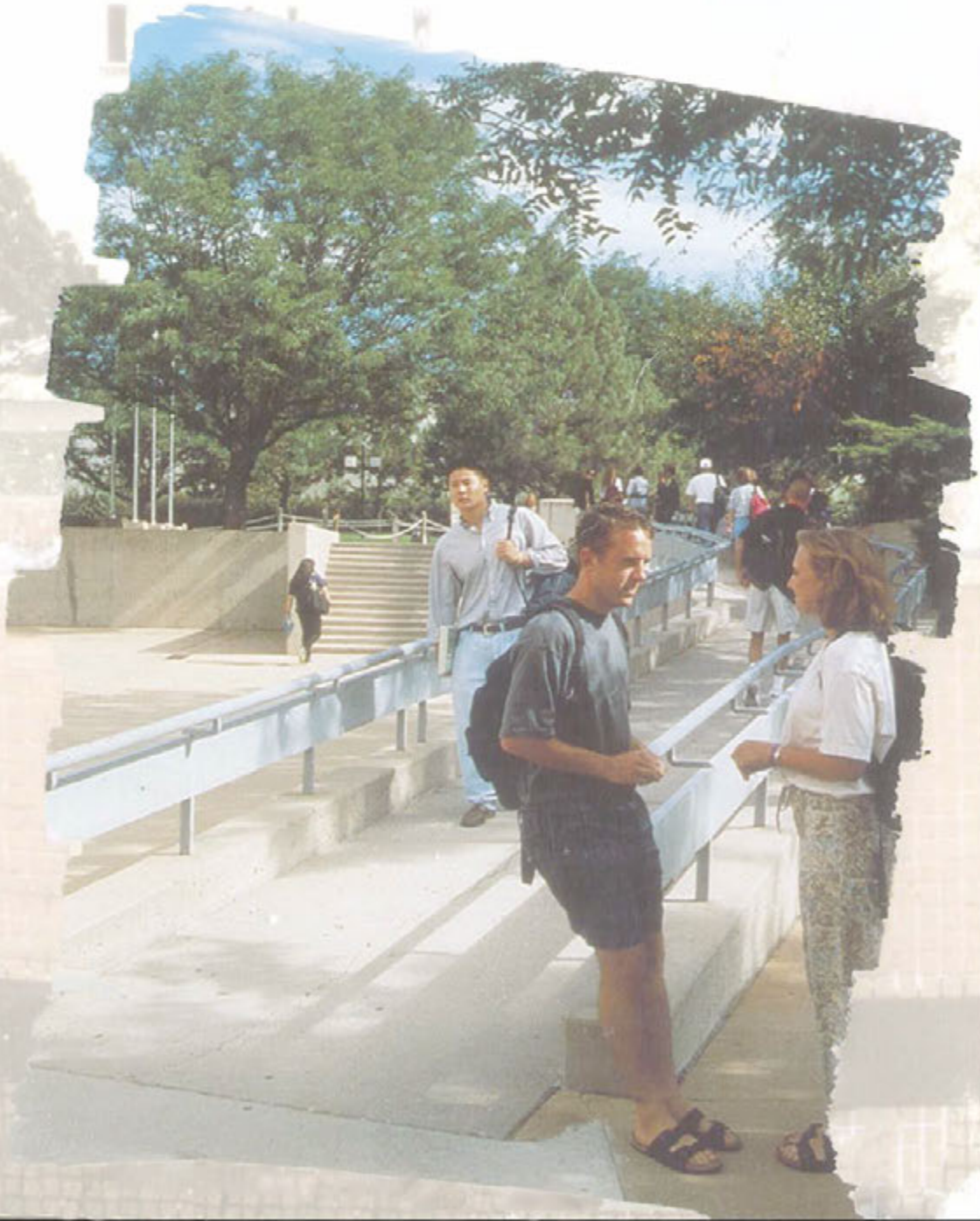
University of SOUTHERN COLORADO



CATALOG
1998/99

TORTESSI

Vol. XXXVI 7/98 No. 2

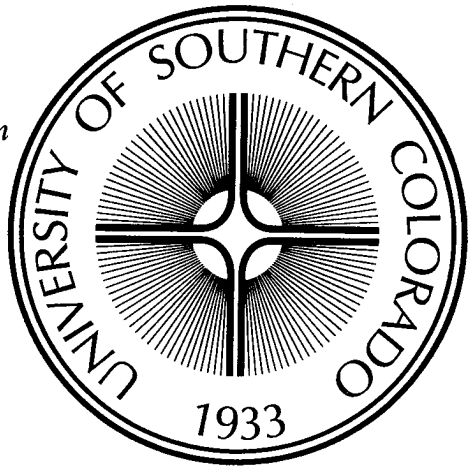
catalog issue 1998-1999

University of Southern Colorado
2200 Bonforte Boulevard
Pueblo, Colorado 81001

Telephone: (719) 549-2100
Web site: http://www.uscolo.edu

An Invitation

You are cordially invited to visit the University of Southern Colorado campus, meet members of the faculty and administration, and inspect the facilities of the university. Escorted tours of the campus will be provided on request. The administrative offices are open from 8 a.m. to 5 p.m. Monday through Friday. Please call or write the admissions office in advance of your visit: (719) 549-2461.



