pesticide Education and Urban Entomology Coordinator in Plant Science, 2012; B.S., Bogor Agricultural University (Indonesia), 2002; M.S., Leibniz Universität Hannover (Germany), 2005; Ph.D., Auburn University, 2009.
- Hagena, Thomas**, Admissions Counselor, 2012; B.A., South Dakota State University, 2010.
- Haggerty, Kayte M.**, Retention Advisor, TRiO, 2006; B.A., SDSU, 2003; M.S., 2005.
- Haight-Kennedy, Mary**, Instructor of Nursing, 2009; B.S., SDSU, 1986; M.S., SDSU, 1993.
- Hair, Margie**, Assistant Professor of Nursing, 2011, B.A., College of St. Scholastica, 1981; M.S., University of Phoenix, 2005; Ph.D., New Mexico State University, 2011.
- Halawish, Fathi T.**, Professor of Chemistry and Biochemistry, Graduate Faculty, 1995, 2007; B.S., University of Mansoura (Egypt), 1976; M.S., 1981; Ph.D., Institute of Science & Technology (United Kingdom), 1987.
- Hale, Jeff**, Director of Housing and Residential Life, 2012; B.A. Taylor University of Fort Wayne, 1980; M.S. University of Saint Francis, 1984; Ed.D. West Virginia University, 1997.
- Hales, Carri**, Instructor of Mathematics, 2011; B.S., University of South Dakota, 1998; M.A., USD, 1999; M.A., USD, 2004.
- Haleta, Laurie L.**, Professor and Head of Communication Studies and Theatre, Graduate Faculty, 1977, 2001; B.S., SDSU, 1977; M.A., 1983; Ph.D., University of Nebraska, 1994.
- Hall, Jesse**, Research Assistant, Plant Science, 2012; B.S., SDSU, 2005.
- Hall, Lon A.**, Research Associate III, Plant Science, 1975, 2001; B.S., SDSU, 1972; M.S., 1990.
- Hall, Mary B.**, Adjunct Professor of Dairy Science, 2004; B.S., Cornell University, 1982; M.S., Virginia Polytechnic Institute, 1983; Ph.D., Cornell University, 1996.
- Hall, Teresa J. K.**, Professor and Head of Construction and Operations Management, Director of SDSU EDA Center, Graduate Faculty, 2003; B.A., University of Northern Iowa, 1989; M.S., 1991; Ph.D., Iowa State University of Science and Technology, 1997.
- Halvorsen, Darin**, Instructor of English, 2006; B.A., SDSU, 2001; M.A., 2006.
- Hamda, Yonas G.**, Research Associate I of Economics, 2007; B.A., University of North Florida, 1999; M.S., SDSU, 2004.
- Hamer, George H.**, Assistant Head of Electrical Engineering and Computer Science and Associate Professor of Computer Science, Graduate Faculty, 1989, 1997; B.S., North Dakota State University, 1980; M.S., Moorhead State University, 1992; Ph.D., North Dakota State University, 2006.
- Hamer, Julie**, Financial Aid Counselor, 1993; B.A., SDSU, 1992.
- Hanan, Niall**, Senior Research Scientist at the Geographic Information Science Center of Excellence, Professor of Natural Resource Management, Graduate Faculty, 2011; B.S., Liverpool Polytechnic-John Moore's University (England), 1985; Ph.D., Queen Mary College, University of London (England), 1990.
- Hansen, Daniel J.**, Assistant Dean for Student Services, College of Pharmacy, Assistant Professor of Pharmacy Practice, 2007, 2010; B.S., SDSU, 2003; Pharm.D., 2005.
- Hansen, Emily**, Research Coordinator, 2009; EA Martin Program in Human Nutrition; B.A. Luther College, 2007; M.S. SDSU, 2009.
- Hansen, Julie A.**, Instructor of Nursing, 2008, Diploma, Sioux Valley School of Nursing, 1984; B.S., SDSU, 1989; M.A., USD, 1996; M.S., Walden University, 2007.
- Hansen, Nathan**, Research Assistant, 2009; EA Martin Program in Human Nutrition; B.A. Luther College, 2007; M.S. SDSU, 2009.
- Hansen, Sally**, Instructor of Teaching, Learning, and Leadership, 2009; B.A., Beloit College, 1966; M.A., University of Oregon, 1970.
- Hansen, Stephanie A.**, Research Associate II, Plant Science, 1994; B.S., SDSU, 1994; M.S., 1996.
- Hanson, Dennis W.**, Research Assistant II, Wildlife and Fisheries, 1993; B.S., SDSU, 1973.
- Hanson, Karla**, Instructor of Nursing, 2001; B.S.N., Mankato State University, 1983; M.S., SDSU, 2005.
- Hardin, Richard Cable**, Assistant Professor of Visual Arts, Graduate Faculty, 2009; B.S., James Madison University, 1995; M.F.A. Ohio University, 1999.
- Harmon Jr., William**, Program Advisor for African American Programs, 2012; B.A., University of Illinois, 2005; A.M., University of Chicago, 2008.
- Harper, Ruth**, Professor of Counseling and Human Development, Graduate Faculty, 1994, 2003; B.A., Cornell College, 1973; M.S.Ed., University of Wisconsin-Oshkosh, 1977; Ph.D., Kansas State University, 1987.
- Harris, Terry**, Adjunct Instructor of Journalism and Mass Communication, 2008; B.S., SDSU, 1977; M.S., 2003.
- Hartenhoff-Crooks, Nancy**, Coordinator of Disability Services, 2003, 2005; B.S., SDSU, 1987; M.S., 2003.
- Hassan, Ashraf Nasr Eldin**, Associate Professor of Dairy Science, Graduate Faculty, 2003, 2007; B.S., Alexandria University (Egypt), 1983; M.S., Minia University (Egypt), 1990; Ph.D., University of Georgia/Minia University (Egypt), 1997.
- Hatfield, Gary**, Assistant Professor of Statistics, 2012, B.S., Oklahoma State University, 1976; M.S., 1978; Ph.D., 2011.
- Haug, Michael F.**, Lecturer in English, 2002; 2013; B.S.E., Black Hills State University, 1971; M.S., SDSU, 1973.
- Hauschild-Mork, Melissa**, Assistant Professor of Communication Studies and Theatre, 1988, 2012; B.S., SDSU, 1987; M.S., Indiana University, 1988; Ed.D., University of South Dakota, 2012.
- Haverkamp, Dan**, Ticket Sales Coordinator, Intercollegiate Athletics; 2013; B.S., St. Ambrose University, 2010; M.S., Western Illinois University, 2012.
- Hay, Christopher**, Assistant Professor, Graduate Faculty, 2009; B.S., Colorado State University, 1992; M.S., Colorado State University Ft. Collins, 2003; Ph.D., University of Nebraska, 2006.
- Hayes, William**, Assistant Professor of Pharmacy Practice, 2010; B.S., SDSU, 2007; Pharm.D., 2009.
- He, Dong**, Bioimaging Research Associate, 2001, 2005; B.S., Chenydu University (China), 1987; M.S., SDSU, 1995.
- He, Hongshan**, Assistant Professor of Electrical Engineering, Graduate Faculty, 2007; BS, Lanzhou University, 1990; MS, Lanzhou University, 1993; Ph.D. Zhongshan University 1996.
- Heaton, Timothy A.**, Chief of University Police and Director of Campus Security, 1995, 1998; B.A., Upper Iowa University, 1993.
- Heemeyer, Adam**, Assistant Athletic Director-Ticket Sales; 2013; B.S., South Dakota State University, 2001.
- Heeren, Elizabeth**, Instructor of Visual Arts, 2002; B.A., Saint Olaf College, 1997; M.A., University of Arizona, 2000; M.F.A., University of South Dakota, 2007.
- Hegerfeld- Baker, Joan M.**, Extension Food Safety Specialist/Instructor, Health and Nutritional Sciences, 1994, 2002; B.S., SDSU, 1980; B.S., Dakota Wesleyan University, 1981; M.Ed., SDSU, 1999.
- Heiberger, Gregory A.**, Instructor and Pre-Health Professional Advisor/Coordinator of Biology and Microbiology, 2005, 2007; B.S., 2004; M.S. SDSU, 2006.

- Hein, Matthew**, Instructor of Mechanical Engineering, 2010; B.S., SDSU, 2008; M.S., 2010.
- Heine, James B.**, Instructor of Economics, 2008; B.A., Mount Martyr College, 1978; MBT, University of Minnesota, 1983; MBA, University of South Dakota, 1987.
- Heins, Jodi R.**, Assistant Department Head, Professor of Pharmacy Practice, Graduate Faculty, 1994, 2004; Pharm.D., University of Nebraska, 1993.
- Heinze, Benjamin K.**, Assistant Athletic Trainer, Intercollegiate Athletics, 2003; B.S., Winona State University, 1998; M.S., SDSU, 2000.
- Held, Jeffrey E.**, Extension Sheep Specialist and Professor of Animal Science, 1990, 2001; B.S., University of Wisconsin, 1982; M.S., University of Illinois, 1985; Ph.D., 1989.
- Helder, Dennis L.**, Associate Dean of Research and Distinguished Professor of Electrical Engineering, Graduate Faculty, 1983, 2011; B.S., SDSU, 1979; B.S., 1980; M.S., 1985; Ph.D., North Dakota State University, 1991.
- Helgeland, David**, Professor of Pharmacy Practice, Graduate Faculty, 1989, 2006; B.S., SDSU, 1974; M.B.A., University of South Dakota, 1982; Ed.D., 2000.
- Heller, Barbara**, Instructor/Coordinator of Entrepreneurial Studies and Economics, Entrepreneurial Studies Program, 2003, 2009; B.S., SDSU, 2003; M.S., 2004.
- Hellwig, Thaddaus**, Assistant Professor of Pharmacy Practice, 2008; B.S., Chadron State, 2002; Pharm.D., Texas Tech University, 2006.
- Helmbolt, Shawn M.**, Assistant Director of Admissions, 2002; B.A., SDSU, 2002; M.S., 2007.
- Hendricks, Bernard D.**, CE Coordinator, 1982, 1987; B.S., SDSU, 1977.
- Hendrickx, Lori D.**, Professor of Nursing, Graduate Nursing, 1998; B.S.N., University of North Dakota, 1981; M.S.N., University of Wisconsin, 1989; Ed.D., University of Montana, 1998.
- Henebry, Geoffrey M.**, Co-Director and Senior Research Scientist at the Geographic Information Science Center of Excellence/Professor of Natural Resource Management, Graduate Faculty, 2005; B.A., St. John's College, 1982; M.S., University of Texas- Dallas, 1986; Ph.D., 1989.
- Herra, Jesse**, Minority Student Recruiter, 2008; B.A., Colorado College, 2004.
- Heslep, Larry**, Adjunct Assistant Professor of Education and Human Sciences, Rapid City Site, 2005; B.A., University of Wyoming, 1967; M.Ed., 1983; Ed.D., 1995.
- Hesler, Louis S.**, Adjunct Associate Professor of Plant Science, Graduate Faculty, 1999; B.S., Texas Christian University, 1984; M.S., Texas A&M University, 1986; Ph.D., University of California, 1991.
- Hesson, Margie**, Instructor of Nursing, 1991, B.S.N., Delta State University, 1986; M.S.N, University of Mississippi, 1990.
- Heylens, Kathy**, Associate Athletic Director of Compliance/Senior Woman Administrator, 1978, 2008; SDSU.
- Hietpas, Steven M.**, Professor of Electrical Engineering and Head of Electrical Engineering and Computer Science, Graduate Faculty, 1994, 2004; B.S., Montana State University, 1984; M.S., 1991; Ph.D., 1994.
- Hildreth, Michael**, Professor of Biology and Microbiology, and Veterinary and Biomedical Sciences, Graduate Faculty, 1987, 1997; B.A., Westmar College, 1977; Ph.D., Tulane University, 1983.
- Hill, Kendra H.**, Assistant Professor of Biology and Microbiology, 2004, 2008; B.A., University of Delaware, M.S., Johns Hopkins University, 1994.
- Hintze Jepperson, Shelby**, Research Coordinator, 2009; EA Martin Program in Human Nutrition; B.S. University of Sioux Falls, 2007.
- Hirko, Ronald J.**, Assistant Professor of Chemistry and Biochemistry, 2003; B.S., Kent State University, 1965; Ph.D., Utah State University, 1967.
- Hobbs, Barbara B.**, Associate Professor and Assistant Dean, West River Nursing, Graduate Faculty, 1994, 2004; B.S.N., San Diego State University, 1970; M.S.N., California State University, 1991; Ph.D., University of Nebraska, 2004.
- Hoffman, Sarah**, Residence Hall Director, 2013; B.S. University of Wisconsin-Stout, 2013.
- Hoffman, Song**, International Student Coordinator, 2011; B.A., Beijing Normal University, 1997; M.A., Flinders University of South Australia, 1999; Ph.D., Flinders University, Australia, 2008.
- Holland, Richard S.**, Adjunct Assistant Professor of Natural Resources Management, 1998; B.S., University of Nebraska, 1977; M.S., 1980; Ph.D., 1987.
- Holler, Larry**, Professor of Veterinary and Biomedical Sciences and Animal Disease Research and Diagnostic Laboratory and University Veterinarian, 1994, 2004; B.S., Kansas State University, 1980; D.V.M., 1984; Ph.D., Washington State University, 1993.
- Holm, Thomas**, Adjunct Assistant Professor of Geography, 2004; B.S., SDSU, 1979; M.S., 1982.
- Holmes, Robert A.**, Adjunct Instructor of Education and Human Sciences, Rapid City Site, Graduate Faculty, 2001; B.A., University of New York, 1970; M.S.W., 1977.
- Holt, Carrie**, Instructor of Nursing, 2012; B.S.N., University of Nebraska, 2000; M.S., Chadron State College, 2009; M.S.N., Nebraska Methodist College, 2012.
- Holtz, Jason**, Assistant Athletic Director-Facilities and Operations, Intercollegiate Athletics; 2012; B.S., Wayne State College, 2006; M.A., Gonzaga University, 2008.
- Hong, Chang Oh**, Postdoctorate Research Associate, Plant Science, 2012; B.S., Gyeongsang National University (South Korea), 2003; M.S., 2005; Ph. D., 2008.
- Hoppe, Adam**, Assistant Professor of Chemistry and Biochemistry, Graduate Faculty, 2008; B.A., Minnesota State University Moorhead, 1997; M.S., University of Wisconsin Colleges, 1999; Ph.D., University Michigan Ann Arbor, 2003.
- Horsley, Gwen K.**, Instructor of English, 2002; B.A., University of South Dakota, 1994; M.A., 1997.
- Hove, Jason**, Assistant Athletic Director-Sports Information, Intercollegiate Athletics, 1996; B.A., SDSU, 2003; M.S., 2007.
- Howard, Gregory B.**, Adjunct Assistant Professor of Education and Human Sciences, Rapid City Site, 1998; B.A., University of Nebraska at Lincoln, 1979; M.S.W., University of Nebraska at Omaha, 1982; Ph.D., Texas Tech University, 1991.
- Howard, John E.**, Instructional Designer, 2005, 2009; B.A., University of Wisconsin, 1975; M.A., New Mexico State University, 1994.
- Hrubes, Eric**, Assistant Athletic Director-Marketing, Intercollegiate Athletics; 2012; B.A., University of Northern Iowa, 2008; M.S., University of Northern Iowa, 2010.
- Hua, Guanghui**, Assistant Professor of Civil and Environmental Engineering, 2012; B.S., 1997, M. Eng. 2000, Qingdao Technological University, China; Ph.D., University of Massachusetts at Amherst, 2006.
- Hu, Zhong**, Associate Professor of Mechanical Engineering, Graduate Faculty, 2002, 2007; M.S., Tsinghua University (China), 1983; Ph.D., 1988.
- Hubbard, Daniel E.**, Professor of Natural Resource Management, Graduate Faculty, 1980, 2000; B.S., Michigan State University, 1975; M.S., SDSU, 1979; Ph.D., 1988.
- Huber, Erika A.**, Instructor of Nursing, 2008, B.S., SDSU, 1997; M.S., University of New Mexico, 2007.
- Hubert, Mindy Beth**, Range Livestock Research and Extension Associate, 2005; B.S., SDSU, 1999; M.S., 2001.



- Hublou, Lynn M.**, Lecturer of English, 1995, 2013; B.A., SDSU, 1979; M.A., 1984.
- Huh, Yung Moo**, Associate Professor of Physics, Graduate Faculty, 2002, 2008; B.S., Myongji University (Korea), 1997; Ph.D., Iowa State University, 2001; M.S., 2002.
- Humburg, Daniel S.**, Professor of Agricultural and Biosystems Engineering, Graduate Faculty, 1985, 2005; B.S., University of Wisconsin, 1982; M.S., SDSU, 1987; Ph.D., University of Illinois, 1991.
- Hummel, Christopher**, Instructor of History, Political Science, Philosophy, and Religion, 2012;
- Hungerford, Hilary**, Assistant Professor of Geography, Graduate Faculty, 2012, B.A., University of Northern Colorado, 2001; M.A., University of Kansas, 2007; Ph.D., University of Kansas, 2012.
- Hunter, Karla**, Assistant Professor of Communication Studies and Theatre, Graduate Faculty, 2009; B.A., Augustana College, 1992; M.A., University of Oklahoma, 1995; Ph.D., 2000.
- Hupp, Alexandria**, Assistant Softball Coach; 2012; B.A., University of Nebraska-Lincoln, 2010; M.S., Emporia State University, 2012.
- Hurley, Philip J.**, Assistant Swim Coach, Intercollegiate Athletics, 2004; B.A., Dickinson College, 1998.
- Huskey, Jeffery**, Wellness Center Director, 2012; B.S., Keene State College, 1993; M.S., University of Tennessee, 1995.
- Ibrahim, Amir Mohamed Hussein**, Adjunct Associate Professor of Plant Science, Graduate Faculty, 2000, 2004; B.S., 1991; M.S., 1994; Ph.D., Colorado State University, 1998.
- Ichinomiya, Akimoto**, Assistant Dairy Plant Manager, 2008; B.S., SDSU, 1996.
- Ingemansen, Jack A.**, Manager/Foundation Seed Stocks, 1982, 1989; B.S., SDSU, 1981, M.S., 1985.
- Ireland, Jon R.**, Project Manager/Engineer, Facilities and Services, 2008, B.S., SDSU, 2007.
- Jaacks, Marie L.**, Executive Secretary: FFA/PAS/SD Ag Ed, College of Education and Human Sciences, 2008; AAS., Mitchell Technical Institute, 2001; B.E., South Dakota State University, 2004.
- Jackson, Sherry**, Adjunct Assistant Professor of Education and Human Sciences, Rapid City Site, 2006; B.S., Madonna College, 1974; M.S., SDSU, 1997.
- Jackson, Trisha**, Assistant Professor of Geography, 2011; B.S., Texas State University, 2004; M.A., University of Kansas, 2007; Ph.D., University of Kansas, 2011.
- Jacobs, Cheryl A.**, SDSU Extension, Community Development Field Specialist; 2011; B.S., SDSU, 1995; M.A., University of South Dakota, 2002.
- Jacques, Christopher N.**, Adjunct Assistant Professor of Wildlife and Fisheries Sciences, 2008; B.S., University of Maine, 1995; M.S., SDSU, 2001; Ph.D. 2006.
- Jacquet, Jeffrey B.**, Assistant Professor of Sociology and Rural Studies, Graduate Faculty, 2012; B.A., University of Wisconsin, 2001; M.A., University of Wyoming, 2005; Ph.D., Cornell University, 2012.
- James, Daniel A.**, Adjunct Assistant Professor of Natural Resource Management, 2012; B.S., M.S., University of South Dakota, 1999, 2003; Ph.D., SDSU, 2011.
- James, Kimberly R.**, Instructor of Plant Science, 2006; B.S., Iowa State University, 2003; M.S., 2005.
- James, Matthew R.**, Assistant Professor of Landscape Architecture, Plant Science, 2003, 2009; B.S., SDSU, 2001; M.S., 2002; Ed.D., University of South Dakota, 2009.
- Jansen, Tarryn**, Assistant Professor of Pharmacy Practice, Graduate Faculty, 2012; Pharm.D., SDSU, 2011.
- Janssen, Larry L.**, Professor of Economics, Graduate Faculty, 1978, 1989; B.S., University of Nebraska, 1971; M.S., Oklahoma State University, 1974; Ph.D., University of Nebraska, 1978.
- Jantzer, Amanda**, Instructor of Psychology, 2009; B.A., College of Saint Benedict, 2004; M.A., Southern Illinois University-Carbondale, 2006; Ph.D., 2009.
- Jantzer, Jacob**, Assistant Professor of Sociology and Rural Studies, Graduate Faculty, 2009; Southern Illinois University of Carbondale.
- Jastorff-Gilles, Tiffany**, Assistant Professor of Pharmacy Practice, 2010; B.S., SDSU, 2007; Pharm.D., 2009.
- Jenks, Jonathan A.**, Distinguished Professor of Natural Resource Management, Graduate Program Coordinator, Graduate Faculty, 1991, 2006; A.A., Unity College, 1982; B.S., 1984; M.S., University of Maine, 1986; Ph.D., Oklahoma State University, 1991.
- Jensen Bender, Wendy S.**, Professor of Pharmacy Practice, 1996, 2006; B.S., SDSU, 1993; Pharm.D., 1995.
- Jensen, Jessica**, Instructor of Journalism and Mass Communication, 2008; B.A., SDSU, 1999; M.S., SDSU, 2007.
- Jensen, Kent C.**, Associate Professor of Natural Resource Management, Graduate Faculty, 2003, 2006; A.A., Fullerton College, 1979; B.S., SDSU, 1985; M.S., Montana State University, 1988; Ph.D., Texas A&M University, 1990.
- Jensen, Mary**, Assistant Professor of Psychology, 2009; B.A., University of Minnesota-Minneapolis, 1996; Ph.D., University of Iowa, 2006.
- Jewel, Melody E.**, Assistant Professor of Chemistry and Biochemistry, 2004; B.A., University of Minnesota, 1997; B.S., 1997; M.S., 1999; Ph.D., 2002.
- Jewett, Michael**, Assistant Women's Basketball Coach, Intercollegiate Athletics; 2012; B.A., Augustana College, 1994; M.A., University of South Dakota, 1999.
- Ji, Young-Hee**, Instructor of Mathematics and Statistics, 2010; B.S., 1991; M.S., New York University, 2001.
- Jiang, Guo-Liang**, Assistant Professor of Plant Science, Graduate Faculty, 2009; B.S., Southwest Agricultural University (China), 1982; M.S., Nanjing Agricultural University, 1986; Ph.D., 1994.
- Jin, Zhu-Qiu**, Assistant Professor Pharmaceutical Sciences, Graduate Faculty, 2009; M.S., Shengyang Pharmaceutical University (China), 1990; Ph.D., Hunan Medical University (China), 1998.
- Jing, Linhong**, Director of Mass-Spec Facility, Graduate Faculty, 2008; B.S., Peking University (China), 1991; M.S., University of Nevada-Las Vegas, 1999; Ph.D., Purdue University-West Lafayette, 2004.
- Joffer, Patricia A.**, Associate Professor of Rural Sociology, Graduate Faculty, 1992, 2008; B.S., University of South Dakota, 1985; M.A., 1987; Ph.D., SDSU, 1995.
- Johansen, Laurie**, Instructor of Nursing, 2004, 2007; A.A., University of South Dakota, 1995; B.S., SDSU, 2004; M.S., 2007.
- Johnson, Annette M.**, Associate Professor of Pharmacy Practice, 2001, 2006; B.S., SDSU, 1997; Pharm.D., 1999.
- Johnson, Bruce A.**, Instructor of Economics, 2012; B.A. University of Sioux Falls, 2008; M.B.A., 2011.
- Johnson, Carrie L.**, SDSU Extension Family Resource Management Specialist and Assistant Professor of Consumer Sciences; 2012; B.S., Dakota State University, 2003; M.S., SDSU, 2007; Ph.D., Iowa State University, 2012.
- Johnson, E. Janet**, Associate Professor, University College, 1990, 2006; B.A., Augustana College, 1969; M.A.Ed., Virginia Polytechnic Institute and State University, 1980; M.A., University of Iowa, 1988; Ed.D., University of South Dakota, 2003.
- Johnson, Laurie**, TriO Retention Advisor, 2007; B.S., SDSU, 1989; M.S., 1994.
- Johnson, Patricia S.**, Professor of Natural Resource Management, Graduate Faculty, 1986, 1997; B.A., Fort Lewis College, 1974; B.S., 1975; M.S., Utah State University, 1978; Ph.D., 1987.

- Johnson, Paul J.**, Professor of Plant Science, Graduate Faculty, 1993, 2002; B.S., Oregon State University, 1982; M.S., University of Idaho, 1987; Ph.D., University of Wisconsin, 1992.
- Johnson, Paul, O.**, Agronomy Crops Specialist, Plant Science, 2000, 2011; B.S., SDSU, 1979; M.S., 1983.
- Johnson, Rex R.**, Adjunct Assistant Professor of Wildlife and Fisheries Sciences, 1996; B.S., Ball State University, 1979; M.S., Iowa State University, 1984; Ph.D., South Dakota State University, 1996.
- Johnson, W. Carter**, Distinguished Professor of Natural Resource Management, Graduate Faculty, 1989, 2006; B.S., Augustana College, 1968; Ph.D., North Dakota State University, 1971.
- Johnston, Aaron J.**, Head Women's Basketball Coach, Intercollegiate Athletics, 1997, 2000; B.A., Gustavus Adolphus College, 1996.
- Johnston, Carol A.**, Professor of Natural Resource Management, Graduate Faculty, 2003; B.S., Cornell University, 1974; M.S., University of Wisconsin, 1977; Ph.D., 1982.
- Johnston, Heidi**, Adjunct Lecturer of Nursing, 2007; A.A., USD, 2001; B.S., SDSU, 2004.
- Jones, Allen L.**, Professor of Civil and Environmental Engineering, Graduate Faculty, 2003, 2013; B.S., University of Idaho, 1986; M.S., 1988; Ph.D., University of Washington, 2003.
- Jones, Amy J.**, Engineer/Project Manager, Facilities and Services, 2003, 2006; B.S., Purdue University, 1995; M.S., Georgia Institute of Technology, 1997.
- Jones, Eluned**, Professor and Head of Economic; B.S., University of Bath (United Kingdom), 1977; M.S., North Carolina State University, 1979; Ph.D., Texas A&M University, 1987.
- Jorgensen, Nathan**, Assistant Professor of Music, 2008; B.M., University of Kansas, 1999; M.M., University of Missouri - Kansas City, 2003; D.M.A., University of Kansas, 2010.
- Julson, James L.**, Professor of Agricultural and Biosystems Engineering, Graduate Faculty, 1981, 2005; B.S., SDSU, 1975; M.S., 1977; Ph.D., University of Nebraska, 1998.
- Kahler, Alex L.**, Adjunct Professor of Plant Science, Graduate Faculty, 1980, 1985; A.A., Long Beach City College, 1963; B.S., University of California, 1965; M.S., 1967; Ph.D., 1973.
- Kalsbeck, Steven**, Research Associate II, Plant Science, 1997; B.S., Dordt College, 1971; M.S., SDSU, 1988.
- Kalscheur, Kenneth F.**, Professor of Dairy Science, Graduate Faculty, 2000, 2012; B.S., University of Wisconsin, 1990; M.S., University of Maryland, 1996; Ph.D., 2002.
- Kampmann, Jennifer A.**, Lecturer of Teaching, Learning and Leadership, 2003, 2012; B.S., SDSU, 2000; M.S., 2003; Ed.D., University of South Dakota, 2012.
- Kang, SunWoo**, Assistant Professor of Department of Counseling and Human Development, Graduate Faculty, 2012; B.A., Ewha Women's University (South Korea), 2002; M.A., 2005; Ph.D., University of Wisconsin, 2012.
- Kappes, John**, Assistant Professor of Pharmacy Practice, 2009; B.S., SDSU, 2005; Pharm.D., 2007.
- Kaptue Tchuente, Armel**, Postdoctoral Fellow, 2010; B.S., University of Dschang, 2002; M.S., University of Yaounde I, 2005; M.S., Institute for Water and Environmental Engineering of Ouagadougou, 2007; Ph.D., Paul Sabatier University, 2010.
- Karnopp, Adam R.**, Assistant Director of Student Union and Activities, 2001, 2005; B.S., Northern State University, 1998; M.S., 2001.
- Kattelmann, Kendra K.**, Professor of Health and Nutritional Sciences; Director, Didactic Program in Dietetics, 1997; Graduate Faculty, 1997, 2006; B.S., SDSU, 1977; M.S., University of Arkansas, 1984; Ph.D., University of Missouri, 1993.
- Kaushik, Radhey S.**, Associate Professor of Biology and Microbiology, and Veterinary and Biomedical Sciences, Graduate Faculty, 2003, 2008; B.S., Haryana Agricultural University (India), 1985; M.S., 1988; Ph.D., University of Saskatchewan (Canada), 1998.
- Kayongo-Male, Diane E.**, Professor of Sociology and Rural Studies, Graduate Faculty, 1985; B.A., State University of New York, 1970; M.A., Michigan State University, 1972; Ph.D., 1974.
- Kayongo-Male, Henry**, Professor of Biology and Microbiology, Graduate Faculty, 1986, 1995; B.S., Makerere University (Uganda), 1969; M.S., Michigan State University, 1972; Ph.D., 1974.
- Keller, Michael A.**, Coordinator of Composition and Professor of English, Graduate Faculty, 1993, 2002; B.A., Colorado State University, 1975; M.A., University of Illinois at Chicago, 1981; Ph.D., 1993.
- Kelley, Van C.**, Associate Professor and Head of Agricultural and Biosystems Engineering, Director of Water Resources Institute, Graduate Faculty, 1978, 2000; B.S., Texas A&M University, 1976; M.S., New Mexico State University, 1978; Ph.D., University of Illinois, 1999.
- Kemp, Daniel C.**, Professor of Mathematics and Statistics, Graduate Faculty, 1976, 1986; B.A., Knox College, 1963; M.S., University of Arizona, 1967; Ph.D., Oklahoma State University, 1975.
- Kennecke, Angela**, Adjunct Instructor of Journalism and Mass Communication, 2010; B.A., University of Iowa, 1988; M.C.M., Webster University, 2010.
- Keppord, Joyce**, Assistant Registrar, 1981, 2005; B.S., SDSU, 2004.
- Kieckhefer, Andrea**, Publications Editor, 2006; B.S., SDSU, 1999.
- Kieffer, Pam I.**, Adjunct Instructor of Chemistry and Biochemistry, 2002; B.S., SDSU, 1970; M.S., 1973.
- Kightlinger, Lon**, Adjunct Assistant Professor of Biology and Microbiology, 2002; B.A., Augustana College, 1977; Ph.D., University of North Carolina, 1993.
- Kim, Jeongmi**, Assistant Professor of Teaching Learning & Leadership, 2012; M.Ed., University of Wisconsin, 2003; Ph.D., 2006
- Kimn, Jung-Han**, Associate Professor of Mathematics, 2007; B.A., Yonsei University, 1992; M.S., Seoul University, 1994; Ph.D., New York University, 2001.
- Kindermann, Ross P.**, Professor of Mathematics and Statistics, Graduate Faculty, 1988, 1996; B.A., Dartmouth College, 1972; M.S., University of Illinois, 1974; Ph.D., 1978.
- Kirby, Jacquelyn A.**, Nursing Learning Lab Coordinator/Lecturer of Nursing, 1991, 2008; B.S., SDSU, 1989.
- Kirby, September L.**, Instructor of Health and Nutritional Sciences, 1991, 2005; B.S., SDSU, 1983; M.S., 1994.
- Kjelden, Rebecca A.**, Instructor, University College, 2002; B.S., SDSU, 2001; M.S., 2003.
- Kjellsen, Michael**, Research Associate III, Wildlife and Fisheries Sciences, 1986; B.S., SDSU, 1985; M.S., 1985.
- Klaver, Robert W.**, Adjunct Associate Professor of Natural Resource Management, 2001; B.S., Iowa State University, 1971; B.S., University of Montana, 1974; M.S., 1977; Ph.D., SDSU, 2001.
- Klawiter, Ruth A.**, Instructor of Nursing, 1996; B.S.N., Capital University, 1984; M.S., SDSU, 2000.
- Klein, Nicole L.**, Professor of Economics, Graduate Faculty, 1997, 2006; B.A., SDSU, 1990; M.S., Kansas State University, 1994; Ph.D., 1996.
- Kleinjan, Barbara**, Instructor of Communication Studies and Theatre, 2009; B.A., SDSU, 1978; M.Ed., 1994.
- Kleinjan, Jonathan L.**, Research Associate II, Plant Science, 2000; B.S., SDSU, 1996; M.S., 2002.
- Klemp, Sue**, Assistant Professor of Communication Studies and Theatre, 2011; B.F.A., University of Wisconsin, 1995; M.F.A., University of South Dakota, 1999.
- Klinkefus, Rob**, Assistant Men's Basketball Coach, 2007; B.A., Buena Vista University, 2000; M.S., Drake University, 2005.