University of Southern Colorado (USPS 857-100) is published four times a year, in March, July, August and November. Periodical postage paid at Pueblo, Colorado 81003. POSTMASTER: Send address changes to the UNIVERSITY OF SOUTHERN COLORADO, Office of the Registrar, 2200 Bonforte Boulevard, Pueblo, Colorado 81001-4901.

University of SOUTHERN COLORADO

1-25 Exit 101 at U.S. 50. East to the University of Southern Colorado

CAMPUS LEGEND

1. PHYSICS/MATHEMATICS BUILDING
2. LIFE SCIENCES BUILDING
3. CHEMISTRY BUILDING
4. UNIVERSITY LIBRARY
5. CAPPS CAPOZZOLO ACADEMIC CENTER FOR THE ARTS (HOAG HALL)
6. UNIVERSITY VILLAGE AT WALKING STICK APTS.
7. BELMONT RESIDENCE HALL
8. USC CHILD CARE CENTER
9. HEATING PLANT
10. PHYSICAL PLANT
11. OCCHIATO UNIVERSITY CENTER
12. HEALTH, P.E. AND RECREATIONAL BUILDING (MASSARI ARENA, SAM JONES SPORTS COMPLEX AND LEVERT W. HOAG RECREATION CENTER)
13. ADMINISTRATION BUILDING
14. LINDBERG GARDEN
15. UNIVERSITY FOUNTAIN PLAZA
16. PSYCHOLOGY BUILDING
17. McKINNEY PAVILION
18. HASAN SCHOOL OF BUSINESS
19. TECHNOLOGY BUILDING
20. BUELL COMMUNICATIONS CENTER (KTSC-TV)
21. OUTDOOR CLASSROOM
22. OUTDOOR AMPHITHEATER

RAWLINGS OUTDOOR SPORTS COMPLEX

23. SOFTBALL
24. BASEBALL
25. TENNIS COURTS
26. ROPES COURSE
27. WEINDLING PARK
28. SOCCER FIELD

PARKING LOT SECTORS

NORTH: N-1, N-2, N-3, N-4, N-5, N-6, AND N-7.
EAST: E-1, E-2, E-3, E-4, E-5, E-6, E-7, E-8 (north & south), E-9, E-10 and E-11.
SOUTH: S-1, S-2, and S-3.
WEST: W-1, W-2, W-3, W-4, W-5 and W-6 (north & south).
(Visitors with permit may park in staff or student parking.)

Emergency Phones

PUEBLO MUNICIPAL GOLF COURSE

ThunderWolf Country...

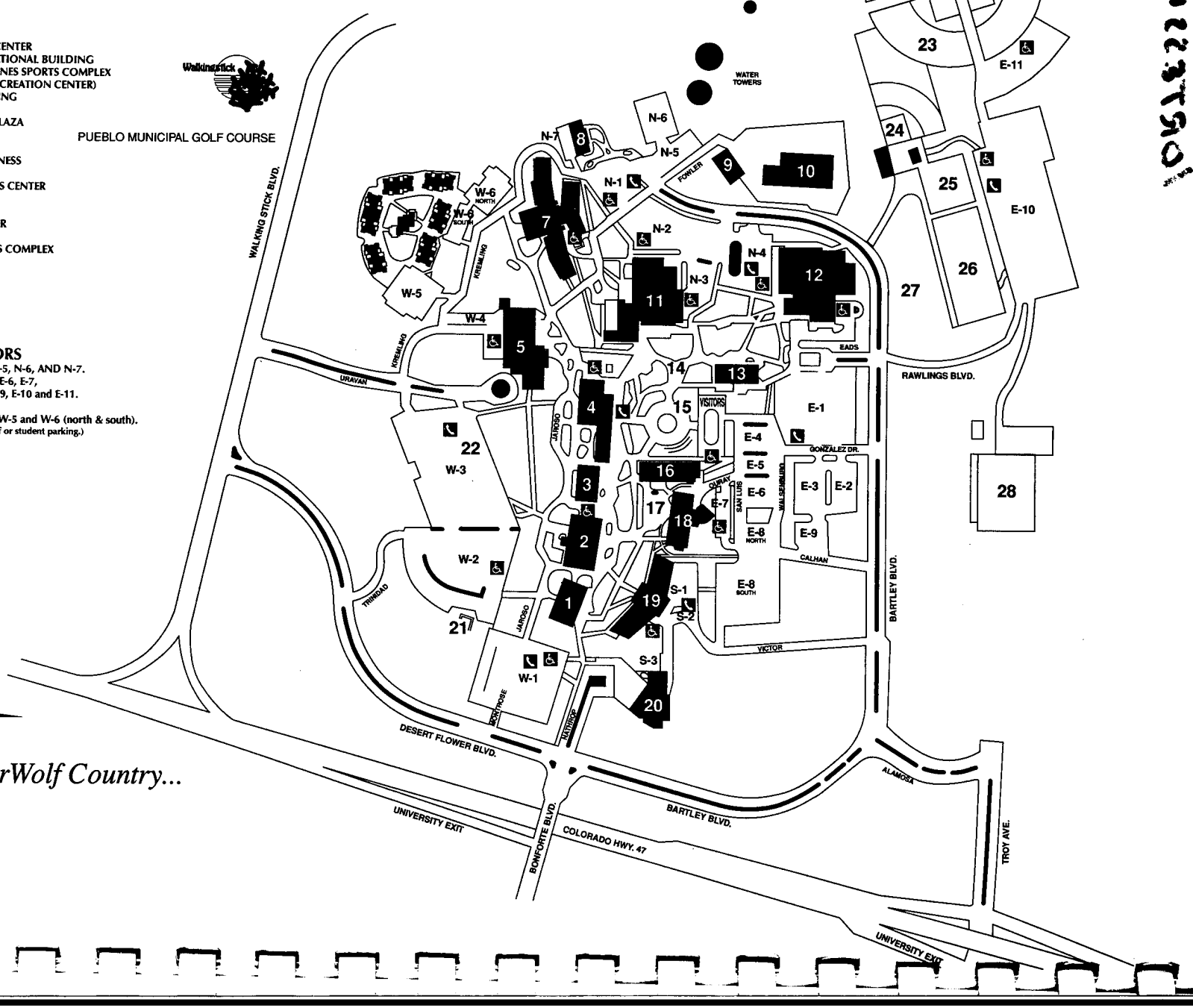


TABLE OF CONTENTS

DIRECTORY

NOTE: 549- IS THE PREFIX FOR ALL NUMBERS

TROUBLE SHOOTING NUMBERS

IF YOU ARE CONSIDERING:

dropping out of school 2581
dropping one or more courses 2261
an on-campus job 2980
an off-campus job 2980

IF YOU ARE HAVING TROUBLE WITH:

access to a computer 2566
money to stay in school ..... 2753, 2380 or 2980
grades/need a tutor 2581
residence hall programs 2601
residence hall repairs 2601
someone harassing you 2373
meals 2831
police/security conduct 2373
interpersonal relations with another student ... 2479
interpersonal relations with a faculty or staff member
(Contact appropriate Department Chair)
day care availability 2407

IF YOU DON'T KNOW:

your adviser 2581
where to get an ID card 2149
how to hold a campus function ..... 2151 or 2161
how to handle a racial or sexual discrimination 2936
where an how you can post signs and messages 2511
how to use the athletic facilities
(pool, fields, gym, etc) 2711
how to schedule the challenge ropes course .. 2085
what clubs are seeking members 2866
what social activities are available
this week ..... 2459 or 2151

IF YOU NEED STUDENT FINANCIAL SERVICES

work study 2980
loans 2605
Veteran's Affairs ..... 2360 or 2368
President's Scholarship 2178
other scholarships 2380
for concerns not listed above 2753

USC GRAMMAR HOTLINE

Monday through Friday - 9:30 to 3:30 p.m. 549-2787

FREQUENTLY CALLED OFFICE LISTINGS

A

Academic Affairs 2313
Academic Advising Center 2584
Accounting Department (Academic) 2101
Accounting Office 2232
Admissions 2461
Affirmative Action 2441
Alliance Grants Center (AGC) 2930
Alumni Relations 2114
American Language Academy 2222
Applied Science & Engineering Technology .. 2696
Art Department 2816
Aspen Leaf Restaurant 2928
Associate Provost 2325
Associated Students' Government 2866
Athletics 2711
Audio Visual Collections Area 2685
Automotive Parts & Service Management 2675

B

Baseball 2065
Basketball
Men's 2713
Women's 2382
Belmont Residence Hall 2601
Biology Department 2743
Bookstore 2146
Buildings and Grounds 2211
Business School 2142
Business Services 2511

C

Cafe del Rio 2009
Cafeteria 2831
Capps Capozzolo Center 2150
Career Center 2980
Cashier 2131
Catering 2831
Center for Academic & Career Development .. 2581
Center for Teaching, Learning and Research . 2681
CTLR Mac Lab 2169
Charter School 2737
Chemistry Department 2574
Child Care Center 2407
Civil Engineering Technology 2683
Classroom Scheduling 2900
Colorado Music Fest 2126
Colorado State Employees Assistance Program 2244
Colorado State University Extension Office ... 2049
Communication Services 2219
Community Compact for Student Success 542-1704
(Pueblo Chamber of Commerce)
Computer Information Systems (Academic) ... 2877
Computer Labs
Administrative Lab 2839
ASET Lab 2836
Library Lab 2354
Math Lab 454
Conference Scheduling 2944
Continuing Education 2316
Controller 2232
CoPIRG 2198
Copy Center 2894
Counseling Center 2859
CSU/DOLA Community Development Office .. 2469

D

Development 2810
Dining Services 2831
Dormitory 2601
Drug and Alcohol Prevention 2092

E

Educational Opportunity Center 542-4811
Electronics Engineering Technology 2877
Engineering (Academic) 2890
English/Foreign Language Department 2103
  English Mac Lab 2989
  Language Lab 2517
Experiential Learning Lab 2085

F

Facilities & Planning 2747
Faculty Center for Professional Development . 2559
Finance and Planning 2307
Financial Aid (Student Financial Services) 2753
  Scholarship Awards 2178
Food Services 2831
Foundation Office 2380

G

Games Room 2139
Golf 584-3400
Graduate School 2461
Grammar Hotline 2787

H

Hasan School of Business 2142
Health Services 2830
History/Chicano Studies/Philosophy/
  Political Science Department 2143
Honors Program 2798
Housing (Residence Hall) 2601
Humanities & Social Sciences 2865
  Psychology Building Office 2143
Human Performance & Leisure Studies 2381

I

Industrial Science & Technology 2838
Information (General) 2100
Instructional Development ..... 2876 or 2559
Instructional Services 2345
Internal Auditors 2113
International Student Programs 2329
Inventory 2290