**Klock, Frank A.**, Instructor of Journalism and Mass Communication, 1990, 2006; B.S., SDSU, 1973; M.A., University of Nebraska, 2005.

**Kluck, Jennifer**, Instructor of English, 2004; B.A., SDSU, 2004; M.A., 2006.

**Klumb, Robert A.**, Adjunct Associate Professor of Natural Resource Management, 2004; B.S., University of Wisconsin - Milwaukee, 1990; M.S., University of Wisconsin - Stevens Point, 1997; Ph.D., Cornell University, 2003.

**Knudsen, David E. B.**, Professor of Veterinary and Biomedical Sciences, and Animal Disease Research and Diagnostic Laboratory, 2002, 2007; B.S., Colorado State University, 1979; D.V.M., 1982.

**Knutson, Ryan**, Manager of Information Security, 2010; B.S., SDSU, 2000; M.S., DSU, 2005.

**Koch, Victoria F.**, Instructor of Economics, 2012; AAS, Nassau Community College, 1998; BBA, Baruch College, City University of New York, 2004; MBA, University of Phoenix, 2008.

**Koepf, Kriston**, Research Coordinator, 2008; EA Martin Program in Human Nutrition; B.S. SDSU, 2003; M.S., 2005.

**Kolthoff, Ann**, Sheep Unit Manager, 2011; B.S., SDSU, 2011.

**Kommareddy, Anil**, Research Engineer II, 2005; B.E., University of Madras, 1998.

**Kommareddy, Indrani**, Research Associate, 2009; B.E., Jawaharlal Nehru Technological University 2006; M.S., Dakota State University, 2008.

**Koroglu, Didem**, Lecturer of Journalism and Mass Communication, 2010; B.A., Bogazici University (Turkey), 1997; M.M.C., Arizona State University, 1999.

**Kopriva, Angela**, Instructor of Health and Nutritional Sciences, 2009; B.S., SDSU, 2006; M.S., University of Wyoming, 2008.

**Kott, Linda**, Information Services Assistant Librarian, 1994, 2012; B.S., University of Wisconsin - Madison, 1980; M.S.L.S., University of North Texas, 2005; M.Ed., SDSU, 2010.

**Kovalskyy, Valeriy**, Postdoctoral Fellow, 2011; B.A., Lviv National University, 2001; M.S., Ohio University, 2004; Ph.D., South Dakota State University, 2011.

**Krabbenhoft, Joe**, Assistant Men's Basketball Coach, Intercollegiate Athletics; 2013; B.A., University of Wisconsin-Madison, 2009.

**Kragness, David**, Assistant Athletic Trainer in Intercollegiate Athletics, 2009; B.S., Minnesota State University, 2005; M.S., University of Nevada, 2008/

**Kraljic, Mary B.**, Access Services Librarian/ Professor, 1991, 2003; B.S., Saint Cloud State University, 1980; M.A., University of Texas, 1984; M.L.S., Texas Woman's University, 1989.

**Kandell, Andrew**, Residence Hall Director, 2011; B.S., Northern Michigan University, 2011.

**Krishnan, Padmanaban G.**, Professor of Health and Nutritional Sciences, Graduate Faculty, 1988, 2000; B.S., University of Madras (India), 1977; M.S., North Dakota State University, 1983; Ph.D., 1989.

**Kruit, Jane E.**, Associate Controller, Finance and Budget, 1982, 1993; B.S., Dakota State University, 1977.

**Kuebler, Michelle**, Assistant Director of Admissions, 1994; B.S., SDSU, 1994.

**Kuehl, Rebecca**, Assistant Professor of Communication Studies and Theatre, 2011; B.A., Gustavus Adolphus College, 2005; M.A., University of Georgia, 2007; Ph.D., University of Minnesota, 2011.

**Kuhl, Carrie**, Adjunct Instructor of Visual Arts, 2012; B.S., SDSU, 2007.

**Kuhl, Renae L.**, Instructor of Economics, 2011; B.A., University of Sioux Falls, 2006; MBA, Colorado Technical University, 2007.

**Kurtenbach, Kami L.**, Instructor, University College, 2001; B.S., SDSU, 1986; M.Ed., 1987.

**Kurtenbach, Paula L.**, Instructor of Computer Science, 2005; B.S., SDSU, 1985; B.S., 1994; M.S., 2002.

**Kurtz, Jeri V.**, Director of Institutional Research, Finance and Budget, 1987, 1996; B.S., SDSU, 1970; M.S.T., 1991; Ed.D., University of South Dakota, 2001.

**Kurtz, Rachel M.**, Adjunct Assistant Professor of Geography, 2004; B.S., SDSU, 1996; M.S., University of Tennessee, 1999; Ph.D., Pennsylvania State University, 2003.

**Kutscher, Eric C.**, Professor of Pharmacy Practice, Graduate Faculty, 2002, 2012; Pharm.D., University of Iowa, 2001.

**Lacher-Starace, Jennifer**, Instructor of Teaching Learning & Leadership, 2012; B.S., Bates College, 1996; M.S., Lesley University, 2009.

**Ladonski, James B.**, Instructor of Biology and Microbiology, 2006; B.S., Michigan State University, 1995; Southern Illinois University, 1999.

**Laible, Brad R.**, Associate Professor of Pharmacy Practice, Graduate Faculty, 2004, 2008; B.S., SDSU, 1999; Pharm.D., 2001.

**Lacher-Starace, Jennifer**, Instructor of Teaching, Learning and Leadership, 2012; B.A., Bates College, 1996; M.Ed., Lesley University, 2009.

**Lammers, Cristina R.**, Associate Professor of Nursing, Graduate Faculty, 2001; M.D., University of Uruguay, 1984; M.P.H., University of Minnesota, 1997.

**L'Amour, Beth**, Research Assistant, 2008; EA Martin Program in Human Nutrition; B.S. SDSU, 1980; A.D.N. University of South Dakota, 2005.

**Lamsal, Aashis**, Geospatial Analyst, 2011; B.E., Tribhuvan University, 2006; M.S., South Dakota State University, 2011.

**Landmark, Shari**, Wellness Center Coordinator, 2000; B.S., SDSU, 1999; M.S., 2004.

**Lane, Julie**, Assistant Professor of History, Political Science, Philosophy, and Religion, Graduate Faculty, 2009; B.A., University of Wyoming, 1992; M.A., 1993; Ph.D., University of Texas, 2009.

**Langelett, George L.**, Professor of Economics, Graduate Faculty, 2002, 2006; B.S., Northwestern Lutheran Theology Seminary, 1991; Ph.D., University of Nebraska, 2000.

**Langham, Marie A. C.**, Professor of Plant Science, Graduate Faculty, 1991, 2001; B.S., East Texas State University, 1975; M.S., 1977; Ph.D., Texas A&M University, 1986.

**Larson, Christine L.**, Professor of Mathematics and Statistics, Graduate Faculty, 1992, 2006; B.A., Augustana College, 1985; M.S., Montana State University, 1987; Ed.D., 1996.

**Larson, Gary E.**, Professor of Natural Resource Management, Graduate Faculty, 1979, 1989; B.S., Kearney State College, 1972; Ph.D., North Dakota State University, 1980.

**Law, David A.**, Project Manager/Engineer, Facilities and Services, 2000; B.S., SDSU, 1998.

**Lee, MaryJo B.**, Engineering Diversity Coordinator, Graduate Faculty, 1982; B.S., University of Maryland, 1975; M.A., 1976; Ph.D., SDSU, 1998.

**Lehman, Chadwick P.**, Adjunct Assistant Professor of Natural Resource Management, 2005; B.S., University of Minnesota, 1994; M.S., SDSU, 1998; Ph.D., 2005.

**Lehman, Michael**, Adjunct Assistant Professor of Natural Resource Management, Graduate Faculty, 2004; B.A., University of Colorado, 1983; M.S., University of Virginia, 1991; Ph.D., Idaho State University, 2000.

**Leiferman, Deborah L.**, Instructor of Mathematics and Statistics, 2001; B.S., Northern State University, 1980; B.S., SDSU, 1984; M.S., 1989.

**Leigh, Jr., Larry M.**, Imaging Engineer, Physics, 2002; B.S., SDSU, 1998; M.S., 2001.

**Lemon, Michael D.**, Professor of Pharmacy Practice, 1997, 2008; A.S., Colby Community College, 1990; Pharm.D., University of Kansas, 1994.

**Lenertz, Kristin**, Instructor of Biology and Microbiology, 2006; B.S., Jacksonville University, 1996; M.S., Auburn University, 2002.

- Leonard, Andrew**, Instructor of Consumer Sciences, 2011; B.A., St. John's University, 2006; M.S., University of North Dakota, 2011.
- Leslie-Steen, Pamela**, Assistant Professor of Veterinary and Biomedical Sciences and Anima Disease Research and Diagnostic Laboratory, 1973, 1992; B.S., SDSU, 1972; M.S., 1975.
- Letcher, Amber**, Assistant Professor of Counseling and Human Development, 2012; B.S., SDSU, 2005; M.S., Ohio State University, 2008; Ph.D., 2012.
- Letcher, Todd**, Adjunct Instructor of Mechanical Engineering, 2012; B.S., SDSU, 2005; M.S., Ohio State University, 2008.
- Levesque, Crystal**, Assistant Professor of Animal Science, 2013. B.S., University of Saskatchewan, 1999; M.S., 2002; Ph.D., University of Alberta, 2010.
- Lewis, Jessica A.**, Professional Academic Advisor, College of Arts and Sciences, 2011, 2013; B.A. SDSU, 2004; M.S., 2011; M.S., 2011.
- Li, Feng**, Associate Professor of Biology and Microbiology, Graduate Faculty, 2005; B.V.Sc., Laiyang Agricultural College, China, 1985; M.V.Sc., Chinese Academy of Agricultural Sciences (China), 1988; Ph.D., University of Melbourne (Australia), 1997.
- Li, Wanlong**, Assistant Professor of Biology and Microbiology, Graduate Faculty, 2009; B.S., Northwestern A&F University (China), 1984; M.S., 1987; Ph.D., Nanjing Agricultural University (China), 1993.
- Lindell, Lisa R.**, Catalog Librarian/Professor, 1990, 2003; B.A., Augustana College, 1987; M.L.S., University of Wisconsin, 1988; M.A., SDSU, 1993.
- Lindstrom, Michael J.**, Adjunct Associate Professor of Plant Science, 1982; B.S., University of Idaho, 1965; M.S., 1967; Ph.D., Washington State University, 1973.
- Lindzey, Frederick G.**, Adjunct Associate Professor of Wildlife and Fisheries Sciences, 2000; B.S., Texas A&M University, 1968; M.S., Utah State University, 1971; Ph.D., Oregon State University, 1976.
- Lis, Anthony S.**, Professor of Music and Composer in Residence, 1987, 1999; B.M., University of Oklahoma, 1979; M.M., University of Cincinnati, 1981; D.M.A., 1985.
- Liu, Shuguang (Leo)**, Adjunct Professor at the Geographic Information Science Center of Excellence, Graduate Faculty, 2005; Adjunct Professor of Chinese Academy of Sciences, 2004; B.S., Central-South Forestry University (China), 1984; M.S., Beijing Forestry University (China), 1987; Ph.D., University of Florida, 1996.
- Liu, Yi**, Associate Professor of Computer Science, Graduate Faculty, 2005, 2010; M.S., 1998; Ph.D., University of Mississippi, 2005.
- Liu, Zhihua**, Postdoctoral Fellow, 2012; B.S., Northeast Normal University, 2005; Ph.D., Institute of Applied Ecology, Chinese Academy of Sciences, 2010.
- Lockrem, Mike**, Director of Marketing and Communications, 2009; B.A., University of Montana, 1997; M.E., University of Minnesota, 2002.
- Loft, Kari**, Research Coordinator, 2009; EA Martin Program in Human Nutrition; B.S. Southwest Minnesota State University, 1997; M.S., 2007
- Logue, Brian A.**, Associate Professor of Chemistry and Biochemistry, Graduate Faculty, 2004; B.S., SDSU, 1995; Ph.D., Oregon State University, 2001.
- Long, Tyg**, Assistant Track Coach, Intercollegiate Athletics, 2008; B.S., Black Hills State University, 2009.
- Longieliere, Darwin G.**, Internal Auditor, College of Agriculture and Biological Sciences Administration, 1984; B.A., Yankton College, 1973.
- Longmire, Cynthia L.**, Adjunct Assistant Professor Natural Resource Management, 2012; B.S., M.S., University of Tennessee Knoxville, 2000, 2007; Ph.D., Pennsylvania State University, 2012.
- Loveland, Thomas R.**, Co-Director of the Geographic Information Science Center of Excellence, Graduate Faculty, 1994; B.S., SDSU, 1974; M.S., 1976; Ph.D., University of California, 1999.
- Lu, Huitian**, Professor of Construction and Operations Management, Graduate Program Coordinator, Graduate Faculty, 1999, 2005; B.S., 1982; M.S., 1986; M.S., Texas Technical University, 1992; Ph.D., 1998.
- Lubeck, Paula**, Instructor of Nursing, 2004, 2009; B.S., University of Nebraska, 1992; B.S.N., 1995.
- Lucchesi, Roxanne**, Professor of Journalism and Mass Communication, 1989; 2008; B.A., SDSU, 1983; M.A., University of Illinois, 1985.
- Lundgren, Jonathan G.**, Adjunct Assistant Professor of Plant Science, Graduate Faculty, 2005; B.S., University of Minnesota, 1998, M.S., 2000; Ph.D., University of Illinois, 2003.
- Lyons, Nancy N.**, Associate Professor of Consumer Sciences, Graduate Faculty, 1977, 2004; B.S., North Dakota State University, 1974; M.S., 1997; Ed.D., University of South Dakota, 2001.
- Maca, Martin**, Professor of Landscape Architecture, Plant Science, 1992, 2003; B.S., Utah State University, 1968; M.L.A., 1984.
- MacBride, Charles R.A.**, Assistant Professor of Architecture, 2011; B.Arch., University of Pennsylvania, 1990; M.S., Columbia University, 1994.
- Madsen, Lisa J.**, Lecturer of English, 2001, 2013; B.A., SDSU, 1995; M.A., 1998.
- Madsen, Sara K.**, Associate Professor of Chemistry and Biochemistry, 2003; B.A., Central Washington University, 1988; Ph.D., University of Wyoming, 1998.
- Mahaffy, Brian**, Coordinator for Veteran Affairs, 2012; B.S., SDSU, 2007.
- Mahgoub, Hesham**, Associate Professor of Civil and Environmental Engineering, Graduate Faculty, 2006, 2008; B.S., Cairo University (Egypt), 1988; M.S., 1990; Ph.D., 1994.
- Mahlen, John C.**, Adjunct Instructor, AROTC, 2011.
- Malo, Douglas D.**, Distinguished Professor of Plant Science, Graduate Faculty, 1975, 1999; B.S., Iowa State University, 1971; M.S., North Dakota State University, 1974; Ph.D., 1975.
- Malo, Mary**, Instructor of Teaching, Learning and Leadership, 2008; B.S., Concordia University St. Paul, 1969.
- Malone, Katherine**, Assistant Professor of English, Graduate Faculty, 2013; Ph.D., Temple University, 2009.
- Malsom, Beth J.**, Safety and Health Consultant, Engineering Extension, 2006; B.S. SDSU, 2004.
- Mann, Josh**, Imaging Engineer, 2008; B.S., School of Mines & Technology, 2004.
- Manning, James D.**, Program Director of Engineering Extension, 1981; B.S., SDSU, 1972; B.S., 1980; M.S., 1985.
- Manzer, Jeanne Jones**, News Editor, University Relations, 2006; B.A., Iowa State University, 1974; M.A., SDSU, 1990.
- Marckstadt, Sheryl**, Instructor of Nursing, 2012; A.A., USD, 1994; B.S., SDSU, 1996, M.S., SDSU, 2000.
- Marella, Chenchaiah**, Manager, Institute for Dairy Ingredient Processing, 2009; B.S, Acharya N. G. Ranga Agricultural University (India), 1988; M.Sc., Gujarat Agricultural University (India), 1991; Ph.D., SDSU, 2008.
- Marshall, Nancy J.**, Distance Information Services Librarian/Professor, 1993, 2007; B.A., University of Wisconsin, 1991; M.L.S., 1993; M.S., SDSU, 1998.
- Martin, Ann**, Hospital Negotiator/Community Liaison, 2008; EA Martin Program in Human Nutrition; B.S. University of Montana, 1994; M.S. SDSU, 1997; B.S., 2003.
- Martin, Rebecca**, Associate Professor of Psychology, 2004, 2009; B.S., Michigan State University, 1996; M.A., University of Connecticut, 2002; Ph.D., 2004.

- Mathiason, Katherine L.**, Research Associate, Plant Science, 1999; B.S., SDSU, 1999.
- Matzner, Steven L.**, Adjunct Assistant Professor of Biology and Microbiology, 2002; B.A., Augustana College, 1990; M.S., University of California, 1994; Ph.D., 1999.
- McCormack, Lacey**, Program Manager, 2009, 2010; EA Martin Program in Human Nutrition; B.S. SDSU, 2006; M.P.H. University of Minnesota, 2009.
- McCready, Zachary**, Training/Quality Control Coordinator, 2009, 2010; EA Martin Program in Human Nutrition; B.S. SDSU, 2008.
- McCurry, Michael W.**, Assistant Professor, Graduate Faculty, 2000, 2006; B.S., Montana State University, 1976; M.Ed., Northern Montana College, 1992, Ph.D., SDSU, 2008.
- McCutcheon, Terry**, Instructor, Biology and Microbiology, 1999; B.S., Murray State University, 1981; M.S., 1985.
- McDaniel, Philip**, Head Volleyball Coach, Intercollegiate Athletics; 2011; B.S., Culver-Stockton College, 1996; M.S., University of Wisconsin-Platteville, 1998.
- McDonald, Tia M.**, Research Associate I of Economics, 2008; B.A., Colorado State University, 2005; M.S., Colorado State University, 2007.
- McDowell, Lyndon**, Assistant Track Coach, Intercollegiate Athletics, 2002; B.A., University of Minnesota, 2008; M.S., Minnesota State University-Mankato, 2008.
- McEntee, Jason T.**, Associate Professor and Head of English, Graduate Faculty, 1996, 2008; B.A., SDSU, 1994; M.A., 1998; Ph.D., University of Kentucky, 2004.
- McFarland, Douglas C.**, Distinguished Professor of Animal Science, Graduate Faculty, 1986, 1997; B.A., Southern Connecticut State College, 1971; M.S., Washington State University, 1975; Ph.D., 1984.
- McKillip, Angela**, Instructor of Interior Design, 2012; B.S., SDSU, 2005; M.Arch, University of Minnesota, 2008.
- McKissic-Luke, Nicolas**, Assistant Football Coach, Intercollegiate Athletics; 2013; B.S., Alabama A&M University, 2007.
- McManus, Bradley**, Research Associate I in Plant Science, 2000; B.S., SDSU, 1991.
- McTaggart, Robert**, Associate Professor of Physics, Graduate Faculty, 2004, 2009; B.A., West Virginia University, 1991; B.S., 1991; Ph.D., Pennsylvania State University, 1999.
- Meendering, Jessica**, Assistant Professor of Health and Nutritional Sciences, Graduate Faculty, 2009; B.S., SDSU, 2002; M.S., University of Oregon, 2004; Ph.D., 2007.
- Mejía Suárez, Carlos M.**, Instructor of Modern Languages, 2011, B.A., Universidad Nacional (Colombia), 2000; M.A., Universidad Javeriana (Colombia), 2004; Ph.D., University of Iowa, 2010.
- Melkumyan, Mariam**, Assistant Professor of Visual Arts, 2011, 2013; B.S., European Regional Educational Academy, 2008; M.F.A., Iowa State University, 2011.
- Merchen, Aaron**, Admissions Counselor, 2012; B.A., South Dakota State University, 2009.
- Merriman, Janet, E.**, Instructor of Construction and Operations Management, 2012; B.S., United States Naval Academy, 1992; M.Eng., The Pennsylvania State University, 2000.
- Merriam, Tyler**, Coordinator of Broadcast Services, Intercollegiate Athletics; 2012; B.S., South Dakota State University, 2011.
- Messerschmidt, Kimberly**, Professor of Pharmacy Practice, Graduate Faculty, 1995, 2005; B.S., SDSU, 1985; Pharm.D., 1995.
- Mettler, Cory J.**, Adjunct Instructor of Electrical Engineering, 2002; B.S., SDSU, 2002; M.S., 2005.
- Metzger, Lloyd E.**, Professor and Alfred Chair in Dairy Education, Graduate Faculty, 2007, 2012; B.S., SDSU, 1992; M.S., 1994; Ph.D., Cornell University, 1999.
- Meyer, Brittney**, Assistant Professor of Pharmacy Practice, B.S., South Dakota State University, 2007; Pharm.D., 2009.
- Meyer, David**, Adjunct Professor of Electrical Engineering, 2008; B.S., Indiana State University, 1979; M.S., 1984; Ph.D., University of Michigan, 1994.
- Meyer, Timothy J.**, Instructor of Economics, 2011; B.A. Buena Vista University, 2003; M.S., Iowa State University, 2006.
- Meyers, Richard**, Lecturer in Sociology and Coordinator of American Indian Studies and Tribal Outreach, 2012; B.A., Amherst College, 1997; M.A., Arizona State University; 2004; M.A., Middlebury College, 2004; Ph.D., ASU, 2008.
- Michna, Gregory**, Assistant Professor of Mechanical Engineering, Graduate Faculty, 2009; B.S., University of Wisconsin, 2001; Ph.D., University of Illinois, 2006.
- Mielke, Barry A.**, Sr. Mechanical Engineer, Facilities and Services, 2008, B.S., SDSU, 2002.
- Milbrandt, Robert M.**, Energy Conservation Engineer, Facilities and Services, 2008, B.S., SDSU, 2006, M.S. Iowa State, 2008.
- Mileham, Russell**, Adjunct Instructor of Electrical Engineering, 2005, 2010; B.S. SDSU, 1995; M.S., 1997.
- Miller, Matthew L.**, Associate Professor of Chemistry and Biochemistry, Graduate Faculty, 2001, 2007; B.S., University of South Dakota, 1985; M.S., Purdue University, 1998; Ph.D., 2001.
- Miller, Michael**, Assistant Professor of Economics, Graduate Faculty, 2009; B.A., Colorado State University, 1980; M.S., 1998; Ph.D., 2009.
- Miller, Tyler**, Assistant Professor of Psychology, 2012; B.A., Buena Vista University, 2004; M.S., Emporia State University, 2008; Ph.D., Texas A&M University, 2012.
- Min, Manki**, Associate Professor of Computer Science, Graduate Faculty, 2006, 2012; B.S., Seoul National University, 1997; M.S., 1999; Ph.D., University of Minnesota, 2004.
- Minton, Mary**, Associate Professor of Nursing, Graduate Faculty, 2007, 2013; B.A., Augustana, 1979; M.S., University of Michigan, 1984; Ph.D., University of Nebraska, 2007.
- Miskimins, Dale W.**, Professor of Veterinary and Biomedical Sciences and Animal Disease Research and Diagnostic Laboratory, 1991, 2002; D.V.M., Iowa State University, 1978; M.S., 1984.
- Mistry, Abha V.**, Adjunct Instructor of Construction and Operations Management, 2012; B.S., University of Minnesota, 2009; M.Arch., 2012.
- Mistry, Vikram V.**, Professor and Head of Dairy Science, Graduate Faculty, 1986, 2002; B.S., Gujarat Agricultural University, 1979; M.S., Cornell University, 1982; Ph.D., 1986.
- Mitchell, Amanda**, Grants & Project Coordinator, 2009, 2012; Nursing; B.S. SDSU, 2004; M.S., 2006.
- Mix, Vickie L.**, Documents Librarian/Associate Professor, Library, 1992, 2012; B.A., SDSU, 1978; M.L.S., University of North Texas, 2003; M.E.D., SDSU, 2005.
- Moe, Nathan A.**, Head Strength and Conditioning Coach, 2005; B.S., Moorhead State University, 1996; M.Ed., University of Texas, 1998.
- Moechnig, Michael J.**, Associate Professor of Plant Science and Extension Agronomist, Graduate Faculty, 2005; B.S., University of Wisconsin, 1997; M.S., 2003; Ph.D., 2004.
- Moeller, Mary R.**, Assistant Professor of Teaching, Learning and Leadership, 2007; B.A., SDSU, 1988; M.Ed., 1994; Ed.D., University of South Dakota, 2004.
- Molengraaf, Callie**, Research Assistant, 2010; EA Martin Program in Human Nutrition, B.S. SDSU, 1997.
- Monnens, Michael**, Safety and Health Consultant, Engineering Extension, 1993, 1995; B.S., SDSU, 1993; M.S., 2000.
- Moore, Shannon B.**, Assistant Football Coach, Intercollegiate Athletics, 2006; B.S., Black Hills State University, 2000; M.S., SDSU, 2005.
- Moore, William**, Assistant Director of MIS, 1981, 2000; B.S. (Electrical Engineering), SDSU, 1982.

- Mordhorst, Sandra**, Instructor of Nursing, 2006; B.S.N., SDSU, 2005.
- Moret, Cody J.**, Farm Operations and Beef Breeding Unit Manager, 1992; B.S., SDSU, 1992.
- Morrison, Kathryn**, Lecturer of Consumer Sciences, Graduate Faculty, 2008; B.S., SDSU, 2002; M.S., 2004; Ph.D., Iowa State University, 2009.
- Mort, Jane R.**, Associate Dean for Academic Programs for College of Pharmacy, Professor of Pharmacy Practice, Graduate Faculty, 1986, 2010; Pharm.D., University of Nebraska, 1985.
- Motlas, Teresa**, FNP Program Coordinator, Nutrition, Food Science and Hospitality, 2006; B.S., University of Nebraska, 1995; M.S., SDSU, 2006.
- Moudry, Thomas**, English Instructor, 2012; B.S., Berea College, 1987; B.S., Middle Tennessee State University, 1990; M.A., Western Kentucky University, 1996.
- Moutsoglou, Alexandros**, Professor of Mechanical Engineering, Graduate Faculty, 1986, 1991; B.S., University of Missouri, 1973; M.S., 1974; Ph.D., 1977.
- Mueller, Nathan**, Assistant Professor of Plant Science, 2012.
- Murphy, Arthur James**, Assistant Professor of History Political Science, Philosophy, and Religion, 2012; B. A. Evangel University, 1998; M. A. Missouri State University, 2001; Ph.D. University of Denver, 2011.
- Murphy, Brietta**, Instructor of Biology and Microbiology, 2005; B.S., SDSU, 2005; M.S., 2008.
- Murray, Linde**, Instructor and Coordinator of Tutoring and Supplemental Instruction, University College, 2009; B.A., University of Northern Colorado, 2002; M.S., SDSU, 2009, Ed.D., University of South Dakota, 2013.
- Muss, Jordan D.**, Postdoctoral Fellow, 2011; B.S., Northwestern University, 1987; M.S., Florida Atlantic University, 2001; Ph.D., University of Wisconsin, Madison, 2011.
- Muthukumarappan, K.**, Distinguished Professor of Agricultural and Biosystems Engineering, Graduate Faculty, 1997, 2013; B.S., University of Madras (India), 1981; B.E., Tamil Nadu Agricultural University (India), 1986; M.E., Asian Institute of Technology, 1988; Ph.D., University of Wisconsin, 1993.
- Muxen, Marla J.**, Professor of Counseling and Human Development, Graduate Faculty, 1989, 1999; B.S., SDSU, 1971; M.S., Southern Illinois University, 1980; Ph.D., University of Minnesota, 1990.
- Mylant, Marylou**, Professor of Nursing, Graduate Faculty, 1992; B.S.N., Cleveland State University, 1974; M.S.N., Case Western Reserve University, 1978; Ph.D., University of Texas, 1988.
- Myrick, April M.**, Instructor of English, 2001; B.A., SDSU, 2001; M.A., 2003.
- Nganga, Christine**, Assistant Professor of Teaching Learning & Leadership, 2012; B.Ed., Kenyatta University (Kenya), 1996; M.S.A., The University of North Carolina at Greensboro, 2006; Ed.D., 2011.
- Nagel, Mary**, Instructor of Chemistry and Biochemistry, 2009; B.A., Jamestown College, 1981; M.Ed., Bemidji State University, 2007.
- Nagy, Dianne L.**, Grants Coordinator for the College of Engineering, 2006; B.A., Kent State University, 1988; M.S., SDSU, 2006; Ed.D., University of South Dakota, 2013.
- Nagy, Michael S.**, Associate Professor of English, Graduate Faculty, 2001, 2006; B.A., Kent State University, 1987; M.A., 1992; Ph.D., Saint Louis University, 2001.
- Nagy, Scott M.**, Head Men's Basketball Coach, Intercollegiate Athletics, 1990, 1995; B.B.A., Delta State University, 1988; M.S., University of Illinois, 1990.
- Napton, Darrell E.**, Professor of Geography, Graduate Faculty, 1992, 1998; B.S., University of Missouri, 1973; M.A., 1975; Ph.D., University of Minnesota, 1987.
- Naugle, David E.**, Adjunct Associate Professor of Wildlife and Fisheries Sciences, 1999; A.S., Iowa Lakes Community College, 1990; B.S., Northwest Missouri State University, 1992; M.S., SDSU, 1994; Ph.D., 1997.
- Nauth, K. Rajinder**, Adjunct Professor of Dairy Science, 2003; B.S., Indian Agricultural Institute (India), 1959; M.S., Agra University (India), 1961; Ph.D., Cornell University, 1969.
- Neiger, Regg D.**, Professor of Veterinary and Biomedical Sciences and Animal Disease Research and Diagnostic Laboratory, Graduate Faculty, 1987, 1998; B.S., University of Minnesota, 1973; D.V.M., 1974; M.S., Iowa State University, 1983; Ph.D., 1987.
- Nelson, Eric A.**, Professor of Veterinary and Biomedical Sciences and Animal Disease Research and Diagnostic Laboratory, Graduate Faculty, 1982, 2003; B.A., Mt. Marty College, 1979; M.A., University of South Dakota, 1981; Ph.D., SDSU, 1993.
- Nelson, Cherry (Neal)**, Instructor of Teaching, Learning, and Leadership, 2007; B.S., SDSU, 1968; M.Ed., 1993; Ed.S., University of South Dakota, 1998.
- Nelson, Jacqueline C.**, Grants Administrator, 2004; A.A., SDSU, 1979; B.S., 1981; M.Ed., 1988.
- Nelson, Tracy L.**, Instructor of Health and Nutritional Sciences, 2008; B.S. SDSU, 1998; M.S. SDSU, 2007; Ed.D. University of South Dakota, 2012.
- Nepal, Madhav**, Assistant Professor of Biology and Microbiology, Graduate Faculty, 2009; M.S., Tribhuvan University (Nepal), 1997; M.S., University of Northern Iowa, 2003; Ph.D., University of Kansas State-Manhattan, 2008.
- Ness, Jody**, Instructor of Nursing, 2003; BS., SDSU, 1997; M.S., 2005.
- Ness, Troy**, Assistant Professor of Military Science, 2005; B.S. SDSU, 1996.
- Nickel, Brian**, Instructor of Modern Language and Global Studies, 2012; B.A., Texas A&M University, 2006; M.A., George Mason University, 2012.
- Nielsen, Jesper, K.**, Research Assistant, Plant Science, B.S., University of Minnesota, 2011.
- Niles, Michael A.**, Professional Academic Advisor, 2009; B.S., SDSU, 1997; M.S., 2003.
- Nixon, Jonathan**, Entomology Specialist, Plant Science, 2012; B.S., Purdue University, 2010; M.S., 2011.
- Nizampatnam, Narasimha Rao**, Visiting Research Scholar, Plant Science, 2012; B.Sc., Nagarjuna University (India), 2000; M.S., Guru Ghasidas University (India), 2002; Ph.D. Jawaharlal Nehru Technological University (India), 2010.
- Njue, Geoffrey**, Specialty Crops Specialist, Plant Science, 2012; A.S., Egerton College (Kenya), 1982; B.S., Egerton University (Kenya), 1993; M.S., Wageningen Agricultural University (Netherlands), 1997.
- Nleya, Thandiwe M.**, Associate Professor of Plant Science, Graduate Faculty, 2003; B.S., University of Zimbabwe (Zimbabwe), 1984; M.S., Southampton University (England), 1989; Ph.D., University of Saskatchewan (Canada), 1997.
- Nolan-Andrino, Jennifer (Jaime)**, Director of Diversity Enhancement, 2011; B.A., Washington State University, 1991; M.A., 1997.
- Nold, Rosemarie**, Extension Program Leader for Agriculture and Natural Resources/Associate Professor of Natural Resources Management, 2007, 2012; B.S., SDSU, 1988; M.S., Kansas State University, 1990; Ph.D., SDSU 1997.
- Nord, Carissa**, Assistant Women's Basketball Coach, Intercollegiate Athletics; 2013; B.S., University of Wisconsin-Superior, 2009; M.S., South Dakota State University, 2013.
- Nordquist, Bridget**, Instructor of English, 2011; B.A., SDSU, 2007; M.A., SDSU, 2010.
- Novotny, Jennifer L.**, Executive Director of Student Union and Activities, 1995, 2005; B.A., Moorhead State University, 1995; M.S., SDSU, 1997.

- Nowell, Brian L.**, Associate Professor of Psychology, 2008; B.S., University of South Florida, 1972; M.A., University of Georgia, 1984; Ph.D., 1986.
- Numata, Izaya**, Postdoctoral Fellow, 2006; B.S., University of Sao Paulo, 1996; M.S., Instituto Nacional de Pesquisas Espaciais, 1999; Ph.D., University of California, Santa Barbara, 2006.
- O'Brien, Jamie L.**, Professor of Economics, 1984, 1994; B.S., Augustana College, 1980; M.P.A., University of South Dakota, 1984; J.D., 1982.
- Odegaard, Doug G.**, Production Supervisor, 1998, 2004.
- Oedekoven, Daniel**, Coordinator for the Community Leadership Program, Field Staff Support, 1994, 1999; B.S., University of Wyoming, 1974; M.Ed., SDSU, 1996.
- Oguntoyinbo, Olalekan**, Associate Professor of Journalism and Mass Communications, Graduate Faculty, 2010; B.A., Southeast Missouri State University, 1985; M.A., University of Alabama Tuscaloosa, 1988.
- Ohrman, Michelle**, Postdoctorate Research Associate, Plant Science, 2012; B.S., California State University, 2001; M.S., 2004; Ph.D., University of Denver, 2009.
- Olesen, Carol J.**, Lecturer of Chemistry and Biochemistry, 1992; B.S., SDSU, 1992.
- Olive, Leslie A.**, Facilities Architect, Facilities and Services, 1991, 1995; B.A., Iowa State University, 1976.
- Olson, Bernadette**, Associate Professor of Health and Nutritional Sciences, Graduate Faculty, 1993, 2005; B.S., University of Delaware, 1988; M.Ed., University of Virginia, 1993; Ed.D., University of South Dakota, 2005.
- Olson, Daniel T.**, Assistant Manager in Seed Certification Service, 1995; B.S., SDSU, 1995, M.S., 1998.
- Olson, Kenneth C.**, Extension Beef Specialist, Associate Professor of Animal Science, 2006; B.S., Montana State University, 1979; M.S., 1982; Ph.D., Utah State University, 1986.
- Olson, Lyle D.**, Professor of Journalism and Mass Communication, Graduate Faculty, 1989, 1995; A.A., Bartlesville Wesleyan College, 1974; B.S., SDSU, 1976; M.A., University of Oklahoma, 1981; Ed.D., Oklahoma State University, 1988.
- Omodt, Kelly R.**, Instructor of Mathematics and Statistics, 2005; B.S., SDSU, 2001; M.S., 2005.
- O'Neill, Douglas E.**, Lecturer in Sociology and Rural Studies, 1990, 2003; B.S., SDSU, 1976; M.S., 1979; Ph.D., 1996.
- O'Neill, Kari L.**, SDSU Extension Community Development Field Specialist, 2002, 2012; B.S., Mankato State University, 1992; M.S., University of Minnesota, 2000.
- O'Neill, Mary**, Program Manager, Water Resource Institute, 1972, 1984; B.S., SDSU, 1972; M.S., 1994.
- Opoku, Emmanuel**, Research Associate I, Economics, B.A., University of Cape-Coast, Ghana, 2004; M.S., South Dakota State University, 2009.
- Orellana Campos, Alberto**, Instructor of Modern Languages, 2005; B.A., Universidad Iberoamericana Torreon (Mexico), 2003; M.S., SDSU, 2008.
- Ohrman, Michelle**, Postdoctorate Research Associate, Plant Science, 2012; B.S., California State University Chico, 2001; M.S., California State, 2004; Ph.D., University of Denver, 2009.
- Osborne, Christy A.**, First Year Professional Advisor, 1988, 1998, 2011; B.S., SDSU, 1982.
- Osborne, L. J.**, Youth Development/4-H Specialist/Associate Professor, Graduate Faculty, 2000, 2006; B.S., Ohio State University, 1981; M.S., University of Kentucky, 1983; Ph.D., Ohio State University, 1991.
- Osborne, Shannon L.**, Adjunct Assistant Professor of Plant Science, Graduate Faculty, 2000; B.S., Oklahoma State University, 1994; M.S., 1996; Ph.D., University of Nebraska, 1999.
- Oscarson, Renee A.**, Associate Professor of Counseling and Human Development, Consumer and Family Sciences, Graduate Faculty, 1994, 2001; B.S., North Dakota State University, 1981; M.S., 1985; Ph.D., Purdue University, 1994.
- Otterson, Lisa**, Instructor of General Studies, 2008; B.A., Southwest Minnesota State University, 1993; M.A., Drew University, 1994.
- Otterson, Robert J.**, Executive Assistant to the President, 2007; B.A., Augustana College, 1985.
- Owen, Jody L.**, Director, First-Year Advising Center and Coordinator for University Academic Advising, 2002; B.S., SDSU, 1996; M.S., 2002; Ed.D. University of South Dakota, 2012.
- Owens, Jason P.**, Associate Professor of Modern Languages, 2003; B.S., Georgetown University, 1990; M.A., 1995; Ph.D., 2001.
- Owens, Vance N.**, Professor of Plant Science, Interim Director of North Central Sun Grant Center, Graduate Faculty, 1996, 2006; B.S., Utah State University, 1990; M.S., 1992; Ph.D., University of Wisconsin, 1996.
- Palakurthi, Srinath**, Associate Professor of Pharmaceutical Sciences, Graduate Faculty, 2003, 2007; B.Pharm., Kakatiya University, 1991; M.Pharm, Gour University, 1993; Ph.D., Indian Institute of Chemical Technology, 2000.
- Pallapu, Prasanthi**, Instructional Designer, 2009, B.A., Andhra University (India), 1987; M.A. Andhra University (India), 1990; M.Ed., Arizona State University, 2001; Ed.D., Auburn University, 2008.
- Pan, Yunpeng**, Assistant Professor of Mathematics and Statistics, Graduate Faculty, 2012; B.S., Nanjing University (China), 1995; M.S., University of Delaware, 1998; Ph.D., University of Wisconsin-Madison, 2003.
- Pannell, Patrick T.**, Associate Professor of Construction and Operations Management and Coordinator of Construction Management, 2003; B.S., University of Arkansas, 1970; M.S., University of Florida, 1976.
- Park, Kunsoo**, Associate Professor of Consumer Sciences 2013; B.Law., Chung-Ang University (South Korea), 1989; M.S., University of Nebraska, 1995; M.B.A, 1995; M.S., Virginia Polytechnic Institute and State University, 2001; Ph.D., 2006.
- Parmely, Ronny**, Assistant Manager of the Seed Testing Lab/Research Assistant, 2004; B.S., SDSU, 1974.
- Pasquariello, Elizabeth A.**, Instructor of Nursing, 2011; B.S., Mount Mercy College, 2003; M.S., University of Phoenix, 2011.
- Patel, Hasmukh**, Associate Professor of Dairy Science, Graduate Faculty, 2012; B.Sc., Dairy Gujarat Agricultural University (India), 1993; M.Sc., 1996; Ph.D., Massey University (New Zealand), 2002.
- Patel, Tina**, Instructor of Consumer Sciences, 2010; B.Arch., MNIT (India), 2001; M.A., Iowa State University, 2005.
- Patin, Albert A.**, Safety and Health Consultant, Engineering Extension, 2000; B.S., University of Arizona, 1997.
- Paulson, James L.**, Associate Professor of Journalism and Mass Communication, 1987, 2002; B.A., University of Nebraska, 1970; M.B.A., University of South Dakota, 1993.
- Paulson, Sara Jean**, Adjunct Professor of Electrical Engineering, 2005; B.A., Augustana College; M.S., Purdue University; Ph.D., SDSU, 2003.
- Pearson, Karen**, District Extension Supervisor-West, Associate Director of Cooperative Extension Service, 2004, 2007; B.S., SDSU, 1972; M.S., 1979.
- Pedersen, Amy**, Instructor, University College, 2006; B.S., SDSU, 1990; M.Ed., 2006.
- Pedersen, Scott**, Associate Professor of Biology and Microbiology, Graduate Faculty, 1999; B.A., University of Colorado, 1984; M.A., 1988; Ph.D., University of Nebraska, 1993.
- Pegg, Mark A.**, Adjunct Assistant Professor of Natural Resource Management, 2007; B.S., Iowa State University, May 1992; M.S., Tennessee Technological University, 1994; Ph.D., Iowa State University, 2000.
- Penrod, Kathryn M.**, Professor of Teaching, Learning and Leadership, Graduate Faculty, 1991, 2000; B.S., Purdue University, 1975; M.S., Cornell University, 1981; Ph.D., 1984.



- Perkins, Christopher**, Residence Hall Director, 2010; B.S., North Dakota State University, 2009.
- Perkins, Lora**, Assistant Professor of Natural Resource Management, Graduate Faculty, 2012; B.S., New Mexico State University, 2004; M.S., Oregon State University, 2006; Ph.D., University of Nevada, 2010.
- Perry, George**, Associate Professor of Animal Science, Extension Beef Specialist, Graduate Faculty, 2003; B.S., Texas A&M University, 1998; M.S., University of Missouri, 2000; Ph.D., 2003.
- Perumal, Omathanu P.**, Interim Head and Associate Professor of Pharmaceutical Sciences, Graduate Faculty, 2005, 2009; B.S., Tamilnadu Dr MGR Medical University (India), 1995; M.S., Birla Institute of Technology (India), 1998; Ph.D., National Institute of Pharm. Education (India), 2003.
- Peters, Douglas J.**, Instructor of Mechanical Engineering, 1998, 2001; B.A., Southwest State University, 1984; M.S., University of North Dakota, 1991; B.S., SDSU, 2001.
- Peters, Stacy**, Assistant Professor of Pharmacy Practice, 2007; B.S., SDSU, 2002; Pharm.D., 2004.
- Petersek, Jami L.**, Research Coordinator, 2006; B.S., SDSU, 2004.
- Peterson, Derek D.**, Director of Bookstore, 1989; B.S., SDSU, 1989.
- Peterson, Eric**, Assistant Professor of Music and Director of Bands, 2008; B.S., University of Illinois, 1992; M.M.E., University of Kansas, 1994; D.M.A., Texas Tech University, 2006.
- Peterson, Gregory R.**, Associate Professor of History, Political Science, Philosophy, and Religion, Graduate Faculty, 2002, 2004; B.A., University of Minnesota, 1988; M.A., Luther Seminary, 1990; Ph.D., University of Denver, 1996.
- Peterson, Janet M.**, Accounts Payable Supervisor, Finance and Budget, 1991, 1999; B.S., SDSU, 1989.
- Peterson, Meghan**, Nursing Student Services Coordinator, 2007; B.S., M.S., SDSU, 2005.
- Peterson, Robert P.**, Senior Associate Athletic Director, Intercollegiate Athletics, 2000; B.S., Northern Michigan University, 1992; M.A., Central Michigan University, 1995.
- Peterson-Lund, Robin**, Assistant Professor of Nursing, 1995, 2011; A.A., University of South Dakota, 1975; B.S., SDSU, 1981; M.S., 1993, PhD, 2011.
- Pflueger, Burton W.**, Extension Specialist and Professor of Economics, Graduate Faculty, 1985, 1995; B.S., University of Nebraska, 1979; M.S., 1981; Ph.D., University of Illinois, 1985.
- Phelps, Brady**, Professor of Psychology, Graduate Faculty, 1992, 2002; B.S., Utah State University, 1983; M.S., 1986; Ph.D., 1992.
- Phillips, Jennifer**, Residence Hall Director, 2011; B.S., University of Wisconsin, 2010.
- Pillatzki, Angela E.**, Instructor of Animal Disease Research and Diagnostic Laboratory, 2001; B.S., University of Wyoming, 1991; D.V.M., Kansas State University of Agricultural and Applied Sciences, 1995.
- Pleasants, William C.**, Professor of Aerospace Studies, 2013; B.S., United States Air Force Academy, 1992; M.A.S., Embry-Riddle Aeronautical University, 2001; M.M.O.A.S., Air University, 2006.
- Pohl, Stephen H.**, Professor of Agricultural and Biosystems Engineering/Extension Specialist, 1986, 2006; B.S., SDSU, 1973; M.S., 1975; Ph.D., University of Nebraska, 2000.
- Posaski, Edward**, Assistant Athletic Director-Budget, Intercollegiate Athletics, 2012; B.S., Bowling Green University, 1996; M.A., Morehead State University, 1998.
- Potts, Dale**, Assistant Professor of History, Political Science, Philosophy, and Religion, 2010; B.A., Kutztown University of PA, 1992; M.A., Penn State Harrisburg, 1997; Ph.D., University of Maine, Orono, 2007.
- Prihodko, Lara**, Assistant Research Professor, Graduate Faculty, 2011; B.A., Boston University, 1990; M.A., University of Maryland, 1992; Ph.D., Colorado State University, 2004.
- Pritchard, Robbi H.**, Distinguished Professor of Animal Science, Graduate Faculty, 1984, 2005; A.A.S., Black Hawk College, 1975; B.S., Southern Illinois University, 1977; M.S., 1978; Ph.D., Washington State University, 1983.
- Prohaska, Kimberly K.**, Instructor of Computer Science, 1998; B.S., SDSU, 1989, M.S., 2003.
- Prout, Jason**, Instructor of Construction and Operations Management, 2011; B.S. Central Michigan, 1995; M.S. 1998.
- Puetz, Jon A.**, Safety and Health Consultant, Engineering Extension, 1988, 2000; B.S., SDSU, 1987; M.Ed., 2004.
- Qasmi, Bashir A.**, Associate Professor of Economics, Graduate Faculty, 1987, 2000; B.S., University of Agriculture (Pakistan), 1967; M.S., University of Manitoba, 1971; M.S., University of Agriculture (Pakistan), 1979; Ph.D., Iowa State University, 1986.
- Qiao, Qiquan**, Assistant Professor of Electrical Engineering, Graduate Faculty, 2007; BS, Hefei University of Technology, 1999; MS, Shanghai Institute of Optics & Fine Mechanics, 2003; Ph.D., Virginia Commonwealth University, 2006.
- Qin, Xiao**, Associate Professor of Civil and Environmental Engineering, Graduate Faculty, 2009, 2013; B.A., Southeast University (China), 1996; M.S., 1999; Ph.D., University of Connecticut, 2002.
- Quail, Jennifer**, Project Manager, Facilities and Services, 2004, 2007; B.S. SDSU, 1995.
- Quam, Dori L.**, Instructor of Music, 2000; B.M.E., SDSU, 1985.
- Qin, Yuchu**, Postdoctoral Fellow, 2011; B.S., Shenyang Jianzhu University 2004; Ph.D., Chinese Academy of Science, 2010.
- Quinn, Terrence**, Adjunct Assistant Professor of Education and Human Sciences, Rapid City Site, 2007; B.S., Montana State University, 1979; M.A., University of Wyoming, 2001.
- Rae, Katherine**, Academic Coordinator for Upward Bound, TRiO, 2012; B.S., University of Columbia, 2005; M.S., SDSU, 2009.
- Ragsdale, Chalton A.**, Assistant Professor of Music, 2007; B.M.E., University of Oklahoma, 2001; M.M., University of Arkansas, 2003; D.M.A., Rutgers University, 2007.
- Rahman, Shafiqur**, Associate Professor of Pharmaceutical Sciences, Graduate Faculty, 2007, 2009; B.S., Dhaka University, 1985; M.S., 1987; Ph.D., Memorial University of Newfoundland, 1995.
- Ramos, Maria**, Professor and Head of Modern Languages, Graduate Faculty, 1998, 2004; B.A., Universidad de Santiago de Compostela (Spain), 1991; M.A., Washington University, 1993; Ph.D., 1997.
- Randall, Rebecca**, Assistant Professor of Nursing, Assistant Dean of Nursing Student Services, 1998, 2010; B.A., Augustana College, 1977; M.S., SDSU, 1997; E.D.D., University of South Dakota, 2009.
- Rasmussen, Kenneth**, Associate Professor of Teaching, Learning and Leadership, Graduate Faculty, 2001; B.S., Dana College, 1968; M.S., University of Nebraska, Omaha, 1972; Ph.D., University of Nebraska, Lincoln, 1979.
- Rauber, Joel D.**, Professor and Head of Physics, Graduate Faculty, 1985, 1994; B.S., Emory University, 1978; Ph.D., University of North Carolina, 1985.
- Rausch, Tasha**, Assistant Professor of Pharmacy Practice, 2011; B.S., South Dakota State University, 2008; Pharm.D., 2010.
- Raynie, Douglas**, Associate Professor of Chemistry and Biochemistry, Graduate Faculty, 2004; B.A., Augustana College, 1981; M.S., SDSU, 1983; Ph.D., Brigham Young University, 1990.
- Redlin, Meredith**, Professor of Sociology and Rural Studies, Graduate Faculty, 2000, 2004; B.A., Macalester College, 1979; M.A.L.S., Hamline University, 1993; Ph.D., University of Kentucky, 2000.
- Reed, Bradley**, Adjunct Professor of Geography, 2001; B.S., Southwest Missouri State University, 1991; M.A., University of Kansas, 1986; Ph.D., 1990.