K

KTSC-FM Radio 2820
KTSC-TV 2692

L

Las Hermanas 2931
Learning Assistance Center 2901
Library 2451
  Acquisitions 2714
  Archives 2475
  Cataloging 2331
  Circulation 2386
  Computer Information Services 2527
  Dean 2361
  Information Desk 2451
  Interlibrary Loans 2362
  Periodicals 2396
  Reference 2333

M

Mail Service 2846
Maintenance 2211
Massari Arena (Athletics) 2711
Mass Communications Department 2835
Mathematics Department 2433
Mechanical Engineering Technology 2884
Minority Biomedical Research Support Program 2231
Music Department 2552

N

National Science Foundation (NSF) 2542
Nature Center 2414
Newspaper (USC Today) 2848
  Advertisements 2812
Nursing Department (Academic) 2401

O

Occhiato University Center 2161
Off-Campus Programs 2316
Office of Emergency Management 2001
Operator (University) 2100
Orientation 2584
Outdoor Program 2023

P

Payroll 2801
Personnel Services 2441
Physical Plant
  Office 2211
  Custodians ..... 2211 or 2400
  Grounds 2206
  Heating Plant ..... 2282 or 2283
  Plant Maintenance ..... 2211 or 2237
  Shipping and Receiving 2299
  After Hours 2282
Physics/Physical Science/Geology Department 2542
Policy and Security 2373
President's Office 2306
Printing Services 2893
Productivity Training Project 583-8677
  (Latino Chamber of Commerce)
Provost's Office 2313
Psychology Department 2156
Pueblo School for Arts & Sciences 2737
Pueblo Symphony 2385
Publications 2171
Purchasing 2339

Q

R

S

T

U

V

W

THE UNIVERSITY

HISTORY

The University of Southern Colorado has served the changing needs of the citizens of Colorado for more than 60 years.

In 1933, the institution was incorporated as The Southern Colorado Junior College. Classes took place on the top floor of the Pueblo County Courthouse. The "Class of 35" graduated 17 students. In 1936, the first building on the Orman Avenue campus site was donated by the Colorado Fuel and Iron Corporation. One year later, local citizens decided to support the institution with county taxes; they organized the Pueblo County Junior College District, and the institution was renamed Pueblo Junior College. In 1951, PJC became the first accredited junior college in Colorado.

A decade later, Colorado's General Assembly enacted legislation, effective in 1963, changing PJC to a four-year institution -- Southern Colorado State College -- to be governed by the Board of Trustees of State Colleges. SCSC received accreditation in 1966.

By then, four buildings had been erected on the new campus north of Pueblo's Belmont residential district. On July 1, 1975, the state legislature granted the institution university status. Three years later, the State Board of Agriculture assumed governance of the university. In 1986, USC, Colorado State University and Fort Lewis College joined to form the Colorado State University System.

MISSION

The University of Southern Colorado, in accordance with the mission defined by the Colorado Commission on Higher Education in 1978 and revised in 1985, provides a unique contribution to higher education in the state. USC strives to become an **excellent regional university** with a polytechnic emphasis, continuing its tradition of teaching effectiveness and increasing its efforts in basic and applied research while maintaining a high degree of service to the citizens of Pueblo, the region and the state.

USC is an accredited institution with a specific mission:

1) to emphasize career-oriented, technological and applied programs, while maintaining strong programs in the liberal arts;

2) to engage in basic and applied research for the benefit of society; and

3) to function as the major education resource for cultural, industrial and economic growth throughout the southeastern Colorado region.

The university accepts enthusiastically its role as a regional university with a polytechnic emphasis. We believe that our special commitment to applied research and career oriented education, embracing but not limited to the technologies of engineering, science, and business, and grounded in an unalterable commitment to the traditional liberal and fine arts, creates a unique opportunity to educate the whole person. We resolutely embrace the conviction that while our liberal arts programs must be predicated on preparing students to engage in productive and meaningful living as well as to earn a living, our professional programs must maintain a strong liberal arts component to guard against the obsolescence of purely vocational and topical learning in a rapidly changing world.

High-quality teaching is the number one priority at the University of Southern Colorado. At the same time, faculty engage in scholarly activity to add to the store of knowledge in various disciplines and fields, and apply that knowledge to solving community and regional problems. Faculty involvement in research, as well as in scholarly and creative activities, substantially enhances the quality of teaching at the university. The University of Southern Colorado also places special emphasis on student development and success. To address this special emphasis, the university has made an unequivocal commitment to significantly improve the retention and graduation rates of all students.

In addition to the primary emphasis on teaching and the accompanying obligation to engage in scholarly endeavors, the university is committed to serving the surrounding community and region. The service obligation is fulfilled primarily through the processes of teaching and research, since the outcomes of those activities significantly address the needs of society. However, as a regional university which strives for excellence, we contribute to the overall quality of life and economic growth in our surrounding environment by sponsoring cultural events, clinical activities, student internships, research on community and business problems, and other special means of interaction.

To enhance its overall relationship with the city and region, the university is strongly committed to providing access for members of all minority groups, particularly the large Hispanic population within its service area, emphasizing and fostering cultural pluralism, enhancing the traditions of culture and language, encouraging the development of economic opportunities, providing appropriate academic support programs, and ensuring equal opportunity for all persons who are, or may become, members of the university community.