- Reese, Cheryl L.**, Research Associate II in Plant Science, 1997; B.A., University of Minnesota, 1990; M.S., 1995.
- Reese, R. Neil**, Professor of Biology and Microbiology, Graduate Faculty, 1988, 1998; B.S., Utah State University, 1977; M.S., University of Idaho, 1980; Ph.D., 1984.
- Reeves, Kathryn A.**, Extension Youth Development/4-H Specialist/Instructor, 1990, 1991; B.S., Colorado State University, 1984; M.A., University of Northern Colorado, 1990.
- Reichardt, Peter**, Instructor of Visual Arts, 2011; B.F.A. Cleveland Institute of Art, 2005; M.F.A. Washington State University, 2007.
- Reicks, Graig W.**, Research Associate I, Plant Science, 2006; B.S., South Dakota State University, 2003; M.S., 2007.
- Rieth, Melissa**, Residence Hall Director, 2013; B.A., University of North Dakota, 2010; M.S., University of North Dakota, 2013.
- Reitsma, Kurt D.**, Precision Agriculture Specialist, Plant Science, 2009; B.S., SDSU, 1993; M.S., 2008.
- Remund, Charles P.**, Coordinator of Laboratory and Research and Professor of Mechanical Engineering, Graduate Faculty, 1982, 1997; B.S., SDSU, 1982; M.S., 1983; Ph.D., University of Nebraska, 1988.
- Ren, Cuirong**, Associate Professor of Plant Science, Graduate Faculty, 2001, 2006; B.S., Anhui Normal University, 1986; M.S., Hangzhou University, 1989; Ph.D., University of Missouri, 2001.
- Renelt, Tracey, E.**, Dairy Science Field Specialist, Agricultural and Biological Sciences, 2012, B.S., SDSU, 1989.
- Rex, Brian**, Associate Professor of Architecture, 2010; B.S., University of Texas, 1990; B.Arch., Carleton University (Canada), 1993; M.S., Columbia University, 1994.
- Reynolds, Paul D.**, Professor and Head of Music, Graduate Faculty, 2005; B.M.E., University of Kansas, 1985; M.M., Florida State University, 1986; D.M.A., University of Maryland, 1994.
- Rice, James A.**, Professor and Head of Chemistry and Biochemistry, Graduate Faculty, 1988, 1999; B.A., Saint John's University, 1978; M.S., Colorado School of Mines, 1982; Ph.D., 1987.
- Rickertsen, John R.**, Agronomy Crops Specialist, 1994; B.S., University of Nebraska, 1985; M.S., 1989.
- Rickwa, Delaina P.**, Physician's Assistant, Student Health Service, 2003; B.A., Augustana College, 1994; B.S., University of South Dakota, 1999.
- Riedell, Walter E.**, Adjunct Assistant Professor of Plant Science, Graduate Faculty, 1987; B.S., Northern Illinois University, 1978; M.S., 1980; Ph.D., Southern Illinois University, 1984.
- Ries, Andrew**, Instructor of Mechanical Engineering, 2007; B.S., SDSU, 2006; M.S., 2008.
- Robinson, John**, Assistant Professor of Chemistry and Biochemistry, Graduate Faculty, 2010; B.A., John Hopkins, 1992; Ph.D., University of Alabama at Birmingham, 2003; M.D., University of Alabama at Birmingham, 2004.
- Roduner, Mary**, Horticulture Consumer Specialist, Plant Science, 2012. B.S. SDSU, 1999, M.S., Oklahoma State University, 2001.
- Roe, Thomas N.**, Assistant Professor of Mathematics and Statistics, 1983; B.S., SDSU, 1972; M.S., University of Wyoming, 1975.
- Rogers, James**, Assistant Football Coach, Intercollegiate Athletics; 2013; B.S., South Dakota State University, 2010; M.S., South Dakota State University, 2012.
- Rogness, James D.**, Accounting Analyst, Finance and Budget, 1983; B.S., Northern State University, 1979.
- Rohila, Jai**, Assistant Professor of Biology and Microbiology, Graduate Faculty, 2009; B.S., GB Pant University of Agricultural and Technology (India), 1989; M.S., 1991; Ph.D., CCS Haryana Agricultural University (India), 1997.
- Roiger, Trevor C.**, Assistant Professor of Health and Nutritional Sciences, Graduate Faculty, 1999; B.S., SDSU, 1997; M.A., University of Minnesota, 1999; Ed.D., USD, 2009.
- Rolz, Eckhard**, Associate Professor of Modern Languages, Graduate Faculty, 2005; B.A., Utah State University, 1994; M.A., University of North Carolina, 1996; Ph.D., 2000.
- Rops, Bradley D.**, Research Assistant, Beresford Field Station - AES, Plant Science, 1993; B.S., SDSU, 1986.
- Rosen, Susan K.**, RN Upward Mobility Coordinator/Academic Advisor, Nursing, 1991, 2006; B.S., SDSU, 1983; M.S., 1989.
- Rosenberg, Mark**, Agronomy Weeds Specialist, Plant Science, 2012., B.S. SDSU, 1981.
- Rosentrater, Kurt**, Associate Professor of Natural Resource Management, Graduate Faculty, 2004; B.S., Iowa State University, 1994; M.S., 1996; Ph.D., 2001.
- Rossiter, Megan**, Head Equestrian Coach, Intercollegiate Athletic s; 2011; B.S., Murray State University, 2000; M.S., Oklahoma State University, 2008.
- Roth, Dale**, Instructor of Construction and Operations Management, 2006; B.S., SDSU, 1958; M.S., 1959 Rowland, Lester M., Assistant Professor of Apparel Merchandising and Interior Design, 2001; B.S., University of Minnesota, 1992; M.Arch., 1995.
- Roth, Susan**, Adjunct Assistant Professor of Education and Human Sciences, Rapid City Site, 1999; B.S., Black Hills State University, 1975; M.Ed., SDSU, 1989; Ed.D., USD, 2005.
- Rowe, Gina C.**, Assistant Professor of Nursing, Graduate Faculty, 2012; B.A., University of Nebraska, 1988; B.S.N., Johns Hopkins University, 1999; M.S.N./M.P.H., Johns Hopkins University, 2002; D.N.P., University of Maryland, 2010.
- Rowland, Raymond**, Adjunct Professor, Animal Disease Research and Diagnostic Laboratory, 2004; B.A., Fresno City College, 1977; M.A., San Francisco State University, 1983; Ph.D., University of New Mexico, 1989.
- Roy, David P.**, Senior Research Scientist of Geographic Information Science Center of Excellence/Professor of Geography, Graduate Faculty, 2005; B.S., University of Lancaster (United Kingdom), 1987; M.S., University of Edinburgh (United Kingdom), 1988; Ph.D., University of Cambridge (United Kingdom), 1993.
- Ruden, Kay R.**, Research Associate I, Plant Science, 2000; B.S., SDSU, 1991; M.S., 1999.
- Rule, David**, Assistant Athletic Trainer, Intercollegiate Athletics; 2011; B.S., Purdue University, 2007; M.S., West Virginia University, 2010.
- Rumble, Mark A.**, Adjunct Assistant Professor of Natural Resource Management, 1991; B.S., Washington State University, 1976; M.S., SDSU, 1979; Ph.D., University of Wyoming, 1990.
- Rushton, Paul**, Associate Professor of Biology and Microbiology, Graduate Faculty, 2009; B.A., University of Cambridge (United Kingdom), 1984; M.A., 1988; Ph.D., University of Manchester (United Kingdom), 1988.
- Russell, Dennis**, Adjunct Instructor of Psychology, 2004; B.S., University of Nebraska, 1997; M.S., Saint Cloud State University, 2000.
- Rydell, Renee**, Adjunct Instructor of Chemistry and Biochemistry, 2002; B.A., Augustana College, 1978, M.S., 2001.
- Saboe-Wounded Head, Lorna**, Assistant Professor of Consumer Sciences, Graduate Faculty, 2004, 2009; B.S., SDSU, 1992; M.Ed., University of Minnesota, St. Paul, 2002; Ph.D., Iowa State University, 2010.
- Sackreiter, Kevin**, Director of Teaching Learning Center, 2010; B.A., SDSU, 2000; M.S., SDSU, 2002; Ed.D., University of South Dakota, 2007.
- Salehnia, Alireza**, Professor of Computer Science, Graduate Faculty, 1989, 1997; B.A., Iranian Institute of Advanced Accounting (Iran), 1975; M.B.A., Central State University, 1977; Ph.D., University of Missouri, 1989.
- Samra, Haifa**, Associate Professor of Nursing, Graduate Faculty, 2007, 2013; B.S. American University, 1982; M.S., SDSU, 2003; M.S., SDSU, 2007; Ph.D., SDSU, 2007.

- Santos, Joseph M.**, Professor of Economics, Graduate Faculty, 1997, 2006; B.S., The College of New Jersey, 1990; M.A., Rutgers University, 1992; Ph.D., 1996.
- Sato, Brendon**, Clinical Coordinator for Medical Laboratory Science Upward Mobility Program, 2011, B.S., Central Washington University, 1999.
- Saunders, Christopher**, Assistant Professor of Mathematics and Statistics, Graduate Faculty, 2012, B.S., California State University at Chico, 2000; M.S., University of Kentucky, 2002; Ph.D., University of Kentucky, 2006.
- Schaal, Daniel J.**, Professor of Mathematics and Statistics, Graduate Faculty, 1983, 2005; B.S., SDSU, 1982; M.S., 1988; Ph.D., University of Idaho, 1994.
- Schaefer, Peter R.**, Professor of Plant Science, Graduate Faculty, 1983, 1995; B.S., Michigan State University, 1978; M.S., 1980; Ph.D., 1983.
- Schafer, Christine L.**, Head of Public Services/Librarian, 2013; B.A., Luther College, 1982; M.L.I.S., University of Hawaii at Manoa, 1987; Ed.D., University of St. Thomas, 2012.
- Schafer, Zachary**, Admissions Counselor, 2011; B.A., Mercyhurst University, 2007; M.S., SDSU, 2010.
- Schantz, Cory**, Visiting Instructor of Music, 2012; B.M., Oklahoma Baptist University, 1992; M.M., Austin Peay State University, 1996; D.M.A., University of Oklahoma, 2009.
- Schell, Kyle**, Extension Range Field Specialist, 2007, B.A., Chadron State College, 2006; M.S., SDSU, 2011.
- Schiefelbein, Jason L.**, Lecturer of Construction and Operations Management, 2001; B.S., SDSU, 2000.
- Schindler, Frank V.**, Research Associate III, Chemistry/Biochemistry, 1996, 2001; B.S., University of Vermont, 1992; M.S., North Dakota State University, 1996; Ph.D., SDSU, 2000.
- Schlechter, Peggy S.**, SDSU Extension Community Development Field Specialist, 2012; B.S., SDSU, 1984; M.S. 2006.
- Schleicher, Jr., Leo C.**, Professor of Plant Science, Graduate Faculty, 1997, 2001; B.S., University of Nebraska, 1989; M.S., 1992; Ph.D. Purdue University, 1997.
- Schlobohm, Paul J.**, Livestock Unit Manager, 1999; B.S., SDSU, 1983.
- Schmaedeke, James E.**, Campus Coordinator for Judicial Affairs/Research, 1995; B.A., Saint Olaf College, 1973; M.A., University of Kansas, 1979; Ph.D., 1995.
- Schmidt, Robert C.**, Professor of Mathematics and Statistics, Graduate Faculty, 1981, 1996; B.S., SDSU, 1979; M.S., Iowa State University, 1981; Ph.D., 1987.
- Schmit, Christopher G.**, Professor of Civil and Environmental Engineering, Director of Water and Environmental Engineering Research Center, Graduate Faculty, 1998, 2008; B.S., University of Wisconsin, 1991; M.S., Iowa State University, 1992; Ph.D., 1997.
- Schmitt, Melissa, L.**, Assistant Manager, Dairy Research and Training Facility, 2011; B.S., Iowa State University, 2011.
- Schneider, Sara**, Coordinator of Development and Special Events; 2012; B.S., SDSU, 2010.
- Schrage, David**, Head Baseball Coach, Intercollegiate Athletics; 2011; B.S., Creighton University, 1983; M.S., Saint Thomas University, 1987.
- Schramm, Lisa**, Admissions Counselor, 1999; B.S., SDSU, 1999.
- Schuelke, Nicholle**, Adjunct Instructor of English, 2012; B.A., Concordia University, 1994; M.S., St. Cloud State University, 2000; Ed.D., Hamline University, 2009.
- Schuelke, Peggy**, Nurse Practitioner, Student Health Services, 2001; B.A., Augustana College, 1980; M.S., SDSU, 1992.
- Schultz, Aaron C.**, Professor and Head of Military Science, 2012; B.S., Southwest Minnesota State University, 1992; M.B.A., University of Sioux Falls, 2009.
- Schulz, Marlene**, Instructor of Sociology and Rural Studies, 2010; B.S., SDSU, 1984; M.S.W., University of Nebraska Omaha, 1995.
- Schumacher, Joseph**, Research Engineer, Plant Science, 1987; B.S. SDSU, 1987; M.S., 1990.
- Schumacher, Linda R.**, Administrative Assistant, President's Office, 1972, 1985; A.A., Bethany Lutheran College, 1969.
- Schurrer, Kelsey**, Research Assistant, 2010; EA Martin Program in Human Nutrition; B.A. SDSU, 2008.
- Schwecke, Zach**, Swine Unit Manager, Animal Science, 2010; B.S., SDSU, 2009.
- Sckerl, Jo Ann**, Director of Academic Evaluation and Assessment, 1984, 2004; B.A., SDSU, 1973; M.A., Mississippi University for Women, 1980; Ed.D., University of South Dakota, 2002.
- Scovel, Kari A.**, Adjunct Assistant Professor of Education and Human Sciences, Rapid City Site, 2001; B.S., Mankato State University, 1991; M.S., SDSU, 1993; Ph.D., University of South Dakota, 2000.
- Scramlin, Stacy**, Assistant Professor of Animal Science, 2011; B.S., Michigan State University, 2003; M.S., University of Kentucky, 2005; Ph.D., University of Illinois, 2009.
- Seefeldt, Teresa M.**, Associate Professor of Pharmaceutical Sciences, Graduate Faculty, 2005; B.S., SDSU, 2002; Pharm.D., 2004; Ph.D., 2007.
- Sell, Justin**, Director of Athletics, Intercollegiate Athletics, 1991; B.S., Bowling Green State University, 1992; M.A., The Ohio State University, 2009.
- Senay, Gabriel**, Adjunct Professor, Geographic Information Science Center of Excellence, and Agricultural and Biosystems Engineering, Graduate Faculty, 2005; B.S., Alemaya University of Agriculture (Ethiopia), 1986; M.S., Wageningen Agricultural University (Netherlands), 1991; Ph.D., Ohio State University-Columbia, 1996.
- Serfling, Nathan**, Instructor of English, 2004; 2004; B.A., SDSU, 2001; M.A, 2006.
- Sergeev, Igor**, Professor of Health and Nutritional Sciences, Graduate Faculty, 1999; B.S./M.S., Moscow State University (Russia), 1977; Ph.D., Institute of Biomedical Problems-Moscow (Russia), 1984; D.Sc., Institute of Nutrition, Academy of Medical Science-Moscow (Russia), 1991.
- Sexton, Peter**, Associate Professor of Plant Science, Graduate Faculty, 2009; B.S., SDSU, 1985; M.S., University of Florida, 1990; Ph.D., 1993.
- Shelsta, Corey**, Professor of Communication Studies and Theatre, Graduate Faculty, 2000, 2004; B.S., SDSU, 1993, M.F.A., Wayne State University, 1996.
- Sherin, Kenneth M.**, SDSU Extension Community Development Field Specialist; 2012; B.S., North Carolina State University, 1994; M.S., North Carolina State University, 1997; MDiv., Campbell University, 2002; Ph.D., University of Missouri, 2012.
- Sherwin, Joseph A.**, Assistant Professor of Physics, 2008; B.S., Pennsylvania State University, 1991; M.S., 1996; Ph.D., 2003.
- Shin, Sung Yun**, Professor of Computer Science, Graduate Faculty, 1991, 2001; B.S., Kentucky State University, 1984; M.S., University of Wyoming, 1986, Ph.D., 1991.
- Shinn, Bonnie**, Instructor, University College, 2011; B.S., SDSU, 1998; M.S., Shippensburg, 2003.
- Shivik, John A.**, Adjunct Assistant Professor of Wildlife and Fisheries Sciences, 2003; B.S., Frostburg State College, 1990; M.S., University of California, 1995; Ph.D., Colorado State University, 1999.
- Shiyanbola, Olayinka**, Assistant Professor of Pharmacy Practice, 2009; B.Pharm., University of Ibadan (Nigeria), 2002; Ph.D., University of Iowa, 2009.
- Shmagin, Boris A.**, Research Associate II, Water Resources Institute, 2004; M.S., Moscow State University (Russia), 1970;

- Ph.D., 1979; Postdoctoral, Komensky University and Charles University (Czech Republic), 1981-82.
- Shore, Jay**, Associate Professor of Chemistry and Biochemistry, Graduate Faculty, 1995, 1999; B.S., Oregon State University, 1986; Ph.D., University of Illinois, 1992.
- Shuster, Tiana, L.**, Research Assistant, Plant Science, 2011; B.S., SDSU, 2010.
- Silva, Israel**, Assistant Wrestling Coach, Intercollegiate Athletics; 2012; B.A., University of Tennessee at Chattanooga, 2007.
- Simons-Olson, La Quita J.**, Staff Counselor, Student Services, 1998; B.S., University of Hawaii, 1986; M.S., SDSU, 1991.
- Skogstad, Keith L.**, Assistant Director of Student Union, 2005; B.S., SDSU, 1986.
- Skovly, Martin**, Assistant Professor of Military Science AROTC, 2007; B.S. South Dakota State University, 2005
- Skroch, Keri L.**, Research Assistant II, Plant Science, 1989; B.S., SDSU, 1987.
- Slunicka, Karen L.**, SDSU Extension Family Resource Management Field Specialist; 2011; B.S. SDSU, 1981.
- Smart, Alexander**, Professor of Natural Resource Management, Graduate Faculty, 2001, 2006; B.S., University of Wisconsin, 1989; M.S., 1992; Ph.D., University of Nebraska, 2001.
- Smith, Mary K.**, Adjunct Instructor of Chemistry and Biochemistry, 1981; B.S., Mount Marty College, 1976; M.S., University of South Dakota, 1996.
- Smith, Sharon**, Assistant Professor of English, Graduate Faculty, 2009; B.A., Augsburg College, 1991; M.A., University of Georgia, 1996; Ph.D., University of Illinois-Chicago, 2007.
- Sojka, Nadine**, Adjunct Assistant Professor of Chemistry and Biochemistry, 2004; B.A., University of Northern Iowa, 1969; M.H.A., 1996.
- Soren, Vicki L.**, Purchasing Agent, Finance and Budget, 1984, 1991; A.A., Longview Community College, 1976; B.B.A., University of Missouri, 1978.
- Sorenson, Andrew**, Assistant Wrestling Coach, Intercollegiate Athletics; 2012; B.S., Iowa State University, 2011.
- Spear, Debra J.**, Professor of Psychology, Graduate Faculty, 1995, 2006; B.S., University of Maryland, 1977; M.A., University of North Carolina, 1980; Ph.D., 1987.
- Specker, Bonny**, Director and Professor of Ethel Austin Martin-Edward Moss Martin Endowed Program in Human Nutrition, Graduate Faculty, 1997; B.S., University of Cincinnati, 1977; M.S., 1980; Ph.D., 1983.
- Spilles, Carl**, Academic Counselor, Student Services Support, 2004; B.A., University of Northern Iowa, 1991.
- Spitz, Maria C.**, Associate Professor of Modern Languages, 2005; B.A., Monmouth College, 1987; M.A., Washington University, 1992; Ph.D., 2001.
- Spors, Lisa**, Assistant Athletic Trainer, Intercollegiate Athletics, 2007; B.A., Dakota Wesleyan University, 2009; M.S., North Dakota State University, 2009.
- St. John, David**, Assistant Track Coach, Intercollegiate Athletics, 2000; B.S., Oral Roberts University, 2001; M.S., Middle Tennessee State University, 2009.
- Stafford, Joshua D.**, Adjunct Associate Professor of Wildlife and Fisheries Sciences, Graduate Faculty, 2011; B.S., Oregon State University, 1997; M.S., SDSU, 2000; Ph.D., Mississippi State University, 2004.
- Stanley, Owen**, Head Athletic Trainer, Intercollegiate Athletics, 2002; B.S., West Chester University, 2005; M.S., University of Kentucky, 2009.
- Steece, Richard**, Adjunct Professor of Biology and Microbiology; B.S., SDSU, 1973; M.S., 1975; Ph.D., University of New Mexico, 1989.
- Steele, Michael Tim**, Professor and Head of Visual Arts, 1985, 1994; A.A., Spokane Falls Community College, 1975; B.F.A., Fort Wright College of the Holy Names, 1978; M.F.A., Washington State University, 1980.
- Steen, Betty**, Research Coordinator, 2008; EA Martin Program in Human Nutrition; B.S. NDSU, 2005.
- Stein, Marianne F.**, Associate/Publications Editor-Writer, 2001; B.A., University of Copenhagen (Denmark), 1983; M.A., 1990; M.S., University of Illinois, 1995; Ph.D., University of Southern Denmark, 2004.
- Steinlicht, Carrie**, Assistant Professor of Construction and Operations Management, Graduate Faculty, 1997, 2005; B.S., Michigan Technological University, 1990; M.A., Central Michigan University, 1993; Ph.D., Capella University, 2010.
- Stemwedel, Brian**, Assistant Coordinator of Yeager Media Center, Journalism and Mass Communication, 2004, 2011; B.S., South Dakota State University, 1995.
- Stemwedel, Mark**, Instructor of Visual Arts, 2006; B.S., SDSU, 1997; M.F.A., University of South Dakota, 2008.
- Stenvig, Thomas E.**, Associate Professor of Nursing, Graduate Faculty, 2001; B.S.N., Wayne State University, 1971; M.P.H., University of Hawaii, 1976; M.S., SDSU, 1991; Ph.D., University of Wisconsin, 2001.
- Stevens, Darla**, Assistant Admissions Officer, 2013; B.A., University of Minnesota - Morris, 2010.
- Stewart, Christine**, Assistant Professor of English, Graduate Faculty, 2007; B.A., University of Northern Iowa, 1995; M.A., Arizona State University, 2000; Ph.D., University of Nebraska, 2007.
- Stiegelmeier, John M.**, Head Football Coach, Intercollegiate Athletics, 1988, 1996; B.S., SDSU, 1979; B.S., 1979; M.A., University of Northern Iowa, 1981.
- Stluka, Suzanne R.**, Extension EFNEP/FNP Coordinator, Health and Nutritional Sciences, 2006; B.S., SDSU, 2004; M.S., Eastern Illinois University, 2006.
- Stock, Kate**, Orientation Program Coordinator, 2013; B.A., College of St. Thomas, 2005; M.S., SDSU, 2011.
- Storey, James**, Adjunct Professor of Electrical Engineering, 2004; B.S., Cornell University, 1979; M.S., University of Wisconsin, 1981; M.S., John Hopkins University, 1989.
- Stover, Ronald G.**, Professor of Sociology and Rural Studies, Graduate Faculty, 1983, 1992; B.A., University of Georgia, 1970; M.A., 1973; Ph.D., 1975.
- Strain, Joey D.**, Associate Professor of Pharmacy Practice, 2003, 2008; B.S., SDSU, 2000; Pharm.D., 2002.
- Stremmel, Andrew J.**, Professor and Head, Teaching, Learning and Leadership, Graduate Faculty, 2004; B.A., Pennsylvania State University, 1978; M.S., Purdue University, 1981; Ph.D., 1989.
- Strickler, Susan C.**, Associate Professor of Consumer Sciences, Graduate Faculty, 1991, 2004; B.S., SDSU, 1982; M.S., Texas Tech University, 1985; Ed.D., University of South Dakota, 1996.
- Struck, Donald J.**, Assistant Professor of Mathematics and Statistics, 1964, 1972; B.S., Saint Cloud State University, 1960; M.S., North Dakota State University, 1963.
- Strunk, Connie**, Plant Pathology Specialist, Plant Science, 2012; B.S., SDSU, 2001; M.S., 2005.
- Sturdevant, James**, Adjunct Assistant Professor of Geography, 2004; B.S., SDSU, 1978; M.S., Oklahoma State University, 1979.
- Subramanian, Senthil**, Assistant Professor of Plant Science, Graduate Faculty, 2009; B.S., Annamali University (India), 1992; M.S., Tamil Nadu Agricultural University (India), 1995; Ph.D., 1994.
- Sudhagoni, Ramu**, Postdoctoral Fellow, 2012; B.S., Kakatiya University, 2001; M.S., Pondicherry University, 2004; M.S., South Dakota State University, 2008; Ph.D., South Dakota State University, 2011.
- Sutton, Fedora**, Professor of Plant Science, Graduate Faculty, 1990, 2001; B.A., University of Maryland, 1981; Ph.D., Howard University, 1985.

- Swain, Larry B.**, Extension Specialist and Instructor of Economics, 2005, 2009; B.S., South Dakota State University, 1964; M.S., 1984; Ph.D., University of Nebraska, 1990.
- Swanson, Christopher C.**, Adjunct Assistant Professor of Natural Resource Management, 2012; B.S., SDSU, 2002; M.S., 2005; Ph.D., 2009.
- Sweeter, Ryan**, Associate Sports Information Director, Intercollegiate Athletics; 2006; B.S., South Dakota State University, 2001.
- Switzer, Chad T.**, Adjunct Assistant Professor of Natural Resource Management, 2011; B.S., University of Nebraska-Lincoln, 1996.
- Sydow, Brooke**, Instructor, University College, 2008; B.A., SDSU, 2005; M.S., 2008.
- Szczepaniec, Adrianna**, Assistant Professor of Entomology, Graduate Faculty, 2012; B.S., University of Maryland, 2003; Ph.D., University of Maryland, 2009.
- Tan, Songxin**, Associate Professor of Electrical Engineering, Graduate Faculty, 2004, 2009; B.S., Sichuan University, 1994; M.S., 1997; Ph.D., University of Nebraska, 2003.
- Tande, Connie**, Clinic Manager, Plant Diagnostic Lab, Plant Science, 2012; B.S., SDSU, 1986.
- Taylor, Gary L.**, Associate Professor of Economics, Graduate Faculty, 2000, 2004; B.S., Purdue University, 1990; M.S., Michigan State University, 1994; Ph.D., Oklahoma State University, 1995.
- Taylor, John W.**, Professor of English, Graduate Faculty, 1980, 1991; B.A., Macalester College, 1969; M.A., Indiana University, 1973; Ph.D., 1973.
- Taylor, Larry M.**, Lecturer of Visual Arts, 2004; B.A., University of Nebraska, 1999; M.A., University of Wisconsin, 2003.
- Tedesche, Luis O.**, Adjunct Associate Professor of Natural Resource Management, 2012; B.S., University of Sao Paulo (Brazil), 1991; M.S., 1996; Ph.D., Cornell University, 2001.
- Thaler, Robert**, Extension Swine Specialist, and Professor of Animal Science, Graduate Faculty, 1982, 1999; B.S., SDSU, 1982; M.S., 1984; Ph.D., Kansas State University, 1988.
- Thanapura, Pravara**, Research Associate I, Water Resource Institute, 1998; B.A., Kasetsart University (Thailand), 1993; M.S., SDSU, 1998.
- Thiex, Natalie**, Postdoctoral Research Fellow, 2008; EA Martin Program in Human Nutrition; B.A. Concordia College, 1999, M.P.H. University of Michigan, 2002; Ph.D., 2008.
- Thill, Kari L.**, Clinical Assistant of Nursing, 2008; B.S., SDSU, 1999.
- Thomas, Julie M.**, Research Assistant, Plant Science, 2009; B.S., SDSU, 2004.
- Thompson, Brock**, Assistant Women's Soccer Coach, Intercollegiate Athletics, 2000; B.S., University of Mary; 2008; M.S., Indiana State University, 2008.
- Thompson, Daniel J.**, Adjunct Assistant Professor of Natural Resource Management, 2012; B.S., SDSU, 2002; M.S., 2005; Ph.D., 2009.
- Thompson, Erica**, Assistant Director for Staff and Community Development, 2012; B.A., The University of Iowa, 2002; M.A., The University of Iowa, 2006.
- Thompson, Marjoanne**, First Year Professional Advisor, 2007, 2011; B.S., SDSU, 2007; M.ED. SDSU, 2011.
- Thompson, Mary Ellen**, Research Assistant II in Plant Science, 1992, 1998; B.S., SDSU, 1989.
- Threadgold, Lee**, Adjunct Instructor of Construction and Operations Management, 2012; B.S., Dakota State University, 1980; M.S., 2010.
- Thue, Roger**, Utility Systems Engineer, Facilities and Services, 1994, 2002; B.S., SDSU, 1988.
- Thum, Mary**, Research Coordinator, 2008; EA Martin Program in Human Nutrition; B.S. University of Sioux Falls, 2005; M.S. SDSU, 2008.
- Tille, Patricia**, Assistant Professor/CLS Program Director, Graduate Faculty, 2009; B.S., University of Sioux Falls, 1993; Ph.D., USD-Sanford School of Medicine, 2002.
- Tilmon, Kelley J.**, Associate Professor of Plant Science, Graduate Faculty, 2005; B.A., University of Delaware, 1992; M.S., 1996; Ph.D., Cornell University, 2001.
- Ting, Francis**, Professor of Civil and Environmental Engineering, Graduate Faculty, 1995, 2005; B.S., University of Manchester (Great Britain), 1982; M.S., California Institute of Technology, 1983; Ph.D., 1989.
- Tirumalaraju, Sivananda, V.**, Research Associate I, Plant Science, 2012; B.Sc., Acharya N. G. Ranga Agricultural University (India), 1999; M.S., University of Agricultural Sciences (India), 2002; Ph.D., University of Florida, 2008.
- Todd, Robert L.**, Adjunct Professor of Biology and Microbiology, 1982, 1988; B.S., SDSU, 1965; M.S., 1967; Ph.D., University of Guelph (Ontario), 1974.
- Todey, Dennis P.**, Assistant Professor of Agricultural and Biosystems Engineering, State Climatologist, 2003; B.S., Iowa State University of Science and Technology, 1988; Ph.D., 1995; M.S., South Dakota School of Mines and Technology, 1990.
- Tolman, Elizabeth**, Associate Professor of Communication Studies and Theatre, Graduate Faculty, 2004; B.A., Concordia College, 1993; M.A., SDSU, 1995; Ph.D., Southern Illinois University, 1999.
- Tonkoski, Reinaldo**, Assistant Professor of Electrical Engineering, Graduate Faculty, 2011; B.S., Pontificia Universidade Católica do Rio Grande do Sul (Brazil), 2003; M.S., 2006; Ph.D., Concordia University (Canada), 2011.
- Tornquist, Kristi**, Chief University Librarian, 2011; B.A., University of Minnesota-Morris, 1980; M.S.L.S., University of Wisconsin-Madison, 1982; Ph.D., University of Minnesota, 1992.
- Toronto, Emily**, Associate Professor of Music, 2004, 2010; B.M., Brigham Young University, 1997; M.M., University of Michigan, 1999; D.M.A., University of Michigan, 2003.
- Tonsager, Bonnie**, Research Coordinator, 2009; EA Martin Program in Human Nutrition; B.S. SDSU, 2000.
- Trautman, Ellie L.**, Health Educator, Student Health Services, 2002; B.S., Moorhead State University, 1984.
- Trautman, Karla H.**, SDSU Extension Associate Director, 1988, 2011; B.S., SDSU, 1987; M.S., 2003.
- Trenhaile, Jay**, Professor and Head of Counseling and Human Development, Graduate Faculty, 1999, 2009; B.S., Dakota State University, 1986; M.S., Kansas State University, 1989; M.S., SDSU, 1993; Ed.D., University of South Dakota, 1996.
- Tritle, Erika**, Instructor of History, Political Science, Philosophy, and Religion, 2010; B.A., Luther College, 1999; M.A., University of Illinois Chicago, 2005.
- Troelstrup, Jr., Nels H.**, Professor of Natural Resource Management, Graduate Faculty, 1993, 2004; B.A., University of Colorado, 1981; M.S., University of Nebraska, 1985; Ph.D., University of Minnesota, 1992.
- Trooien, Todd P.**, Professor of Agricultural and Biosystems Engineering, 1983, 2006; B.S., SDSU, 1983; M.S., 1985; Ph.D., Colorado State University, 1988.
- Trygstad, Jayme P.**, Assistant Director and Assistant Radiation Safety Officer, Environmental Health and Safety, 2003; B.S., SDSU, 2003.
- Tschetter, Emery J.**, Assistant Director of Planning and Special Projects, College of Agriculture and Biological Sciences, 1984, 1997; B.S., SDSU, 1984; M.S., 1989.
- Tschetter, Lois J.**, Associate Professor and Assistant to Associate Dean, Undergraduate Nursing, Graduate Faculty, 1983, 2006, 2008; B.S., SDSU, 1974; M.S., 1985; Ed.D., University of South Dakota, 2001.
- Tummala, Hemachand**, Assistant Professor of Pharmaceutical Sciences, Graduate Faculty, 2008; B.Pharm., Kakatiya

- University (India), 1994; M.S., Punjab University (India), 1997; Ph.D., National Institute of Immunology (India), 2002.
- Tuntland, Mary**, Instructor of Teaching, Learning and Leadership, 2008; B.S., Northern State University, 1970; M.A., University of South Dakota, 1983.
- Turnipseed, E. Brent**, Manager of Seed Lab and Professor of Plant Science, Graduate Faculty, 1991, 2002; B.S., Mississippi State University, 1984; M.S., 1987; Ph.D., 1993.
- Twedt, Michael P.**, Instructor of Mechanical Engineering and Program Engineer, 1992; B.S., SDSU, 1992; M.S. 1994.
- Uecker, Toby**, Assistant Director for Living Learning Initiatives, 2013; B.A., South Dakota State University, 2004; M.S., Miami University, 2010.
- Uilk, Nicholas**, Lecturer of Agricultural and Biosystems Engineering, 2008; B.S., SDSU, 2008.
- Underwood, Keith**, Assistant Professor of Meat Science, Graduate Faculty, 2009; B.S., Texas Tech University, 2002; M.S., University of Wyoming, 2007; Ph.D., 2008.
- Ulvestad, Erin L.**, Instructor of Mathematics and Statistics, 2006; B.S., SDSU, 2004; M.S., 2006.
- Uresk, Daniel W.**, Adjunct Associate Professor of Natural Resource Management, 1987; B.S., University of Utah, 1965; M.S., 1967; Ph.D., Colorado State University, 1972.
- Valencia, Flora M.**, Instructor of Modern Languages and Global Studies, 2011; B.A., Pontificia Universidad Católica del Perú; M.A., University of Kentucky; Ph.D., University of Kentucky, 2010.
- Van Benschoten, Elijah**, Instructor of Visual Arts, 2012; B.F.A., Siena Heights University, 2003; M.F.A. Syracuse University, 2006.
- Vandekieft, Ryan**, Admissions Counselor, 2004; B.S., SDSU, 2002; M.A., Minnesota State University, 2004.
- Vandermark, Jessica**, Research Assistant, 2009; EA Martin Program in Human Nutrition; B.S. University of Arizona, 2004.
- Van der Sluis, Evert**, Professor of Economics, Graduate Faculty, 1997, 2006; B.S., Hogere Landbouwschool (Leeuwarden, The Netherlands), 1982; M.S., Iowa State University, 1988; Ph.D., University of Minnesota, 1993.
- Van Gilder, Deidra J.**, Associate Professor of Pharmacy Practice, 2006, 2012; B.S., SDSU, 2000; Pharm.D., 2002.
- Van Guilder, Gary P.**, Assistant Professor of Health and Nutritional Sciences, Graduate Faculty, 2012; B.S., Castleton State College, 1998; M.S., Colorado State University, 2001; Ph.D., University of Colorado at Boulder, 2006.
- Van Ruler, Dawn**, Instructor of Nursing, Graduate Faculty, 2012; B.A., University of Minnesota, 1991; B.S.N., Creighton University, 1993; M.S.N., SDSU, 1996; Post MSN; University of Nebraska Medical Center, 2003.
- Venhuizen, Lynda**, Instructor of Teaching, Learning and Leadership, 2000; B.S., University of South Dakota, 1991; M.S., SDSU, 1998.
- Verschoor, Lynn**, Director, South Dakota Art Museum, 1999; B.S., SDSU, 1979; M.S., Saint Cloud State University, 1985.
- Vestal, Donald**, Associate Professor of Mathematics and Statistics, Graduate Faculty, 2006; B.S., Colorado State University, 1990; M.S., 1992; Ph.D., University of Colorado- Boulder, 1998.
- Vestal, Sharon**, Associate Professor of Mathematics and Statistics, 2006; B.A., University of South Dakota, 1992; M.A., 1994; Ph.D., University of Colorado, 2000.
- Veurink, Jennifer**, Admissions Counselor, 2010; B.A., University of Sioux Falls, 2007.
- Visser, Jerry J.**, Adjunct Instructor of Construction and Operations Management, 2001; 2012; B.S., Kansas State University, 1992; M.S., Kansas State University, 2005.
- Vockrodt, Mary L.**, Instructor of Nursing, 2001; B.S., SDSU, 1986; M.S., SDSU, 2008.
- Voelzke, Catherine D.**, Adjunct Assistant Professor of Nutrition, Food Science and Hospitality, 1993; B.S., SDSU, 1966; M.S., 1988.
- Vogelmann, James**, Adjunct Professor, Geographic Information Science Center of Excellence, Graduate Faculty, 2005; B.A., University of Vermont, 1978; Ph.D., Indiana University, 1983.
- Vollan, Beth**, Assistant Director of Financial Aid, 2010; B.A. University of Nebraska, 1991.
- Vollan, Charles A.**, Associate Professor of History, Political Science, Philosophy, and Religion, 2006, 2012; B.A., Hiram College, 1991; M.A., University of Tulsa, 1994; Ph.D., University of Nebraska-Lincoln, 2004.
- Vondruska, Judy**, Instructor in Physics, 2001; B.S., University of Nebraska, 1986; M.S., University of Arizona, 1992.
- Voss, Jo**, Associate Professor of Nursing, 1995, 2002; B.S.N., Winona State University, 1980; M.S.N., University of Minnesota, 1993; Ph.D., University of Nebraska, 2003.
- Vostad, Jeffrey**, Director of TRiO, 1990, 2004; B.A., SDSU, 1990; M.Ed., 1992; Ed.D., University of South Dakota, 2004.
- Vukovich, Matthew D.**, Professor and Head of Health and Nutritional Sciences, Graduate Faculty, 1999, 2003; B.S., Iowa State University, 1988; M.A., 1990; Ph.D., Ball State University, 1993.
- Wagner, Larry**, Agronomy Crops Specialist, Plant Science, 2012; B.A., St. Mary's University of Minnesota, 1970; B.S., University of Minnesota, 1990.
- Wake, Carol Marie Fodness**, Professor of Biology and Microbiology, Graduate Faculty, 1991, 2004; B.S., SDSU, 1990; M.S., 1993; Ph.D., 1997.
- Walker, John**, Professor of Music, 2001, 2011; B.M., University of California-Santa Barbara, 1977; M.M., San Francisco Conservatory of Music, 1982; D.M.A., University of Colorado-Boulder, 1995.
- Walker, Julie A.**, Extension Beef Specialist and Associate Professor of Animal Science, 1997, 2002; B.S., North Dakota State University, 1983; M.S., Purdue University, 1990; Ph.D., University of Kentucky, 1995.
- Wallace, Scott**, Professor of Visual Arts, Graduate Faculty, 1995, 2004; B.F.A., Northern Illinois University, 1981; M.A., 1983; M.F.A., University of Arizona, 1985.
- Walsh, Michael**, Assistant Professor of Music, 2009; B.M., University of Miami, 1998; M.M., 2000; D.M.A., University of Kansas, 2008.
- Walter, Chanda**, Professional Academic Advisor, B.S., SDSU, 2007; M.S., SDSU, 2010.
- Walters, Craig**, Research Assistant, 2009; EA Martin Program in Human Nutrition; B.S. USD, 1980.
- Wang, Wei**, Assistant Professor of Computer Science, Graduate Faculty, 2010; B.S., Xian Jiaotong University (China), 2002; M.S., 2005; Ph.D., University of Nebraska, 2009.
- Wang, Xianzhi**, Visiting Research Scholar, 2012; B.S., Hubei Agricultural College (China), 1999; Ph.D., 2008.
- Wang, XiuQing**, Associate Professor of Biology and Microbiology, Graduate Faculty, 2002, 2006; D.V.M., Inner Mongolia College of Agriculture and Animal Husbandry (China), 1988; M.S., 1991; Ph.D., University of Connecticut, 2000.
- Wang, Zhiguang**, Assistant Professor of Economics, 2009; B.S., Jilin University (China), 2000; M.A., Shanghai University of Finance and Economics (China), 2004; M.A., Florida International University, 2008; Ph.D., 2009.
- Warmann, Gerald W.**, Extension Specialist and Professor of Economics, 2004, 2007; B.A., University of Missouri, 1973; M.S., 1980; Ph.D., Oklahoma State University, 1984.
- Warren, Randall F.**, Instructor of Biology and Microbiology, 2007; B.S., University of Minnesota, 1993; Ph.D., Indiana University, 1999.

- Watrel, Robert H.**, Associate Professor of Geography, Graduate Faculty 2006, 2001; B.S., University of North Dakota, 1989; M.A., University of Nebraska, 1993; Ph.D., 2001.
- Weaver, Kristyn**, Instructor of Visual Arts, 2012; B.F.A., University of Texas at Austin, 2004; M.F.A., Washington State University, 2008.
- Weber, Jennifer**, Lecturer of Teaching, Learning and Leadership, 2004, 2012; B.A., SDSU, 1998; M.Ed., 2003.; Ed.D. University of South Dakota, 2012.
- Weber, Karyn L.**, Assistant to the Provost, 1990, 2010; B.S., SDSU, 1990; M.A., 1992.
- Wedemeyer, Lang**, Head Women's Soccer Coach, Intercollegiate Athletics; 1994; B.A., Old Dominion University; 1996; M.S., Old Dominion University, 2000.
- Wehbe, Nadim I.**, Professor and Interim Department Head of Civil and Environmental Engineering, Graduate Faculty, 1998, 2008; B.E., American University of Beirut (Lebanon), 1980; M.S., University of Nevada, 1992; Ph.D., 1997.
- Weidauer, Lee**, Post-Doctoral Research Associate in the Ethel Austin Martin Program in Human Nutrition, 2012; B.S., SDSU, 2007; M.S., 2009; Ph.D., 2012.
- Weiss, James J.**, Project Manager/Engineer, Facilities and Services, 2008, B.S., USD, 1993; B.S., SDSU, 2007.
- Weist, Paul**, Instructor of Construction and Operations Management, 2011; B.B.A., Dakota State University, 2002, M.S. 2005.
- Welsh, Tracy**, Director of High School Relations and Admissions, 1984, 1997; B.A., Fontbonne College, 1980.
- Wendell, Kelly**, Coordinator of Communications, Admissions, 2007; B.A., SDSU, 2003.
- Wendell, Nicholas W.**, Director of Student Engagement, 2012; B.A., SDSU, 2004; M.S., SDSU, 2010.
- Werner, LeAnn C.**, Instructor of Mathematics and Statistics, 1991; B.S., SDSU, 1970; M.S., 1997.
- West, Thomas P.**, Professor of Biology and Microbiology, Graduate Faculty, 1988, 1993; B.A., Purdue University, 1974; M.S., Texas A&M University, 1976; Ph.D., 1980.
- Westerhuis, Hillary**, Undergraduate Nursing Academic Advisor/Coordinator Sioux Falls, 2011; B.A., Augustana College, 2001; M.A., University of Minnesota-Duluth, 2003.
- Westwick, Joshua**, Assistant Professor Communication Studies and Theatre, 2012; B.S., SDSU, 2001; M.S., 2003; Ed.D., University of South Dakota, 2012.
- Wey, Howard E.**, Associate Professor of Nursing, Graduate Faculty, 1997; B.S., Wright State University, 1975; Ph.D., University of Cincinnati, 1980.
- White, Charles F.**, Adjunct Senior Military Instructor, AROTC, 2011.
- White, George**, Professor and Head of Geography, 2009; B.A., California State University, 1987; M.A., University of Oregon, 1990; Ph.D., 1994.
- Wicks, Molly**, Instructor of Visual Arts, 2011; B.F.A., University of Minnesota, 2007; M.F.A., Washington State University, 2011.
- Wiederrich, Lisa**, Adjunct Lecturer of Nursing, 2006; B.S., SDSU, 1995.
- Wiersma, Janice M.**, Payroll Supervisor, 2006; B.S., SDSU, 1982; M.B.A., University of South Dakota, 1993.
- Wilburn, Lonnie**, Assistant Professor of Communication Studies & Theatre, 2007; B.A. Morehead State University, KY, 2002; M.F.A. Michigan State University, 2007.
- Williams, Christi L.**, Assistant Athletic Director-Tickets, Intercollegiate Athletics, 2003; A.A., Kirkwood Community College, 2002; B.S., Wayne State College, 2003; M.S., SDSU, 2005.
- Williams, Marla**, Assistant Professor of Chemistry and Biochemistry, 2000; B.S., SDSU, 2000; M.S., 2003; Ph.D., 2008.
- Willis, David W.**, Distinguished Professor and Head of of Natural Resource Management, Graduate Faculty, 1987, 2007; B.S., University of North Dakota, 1977; M.S., 1978; Ph.D., Colorado State University, 1980.
- Wilson, Ann L.**, Professor of Teaching, Learning and Leadership, Graduate Faculty, 2002; B.A., Lewis and Clark College, 1969; M.A., Michigan State University 1973; Ph.D., 1975; M.S., SDSU, 1994; M.A., Augustana College, 1995.
- Wiltse, David**, Assistant Profess of History, Political Science, Philosophy, and Religion, 2013; B.S., Montana State University, 1993; M.A., California State University, 1996; Ph.D., University of Massachusetts, 2006.
- Wiltse, Evren Çelik**, Assistant Professor of History, Political Science, Philosophy, and Religion, 2012; B.A., Boğaziçi University (Turkey), 1997; M.S., 2000; Ph.D. University of Massachusetts, 2010.
- Wimberly, Michael C.**, Senior Research Scientist of Geographic Information Science Center of Excellence/Professor of Natural Resource Management, Graduate Faculty, 2005; B.S., University of Virginia, 1990; M.S., University of Washington, 1995; Ph.D., Oregon State University, 1999.
- Winchester, Liesel**, Area Coordinator, 2013; B.A., Stetson University, 2001; M.E., The Pennsylvania State University, 2007.
- Wingate, Steven**, Assistant Professor of English, 2011; B.A., University of Massachusetts (Boston), 1987; MFA, Florida State University, 1991.
- Winterboer, Venita J.**, Instructor of Nursing, 1986, 1992; B.S., SDSU, 1980; M.S., 1992.
- Wipf, Darin J.**, Instructor of Economics, 2012; B.A., South Dakota State University, 1993; M.P.A., University of South Dakota, 1997.
- Wolcott, Addie**, Greek Life Advisor, Student Union & Activities, 2006; B.A., SDSU, 2006; M.S., 2008.
- Woldt, Bradley**, Professor and Head of Psychology, Graduate Faculty, 1995, 2006; B.S., SDSU, 1988; M.A., University of Montana, 1991; Ph.D., 1993.
- Wood, Eric**, Adjunct Associate Professor of Geography, 2004; B.S., University of Michigan, 1973; M.S., University of Oregon, 1984; Ph.D., University of Wisconsin, 2002.
- Wood, William**, Assistant Professor of Communication Studies and Theatre, 2012; B.F.A., University of South Dakota, 1999; M.F.A., Minnesota State University, 2003.
- Woodard, Charles L.**, Distinguished Professor of English, Graduate Faculty, 1975, 1985; B.S., Dakota State University, 1964; M.A., University of Nebraska, 1966; Ph.D., University of Oklahoma, 1975.
- Woodard, Howard J.**, Professor of Plant Science, Graduate Faculty, 1990, 2000; B.S., University of Rochester, 1973; Ph.D., Rutgers University, 1985.
- Woodburn, Ronald**, Director, Capital University Center, 2004; B.S., Oklahoma State University, 1974; M.S., University of Alberta, 1977.
- Wright, Christopher K.**, Postdoctoral Fellow, 2008; B.A. , Williams College, 1990; M.S., Montana State University, 1993; Ph.D., Montana State University, 2004.
- Wright, Cody L.**, Professor of Animal Science, Graduate Faculty, 2001, 2006; B.S., SDSU, 1994; M.S., Kansas State University, 1996; Ph.D., North Carolina State University, 2000.
- Wright, David**, Professor and Head of Plant Science, 2013; A.S., Ellsworth Community College, 1980; B.S., Iowa State University, 1982; M.S., 1986; Ph.D., Kansas State University, 1991.
- Wrightson, Graham**, Assistant Professor of History, Political Science, Philosophy, and Religion, 2013; M.A., Cambridge University - Fitzwilliam College, 2004; M.A., University of Calgary, 2006; Ph.D., 2012.
- Wu, Jixiang**, Assistant Professor of Plant Science, Graduate Faculty, 2009; B.S., Zhejiang Agricultural University (China), 1991;



- M.S., 1994; Ph.D., Zhejiang University (China), 2001; M.S., Mississippi State University, 2003; Ph.D., 2003.
- Wu, Kangsheng**, Post Doctoral Research Associate, 2005; B.S., Beijing Forestry University, 1985; M.S., 1988; Ph.D., Louisiana State University, 2005.
- Wu, Yajun**, Assistant Professor of Biology and Microbiology, Graduate Faculty, 2009; B.S., Nanjing Normal University (China), 1983; M.S., Southern Illinois University-Edwards, 1991; Ph.D. University of Missouri- Columbia, 1996.
- Wuellner, Melissa R.**, Assistant Professor of Natural Resource Management, Graduate Faculty, 2010; B.S., Ball State University, 2002; M.S., Montana State University, 2007; Ph.D., SDSU, 2009.
- Wylie, Bruce K.**, Adjunct Professor of Natural Resource Management, 2012; B.S., University of Montana, 1979; M.S., New Mexico State University, 1989; Ph.D., 1991.
- Wymer, Greg**, Manager of International Students and Scholars, 2012; B.A., Southwest Minnesota State University, 1995; M.S., Minnesota State University, 2003; MBA., Southwest Minnesota State University, 2005.
- Xu, Fei**, Integrated Systems Librarian/Assistant Professor, 2008, 2008; B.S., Zhengzhou University, 1995; M.S., Chinese Academy of Sciences, 1998; M.L.I.S., McGill University, 2005.
- Xu, Lan**, Associate Professor of Natural Resource Management, Graduate Faculty, 1998; B.S., Shanxi University, 1985; M.S., Institute of Applied Ecology of Chinese Academy of Sciences, 1988; Ph.D., North Dakota State University, 1998.
- Yan, Xingzhong**, Assistant Professor of Electrical Engineering, 2006; BS, Hunan Normal University, 1988; MS, Lanzhou Institute of Chemical Physics, 1991; Ph.D., Sun Yat-sen (Zhongshan) University, 1996.
- Yarrow, Gary**, Director of Environmental Health and Safety, Professor of Chemistry; General, Radiation, Biological and Chemical Safety Officer; Graduate Faculty, 1993, 1998; B.S., SDSU, 1977; M.S., Ohio State University, 1979; Ph.D., University of Minnesota, 1985.
- Yan, Lin**, Postdoctoral Fellow, 2011; B.S., Tongji University, 2002; M.S., Tongji University, 2005; Ph.D., Ohio State University, 2011.
- Yen, Yang**, Associate Professor of Biology and Microbiology, Graduate Faculty, 1996, 2000; B.S., Sichuan Teachers University, 1978; M.S., Nanjing Agricultural University, 1986; Ph.D., University of Missouri, 1989.
- Yeo, JeongHee**, Assistant Professor of Consumer Sciences, 2011; B.S., Sungkyunkwan University (Korea), 1999; M.S., 2001; M.S., Ohio State University, 2003; Ph.D., 2009.
- Yonce, Tammy Evans**, Assistant Professor of Music, 2012; B.M., Kennesaw State University, 2003; M.M., Indiana University, 2005; D.M.A., University of Georgia, 2010.
- Yordanova, Albena**, Assistant Professor of Construction and Operations Management, 2011; B.S. Institute of Architecture and Civil Engineering (Bulgaria), 1984; M.Arch, 1991; M.A. University of Missouri-Columbia, 1998.
- York, Jonathan David**, Assistant Professor of History, 2007; B.A., Appalachian State, 1986; M.A., 1988; Ph.D., University of Illinois (Champaign-Urbana) 1997.
- Young, Alan**, Professor of Veterinary and Biomedical Sciences, Graduate Faculty, 2001, 2004; B.S., University of Toronto (Canada), 1989; Ph.D., 1994.
- Young, Douglas B.**, Superintendent of Antelope Research Station, Animal Science, 1990; B.A., Chadron State College, 1989.
- Youngren, Larry**, Accounts Receivable Supervisor, 2005; B.A., Yankton College, 1979.
- Yseth, Kelley**, Program Coordinator, Admissions, 2008; B.A., College of Saint Benedict, 2004.
- Zamy, R. Martine**, Research Associate II, Plant Science, 2008.
- Zaruba Fountaine, Julie**, Research Coordinator, 2009, 2010; EA Martin Program in Human Nutrition; B.S. NDSU, 2007; M.S. University of Mary, 2009.
- Zdorovtsov, Christina**, SDSU Extension Community Development Field Specialist; 2008, 2011; B.S., Iowa State University, 2002; M.S., SDSU, 2007.
- Zeug, Krista**, Research Coordinator, 2009; EA Martin Program in Human Nutrition; B.S. Southwest Minnesota State University, 2001, M.S. SDSU, 2005.
- Zevenbergen, Jacqueline**, Admissions Counselor, 2012; B.S., South Dakota State University, 2012.
- Zhang, Hongwei**, Assistant Professor of Pharmaceutical Sciences, Graduate Faculty, 2010; B.S., Sichuan University (China), 2003, Ph.D, 2006.
- Zhang, Shouhong**, Manager of Instructional Design Services, 2002, 2005; B.A., Southwest Normal University (China), 1995; M.A., Sichuan International Studies University (China), 1998; Ed.D., East Tennessee State University, 2002.
- Zhang, Weiping**, Research Assistant Professor of Veterinary and Biomedical Sciences, 2005; B.S., Zhejiang Forestry College, China; M.S., Southwestern Forestry University, China, 1987; Ph.D., Iowa State University, 1996.
- Zhao, Mojun**, Molecular Biology Research Associate, 2005; M.S., Kansas State University, 2005.
- Zhong, Li**, Research Assistant, 2009; EA Martin Program in Human Nutrition; M.D. Medical College of Lanzhou University, 1992; M.S., NDSU, 2007.
- Zhou, Ruanbao**, Associate Professor of Biology and Microbiology, Graduate Faculty, 2008; B.S., Anhui Normal University (China), 1985; M.S., 1988; Ph.D., Peking University (China), 1997.
- Ziebarth, Ann**, Adjunct Instructor of Community Development, 2012; B.S., University of Minnesota, 1975; Ph.D., Louisiana State University, 1989.
- Ziegler, Nathan**, Director of English as a Second Language, 2013; B.A., University of Toledo, 2004; M.A., 2007; Ph.D., 2013.
- Zimmerman, Jason R.**, Professor and Assistant Department Head of Economics, Graduate Faculty, 1999, 2008; B.A., Wabash College, 1994; M.S., Purdue University, 1996; Ph.D., 1998.
- Zimmerman, Kyrsten K.**, Academic Development Assistant, Pharmacy, 2001; B.S., Indiana University, 1992; M.H.A., 1995.
- Zwart, Mary Beth**, Assistant Professor of Health and Nutritional Sciences, 1999, 2001; B.S., University of Wisconsin-La Crosse, 1999; M.S., SDSU, 2001; Ed.D., USD, 2009.

## Emeriti Faculty, Staff

- Aamot, Mary E.**, Professor Emerita of Cooperative Extension Service, 1967, 1995; B.A., Mt. Marty College, 1965; M.A., SDSU, 1976; Ed.D., University of South Dakota, 1985.
- Allen, Herbert R.**, Professor Emeritus of Economics, 1963, 1987; B.S., Iowa State University, 1950; M.S., 1952; Ph.D., SDSU, 1968.
- Amiotte, Lowell**, Associate Professor Emeritus of Education and Counseling, 1990, 1996; B.S., Black Hills State University, 1964; M.A., University of South Dakota, 1971.
- Andrawis, Alfred S.**, Professor Emeritus of Electrical Engineering, Graduate Faculty, 1981, 2013; B.S., Alexandria University (Egypt), 1974; M.S., SDSU, 1982; Ph.D., Virginia Polytechnic Institute and State University, 1991.
- Andrawis, Madeleine Y.**, Professor of Emerita of Electrical Engineering, Graduate Faculty, 1980, 2013; B.S., Cairo University (Egypt), 1977; M.S., SDSU, 1983; Ph.D., Virginia Polytechnic Institute and State University, 1991.