Thus the university's mission has three components: teaching (the primary emphasis), scholarly activity (necessary to the advancement of knowledge and to high-quality teaching) and service (contributing to the development of the city and region).

GOALS AND PRIORITIES

In fulfilling its basic mission, the university regularly establishes long-range and short-term goals. Students, faculty, staff and administrators actively work together to achieve such important goals and to establish priorities for the institution's future. Copies of the most recent strategic plan are available for inspection in the Office of Finance and Planning.

GOVERNANCE

As part of the Colorado State University System, the University of Southern Colorado is governed by the State Board of Agriculture, which also governs Fort Lewis College in Durango and Colorado State University in Fort Collins. The Colorado Commission on Higher Education, the central policy and coordinating board for all public institutions, establishes policy on legislative, academic and fiscal matters.

ACCREDITATION

The University of Southern Colorado is accredited by the Commission on Institutions of Higher Education of the North Central Association of Colleges and Schools, 3030 N. LaSalle St., Suite 2400, Chicago, Il, 60602-2501, phone (312) 263-0456.

Individual programs approved by accreditation agencies include; chemistry, the American Chemical Society; civil, electronics, and mechanical engineering technology, the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET); industrial engineering, the Engineering Accreditation Commission of ABET; education, the Colorado State Board of Education; music, the National Association of the Schools of Music; nursing, the National League for Nursing; and social work, the Council of Social Work Education.

AFFIRMATIVE ACTION/EQUAL OPPORTUNITY COMMITMENT

The University of Southern Colorado is committed to providing an environment free from unlawful forms of discrimination, including sexual harassment, against any person based upon race, color, ethnic background, religion, gender, national origin, age, sexual orientation, disability, or status of veteran of the Vietnam Era.

Also, the university provides affirmative action to ensure that protected class applicants are employed and that all employees are treated fairly during employment without any regard to the aforementioned protected groups, in accordance with the laws of the United States and the State of Colorado. Such action includes, but is not limited to, affirmative efforts with respect to employment, promotion, transfer, recruitment, advertising, layoff, retirement, or termination; rate of pay or other forms of compensation and selection for faculty development activities. The university posts in conspicuous places notices setting forth the provision of nondiscrimination policy, affirmative action plans and programs, and equal opportunity commitments.

The university prohibits discrimination based on the aforementioned criteria above in admission or access to, treatment of, or employment in its educational programs or activities. The Americans with Disabilities Act (ADA) prohibits any form of discrimination based on disability in admission to, access to, and the operations of programs, services or activities at the University of Southern Colorado. Inquiries concerning Titles IV, VI, and VII of the 1964 Civil Rights Act Section 504, ADA, and Title IX of the Education Amendments of 1972 may be referred to Affirmative Action Director, University of Southern Colorado , 2200 Bonforte Boulevard, Pueblo, Colorado, 81001-4901, phone (719) 549-2936 or Office of Civil Rights (OCR) Department of Education, Colonnade Center, 1244 Speer Blvd., Denver, CO 80204-3582. Any questions, complaints and requests for additional information of ADA may be directed to the ADA Coordinator at (719) 549-2511.

THE CAMPUS

USC's campus, spanning more than 275 acres, crowns the north end of Pueblo, a historically and culturally rich city of 100,000 located near the Greenhorn Mountains in the colorful Pikes Peak region of southern Colorado.

Fourteen of the 16 buildings on campus, as well as fountains and pathways, follow the grand and unusual architecture of the University Library complex, which received a national award for design in 1966 from the American Institute of Architects and the U.S. Office of Education.

Approximately 320 sunny days a year attract outdoor enthusiasts to a full slate of summer and winter recreational activities, encompassing water sports at Lake Pueblo, biking along Pueblo's unique river trails, white water rafting, golf, tennis and skiing in the mountains to the west.

Enrollment exceeds 4,000 students from throughout southeastern Colorado, the state, the nation and several foreign countries, representing a diversity of age groups and backgrounds, both rural and urban.

TERMS OF THIS CATALOG ISSUE

Students graduate under the catalog requirements noted in the *Academic Policies* section of this catalog. The 1998-99 issue becomes effective fall semester 1998. Information contained within the catalog is current as of April 1998, but is subject to change without notice and therefore is not to be regarded as an irrevocable contractual commitment. Modification may occur at any time during the student's term of residence in the interest of lawful missions, processes and functions of the institution. The university will make reasonable efforts to inform students of any modifications occurring prior to publication of the 1999-2000 catalog issue.

ADMISSION

The University of Southern Colorado welcomes applications from all persons interested in post-secondary education. The Office of Admissions is located in the Administration building. Prospective students may obtain information about all USC programs, as well as university admission procedures, from the admissions office. Campus tours are available Monday through Friday. Prospective students should make advance arrangements for a tour by calling 800.USC.GROW (toll free) or 719.549.2461.

All correspondence concerning admission and campus visits should be addressed to the Office of Admissions, USC, Pueblo, CO 81001-4901 or by e-mail to info@uscolo.edu.

ENTERING FRESHMEN

Admission Standards

The University of Southern Colorado's admission process is designed to promote diversity within the student population and to assure equal access to qualified applicants. The final admission decision is based on the applicant's potential for attaining a degree at the university.