- Ayers, Clara J.**, Professor Emerita of Mathematics and Statistics, 1964, 1997; B.S., Minot State College, 1958; M.A., University of Minnesota, 1962.
- Baer, Robert J.**, Professor Emeritus of Dairy Science, Graduate Faculty, 1982, 2011; B.S., University of Georgia, 1977; M.S., 1979; Ph.D., 1983.
- Bahr, AnnMarie B.**, Professor Emeritus of Religion, Graduate Faculty, 1988, 2012; B.A., Lawrence University, 1972; M.A., Stanford University, 1975; Ph.D., Temple University, 1989.
- Bailey, James**, Professor Emeritus of Animal and Range Sciences, 1968, 1986; D.V.M., Iowa State University, 1946.
- Baker, Philip R.**, Professor Emeritus of Spanish, Graduate Faculty, 1973, 1999; B.A., University of Connecticut, 1959; M.A., Middlebury College, 1965; M.A.T., University of Hartford, 1968; Ph.D., Florida State University, 1973.
- Beattie, Patricia K.**, Professor Emerita of Modern Languages, 1968, 1986; B.S., SDSU, 1963; M.A., Middlebury College, 1964; Ph.D., University of Minnesota, 1983.
- Bell, Rodney E.**, Professor Emeritus of History, Graduate Faculty, 1970, 2000; B.S., Jamestown College, 1955; M.A., University of Michigan, 1956; Ph.D., 1975.
- Berg, Donald J.**, Professor Emeritus of Geography, Graduate Faculty, 1990, 2011; B.A., North Dakota State University, 1964; M.A., 1966; M.A., University of California, 1971; Ph.D., 1976.
- Berg, Sherwood O.**, President Emeritus, 1975, 1984; B.S., SDSU, 1947; M.S., Cornell University, 1948; Ph.D., University of Minnesota, 1951.
- Bergum, Gerald E.**, Professor Emeritus of Computer Science, Graduate Faculty, 1970, 2000; B.S., University of Minnesota, 1958; M.S., University of Notre Dame, 1962; Ph.D. Washington State University, 1969.
- Berry, Jr., Charles R.**, Professor Emeritus of Wildlife and Fisheries Sciences, Graduate Faculty, 1985, 2010; B.S., Randolph-Macon College, 1967; M.S., 1970; Ph.D., Virginia Polytechnic Institute and State University, 1976.
- Billow, Joye**, Professor Emerita of Pharmaceutical Sciences, Graduate Faculty, 1972, 1987; B.S., Temple University, 1966; Ph.D., 1972.
- Blazey, Charles H.**, Professor Emeritus of Health Science, 1965, 1987; B.S., State University of New York, 1950; M.S., 1960; D.Ed., University of Oregon, 1971.
- Bonnemann, Joseph J.**, Assistant Professor Emeritus of Plant Science, 1955, 1992; B.S., SDSU, 1951; M.S., 1964.
- Bonzer, Boyd J.**, Associate Professor Emeritus of Animal and Range Sciences, 1948, 1985; B.S., SDSU, 1942; M.S., 1959.
- Booher, James M.**, Professor Emeritus of Health, Physical Education and Recreation, Graduate Faculty, 1967, 1983; B.A., Nebraska Wesleyan University, 1965; M.S., SDSU, 1969; Ph.D., University of Utah, 1976.
- Branum, Allen R.**, Professor Emeritus of Psychology and Director of Diversity, 1970, 2000; B.S., Montana State University, 1966; M.A., University of Montana, 1968; Ph.D., 1971.
- Brown, Mary, M.**, Professor Emerita of English, 1955, 1982; B.A., Briar Cliff College, 1938; M.A., University of South Dakota, 1947; Ed.D., 1964.
- Buchenau, George W.**, Professor Emeritus of Plant Science, 1959, 1980; B.S., New Mexico State University, 1954; M.S., 1955; Ph.D., Iowa State University, 1960.
- Bugg, Wesley A.**, Director Emeritus of Finance, 1957, 1982; B.Ed., Western State University, 1942; B.S., Walton School of Commerce, 1949.
- Burns, Robert V.**, Distinguished Professor Emeritus of Political Science and Dean Emeritus of the Honors College, Graduate Faculty, 1970, 1994; B.S., SDSU, 1964; M.A., University of Missouri, 1966; Ph.D., 1973.
- Canaan, Charles W.**, Professor Emeritus of Music and Director of Choral Activity, 1986, 1992; B.S., California State University, 1965; M.A., Western Michigan University, 1973; D.M.A., Arizona State University, 1986.
- Cardenas, Karen**, Professor Emerita of Modern Languages, 1992, 1994; B.A., Grinnell College, 1965; M.A., University of Kansas, 1970; Ph.D., 1973.
- Carson, Paul L.**, Professor Emeritus of Plant Science, 1948, 1985; B.S., Northwestern Missouri State University, 1941; M.S., Iowa State University, 1947.
- Cecil, Charles F.**, Instructor Emeritus of Journalism and Mass Communication, 1965, 1987; B.S., SDSU, 1959; M.A., 1970.
- Chappell, Gary S.**, Professor and Head of Pharmaceutical Sciences Emeritus, 1973; 2000; B.S., Ohio State University, 1963; Ph.D., University of Kansas, 1968.
- Cheever, Jr., Herbert E.**, Professor Emeritus of Political Science and Dean of the College of Arts and Sciences Emeritus, 1968, 2000; B.S., SDSU, 1960; M.A., University of Iowa, 1962; Ph.D., 1967.
- Chen, Chen H.**, Professor Emeritus of Biology, 1960, 1975; B.S., National Taiwan University, 1954; M.S., Louisiana State University, 1960; Ph.D., SDSU, 1964.
- Chu, Shu-Tung, P.E.**, Professor Emeritus of Agricultural and Biosystems Engineering, 1955; 1999; B.S., National Taiwan University, 1956; M.S., University of Minnesota, 1960; Ph.D., 1966.
- Clague, Carolyn L.**, Associate Professor Emerita of Extension, Youth Development/4-H Specialist, 1977, 2002; B.A., SDSU, 1974; M.Ed., 1975; Ed.D., University of South Dakota, 2000.
- Clever, Charles C.**, Associate Professor Emeritus of Mathematics and Statistics, 1965, 1977; B.S., Grove City College, 1961; M.A., University of Kentucky, 1965.
- Colburn, J. Duane**, Associate Professor Emeritus of Plant Science, 1957, 1990; B.S., SDSU, 1950; M.S., 1960.
- Colson, John F.**, Professor Emeritus of Music, 1965, 1987; E.M.E., University of Iowa, 1955; M.A., 1956.
- Costello, William J.**, Distinguished Professor Emeritus of Animal Science, 1965, 1991; B.S., North Dakota State University, 1954; M.S., Oklahoma State University, 1960; Ph.D., 1963.
- Crain, David A.**, Professor Emeritus of History, Graduate Faculty, 1973, 1983; B.A., Pittsburgh State University, 1960; M.A., George Washington University, 1962; Ph.D. Indiana University, 1972.
- Crews, Georgia W.**, Associate Professor Emerita of Nutrition, Food Science and Hospitality, Graduate Faculty, 1984, 2003; B.S., Middle Tennessee State University, 1968; M.S., University of Tennessee, 1970; Ph.D., Kansas State University, 2000.
- Crews, Michael G.**, Professor Emeritus of Nutrition, Food Science and Hospitality, Graduate Faculty, 1984, 1990; B.S., Virginia Polytechnic Institute and State University, 1972; Ph.D., 1978.
- Dearborn, Delwyn D.**, Professor Emeritus of Animal and Range Sciences, 1956, 1990; B.S., SDSU, 1954; M.S., 1959; Ph.D., University of Nebraska, 1970.
- DeBoer, Darrell W.**, Professor Emeritus of Agriculture and Biosystems Engineering, Graduate Faculty, 1969, 2000; B.S., Iowa State University, 1963; M.S., 1964; Ph.D., 1969.
- DeBoer, Delvin E.**, Professor Emeritus of Civil and Environmental Engineering, Graduate Faculty, 1978, 2012; B.S., SDSU, 1978; M.S., 1980; Ph.D., Iowa State University, 1990.
- Dobbs, Thomas L.**, Professor Emeritus of Economics, Graduate Faculty, 1978, 1982; B.S., SDSU, 1965; Ph.D., University of Maryland, 1969.
- Duffey, George H.**, Professor Emeritus of Physics, 1945, 1959; B.S., Cornell College, 1942; M.A., Princeton University, 1944; Ph.D., 1945.
- Duggan, Margaret M.**, Professor Emerita of English, Graduate Faculty, 1978, 2001; B.A., St. John's University, 1958; M.A., Columbia University, 1965; Ph.D., 1972.

- Dybing, C. Dean**, Professor Emeritus of Plant Science, 1960, 1993; B.S., Colorado State University, 1953; M.S., 1955; Ph.D., University of California, 1959.
- Edeburn, Carl**, Professor Emeritus of Educational Leadership, Graduate Faculty, 1973, 1982; B.S., St. Cloud State University, 1963; M.A., University of Minnesota, 1969; Ph.D., University of North Dakota, 1973.
- Edie, Richard**, Professor Emeritus of Visual Arts, 1956, 1987; B.F.A., Kansas City Art Institute, 1951; M.F.A., University of Kansas, 1956.
- Ellerbruch, Virgil G.**, Dean and Professor Emeritus of Electrical Engineering, Graduate Faculty, 1967, 2001; B.S., University of Wyoming, 1960; M.S., 1961; Ph.D., 1969.
- Emerick, Royce J.**, Professor Emeritus of Chemistry and Biochemistry, Graduate Faculty, 1957, 1965; B.S., Oklahoma State University, 1952; M.S., University of Wisconsin, 1955; Ph.D., 1957.
- Enevoldsen, Bernadine L.**, Professor of Consumer Affairs Emerita, Graduate Faculty, 1964, 2001; B.S., SDSU, 1964; M.S., 1986; Ph.D., University of Minnesota, 1993.
- Evans, David A.**, Professor Emeritus of English and Writer in Residence, Graduate Faculty, 1968, 1978; B.A., Morningside College, 1962; M.A., University of Iowa, 1964; M.F.A., University of Arkansas, 1976.
- Evenson, Donald P.**, Distinguished Professor Emeritus of Veterinary Science, Graduate Faculty, 1981, 1996; B.A., Augustana College, 1964; Ph.D., University of Colorado, 1968.
- Evenson, Paul D.**, Professor Emeritus of Plant Science and Statistics, 1959, 2001; B.S., University of Nebraska, 1957; M.S., 1959.
- Evers, Norman P.**, Instructor Emeritus of Horticulture, Forestry, Landscape and Parks, 1963, 1982; B.S., SDSU, 1959.
- Everett, V. Duane**, Professor Emeritus of Education, 1966, 1989; B.S., University of Nebraska, 1953; M.S., 1962; Ed.D., 1966.
- Flake, Lester D.**, Distinguished Professor Emeritus of Wildlife and Fisheries Sciences, Graduate Faculty, 1972, 1999; B.S., Brigham Young University, 1965; M.S., 1966; Ph.D., Washington State University, 1971.
- Fleming, Mary J.**, Emerita Extension EFNEP Coordinator/Assistant Professor of Nutrition, Food Science & Hospitality, 1958, 2000; B.S., SDSU, 1958; M.S., 1974.
- Flynn, M. L.**, Professor Emerita of English, Graduate Faculty, 1990, 2000; Ph.B., DePaul University, 1969; M.A. University of Missouri, 1977; Ph.D., 1885.
- Forsyth, Harry L.**, Professor Emeritus of Health, Physical Education and Recreation, 1955, 1990; B.S., SDSU, 1951; M.S., 1956; D.P.Ed., Springfield College, 1970.
- Froehlich, Don P.**, Professor Emeritus of Mechanical Engineering, Graduate Faculty, 1982, 1992; B.S., SDSU, 1972; M.S., 1973; Ph.D., Cornell University, 1976.
- Funchion, Michael F.**, Professor Emeritus of History, Graduate Faculty, 1973, 1983; B.A., Iona College, 1966; M.A., Loyola University, 1968; Ph.D., 1973.
- Gambill, Norman**, Professor Emeritus of Visual Arts, Graduate Faculty, 1992; B.A., Emory University, 1962; M.A., University of Iowa, 1966; Ph.D., Syracuse University, 1976.
- Gardner, Wayne S.**, Professor Emeritus of Plant Science, 1967, 1985; B.S., Utah State University, 1950; M.S., 1951; Ph.D., University of California, 1969.
- Gartner, F. Robert**, Professor Emeritus of Range Sciences, 1956, 1980; B.S., University of Wyoming, 1950; M.S., University of California, 1956; Ph.D., University of Wyoming, 1967.
- Gee, Dan H.**, Professor Emeritus of Animal and Range Sciences, 1966, 2001; B.S., University of Minnesota, 1965; M.S., SDSU, 1967; Ph.D., 1970.
- Gehrke, Jr., Henry**, Professor Emeritus of Chemistry and Biochemistry, 1964, 1973; B.S., Oklahoma State University, 1958; M.S., University of Iowa, 1963; Ph.D., 1964.
- Gerwing, James R.**, Professor Emeritus of Plant Science, 1980, 2002; B.S., University of Minnesota, 1975; M.S., 1978.
- Getz, John E.**, Professor Emeritus of Journalism and Mass Communication, Graduate Faculty, 1985, 2005; B.S., SDSU, 1964; M.A., University of Arizona, 1985; Ed.D., University of South Dakota, 2001.
- Ghazi, Hassan S.**, Professor Emeritus of Mechanical Engineering, Graduate Faculty, 1984, 2004; B.S., Purdue University, 1954; M.S., Ohio State University, 1956; Ph.D., 1962.
- Graetzer, Hans G.**, Professor Emeritus of Physics, 1956, 1992; B.A., Oberlin College, 1952; M.S., Yale University, 1953; Ph.D., 1956.
- Gleim, David E.**, Dean Emeritus of the Briggs Library, 2007, 2011; B.A., Brescia University, 1971; M.S.L.S., University of Kentucky, 1973; Ph.D., University of North Carolina-Chapel Hill, 1992.
- Gorham, Elizabeth E.**, Associate Professor Emerita of Extension Family Resource Management, 1999, 2011; B.S., Iowa State University, 1968; M.S., Utah State University, 1971; Ph.D., Oregon State University, 1993.
- Granholt, Nels H.**, Distinguished Professor Emeritus of Biology and Microbiology and Global Studies, Graduate Faculty, 1968, 2011; B.A., University of Massachusetts, 1964; Ph.D., Iowa State University, 1968.
- Grant, Geoffrey W.**, Associate Professor Emeritus of Rural Sociology, Graduate Faculty, 1977, 1986; B.A., Carroll College, 1964; M.A., University of Nebraska, 1969; Ph.D., 1980.
- Greenbaum, Harry**, Professor Emeritus of Economics, 1961, 1979; B.S., Texas A&M University, 1955; M.S., Ohio State University, 1956; Ph.D., 1961.
- Gritzner, Charles F.**, Distinguished Professor Emeritus of Geography, Graduate Faculty, 1980, 1995; B.A., Arizona State University, 1958; M.A., Louisiana State University, 1960; Ph.D., 1969.
- Grove, John A.**, Professor Emeritus of Chemistry and Biochemistry, Graduate Faculty, 1968, 1979; B.S., Ohio State University, 1961; M.S., 1964; Ph.D., 1966.
- Haertel, Lois S.**, Professor Emerita of Biology, Graduate Faculty, 1969, 1988; B.S., University of Illinois, 1961; M.S., 1963; Ph.D., Oregon State University, 1969.
- Hall, Robert G.**, Professor Emeritus of Plant Science, Graduate Faculty, 1982, 2011; B.S., University of Idaho, 1969; M.S., 1974; Ph.D., University of Missouri, 1978.
- Hallman, Clark**, Professor Emeritus of Hilton M. Briggs Library, 1983, 1995; B.S., University of Pittsburgh, 1971; M.L.S., 1977; M.S., SDSU, 1988.
- Halverson, Andrew W.**, Professor Emeritus of Chemistry, 1949, 1985; B.S., SDSU, 1943; M.S., University of Wisconsin, 1947; Ph.D., 1949.
- Hamilton, Edward D.**, Professor Emeritus of Veterinary Science and Animal Disease Research and Diagnostic Laboratory, Graduate Faculty, 1997, 2007; B.S., Texas A&M University, 1973; D.V.M., 1974.; M.S., 1992.
- Hanson, Clark W.**, Supervisor of Agricultural Education and Professor Emeritus of Education and Counseling, Graduate Faculty, 1973, 1982; B.S., University of Minnesota, 1963; M.A., 1971; Ph.D., Iowa State University, 1972.
- Hassoun, Nadim M.**, P.E., Professor Emeritus of Civil and Environmental Engineering, Graduate Faculty, 1980; 1999; B.S., Cairo University, 1956; M.S., University of Michigan, 1966; Ph.D., 1968.
- Hatfield, Warren G.**, Professor Emeritus of Music, 1961, 1993; B.A., University of Northern Iowa, 1952; M.S., University of Iowa, 1959; Ph.D., 1967.
- Haug, Mary**, Associate Professor Emerita of English, 1979, 2002; B.A., SDSU, 1968; M.A., 1976.

- Hecht, Harry G.**, Professor Emeritus of Chemistry, Graduate Faculty, 1973, 1980; B.S., Brigham Young University, 1958; M.S., 1959; Ph.D., University of Utah, 1962.
- Hefling, Joel L.**, Assistant Professor Emeritus of Communication Studies and Theatre, 1970, 2012; B.S.E., Emporia State University, 1964; M.S., 1970.
- Hegge, Margaret J.**, Distinguished Professor Emerita of Nursing, Graduate Faculty, 1969, 1999; B.A. Gustavus Adolphus College, 1969; M.Ed., SDSU, 1972; Ed.D., University of South Dakota, 1983; M.S., University of Minnesota, 1984.
- Hellickson, Mylo A.**, Professor Emeritus of Agricultural and Biosystems Engineering, Graduate Faculty, 1969, 1982; B.S., North Dakota State University, 1964; M.S., 1966; Ph.D., West Virginia University, 1969.
- Henning, David R.**, Alfred Chair - Associate Professor Emeritus of Dairy Science, Graduate Faculty, 1990, 2006; B.S., University of Illinois, 1962; Ph.D., Oregon State University, 1967.
- Hess, Donna J.**, Distinguished Professor Emerita of Rural Sociology, Graduate Faculty, 1974, 1998; B.A., Marquette University, 1965; M.A., State University of New York, 1971; Ph.D., Michigan State University, 1974.
- Heusinkveld, Marion**, Professor Emeritus of General Engineering, 1984, 1990; B.S., University of South Dakota, 1959, M.N.S., 1962.
- Hietbrink, Bernard E.**, Dean/Professor Emeritus of Pharmaceutical Sciences, 1964, 1987; B.S., SDSU, 1958; Ph.D., University of Chicago, 1961.
- Higgins, Kenneth F.**, Professor Emeritus of Wildlife and Fisheries Sciences, Graduate Faculty, 1985, 1994; B.S., Colorado State University, 1965; M.S., SDSU, 1968; Ph.D., North Dakota State University, 1981.
- Hilderbrand, David**, Professor Emeritus of Chemistry, Dean Emeritus of Graduate School, Research and Sponsored Programs. Graduate Faculty, 1974, 2004; B.A., Southwest Baptist College, 1967; M.A., University of Missouri, 1969; Ph.D., 1971.
- Hillner, Kenneth**, Professor Emeritus of Psychology, Graduate Faculty, 1969, 2000; B.A., Dartmouth College, 1960; Ph.D., Indiana University, 1965.
- Hofland, Sharon A.**, Professor Emerita of Nursing, Graduate Faculty, 1964, 1983; B.S., SDSU, 1972; M.S., 1972; Ph.D., 1976; M.N., University of Washington, 1979.
- Hogan, Edward P.**, Professor Emeritus of Geography, Associate Vice President for Academic Affairs and Chief Information Technology Officer Emeritus, Graduate Faculty, 1967, 1999; B.S., Saint Louis University, 1961; M.A., 1962; Ph.D., 1969.
- Hoogstraat, Wayne E.**, Professor Emeritus of Communication Studies and Theatre, 1960, 1987; B.A., Sioux Falls College, 1951; M.A., University of South Dakota, 1953; Ed.D., Pennsylvania State University, 1963.
- Houglum, Joel E.**, Professor Emeritus of Pharmaceutical Sciences/Assistant Dean of Pharmacy Emeritus, Graduate Faculty, 1979, 2004; A.A., Lake Region Junior College, 1969; B.S., University of Minnesota, 1972; Ph.D., University of Wisconsin, 1979.
- Howard, Richard K.**, Emeritus Assistant Professor of the Cooperative Extension Service, 1970, 2001; B.S., SDSU, 1966; M.Ed., 1976.
- Iken, Martha B.**, Assistant Professor Emerita of Nursing, 1980, 1984; B.S., Dakota State University, 1967; M.A., University of South Dakota, 1968; B.S., SDSU, 1977; M.S., 1984; Ed.D., University of South Dakota, 2000.
- Jensen, Darrell**, Professor Emeritus of Education/Dean of Education and Counseling Emeritus, 1971, 1981; B.S., Northwest Missouri State University, 1959; M.A., Drake University, 1965; Ph.D., University of Iowa, 1971.
- Jensen, William**, Professor Emeritus of Chemistry and Biochemistry, Graduate Faculty, 1967, 1976; B.S., University of Minnesota, 1959; M.S., University of Iowa, 1962; Ph.D., 1964.
- Joffer, Coral Lee**, Assistant Professor Emeritus of Nursing, 1985; B.S., SDSU, 1964; M.S., University of Minnesota, 1969.
- Johnson, Corliss L.**, Professor Emeritus of Music, Graduate Faculty, 1972, 1994; B.M.E., Emporia State University, 1965; M.S., 1966; D.M.A., University of Colorado, 1972.
- Johnson, Darrell D.**, Professor Emeritus of Veterinary Science, 1976, 2001; B.S., North Dakota State University, 1956; B.S., Kansas State University, 1961, D.V.M., 1963, Ph.D., 1976.
- Johnson, James L.**, Distinguished Professor Emeritus of Communication Studies and Theatre, Director of Theatre, Graduate Faculty, 1973, 2001; B.S., Kansas State University, 1960; M.A., University of South Dakota, 1961; Ph.D., University of Kansas, 1973.
- Johnson, James R.**, Professor Emeritus of Animal and Range Sciences, 1966, 2001; B.S., Montana State University, 1964; M.S., 1966; Ph.D., Oregon State University, 1974.
- Johnson, LeRoy C.**, Associate Professor Emeritus of Horticulture, Forestry, Landscape and Parks, 1965, 1988; B.S., Michigan State University, 1951; M.S., Kansas State University, 1964.
- Jorgensen, Jerry D.**, Dean Emeritus of the College of Arts and Sciences, Professor Emeritus of Communication Studies and Theatre, Graduate Faculty, 1979, 2011; B.S., SDSU, 1978; M.S., 1984; Ph.D., University of Nebraska, 1990.
- Kantack, Benjamin H.**, Professor Emeritus of Entomology and Plant Science, 1962, 1977; B.S., Kansas State University, 1951; M.S., Oklahoma State University, 1954; Ph.D., University of Nebraska, 1963.
- Kenefick, Donald G.**, Professor Emeritus of Plant Science and Biochemistry, Graduate Faculty, 1959, 1971; B.S., University of Wisconsin, 1951; Ph.D., Michigan State University, 1959.
- Kerr, Foster**, Water Resources Specialist Emeritus, Agricultural and Biosystems Engineering, 1957, 1990; B.S., University of South Dakota, 1933.
- Kildahl, Karen A.**, Professor Emerita of English, Graduate Faculty, 1969, 2001; B.S., University of Washington, 1963; M.A., 1968; Ph.D., 1974.
- Kim, Bang J.**, Professor Emerita of Hilton M. Briggs Library, 1967, B.A., Ewha Women's University, 1961; M.A., University of Oregon, 1965.
- Kim, Han J.**, Professor Emeritus of Economics, Graduate Faculty, 1967, 1979; A.A., San Joaquin Delta College, 1958; B.A., University of California, 1960; M.A., University of Oregon, 1962; Ph.D., Oregon State University, 1969.
- Knabach, Wayne E.**, Professor Emeritus of Electrical Engineering, 1957, 1975; B.S., SDSU, 1949; M.S., 1961.
- Knofczynski, Clayton W.**, P.E., Professor Emeritus of Mechanical Engineering, 1958, 1991; B.S., SDSU, 1958; M.S., 1966.
- Kohl, Robert A.**, Professor Emeritus of Plant Science, Graduate Faculty, 1975, 1987; B.S., Purdue University 1958; M.S., Utah State University, 1960; Ph.D., 1962.
- Kohler, Paul H.**, Professor Emeritus of Animal Science, 1951, 1962; B.S., SDSU, 1949; M.S., 1950; Ph.D., University of Minnesota, 1959.
- Lacher, Robert J.**, Professor Emeritus of Mathematics and Statistics, Graduate Faculty, 1970, 1982; B.S., Saint Cloud State University, 1961; M.S., Rutgers University, 1965; D.A., University of Northern Colorado, 1971.
- Lamberton, Charles E.**, Professor Emeritus of Economics, Graduate Faculty, 1974, 1984; B.B.A., University of Minnesota, 1960; M.S., University of Wyoming, 1970; Ph.D., Iowa State University, 1975.
- Lattin, Danny L.**, Professor and Dean Emeritus of the College of Pharmacy, Graduate Faculty, 1995; B.S., University of Kansas, 1965; Ph.D., University of Minnesota, 1970.

- Lee, Richard W.**, Professor Emeritus of Journalism and Mass Communication, Graduate Faculty, 1978; B.S., University of Illinois, 1956; M.A., Southern Illinois University, 1964; Ph.D., University of Iowa, 1972.
- Leisure, O. W.**, Professor Emeritus of Physics, Graduate Faculty, 1963, 2004; B.S., SDSU, 1960; M.S., 1966.
- Leslie, Jerome R.**, Assistant Professor Emeritus in Extension, 1978, 2001; B.S., SDSU, 1962; M.S., 1990.
- Libal, George W.**, Professor Emeritus of Animal and Range Sciences, 1968, 2001; B.S., University of Nebraska, 1966; M.S., 1968; Ph.D., SDSU, 1974.
- Lingren, Charles K.**, Professor Emeritus of Educational Leadership, Graduate Faculty, 1976, 1999; B.A., University of Northern Iowa, 1958; M.A., University of Iowa, 1968; Ph.D., 1975.
- Lonowski, Delmer E.**, Professor Emeritus of Political Science, 1991, 2013; B.A., George Washington University, 1968; M.A.Ed., University of Nebraska-Kearney, 1986; M.A., 1988; Ph.D., University of Nebraska-Lincoln 1991.
- Marquardt, Steve R.**, Dean and Professor Emeritus of Library Science, 1996; B.A., Macalester College, 1966; M.A., University of Minnesota, 1970; M.A., 1974; Ph.D., 1978.
- Mathees, Duane**, Professor Emeritus of Veterinary and Biomedical Sciences - Olson Biochemistry Laboratory, Graduate Faculty, 1980, 1991; B.A. Augsburg College, 1972; Ph.D., University of Maryland, 1978.
- Matz, Ralph L.**, Program Coordinator Emeritus, Cooperative Extension Service, 1980, 1998; B.S., SDSU, 1969; M.Ed., 1971; M.S., 1975.
- Mc Kinney, Jimmy R.**, Professor Emeritus of Music and Director of Bands, 1975, 1991; B.M.E., Oklahoma State University, 1971; M.Ed., University of Arkansas, 1972.
- McMullen, Charles R.**, Professor Emeritus of Biology and Microbiology, Assistant Director of Academic Programs of College of Agriculture and Biological Sciences, Graduate Faculty, 1966, 1986; B.S., Northern State University, 1966; M.S., SDSU, 1969; Ph.D., 1974.
- McRoberts, Donald E.**, Associate Professor Emeritus of Chemistry, 1956, 1985; B.S., Montana State University, 1943; M.S., 1963.
- Mendelsohn, Robert D.**, Professor Emeritus of Rural Sociology, Graduate Faculty, 1976, 1986; B.S., Illinois State University, 1967; M.S., Western Michigan University, 1971; Ph.D., 1973.
- Miller, John E.**, Professor Emeritus of History, Graduate Faculty, 1974, 1984; B.A., University of Missouri, 1966; M.A., University of Wisconsin, 1968; Ph.D., 1973.
- Miller, Peggy Gordon**, President and Professor Emerita of Education, Graduate Faculty, 1998; B.A., Transylvania University, 1959; M.S., Northwestern University, 1964; Ed.D., Indiana University, 1975, L.L.D., Transylvania University (Honorary Degree), 1993.
- Moeller, Lonell L.**, Professor Emeritus of Agricultural Education, 1981, 2012; B.S., SDSU, 1970; M.Ed., 1976; Ph.D., Iowa State University, 1981.
- Monahan, Maurice L.**, Professor Emeritus of Mathematics, 1956, 1999; B.S., SDSU, 1956; M.S., University of Illinois, 1964.
- Morgan, Helen N.**, Professor Emerita of Visual Arts, 1965, 1984; B.F.A., School of the Art Institute of Chicago, 1953; M.F.A., 1964; Ed.D., Illinois State University, 1984.
- Morrill, Keith**, Associate Professor Emeritus of Biology, 1968, 1975; B.S., SDSU, 1959; M.A., University of South Dakota, 1963.
- Murra, Gene**, Professor Emeritus of Economics, 1959, 1977; B.S., SDSU, 1959; M.S., 1960; Ph.D., Ohio State University, 1963.
- Myers, Gerald A.**, Professor Emeritus of Biology, 1958, 1968; B.A., Kearney State College, 1951; M.A., University of Northern Colorado, 1957; Ph.D., SDSU, 1963.
- Nelson, David S.**, Professor Emeritus of Philosophy, 1968, 2001; B.A., Augustana College, 1960; M.S., S.D. School of Mines and Technology, 1962; Ph.D., University of Oregon, 1967.
- Nielsen, G. Howard**, Professor Emeritus of Mathematics and Statistics, Graduate Faculty, 1976, 2012; B.S., SDSU, 1963; M.A., University of Colorado, 1966; Ph.D., 1969.
- Norris, Virginia**, Professor Emerita of Psychology, Head of Psychology, Graduate Faculty, 1991, 2000; B.A., Baldwin-Wallace College, 1983; M.A., Kent State University, 1986; Ph.D., 1991.
- Nussbaumer, Linda L.**, Professor Emerita of Interior Design , Graduate Faculty, 1994, 2007; B.S., Mankato State University, 1990; M.S., 1992; Ph.D., University of Minnesota, 1998.
- O'Connor, Mary**, Professor Emerita of English, Graduate Faculty, 1992, 2002; B.A., College of Notre Dame, 1970; M.F.A., Columbia University, 1977; Ph.D., University of California, 1992.
- Olson, Roberta K.**, Dean and Professor Emerita of Nursing, 1994, 2013; B.S., SDSU, 1964; M.S.N., Washington University, 1968; Ph.D., Saint Louis University, 1984.
- Pahl, Darrel**, Assistant Professor Emeritus of Agricultural and Biosystems Engineering, 1951, 1985; B.S., SDSU, 1950.
- Palmer, Ivan S.**, Professor Emeritus of Chemistry and Biochemistry, 1955, 1973; B.S., SDSU, 1955; M.S., 1956; Ph.D., Pennsylvania State University, 1960.
- Parsons, John G.**, Professor and Head Emeritus of Dairy Science, Graduate Faculty, 1968, 2001; B.S., University of Manitoba, 1961; M.S., 1963; Ph.D., Pennsylvania State University, 1968.
- Paynter, Wilford G.**, Assistant Professor Emeritus of Extension, 1949, 1983; B.S., SDSU, 1949.
- Pedersen, James O.**, Professor of Education/Dean of General Registration Emeritus, B.S., SDSU, 1955; M.S., 1962; Ph.D., Purdue University, 1968.
- Penor-Ceglian, Cindi M.**, Professor Emerita of Human Development, Graduate Faculty, 1979, 2011; B.S., SDSU, 1979; M.Ed., 1980; Ph.D., 1997.
- Perpich, Mary**, Associate Professor Emerita of Journalism and Mass Communication, B.A. Michigan State University, 1976; M.A. Michigan State University, 1981.
- Petersen, Marvin E.**, Associate Professor Emeritus of Electrical Engineering, 1982, 1989; B.S., S.D. School of Mines and Technology, 1948; M.S., Massachusetts Institute of Technology, 1957.
- Peterson, Carol J.**, Provost and Vice President Emerita for Academic Affairs, Professor of Nursing, Graduate Faculty, 1977, 2000; Diploma in Nursing, Methodist Kahler School of Nursing, 1960; B.S., University of Minnesota, 1963; M.Ed., 1964; Ph.D., 1969.
- Peterson, Donald L.**, Extension Specialist and Professor Emeritus of Economics, 1974, 1987; A.A., Austin Community College, 1960; B.A., Mankato State University, 1965; M.A., 1967; Ph.D., University of Nebraska, 1973.
- Peterson, Gary**, Professor Emeritus of Biology and Microbiology, Graduate Faculty, 1973, 1983; B.S., University of Utah, 1965; M.S., Emporia State University, 1969; D.A., University of Northern Colorado, 1971.
- Peterson, Raymond L.**, Professor Emeritus of Communication Studies and Theatre, 1971, 2011; B.S., Dakota State University, 1968; M.A., SDSU, 1973.
- Peterson, Ronald M.**, Professor Emeritus of Horticulture-Forestry, 1953, 1987; B.S., Colorado State University, 1947; M.S., University of California, 1949; Ph.D., University of Minnesota, 1953.
- Piersel, David**, Professor Emeritus of Music, 1978, 2000; B.M.E., Simpson College, 1958; M.A., University of Iowa, 1964; Ph.D., 1970.
- Plumart, Phillip E.**, Professor Emeritus of Animal Science, 1961, 1990; B.S., University of Illinois, 1950; M.S., Kansas State University, 1952.
- Pollmann, Robert J.**, Associate Professor of Plant Science/Manager of Seed Certification Emeritus, 1978, 2004; B.S., SDSU, 1961; M.Ed., 1967.
- Powers, James E.**, Professor Emeritus of Clinical Pharmacy, Graduate Faculty, 1983, 2000; B.S., University of Wisconsin, 1957; Pharm.D., University of Minnesota, 1983.
- Quist, Oren P.**, Professor Emeritus of Physics, Graduate Faculty, 1986, 1997; B.A., Gustavus Adolphus College, 1965; M.S., University of Denver, 1967; Ph.D., 1973.

- Raney, A. Leon**, Professor/Dean of Libraries Emeritus, B.S., University of Central Arkansas, 1960; M.S., Louisiana State University, 1962; Ph.D., Indiana University, 1972.
- Reeves, Dale L.**, Professor Emeritus of Plant Science, 1970, 1980; B.S., Kansas State University, 1958; M.S., 1963; Ph.D., Colorado State University, 1969.
- Reger, Michael P.**, Executive Vice President Emeritus for Administration, Assistant Professor of Education, Graduate Faculty, 1979, 2000; B.A., Western Illinois University, 1970; M.S., 1972; Ph.D., Ohio State University, 1983.
- Richardson, Jay R.**, Professor Emeritus of Human Development, Consumer and Family Sciences, 1963, 1970; B.S., Brigham Young University, 1957; M.S., 1958; Ed.D., Pennsylvania State University, 1969.
- Richardson, Marilyn**, Associate Professor Emerita of Health, Physical Education and Recreation, 1963, 1994; B.A., Brigham Young University, 1956; M.A., Pennsylvania State University, 1963.
- Richter, Anthony H.**, Professor Emeritus of German, Graduate Faculty, 1971, 1981; B.A., Northwestern University, 1965; M.A.T., 1966; Ph.D., 1971.
- Rickerl, Diane Holland**, Professor Emerita of Plant Science, Graduate Faculty, 1986, 2011; B.S., Iowa State University, 1972; M.A., 1976; M.S., Auburn University, 1984; Ph.D., 1986.
- Roberts, Ardelle A, Lundeen**, Professor Emerita and Head of Economics, 1976, 1977; B.S., SDSU, 1970; M.S., 1971; Ph.D., Iowa State University, 1976.
- Rogers, Lawrence.**, Professor Emeritus of Education and Human Sciences, Professor of Teaching, Learning and Leadership, Graduate Faculty, 1995, 2011; B.A., University of Nebraska, 1964; Ph.D., 1975.
- Rollag, Dwayne A.**, P.E., Professor and Head of Civil and Environmental Engineering, Graduate Faculty, 1965, 1979; B.S., University of Minnesota, 1959; M.S., SDSU, 1966; Ph.D., Purdue University, 1975.
- Rose, Madeleine S.**, Associate Professor Emerita of Nutrition, Food Science & Hospitality, Science Fair Coordinator, Graduate Faculty, 1990, 2000; B.S., University of California, 1970; M.S., University of Maryland, 1972; Ph.D., Texas Woman's University, 1985.
- Rose, Robert**, Associate Professor Emeritus of Nutrition, Food Science & Hospitality, 1988, 2000; B.S., SDSU, 1970; M.S., University of Maryland, 1972; Ph.D., Texas Woman's University, 1991.
- Rue, Rolland R.**, Professor Emeritus of Chemistry and Biochemistry, 1962, 1983; B.A., Macalester College, 1957; Ph.D., Iowa State University, 1962.
- Ruffolo, John J.**, Professor Emeritus of Biology and Microbiology, Graduate Faculty, 1999; B.S., Loyola University, 1965; M.S., University of Iowa, 1969; Ph.D., 1972
- Ryder, Mary R.**, Distinguished Professor Emerita of English, Graduate Faculty, 1989, 1997; B.A., Monmouth College, 1972; M.A., Illinois State University, 1981; Ph.D., University of Illinois, 1987.
- Sander, Duane**, Dean and Professor Emeritus of Electrical Engineering, 1967, 1999; B.S., S.D. School of Mines and Technology, 1960; M.S., Iowa State University, 1962; Ph.D., 1964.
- Sandness, Roger K.**, Professor and Head Emeritus of Geography, Graduate Faculty, 1971, 1992; B.S., University of North Dakota, 1967; M.S., 1968; Ph.D., University of Iowa, 1986.
- Satterlee, James L.**, Professor Emeritus and Head of Rural Sociology, Graduate Faculty, 1962, 1976; B.S., SDSU, 1962, M.S., 1963; Ph.D., 1970.
- Scalet, Charles G.**, Professor Emeritus of Wildlife and Fisheries Sciences, Graduate Faculty, 1973, 1982; B.A., Southern Illinois University, 1964; M.A., 1967; Ph.D., University of Oklahoma, 1971.
- Schingoethe, David J.**, Distinguished Professor Emeritus of Dairy Science, Graduate Faculty, 1969, 2011; B.S., University of Illinois, 1964; M.S., 1965; Ph.D., Michigan State University, 1968.
- Schipull, Martin A.**, Professor Emeritus of Agricultural and Biosystems Engineering, 1981; B.S., University of Wisconsin, 1974; M.Ed., University of Minnesota, 1981.
- Schliessmann, Michael R.**, Assistant Dean and Professor Emeritus of Communication Studies and Theatre, Institutional Management Officer, Graduate Faculty, 1973, 2001; B.S., SDSU, 1973, M.S., 1974; Ph.D., University of Kansas, 1981.
- Schumacher, Thomas E.**, Professor Emeritus of Plant Science, Graduate Faculty, 1983, 2012; B.A., Bluffton College, 1972; M.S., Michigan State University, 1979; Ph.D., 1982.
- Selim, Ali A.**, Professor Emeritus of Civil and Environmental Engineering and Director of Local Transportation Assistance Program, Graduate Faculty, 1977, 2008; B.S., Ain-Shams University (Egypt), 1967; M.S., University of Missouri, 1974; Ph.D., 1976.
- Shane, Richard C.**, Professor Emeritus of Economics, Graduate Faculty, 1977, 2008; B.S., SDSU, 1969; M.S., University of Arizona, 1971; Ph.D., Washington State University, 1978.
- Shank, D. Boyd**, Professor Emeritus of Plant Science, 1946; 1980; B.S., University of Nebraska, 1935; Ph.D., Iowa State University, 1941.
- Shubeck, Fred E.**, Professor Emeritus of Plant Science, 1951, 1985; B.S., SDSU, 1940; Ph.D., University of Minnesota, 1951.
- Sigl, Arden B.**, Professor Emeritus of Civil and Environmental Engineering, Graduate Faculty, 1967, 1984; B.S., SDSU, 1967; M.S., 1969; Ph.D., Northwestern University, 1977.
- Singh, Yadhu N.**, Professor Emeritus of Pharmaceutical Sciences, Graduate Faculty, 1988, 1997; B.S., University of Otago (New Zealand), 1967; M.S., University of Strathclyde (Scotland), 1974; Ph.D., 1979.
- Slyter, Lowell**, Professor Emeritus of Animal and Range Sciences, Graduate Faculty, 1970, 2001; B.S., Kansas State University, 1964; M.S., University of Nebraska, 1966; Ph.D., Kansas State University, 1969.
- Smith, Howard**, Associate Dean Emeritus of the College of Education and Counseling and Professor Emeritus of Counseling and Human Resource Development, 1978, 2003; B.A., University of Sioux Falls, 1965, M.Div., Central Baptist Theological Seminary, 1968; M.Ed., SDSU 1974; Ed.D., USD, 1980.
- Smolik, James D.**, Professor Emeritus of Plant Science, Graduate Faculty, 1967, 1988; B.S., SDSU, 1965; M.S., 1969; Ph.D., 1973.
- Sorenson, Jerry A.**, Professor Emeritus of General Engineering Technology, Graduate Faculty, 1984, 2000; B.S.E., University of South Dakota, 1963; M.Ed., University of Illinois, 1967.
- Spinar, Leo H.**, Professor Emeritus of Chemistry and Biochemistry, 1966, 1970; B.A., University of South Dakota, 1951; M.S., University of Wisconsin, 1953; Ph.D., 1958.
- Spinar, Melvin F.**, Professor Emeritus of Visual Arts, 1969, 1989; B.A., Dakota Wesleyan University, 1962; M.A., University of Iowa, 1965; M.F.A., 1966; M.F.A., 1966.
- Steinley, Gary L.**, Professor Emeritus of Education and Counseling, Graduate Faculty, 1979, 1992; B.S., Black Hills State University, 1963; M.A., Fresno State University, 1967; Ph.D., University of Utah, 1970.
- Stoflet-Gouldin, Dorothy**, Professor Emerita of Textiles, Clothing and Interior Design, 1962, 1977; B.A., Coe College, 1933; M.S., Iowa State University, 1948.
- Stuart, Signe**, Professor Emerita of Visual Arts, 1972, 1974; B.A., University of Connecticut, 1959; M.A., University of New Mexico, 1960.
- Stymiest, Clair**, Associate Professor of Plant Science Emeritus, 1967, 2004; B.S., SDSU, 1966; M.S., 1970.
- Sunde, Carl R.**, Professor Emeritus of Modern Languages, 1970, 1980; B.A., Luther College, 1962; M.A., University of Iowa, 1967; Ph.D., 1974.
- Swanson, Robert N.**, Professor Emeritus of Veterinary Science, 1965, 1996; B.S., Ft. Hays Kansas State College, 1953; M.S., Kansas State University, 1960; D.V.M., 1960; Ph.D., 1964.



- Swedlund, Harriet P.**, Director of International Programs Emerita and Assistant Professor Emerita of Apparel Merchandising, 1984, 1994; B.S., Iowa State University, 1954; M.S., 1957.
- Sweeney, Jerry K.**, Professor Emeritus and Head of History, Graduate Faculty, 1970, 2000; B.A., Fort Hays Kansas State University, 1962; M.A., Kansas State University, 1967; Ph.D., Kent State, 1970.
- Taylor, Donald C.**, Professor Emeritus of Economics, 1980, 1996; B.S. Cornell University, 1959; M.S., University of Minnesota, 1964; Ph.D., 1965.
- Thiex, Nancy**, Professor Emerita of the SDSU Veterinary and Biomedical Sciences Department and the SD Agricultural Experiment Station, 1970, 2012; B.A., Northern State University, 1970; M.Ed., SDSU, 1972; M.S., 1974.
- Thompson, John E.**, Professor Emeritus of Economics, 1952, 1985; B.S., University of South Dakota, 1950, M.S., SDSU, 1953; Ph.D., University of Wisconsin, 1960.
- Tidemann, Gail Dobbs**, Dean Emerita of Continuing and Extended Education, Graduate Faculty, 1986, 2012; B.S., Jacksonville State University, 1977; M.A., University of Alabama, 1978; Ph.D., 1986.
- Tidemann, Larry J.**, Director Emeritus of Cooperative Extension Service, 1970, 1999; B.S., SDSU, 1970; M.S., 1972.
- Tiltrum, Charles A.**, Associate Professor Emeritus of Civil and Environmental Engineering, 1981, 2005; B.S., SDSU, 1972; M.S., 1974.
- Tolle, Gordon J.**, Professor Emeritus of Political Science, Graduate Faculty, 1967, 2012; B.A., Oberlin College, 1965; M.A., University of Notre Dame, 1967; Ph.D., University of Colorado, 1978.
- Tucker, William L.**, Agricultural Experiment Station Statistician/Professor Emeritus of Mathematics and Statistics, 1963, 1972; B.S., University of Kentucky, 1952; M.S., North Carolina State University, 1957; Ph.D., 1963.
- Vandever, Jan J.**, Professor Emerita of Mathematics and Statistics, Graduate Faculty, 1981, 1990; B.S., Monmouth College, 1967; M.Ed., Rutgers University, 1971; M.A.T., Colorado State University, 1973; Ph.D., University of North Dakota, 1976.
- VanRiper, Gary**, Assistant Professor Emeritus of Pharmaceutical Sciences, 1972, 2007; B.S., SDSU, 1969; M.S., SDSU, 1972.
- Wadsworth, Jr., William S.**, Professor Emeritus of Chemistry, 1962, 1970; B.S. Trinity College, 1950; M.S., 1952; Ph.D., Pennsylvania State University, 1955.
- Wahlstrom, Richard C.**, Distinguished Professor Emeritus of Animal Science, 1952, 1988; B.S., University of Nebraska, 1948; M.S., University of Illinois, 1950; Ph.D., 1952.
- Walker, Darwin E.**, Professor Emeritus of Music, 1973, 1979; B.S., Northern State University, 1959; M.A., University of Northern Colorado, 1968; Ed.D., 1972.
- Werner, Hal D.**, Professor Emeritus of Agricultural and Biosystems Engineering, 1970, 1992; B.S., SDSU, 1970; M.S., 1971; Ph.D., University of Minnesota, 1984.
- West, George A.**, Professor Emeritus of English, Graduate Faculty, 1969, 2000; B.S., SDSU, 1965; M.A., University of Nebraska, 1967; Ph.D., 1972.
- Whalen, Richard H.**, Professor Emeritus of Biology and Microbiology, Graduate Faculty, 1967, 1990; B.S., College of Saint Thomas, 1954; M.S., University of Illinois, 1956; Ph.D., Purdue University, 1965.
- White, Everett M.**, Professor Emeritus of Plant Science, 1954, 1990; B.S., Iowa State University, 1948; M.S., 1950; Ph.D., 1953.
- Widvey, Harold W.**, Professor Emeritus of Communication Studies and Theatre, 1972, 1978; B.S.Ed., Northern State University, 1957; M.S.Ed., 1961; Ph.D., University of Nebraska, 1971.
- Williams, Louis P.**, Professor Emeritus of English, Graduate Faculty, 1965, 1983; B.A., University of Texas, 1960; M.A., 1965; Ph.D., University of Minnesota, 1976.
- Wills, Rena**, Professor Emerita of Nutrition, Food Science & Hospitality, 1952, 1976; B.S., Iowa State University, 1940; M.S., 1946.
- Witherington, Paul**, Professor Emeritus of English, 1970, 1993; B.A., Baylor University, 1954; M.A., University of Texas, 1960; Ph.D., 1964.
- Wrage, Leon J.**, Distinguished Professor of Plant Science Emeritus, Extension Specialist, 1961, 2004; B.S., SDSU, 1961; M.S., 1964.
- Yarbrough, Jerry W.**, Professor Emeritus of English, 1968, 1976; B.A., Abilene Christian University, 1960; M.A., University of Texas, 1962; Ph.D., 1968.
- Yocom, Kenneth L.**, Professor Emeritus of Mathematics and Statistics, Graduate Faculty, 1962, 1980; B.S., SD School of Mines and Technology, 1960; M.S., University of Wyoming, 1962; Ph.D., 1972.
- Zeman, David H.**, Professor Emeritus of Veterinary and Biomedical Sciences, 1986, 2013; B.S., North Dakota State University, 1976; D.V.M., Oklahoma State University, 1980; Ph.D., Louisiana State University, 1986.





# Index

## A

Abbreviations, 242  
Absence, 25, 37  
Academic  
  advisement, 32, 69, 74  
  amnesty, 18  
  calendar, 410  
  deans, 368, 371  
  honesty, 24  
  performance, 24  
  probation, 24  
  recognition, 20  
  suspension, 24  
  warning, 24  
Accelerated, 14  
  economics, 82  
  nursing, 72, 89, 183-184  
Accounting, 209  
Accreditation, affiliations and, 370  
ACT, 10-11  
Adding courses, 28  
Administration  
  business, 144, 260  
  public admin emphasis, 193  
  recreation, 229  
  of the university, 368-371  
Admission  
  advanced standing, 14  
  application, 10  
  articulation agreements, 12, 14, 15, 52  
  associate of arts program, 49, 52, 54, 71, 97, 155  
  by high school students, 11  
  concurrent, 11  
  correspondence credit, 14  
  education courses, 104-106  
  fee, 10, 14  
  former students, 11  
  graduate school, 70  
  home-schooled students, 11  
  international students, 14  
  nonresident, 14-15  
  policies and procedures, 10-15  
  readmission, 11  
  requirements, 10-15  
  resident, 10, 15  
  Servicemembers Opportunity College (SOC), 14  
  special students, 11  
  teacher education, transfer students, 11-14  
  undergraduate, 10-15  
Advanced  
  placement, 12, 19, 21  
  placement in speech, 79  
  standing, 14  
  writing requirement, 41, 48  
Advertising, 107, 209, 246  
Advisee role, rights, responsibilities, 32  
Advisor role, responsibilities, 32  
Aerospace studies, 76, 248, 357  
Aid, financial, 11, 14, 29, 355-357, 361  
404

Affiliation and accreditation, 370  
Affirmative Action, 33  
Agricultural  
  and biosystems engineering, 76, 108-109, 244  
  and resource economics, 109, 246  
  business, 110-111, 210-211  
  education, communication, and leadership, 111-113  
  Experiment Station, 8, 352  
  Extension Service 6, 7, 60, 352-353, 370  
  marketing, 210-211  
  science, 114-115  
  systems technology, 76, 115-116, 256  
Agriculture  
  College of, and Biological Sci., 60-61  
Agronomy, 116-117, 211  
Air Force ROTC, 76, 210, 248, 357  
Alcohol and drug programs, 363  
Alumni Association, 352  
American Indian studies, 117, 211, 248  
Amnesty, academic, 18  
Animal Disease Research and Diagnostic Laboratory, 352  
Animal science, 77, 212, 254  
  business and production specialization, 118  
  equine studies minor, 216-217  
  science specialization, 119  
Animal Health, 211-212  
Anthropology courses, 250  
Apparel merchandising, 120, 250  
Appeals, and petitions, 29  
Application procedures, 10  
Architecture  
  Architectural studies, 77, 120, 250  
  Landscape Architecture, 172, 305  
Army concurrent admissions, 11  
Army ROTC, 6, 76, 86, 318, 357  
Art, (see also Visual Arts, 94)  
  certificates, 100-103  
  education, 121-123, 253  
  graphic design, 162-163  
  studio arts, 206-207, 232  
Articulation agreements, 14  
Arts and humanities/diversity requirements, 40-41, 43, 49  
Arts and Sciences, College of, 62-65  
  degree requirements, 63  
Assessment program, 18  
Associate degree, 10, 11, 13, 19, 20, 40, 49, 52, 114, 115, 151  
Athletic  
  coaching certification, 104, 326-327  
  training, 123-124, 257  
  trip regulations, 37  
Attendance, class, 25, 37  
Auditing courses, 28  
Aviation, 124-125, 212, 258

## B

Bachelor's degree, 52  
Billing, electronic, 355-356  
Biochemistry, 78, 125-126  
Biological sciences,  
  College of Agriculture and, 60-61  
Biology, 126-129-130, 212, 262  
  and microbiology department, 77-78  
Biomedical engineering, 213  
Biotechnology, 129-130, 213  
Board and room, 355  
Board of Regents, 368  
Botany, 213-214  
Business  
  administration courses, 260  
  economics, 140  
Business specializations  
  animal science, 118  
  economics, 140  
**C**  
Calendar, University, 410  
Campus map, back cover  
Capital University Center, 97  
Career planning services, 362  
Catalog applicable to graduation, 50  
Certificates, 12, 100-103  
Certification Preparation  
  athletic coaching, 104  
  soil sciences, 104  
  teaching, 104-106  
Chairs, endowed, 353  
Challenge exams, 19-20  
Chemistry, 78  
  ACS certified major, 130-131  
  minor, 214  
Child  
  early childhood ed., 106, 139-143  
Chiropractic, pre, 234  
Choral music emphasis, 179  
Civil and environmental engineering, 78, 131, 265  
Class  
  attendance policy, 25, 37  
  definition, 26  
  rank, 26  
Classroom Technology Services, 358  
Clinical  
  experience, 37, 123-124, 178, 184, 190, 242  
  laboratory, 177, 242  
Coaching certification, athletic, 104, 326  
Code, student, 37  
College of  
  Agriculture and Biological Sciences, 60-61  
  Arts and Science, 62-65  
  Education & Human Sciences, 66-67  
  Engineering, 68-69  
  Graduate School, 70  
  Honors, 71  
  Nursing, 72

- Pharmacy, 73-75
  - University, 76
  - College Level Examination Program (CLEP), 12, 13, 19
  - Common course
    - descriptions (x9x), 243
    - numbering, 243
  - Communication, see also journalism and mass communication
  - Communication studies and theatre, 79
    - CST minor, 214
    - dance, 215
    - speech communication, 203
    - speech education specialization, 204
    - theatre, 204, 233
  - Communications and advanced electronics
    - engineering emphasis, see electrical engineering, 146
  - Competency-based courses, 242
  - Complaints policy, student, 36
  - Computer Science, 132, 214-215, 272
    - Department of Electrical Engineering and, 82
  - Concurrent student, 11
  - Construction management, 80, and Operations Management Department, 80, 134
  - Consumer
    - affairs, 135-136, 264
    - Sciences, 80, 271
  - Continuing education, 34, 98
  - Cooperative education, 242
  - Core curricula, 42-49
    - agriculture, 61
    - arts and sciences, 63-65
    - associate degree, 49
  - Correspondence credit, 14
  - Counseling
    - and human development, 81
    - services, 361
  - Course
    - adding, 28
    - auditing, 28
    - common, 243
    - crosslisted, 243
    - descriptions, 240, 242-350
    - dropping, 28
    - dual numbered, 243
    - experimental, 240
    - exemption, 20
    - graduate, 209
    - honors, 20
    - non-degree, 34
    - numbering system, 240
    - repeating, 2
    - undergraduate, 240
    - types, 242
  - Classroom Technology Services, 358
  - Credit
    - auditing, 28
    - correspondence, 14
    - definition, 19
    - entrance, 10
    - examinations for, 19
    - graduate for seniors, 70
    - modern language, 20
    - overloads, 26, 28
    - semester, 19
    - undergraduate transfer, 10-15
  - Crime reports, 353
  - Criminal justice, 315, 270
  - Cross-cultural experiential education, 160, 162, 219, 239, 295
  - Crosslisted courses, 243
  - Cultural Awareness and Social and Environmental Responsibility, 40-41, 46
  - Curriculum entries, 240
- D**
- Dairy Science, 81-82, 136-138
    - endowed chair, 353
  - Dance minor, 215
  - Deans, academic, 368, 371
  - Dean's list, 20
  - Degree
    - associate, 49, 52
    - definitions, 52
    - general requirements, 40
  - Degrees offered, 52-54
  - Dental, pre, 234
  - Department heads (by college), 369
  - Departments, 75-94
    - Aerospace Studies 76
    - Agricultural and Biosystems Engineering 76
    - Animal Science 77
    - Architecture 77
    - Biology and Microbiology 77
    - Chemistry and Biochemistry 78
    - Civil and Environmental Engineering 79
    - Communication Studies & Theatre 79
    - Construction and Operations Management 80
    - Consumer Sciences 80
    - Counseling and Human Development 81
    - Dairy Science 81
    - Economics 82
    - Electrical Engineering and Computer Science 82
    - English 83
    - Geography 83
    - Health and Nutritional Sciences 84
    - History, Political Science, Philosophy, and Religion 84
    - Journalism and Mass Communication 85
    - Mathematics and Statistics 85
    - Mechanical Engineering 86
    - Military Science 86
    - Modern Languages and Global Studies 87
    - Music 87
    - Natural Resource Management 88
    - Nursing 89
    - Pharmaceutical Sciences 90
    - Pharmacy Practice 90
    - Physics 91
    - Plant Science 91
    - Psychology 92
    - Sociology and Rural Studies 92
    - Teaching, Learning & Leadership 93
    - Veterinary and Biomedical Sciences 93
    - Visual Arts 94
- E**
- Design/research courses, 242
  - Dietetics, 138
  - Directors, 369
  - Disability, 2, 33, 361
  - Discussion/recitation courses, 242
  - Distance education, 96-98
  - Distinguished professors, 369
  - Diversity
    - equity & community, 353
    - requirement, 40-43, 49
  - Doctor of pharmacy, 52, 73, 90, 187
  - Doctor of philosophy, 52
  - Dropping courses, 28
  - Drug and alcohol programs, 363
  - Dual numbered courses, 243
- E**
- E-mail policy, 33, 356
  - E. A. Martin
    - chair of human nutrition, 353
    - program in human nutrition, 8
  - Early childhood education, 106, 139-143
    - kindergarten education endorsement, 106
    - special education endorsement, 106
  - Ecology and Environmental Science, 143
  - Economics, 82, 144-145, 278
    - agricultural and resource, 109, 246
    - business, 110, 210
    - endowed chair, 354
  - EdEx, 45
  - Education
    - and Human Sciences, College, 66-67
    - agricultural, 111-112, 247-248
    - art, see also visual arts, 121-122, 253
    - biology, 128-129
    - early childhood, 106, 139-143
    - elementary, 106, 139-143
    - English, 148-149
    - family and consumer sciences, 153, 289-290
    - health, 163, 363
    - history, 164-165
    - mathematics, 174-175
    - music, 179-180
    - physical education, 190-191, 325
    - physics, 192
    - psychology, 194-195
    - speech, 204
    - teacher education, 104-105
  - Educational
    - experiences alternative (EdEx), 45
    - objectives of the University, 7
    - electives, 26
    - satisfactory-unsatisfactory, 22
  - Electrical engineering, 82, 145-147
    - emphases, 146-147
    - endowed chair, 353
  - Electronic devices and materials, see electrical

Elementary education, 106, 139-143  
E-mail policy, 33, 356  
Employment/placement services, 362  
Endowed chairs, 353  
Endorsements, 67  
    Program requirements, 106  
Engineering  
    agricultural and biosystems, 108-109  
    civil and environmental, 131-132  
    College of, 68-69  
    construction management, 134, 270  
    electrical, 145-146  
    biomedical, 146, 213  
    communications and advanced  
    electronics emphasis, 146  
    computers-digital hardware  
    emphasis, 146  
    electronic devices and materials  
    emphasis, 147  
    electronics emphasis, 187  
    image processing emphasis, 147  
    power systems emphasis, 147  
    mechanical, 175-176  
    manufacturing emphasis, 187  
English, 83, 148  
    education specialization, 148-149  
    writing specialization, 150  
English skills requirements, 15  
Ensemble courses, 242, 319  
Entrance requirements, 10-14  
Entrepreneurial studies, 151, 216  
Entrepreneurship certificate, 101  
Environmental Planning and  
Management Emphasis, 158  
Equal employment opportunity policy, 33  
Equine studies minor, 216  
Establishment of the University, 6  
Examinations  
    advanced placement (AP), 12, 19, 21  
    auditor, 28  
    college level examination program  
    (CLEP), 12, 13, 19  
    for university credit, 19  
    local challenge, 19  
    placement, modern languages, 20-21  
    proficiency (CAPP), 19  
Exercise science, 151-152  
Experiential education, 45, 71, 130, 166,  
225, 289  
Experimental courses, 240  
Experiment Station, Agricultural, 6, 8,  
352  
Extended programs, 96-98  
Extension, 6, 7, 354