First-time applicants are eligible for consideration for admission to the University of Southern Colorado if the CCHE admissions index score is 80 or higher. The score can be achieved by various combinations of high school grade-point average and ACT composite or SAT combined scores. Such combinations include:

High School GPA	Minimum ACT or	SAT Composite
2.0000	23	1030-1050
2.3000	20	910-930
2.6000	18	830-850
3.0000	15	730-740
3.3000	13	630-660

If applicants do not achieve an index score of at least 80, the credentials will be reviewed by an admissions committee, which will base a recommendation for admission on:

1) the applicant's academic and personal potential to benefit from or contribute to university programs; and
2) the applicant's previous academic record.

Students with non-traditional backgrounds are encouraged to apply.

- NOTE: Acceptance by the university does not necessarily mean acceptance into a particular degree program, some of which have admission requirements beyond those of the university.

Admission Requirements

Students may apply any time after the completion of their junior year in high school. One official transcript of high school work should be sent directly to the admissions office from the high school, and a final transcript must be submitted after the applicant graduates from high school. Students who apply on the basis of the General Education Development (GED) tests in place of high school graduation must have the agency issuing the GED tests forward the test scores (not the certificate) to the Office of Admissions.

Applicants must submit:

1) a completed USC application;
2) a $15 application fee (non-refundable) (effective for students applying for Fall 1999 and beyond, application fee is $25);
3) an official transcript of high school records or GED scores **(USC will not accept transcripts directly from students as official)** ; and
4) scores from either the ACT or the SAT.

- NOTE: Applicants who have completed their secondary education through alternative options such as home schooling should submit documentation of that education (i.e., transcript, portfolio, narrative statements of accomplishment, etc). Consideration for admission will be in a similar manner as that for applicants from traditional high school programs, but additional emphasis may be placed on scores obtained on standardized examinations.
- Graduates of Colorado high schools participating in the standards based admissions project will be considered according to the current state guidelines for that project.

Minimum High School Academic Preparation Standards (MAPS)

Students who meet the course requirements for graduation from a Colorado high school also meet the minimum academic preparation standards for admission to the University of Southern Colorado. However, to be prepared to take full advantage of the university's academic programs, and to strengthen the probability of graduation and career success, the university strongly recommends that students complete the following course work while in high school:

- four years of English;
- three years of mathematics including two years of algebra and one year of geometry;
- two years of natural science including at least one year of physical science;

- two years of social studies including American government; and
- two years of a single foreign language.

Advanced Placement

The University of Southern Colorado participates in the Advanced Placement Program of the College Entrance Examination Board. Under the program, outstanding secondary school students may take certain college-level courses in their own high schools. Students who have taken the Advanced Placement Examination and who have received scores of 3, 4, or 5 will be granted university credit as well as advanced placement. USC credit is awarded without a grade, is counted toward graduation credits, and may be used to fulfill specific requirements.

For further information, students should contact the admissions office.

TRANSFER STUDENTS

Students who have attended other colleges or universities and are seeking admission to USC for the first time must submit:

1) a completed USC application;
2) a $15 application fee (non-refundable) (effective for students applying for Fall 1999 and beyond, application fee is $25);
3) official transcripts sent directly to USC from each college attended. **USC will not accept transcripts directly from applicants**; and
4) Final high school transcripts and ACT or SAT scores must also be submitted if total transfer credits earned are less than 30 semester hours.

Note: Transfer students who have less than 30 collegiate semester credit hours must meet the first-time freshmen standards and have a 2.0000 GPA in previous college courses.

Transfer students must be in good standing at the institution last attended and have at least a 2.0000 cumulative grade-point average. If not, the records will be reviewed and a recommendation on admission will be made by the admissions committee.

Students who are enrolled at another institution at the time application for admission is made to USC should arrange to have one official transcript from the current institution sent with the application. A final transcript should be sent when the final term is completed.

Transferred credit will be evaluated as soon as possible after official transcripts have been received from all colleges previously attended and the student has been accepted for admission.

Each student must indicate all previous college experience on his or her application. Applicants may not ignore previous college attendance. Students who fail to inform the Office of Admissions of all previous college work will be subject to cancellation of enrollment.

Transfer Agreements

USC is dedicated to the concept of guaranteed transfer opportunities for students enrolled at any of Colorado's public two-year and four-year institutions. Information on transfer agreements is available in the Office of Admissions. Additional information appears in the *Academic Requirements* section of this catalog.

Transfer of Credit

Transfer students should be aware of the 10-year time limit on credit earned toward a bachelor's degree, which applies to both transfer and resident credit. (Additional information appears in the *Academic Requirements* section of this catalog.)

Credit is accepted by USC from institutions accredited by the North Central Association of Colleges and Secondary Schools or similar regional accrediting bodies. For credit toward degree requirements, USC accepts a maximum of 64 semester hours from community or junior colleges and/or a maximum of 96 semester hours from four-year institutions.

Courses with grades of D or F are not accepted for transfer with one exception. Grades of D in General Education courses are accepted in transferring Colorado Community College and Occupational Educational System core courses if the student has fully completed either an AA or AS degree with at least a 2.0000 cumulative grade-point average.

The University of Southern Colorado may accept the AA or AS degree from other states as fulfilling the university's general education requirements. Transcripts will be reviewed on request by the Office of Admissions to determine if general education requirements are satisfied.

Credit from an institution without regional accreditation may be accepted by petition for transfer after the student has completed at least 24 semester hours at USC with a C (2.0000) average or better.