## F

Faculty, 372-397  
Facilities and Services, 354  
Family and Consumer Sciences  
Education, 153  
Family Educational Rights and Privacy  
Act (FERPA), 34  
Family financial management, 135-136  
Family student housing, 362  
Fees, 354  
FERPA, 34  
406

Financial aid, 11, 14, 29, 355-357, 361  
First Year Seminar (IGR #1), 40, 45  
Flight training, 124, 125, 210, 212, 260,  
354  
Food  
    and biomaterials engineering  
    emphasis, 109  
    safety, 217  
    service, 355, 356, 362,  
Former students, 11  
Foundation, SDSU, 357  
Fraction of credits, 28, 50  
Freedom, student code of, 24, 37  
French studies, 153-154, 217  
    teaching specialization, 154-155  
Freshman entrance credits, 10

## G

Gardens, McCrory, 360  
General  
    administration, 368-371  
    degree requirements, 40  
    education requirements, 40-49  
    engineering, 80, 290  
    studies, 295  
General Studies, 6, 52, 74, 155-156  
Geographic information sciences, 101-  
102, 156-157, 217-218  
Geographic information sciences center  
of excellence, 358  
Geography, 83, 157-158, 218  
    environmental planning and  
    management emphasis, 158  
    planning emphasis, 158  
German, 158-160, 218  
    teaching specialization, 159-160  
Gerontology, 219, 294  
Global studies, 87, 160-162, 219, 294-  
295  
Globalization requirement, 41, 47  
Goals  
    institutional graduation requirements  
    (IGRs), 40-41, 45-47  
    system general education (SGRs),  
    40-44  
Grade  
    appeals, 29  
    dropped courses, 28  
    graduate, 22  
    points, average (GPA), 21-22  
    undergraduate, 21  
Grading system, 21-22  
Graduate  
    admission, 70  
    course numbers, 240  
    credit for seniors, 70  
    School, 70  
    study in agriculture and  
    biological sciences, 60-61  
    in arts and sciences, 62-65  
    in education and human  
    sciences, 66-67  
    in engineering, 68-69  
    in nursing, 72  
    in pharmacy, 73  
    thesis, 242

Graduation  
    honors, 20  
    policies and procedures, 34  
    requirements, 39-50  
Graphic design, 102, 162-163

## H

Harassment policy, sexual, 35  
Health  
    and Nutritional Science, 84, 300  
    education, 163, 219-220  
    science, 220, 302  
    services, student, 363  
High school  
    teaching preparation, 104-106  
History  
    and mission of the University, 6  
    major and specialization, 164-165  
    minor, 220-221  
    political science, philosophy, and  
    religion department, 84  
Home-schooled students, 11  
Honesty, academic, 24  
Honors  
    college, 71  
    courses, 301-302  
    designation, 20  
Horticulture, 166-168  
    business, 167  
    food crops, 167  
    production, 167  
    science, 167  
    turf grass, 168  
Hospitality management, 168, 296  
Hours, credit, 19  
Housing, 355  
Human development  
    and family studies, 169, 221, 295  
    department of counseling, 81  
Humanities and arts/diversity  
requirements, 40-41, 43, 49  
  
**I**  
IDS (Instructional Design Services), 358  
IGRs, 40-41, 45-46, 49  
IP (in progress grade), 22  
Image processing emphasis, see electrical  
    engineering, 147  
Incompletes ("I" Grade), 22  
Indebtedness, 355  
Independent study, 242-243  
Informatics, 222, 305  
Information literacy, 40-41, 44  
Information Technology, Office, 242,  
358  
Information Technology Services ITS,  
358  
Instructional Design Services (IDS), 358  
Intercollegiate athletics, 358  
Interdisciplinary studies, 170, 304  
Interior design, 170-171, 222, 303-304  
International  
    affairs and outreach, 359  
    student affairs, 14-15



students,  
admission, 14  
modern language placement, 21,  
87  
studies, 21, 359, 362,  
undergraduate transfer credit, 15

Internship/practicum, 242, 243, 354-355,  
362

Institutional graduation requirement  
(IGR), 40-41, 45-46, 49

Instructional method types, 242-243

Instrumental music emphasis, 179-180

Intramurals, recreational sports, and  
sports clubs, 363

ITS Information Technology Services,  
358

## J

Journalism, 171, 222

advertising, 107, 209

and mass communication, 85

ag education, communication, and  
leadership – communication

specialization, 112-113

broadcast emphasis, 171

marketing, 224

news-editorial emphasis, 171

Juniors, class rank, 26

## K

K-12 teacher education, 104-105

Kindergarten endorsement, 106

## L

Laboratory courses, 242

Lakota, 306

Land-grant heritage, 6

Landscape architecture, 172-173, 305

design/build emphasis, 173

professional practice emphasis, 173

Language credit policy, modern, 20-21

Law, pre, 193, 235

Leadership and management of nonprofit  
organizations, 222-223

Leadership minor, 223

Lecture courses, 242

Library, H.M. Briggs, 359

Loans, student, 356-357

Logos, university, 359

## M

Majors

definition, 52

degree requirements, 50

minors, specializations,

certificates, certification

programs, and endorsements, 53-  
56

program requirements, 107

Management, 223

construction, 134

hospitality, 168

natural resource management, 88

operations, 186

pest, 227

sports, recreation, and park, 205-  
206

Map, campus, back cover

Marketing, 224

agricultural marketing, 210-211

university marketing and

communications, 364-365

Married student housing,

see family student housing, 362

Mass communication and journalism,  
85, 309

advertising, 107, 209

ag education, communication,

and leadership – communication

specialization, 112-113

journalism, 171, 222

marketing, 224

Master's degree, 52, 70

Mathematics, 173-174, 307

and statistics department, 85-86

teaching specialization, 174

university requirements, 44

McCrary Gardens, 360

Mechanical engineering, 86, 175, 311

Medical laboratory science, 98, 175,  
314

Medicine, pre, 235

Microbiology, 178-179, 316

Military science, 86, 225, 318

Ministerial, pre, 236

Minors,

definition, 52

majors, specializations,

certificates, certification

programs, and endorsements, 53-  
56

program requirements, 209

Mission of the University, 6, 8

Modern language,

and global studies, 87

credit/placement, 20-21, 87

requirement for B.A. degree, 63

Modified physical education activity  
course, 242

Mortuary, pre, 236

Multiple-numbered courses, see dual  
numbered courses, 243

Museums/collections, 360

Music,

choral emphasis, 180

department, 87-88

education major, 180

ensembles, 63, 242, 319

entrepreneurship specialization,  
181

groups, 63

instrumental emphasis, 180

studies specialization, 182

## N

Native American student advising, 353

Natural resource management, 88

News-editorial emphasis, journalism, 171

No-preference/undecided students, 6, 74

Non-discrimination policy, 2

Non-degree courses, 34

Non-major programs, 74

Non-native speakers of English, 14, 15

Non-resident students, 14

transfer, 11-14

Non-traditional students, 11

Nuclear engineering, 225, 321

Number system, course, 14, 21, 240, 243

Nursing,

accelerated, RN upward mobility,

and standard option, 183-185

college of, 72

courses, 323

department, 89

loan program, 356, 357

Nutrition

and food science, 185-186

courses, 300

major, 140-141, 145

endowed chair, 353

Health and Nutritional Sciences

department, 84, 300

minor, 226

## O

Objectives, educational, 7

Occupational therapy, pre, 236

Optometry, pre, 237

Operations Management, 186-187

Oral communication requirements, 42

Organization of the University, 57, 367

Outreach courses and programs, 6, 34, 98

Overloads (rate of progress), 26, 28

## P

Payment,

dates, 354, 365, 410

electronic, 355-356

Peace and Conflict Studies, 226

Performance requirements, academic, 24

Pest management, 227

Petitions and appeals, 29

Pharmaceutical sciences, 90

Pharmacy,

college of, 73

courses, 327

doctor of (Pharm.D.), 187-190

practice, 90

Philosophy,

academic amnesty philosophy, 18

courses, 329

doctor of, 52, 70

history, political science, philosophy,

and religion department, 84

minor, 227

Physical education

activity course, 242

courses, 325

teacher education major, 190-191

- therapy, pre, 237
  - Physician assistant, pre, 237
  - Physics, 191-193
    - courses, 330
    - department, 91
    - emphases, 191-192
    - science teaching specialization, 192-193
  - Placement, advanced, 12, 19, 21, 79, 343
  - Placement/Career services, 362
  - Planning emphasis, 158
  - Plant science department, 91
  - Political science, 193-194, 229
    - criminal justice emphasis, 193
    - general emphasis, 193
    - pre-law emphasis, 193
    - public administration emphasis, 193
    - research/graduate school emphasis, 193
    - teaching emphasis, 193
  - Portfolio, challenge by, 20
  - Power
    - and machinery emphasis, see agricultural and biosystems engineering, 109
    - systems emphasis, see electrical engineering, 147
  - Practicum, Internship, 243
  - Preparation for teaching, 104-106
  - Pre-professional curricula,
    - areas of study (listing), 57
    - chiropractic, 234
    - dental, 234
    - law, 235
    - medicine, 235
    - ministerial, 236
    - mortuary, 236
    - occupational therapy, 236
    - optometry, 237
    - physical therapy, 237
    - physician assistant, 237
    - veterinary, 238
  - Print Lab, 360
  - Private instruction courses, 243
  - Probation, scholastic, 24
  - Production
    - animal science, 118
    - dairy, 138
    - theatrical, 63
  - Professional
    - semester (Teaching), 104-106
    - writing, 228
  - Proficiency examinations, 19
  - Programs
    - of study,
      - Certificates 100
      - Certification Programs 104
      - Endorsements 106
      - Majors and Specializations 107
      - Minors 209
      - Pre-Professional Programs 233
    - outreach, 98
  - Progress, rate of, 26
  - Psychology, 92, 194-196, 229
    - grad school prep emphasis, 194
    - minor, 229
    - psychological services emphasis, 194
    - teaching specialization, 195-196
  - Public administration emphasis, see political science, 193
  - Purposes of the University, 7
- R**
- Range science, 196-197, 229
  - Rank, class (class definition), 26
  - Rate of progress, 26
  - Readmission (former students), 11
  - Recitation, discussion courses, 242
  - Recognition, academic, 20
  - Records & registration office, 34, 96, 361
  - Recreation administration, 229
  - Recreational sports, 362-363
  - Refunds, 356
  - Regents, Board of, 368
  - Religion,
    - history, political science, philosophy, and religion department, 84
    - minor, 230
  - Remote Sensing office, 358
  - Repeating a course, 22, 28
  - Requirements
    - academic performance, 24
    - admissions, 10-15
    - advanced writing, 41, 48
    - computer technology, 41
    - cultural awareness and social and environmental responsibility, 40-41, 46
    - diversity, 40-43, 49
    - entrance, 10
    - first year seminar, 40-41, 45
    - general education, 40
    - general degree, 40
    - globalization, 41, 47
    - graduation, 39-50
    - humanities and arts/diversity, 40-41, 43, 49
    - information literacy, 40-41, 44
    - institutional graduation (IGR), 40-41, 45-46, 49
    - mathematics, 40-41, 44, 49
    - natural sciences, 40-41, 44, 49
    - oral communication, 40-42, 49
    - residency, 15
    - social sciences/diversity, 40-42, 49
    - system general (SGR), 40-45
    - written communication, 40-42, 49
  - Research program, 8
    - sustaining courses, 242
  - Reserve Officer Training Corps (ROTC),
    - Air Force, 76, 210, 248, 357
    - Army, 6, 76, 86, 318, 357
  - Residence halls, 355, 361
  - Residency requirements, 15
  - Residential life, 361
  - Responsibility, student code, 37
  - Ritz Art Gallery, 63, 94,
  - RN Upward Mobility program, 183-185
  - Role statements, academic advising, 32
  - Room and board, 355
  - ROTC,
    - Air Force, 76, 210, 248, 357
    - Army, 6, 76, 86, 318, 357
- S**
- Satisfactory-unsatisfactory system, 22
  - Scholarships, 356-357, 361
  - Scholastic
    - honors, 20
    - probation, 24
  - Science
    - agricultural science, 114-115
    - animal science, 77, 118-120, 212
    - associate of (definition), 52
    - bachelor of , 52-54
    - computer science, 82, 132, 214-215, 272
    - ecology and environmental science, 143
    - exercise science, 151-152
    - family & consumer science ed., 153
    - geographic information science, 101-102, 156-157, 217-218
    - medical laboratory science, 98, 175, 314
    - nutrition and food science, 140-141, 145, 185-186
    - physics - science teaching specialization, 192-193
    - political science, 193-194, 228
    - range science, 196-197, 229
    - soil science, 104
    - wildlife & fisheries sciences, 208-209
  - Secondary education,
    - specialization of biology major, 128-129
    - teacher preparation, 104-106
  - Self-paced study course, 243
  - Semester
    - calendar, 410
    - credit hours, 19
  - Seminar, 243
  - Seniors, class rank (class definition), 26
  - Servicemembers Opportunity College (SOC), 14
  - Sexual harassment policy, 35
  - Sioux Falls programs, 97
  - Small ensemble courses, 243
  - Small group instruction courses, 243
  - SOC (Servicemembers Opportunity College), 14
  - Social sciences/diversity requirements, 40-42
  - Sociology and Rural Studies,
    - courses, 341
    - criminal justice minor, 215
    - department, 92-93
    - human resources specialization, 198-199
    - human services specialization, 199-200
    - major, 197-198
    - minor, 230
    - teaching specialization, 200-201
  - Soils science certification, 104

- Sophomore class rank (class definition), 26
  - Spanish, 201-202
    - minor, 231
    - teaching specialization, 202-203
  - Special
    - students, 11
    - topic courses, 242, 243
  - Specialization,
    - definition, 52
    - list of programs, 55-56
    - program requirements, 107-209
  - Speech
    - advanced placement, 79, 343
    - CST minor, 214
    - communication major, 203
    - education specialization, 204
    - dance minor, 215
    - department of communication studies and theatre, 79
    - theatre major and minor, 204, 233
  - Sports,
    - intramural and club, 362-363
    - recreation, and park, 205-206
  - Staff, university, listing, 372-397
  - Standardized tests, 19-20
  - Statistics,
    - Mathematics and statistics department, 85-86
    - minor, 232
  - Student
    - career development and internship services, 331
    - code, 37
    - concurrent, 11
    - former, 11
    - high school, 10-11
    - international, 15
    - nontraditional, 11
    - special, 11
    - transfer, 11-15, 50
    - trip regulations, 37
  - Student Affairs Division, 360
    - Admission, 360
    - Dean of Students 361
    - Dining Services 361
    - Enrollment Services 361
      - financial aid
      - records and registration
      - scholarships
    - Residential Life 361
    - Multicultural affairs and student support services, 361
      - disability services
      - veterans affairs
      - TRiO student support services, TRiO Upward Bound
    - Union 362
      - center for student engagement
        - career/internships
        - orientation
    - Wellness Center 362
      - Community fitness
      - health and counseling service
  - sports, intramural and club
  - Studio Art,
    - art education specialization, 121-123, 253
    - certificates, 100-103
    - graphic design major, 162-163
    - major, 206-207, minor, 232
  - Studio course, 243
  - Study
    - competency-based/self-paced course, 243
    - independent, 243
    - Structures and environment emphasis, see agricultural and biosystems engineering, 109
  - Summer term, 78, 50, 242
  - Suspensions, academic, 24
  - Sustainable Energy Systems, 232-233
  - Sustaining, thesis, 243
  - System general education requirements (SGRs), 40-48
- T**
- Teacher
    - certification, 104-106
    - education, 104-106
    - endorsements, 106
  - Teaching
    - agricultural, 111-112, 247-248
    - art, see also visual arts, 121-122, 253
    - biology, 128-129
    - early childhood, 106, 139-143
    - elementary, 106, 139-143
    - English, 148-149
    - family and consumer sciences, 153, 289-290
    - health, 163, 363
    - history, 164-165
    - mathematics, 174-175
    - music, 179-180
    - physical education, 190-191, 325
    - physics, 192
    - psychology, 194-195
    - speech, 204
    - teacher education, 104-105
  - Technical-vocational institute courses, programs, 11-15
  - Tests and testing, 18-19
  - Theatre,
    - communication studies and theatre department, 79
    - major, 207-208
    - minor, 233
  - Thesis, 242, 243
    - sustaining courses, 242
    - graduate courses, 240, 242-243
    - research sustaining courses, 242
    - undergraduate courses, 24
  - TOEFL test, 14
  - Tracking courses, 208
  - Transcript
    - college, 10
    - high school, 10
- Transfer**
- between Regental institutions, 11-14
  - credits, 11-14
  - fraction of credit, 50
  - international undergraduate credit, 11-15
  - students, 11, 50
- TRiO student support services, 361
  - TRiO Upward Bound, 361
  - Trip regulations (also athletic), 37
  - Tuition, 355
  - Tutoring, 74, 86, 346-347, 361
  - Two-year terminal programs (associate degree), 49, 52
- U**
- Undeclared majors, 6, 74
  - Undergraduate
    - admission, 10-15
    - course numbers, 14, 21, 240, 243
    - course special, topics, 243
    - credit transfer, 11-15, 19
    - international, 15
    - research/scholarship, 242
    - thesis, 243
  - Union, 362
  - University
    - accreditation and affiliations, 370
    - administration, 368, 371
    - apartments, 362
    - assessment program, 18
    - calendar, 410
    - credit, examinations for, 19-20
    - marketing and communications, 364-365
    - networking systems & services, 358
    - organization, 57, 367
    - purposes, 7
    - sponsored trip regulations, 37
    - University Center
      - Rapid City, programs, 97
      - Sioux Falls, programs, 97
    - University staff, 372-397
    - Upward Bound, 361
- V**
- Veterans Affairs, 361
  - Veterinary and biomedical science, 93-94
    - Pre-veterinary medicine, 238
  - Visual
    - arts department, 94
      - certificates, 100-103
      - education, 121-123, 253
      - graphic design, 162-163
      - studio arts, 206-207, 232
- W**
- Water
    - and natural resources engineering emphasis, see agricultural and biosystems engineering, 109
    - and Environmental Engineering Research Center (WEERC), 365

Resources Institute (WRI), 365  
 Wellness Center, 362  
 Wildlife and fisheries sciences, 208-209  
 Withdrawal, 22, 25, 28, 29, 323, 354,  
 355, 356  
 Women's studies program, 2233-234,  
 349-350  
 Workshop courses, 243

Writing,  
 advanced writing requirement, 41,  
 48, 243  
 professional writing minor, 228  
 specialization of English major, 150  
 Written communication requirement, 40-  
 42, 49

**X**  
 x9x common courses, 243

**Z**  
 Zoology courses, 349-350-

## Academic Calendar

---

### 2013 Fall Term

August 26, Monday  
 September 2, Monday  
 September 5, Thursday  
 September 6, Friday  
 September 13, Friday  
 October 14, Monday  
 October 18, Friday  
 October 23, Wednesday  
 November 8, Friday  
 November 11, Monday  
 November 27- December 1, Wednesday-Sunday  
 December 11, Wednesday  
 December 12-18,\* Thursday-Wednesday  
 December 23, Monday  
 \* December 18 - official graduation date noted on transcript  
 Note: There is no Fall 2013 Commencement Ceremony

Start date/Instruction begins  
 Labor Day holiday  
 Last day to drop or add and adjust final fees  
 "W" grade begins  
 Last day to submit graduation applications for Fall 2013  
 Native American Day holiday  
 First half Fall Term ends  
 Deficiency reports due on WebAdvisor by midnight  
 Last day to drop a course  
 Veterans' Day holiday  
 Thanksgiving Recess  
 No classes; Final exam preparation  
 Final exams  
 Grades due on WebAdvisor by midnight

### 2014 Spring Term

January 13, Monday  
 January 20, Monday  
 January 22, Wednesday  
 January 23, Thursday  
 February 3, Monday  
 February 17, Monday  
 March 10-14, Monday-Friday  
 March 17, Monday  
 March 20, Thursday  
 April 7, Monday  
 April 18-20, Friday-Sunday  
 May 5-9\*, Monday-Friday  
 May 10, Saturday  
 May 14, Wednesday  
 \*May 9 - official graduation date noted on transcript

Start Date/Instruction begins  
 Martin Luther King Day Holiday  
 Last day to drop or add and adjust final fees  
 "W" grade begins  
 Last day to submit graduation application for Spring 2014  
 Presidents' Day Holiday  
 Spring Break  
 First half Spring Term ends  
 Deficiency reports due on WebAdvisor by midnight  
 Last day to drop a course  
 Easter Recess  
 Final exams  
 128th Annual Commencement  
 Grades due on WebAdvisor by midnight

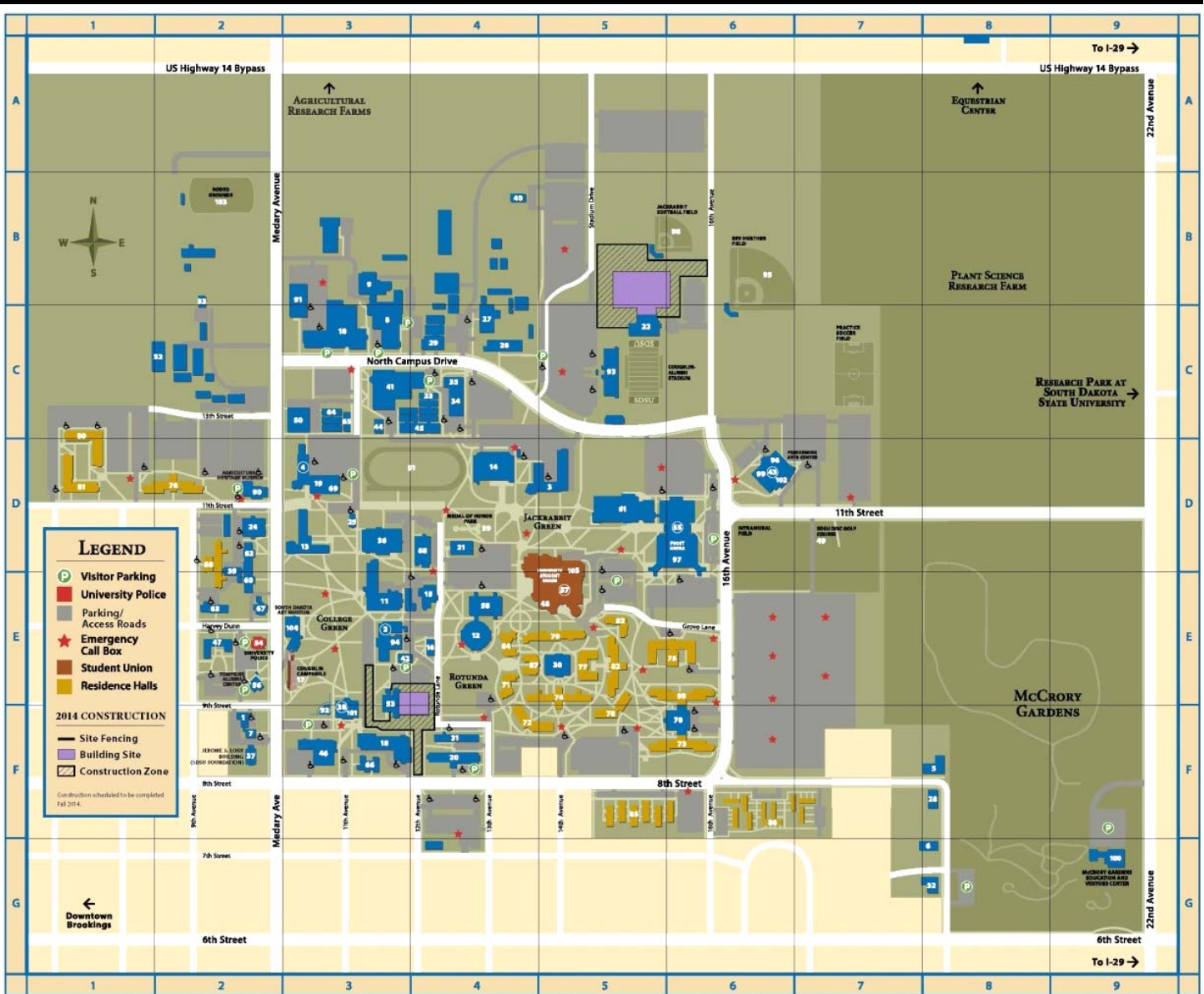
### 2014 Summer Term

May 12, Monday - May 23, Friday  
 May 26, Monday  
 May 27, Tuesday - August 1, Friday  
 July 4, Friday  
 August 4, Monday - August 22, Friday  
 May 12, Monday - August 22, Friday

May Interim  
 Memorial Day Holiday  
 10-week Academic Summer Session  
 Independence Day Holiday  
 August Interim  
 Summer Administrative Term



# Campus Map



Academic Evaluation & Assessment	SFND F2	Foundation Seed Conditioning	SFSS C4	University Student Union	SSU E5	Meadows North Apartments	SMN C1
Administration Building	SAD E3	Grove Hall	SGH E5	Wagner Hall	SWG E4	Meadows South Apartments	SMS D1
Agricultural Engineering	SAE D5	Harding Hall	SHF F4	Wecota Annex	SWX D2	Pierson Hall	SPR E5
Alfred Dairy Science Hall	SDM D3	Heat Power Lab	SCSD C2	Wecota Hall	SWC E2	Schultz Hall	SSCH E5
Alpha Gamma Rho Fraternity (Men's)	F8	Horse Unit	B2	Wellness Center	SSWC D5	Spencer Hall	SSH E4
Alpha Xi Delta Fraternity (Women's)	G8	Horticulture Greenhouse	SHG C4	Wenona Hall	SWE D2	State Court Family Housing	SSC F6
American Indian Ed & Cultural Center	SFND F2	Horticulture & Forestry	SHF C4	West Hall	SWH E2	State Village Family Housing	SSV F6
Animal Disease Research	SAR C3	Intramural Building	SIM D3	West Headhouse & Greenhouse	SWHH C3	Thorne Hall	STH E4
Animal Resource Wing	SAW B3	Jerome J. Lohr Building	SDSU Foundation F2	Wheat Commission Greenhouse	SWCD C3	Waneta Hall	SWN D2
Animal Science Complex	SAS C3	Lincoln Music Hall	SLM E3	Wintrose Student Center	SWSC F3	Young Hall	SYH E6
Avera Health & Science Center	SAV E3	Medal of Honor Park	D4	Woodbine Cottage	SWBC E2		
Bailey Rotunda	SRO E4	Motor Pool Complex	SMPC C2	Yeager Hall	SYE D4		
Berg Agricultural Hall	SAG D3	Northern Plains Biostress Lab	SNP C3				
Briggs Library	SBL D4	Old Horticulture	SOHO E3				
Central Heating Plant	SCP E4	Performing Arts Center	SPAC D6	<b>Food Service</b>			
Communications Center	SCM E4	Physiology Laboratory	SPL C3	University Student Union	SSU E5	<b>Event Locations</b>	
Coughlin Campanile	E3	Plant Science Building	SPSB C4	Dairy Bar	SDM D3	Agricultural Heritage Museum	SAGM D2
Crothers Engineering Hall	SCEH F3	Pugsley Continuing Education Center	SPC F3	Hansen Hall	SHN D2	Animal Science Arena	SAA B3
Davis Dairy Plant	SDS D3	Scobey Hall	SSB E2	Larson Commons	SLC F6	Coolidge Sylvan Theatre	SSY F3
Daktronics Engineering Hall	SDEH F4	SDSU Bookstore	SSU E5			Coughlin-Alumni Stadium	SCS C5
DePuy Military Hall	SDP D4	SDSU Disc Golf Course	D7	<b>Residence Halls</b>		Doner Auditorium	SAD E3
Dykhouse Student-Athlete Center	SDSC C5	Seedhouse	SSD C3	Abbott Hall	SAH E4	Erv Huether Field	B6
East Headhouse	SEHH C4	Sexauer Field	SSF D3	Ben Reifel Hall	SREF F4	Fishback Studio Theater	SPAC D6
Enrollment Services Center	SESC D2	Sigma Alpha Epsilon Fraternity (Men's)	G8	Binnewies Hall	SBN F6	Frost Arena	SPE D6
Ethel A. Martin Building	SEM D3	Solberg Hall	SSO E3	Brown Hall	SBH E5	Jackrabbit Softball Field	B6
Facilities & Services	SFS C4	Sorenson Center	SSOR E2	Caldwell Hall	SCH E6	Larson Memorial Concert Hall	SPAC D6
Customer Service Center	SFCS C4	Stanley J. Marshall HPER Center	SPE D6	Hansen Hall	SHN D2	McCormy Gardens Education & Visitors Center	G9
Farmhouse Fraternity (Men's)	F8	Tompkins Alumni Center	STA E2	Honors Hall	SHON E5	Peterson Recital Hall	SLM F3
				Hyde Hall	SHYD F5	Roberts Reception Hall	SPAC D6
				Mathews Hall	SMH E5	Rodeo Grounds	B2
						South Dakota Art Museum	SMU E3
						Volstorff Ballroom	SSU D5