The university accepts up to eight semester hours of cooperative education courses in transfer. Cooperative education course work, to be acceptable, must include a clearly defined academic element, such as a study plan or reading assignments.

A maximum of 30 hours of correspondence work may be applied toward a bachelor's degree. Extended studies (continuing education) will be treated in the same manner as traditional credit.

Military service credit is evaluated when official copies of certificates are received at USC. Courses are evaluated according to the American Council on Education (ACE) Guidelines. A maximum of 20 semester hours of credit is counted toward a baccalaureate degree. Credit is not given for military service work experience.

Acceptance of credit does not necessarily mean that a specific department will accept the same credit toward its major requirements. Each department evaluates transfer courses to determine applicability to major and minor requirements.

All application materials for applicants who decide not to enroll for the term for which they applied will be kept on file in the Office of Admissions for one year.

College Level Examination Program

All credit earned by the student on any of the CLEP **general examinations** and recorded on the student's transcript from another institution is accepted in transfer, if the credit is not duplicated from other sources. If CLEP credit is transferred directly, only credit in the areas of humanities and social science is accepted unless otherwise approved in writing by the appropriate department chair and dean. If a student has taken humanities or social science classes **before** taking CLEP tests, those credits are deducted from the CLEP credits.

Appeals Process

If a student disputes the university's evaluation of credits from other Colorado public institutions, the student must file a written appeal with the Director of Admissions within 15 calendar days of receiving the evaluation. If the student fails to file an appeal within the 15-day period, the decision made in the transfer evaluation will be binding.

The Director of Admissions will have 30 calendar days to review the appeal and notify the student in writing of the decision including the rationale for the decision. In addition, the student will be notified in writing about the process for appealing and the appeal decision should the student feel that reasonable doubt exists.

If the Director of Admissions fails to inform the student of the available appeal options, the appeals decision shall be null and void. The student's request prevails and cannot be overturned by any institutional administrator or committee.

Student may appeal the first appeal decision in writing to the associate provost. The appeal must be filed within fifteen (15) calendar days of the postmark date of the letter from the Director of Admissions regarding the first appeal decision.

The university must hear and reach a decision on the appeal within fifteen (15) calendar days after the appeal is filed. The student will be notified in writing by the university of the decision regarding the appeal and the rationale for the decision. In addition, the student shall be informed in writing about the subsequent process for appealing the institutional transfer decision, if the student chooses to do so.

The student may appeal the institutional decision by writing the Vice Chancellor for Academic Affairs of the Colorado State University System (CSUS). The appeal must be filed within five (5) calendar days of the postmark date of the letter notifying the student of the institutional decision. If the student fails to file an appeal within this time period, the institutional decision shall be binding.

The Vice Chancellor for Academic Affairs shall review and reach a decision on the appeal within five (5) calendar days after the appeal is filed. The student will be notified in writing of the decision regarding the transfer appeal and the rationale for the decision. In addition, the institution shall inform the student that the decision may be appealed further by writing to the Colorado Commission on Higher Education (CCHE). The appeal must be filed within five (5) calendar days of the postmark date of the letter notifying the student of the vice chancellor's decision.

Graduation Cum Laude

Transfer students who wish to be considered for graduation cum laude, magna cum laude, or summa cum laude should request a recomputation of grade-point average as outlined in the *Academic Policies* section (Deans' List and Graduation Cum Laude) of this catalog.

INTERNATIONAL STUDENTS

Students who are residents of another country must submit the following to be admitted to USC:

1) the official international application for university admission, accompanied by a $30 fee;

2) two official transcripts of all work completed either in high school or in college (or the equivalent). One transcript must be in the native language, one in English. Both must show courses taken, grades earned, length of classes and length of school terms. All transcripts must bear the official seal of the issuing institution and must be sent by that institution directly to the Center for International Programs. An explanation of all transcript terminology must be included;

3) results of an English language proficiency test. First-time freshmen students: A score of 500 on the Test of English as a Foreign Language (TOEFL), a minimum score of 80 on the Michigan Test of English Proficiency, or completion of level 5 at the American Language Academy is required. Transfer students: A score of 500 on the Test of English as a Foreign Language (TOEFL) or a minimum score of 80 on the

Michigan Test of English proficiency is required. In addition, transfer students must have an overall cumulative grade-point average of 2.0 or above. English language proficiency scores are not required of students from countries where English is the native language;

4) a financial statement regarding the resources available to the student during his or her stay in the United States. An international student cannot be accepted without this statement.

The Center for International Programs reserves the right to change policy. Exceptions are at the discretion of the USC Director of Admissions.

No international student application for admission will be considered until all required materials have been submitted. All materials must be received by the Center for International Programs' application deadlines.

INTERNATIONAL BACCALAUREATE DIPLOMA PROGRAM

The University of Southern Colorado recognizes and encourages high school students to participate in the International Baccalaureate Diploma Program. The university recognizes the IB program as a rigorous pre-university course of study for highly motivated secondary students. Students who complete the IB program and IB examination(s) are eligible to receive credit and advanced placement standing at the University of Southern Colorado.

To receive university credit, a student must take the IB examination(s) and request that the scores be sent to the University of Southern Colorado admissions office. Upon receipt of the scores, an evaluation for credit will be performed by the appropriate academic department. The student will be notified by mail of the evaluation results in approximately two - four weeks.

A score of 4 or better on the IB examination(s) will receive between 3 -10 credits for most examinations. Please contact the office of the Director of Admissions for more information.

RETURNING STUDENTS

Students who have been enrolled in residence, but whose attendance was interrupted for one or more regular semesters, are required to file an application for readmission by the admissions deadline of the semester in which they wish to enroll. Effective for Fall 1999 and beyond students seeking readmission must submit a $25 reapplication fee (non-refundable). Students who withdraw, or are withdrawn, from the university for any reason and are subsequently readmitted after an absence of two or more semesters are governed upon readmission by the catalog current at the time of readmission. Any exceptions to the policy must have prior approval from the provost. Degree-seeking students who have attended another post-secondary institution or have taken college-level correspondence or extended studies courses must provide complete official transcripts of such studies.

ACADEMIC RENEWAL

Students who return to the University of Southern Colorado after an absence of at least two years, have not attended full-time at any other college or university, and whose cumulative USC grade point average is below 2.0000, may request academic renewal at the time of readmission to the university. Students who take advantage of the Academic Renewal Policy will not have grade-point averages carried forward upon readmission, and courses with grades of D or F will not count toward graduation. **Academic renewal will not be granted more than once.**

Students who seek readmission to the university after an absence of 10 years or more will not have grade-point averages carried forward. Any college credit earned more than 10 years before the date of readmission is not applicable toward the degree desired unless approved by the chair of the department offering the course(s) [or equivalent(s)], and by the appropriate dean. Courses petitioned for general education credit must also be approved by the Office of Admissions.

Students who elect academic renewal will be required to complete at least 32 hours of credit after readmission before they are eligible for a baccalaureate degree.

The Academic Renewal Application can be obtained from the Registrar's Office.

UNCLASSIFIED STUDENTS

Students may enroll at the University of Southern Colorado as unclassified (non-degree seeking) students if one of the following categories applies.

Special Student:

Special student status is reserved for applicants who are 20 years of age or older and who wish to enroll in courses without degree-seeking status. Applicants who wish to register as special students are required to file an application with the Office of Admissions each term that they wish to enroll.

A special student may carry up to 15 hours per semester and may earn a maximum of 30 semester hours while maintaining special student status. The student must maintain a 2.0000 cumulative grade-point average as a special student. Special students who wish to exceed the 30-semester-hour maximum may file a petition with the Office of Admissions. However, no more than 30 semester hours may be applied to the baccalaureate degree should the student decide to become a degree candidate.

Degree-plus Student:

Non-degree-seeking students who have completed a baccalaureate degree may enroll as unclassified degree-plus students after filing the appropriate application with the Office of Admissions.

Guest Student:

Students who have enrolled as degree candidates at other institutions of higher education may enroll for the summer term at the University of Southern Colorado as guest students. Guest students must complete the appropriate application with the Office of Admissions.

National Student Exchange:

The university is affiliated with the National Student Exchange Program (NSE), a consortium of state colleges and universities throughout the United States that arranges for students to study on various campuses as guest students. The exchange enables students to get better acquainted with different social and educational patterns in other areas of the country while paying USC tuition. The student must be approved for participation by both their home and the receiving institution. USC sophomores and juniors interested in learning more about this opportunity should contact the Office of Admissions in the Administration building for an information packet and instructions on the application process. Applications must be submitted early in the spring semester prior to the academic year in which an exchange is planned.

High School University Program:

Under Colorado's Postsecondary Options Act, high school juniors and seniors may register for classes at the university. Students must submit an admission application approved by their high school counselor, principal and parents for each term they wish to enroll. In some cases, the high school district may pay students' tuition. Students in the PSO program are considered unclassified (non-degree seeking) students at the university. Information on such programs is available in the Office of Admissions.

The University also offers a Senior-to-Sophomore (STS) program by agreement with various high school districts. High school students in this program are afforded the opportunity to study in university level courses while remaining in their high school classrooms and are considered classified students by the university. Students must submit an application for admission, transcript of their high school record and ACT or SAT scores. Those STS students who are in their senior year are given consideration for admission as regular first-time students for the fall semester following their high school graduation. Students interested in this program are encouraged to seek information from their high school guidance counselor or from the university's Office of Continuing Education at 719.549.2316.

Senior Citizens:

Persons 65 years of age or older, or 62 and retired, may audit courses on a space-available basis without paying tuition. Permission of the instructor is required. Unclassified students are ineligible to receive financial assistance from the university, including aid from all federal and state financial assistance programs.

VETERANS

Veterans must follow the admission requirements and procedures outlined in this catalog. For certification of eligibility for education benefits under one of the Public Laws, students can apply for Veterans Administration benefits through the Office of Veterans Affairs in the Administration building, Room 207.

ADMISSION PROCEDURES

Application Deadlines

The application for admission as a degree seeking student and all other required documents must be received at least ten days prior to the start of the term for which the applicant wishes to enroll. Applications and supporting documents received after this point but prior to the end of the first week of classes will be given consideration if space is available.

RESIDENCE CLASSIFICATION

A person moving to Colorado must be domiciled in the state for 12 continuous months before becoming eligible for a change in residence classification. To qualify for in-state classification for tuition purposes as a resident of Colorado, a person must do more than just reside in Colorado for the preceding 12 continuous months. "Residency" in this context means legal "domicile," which requires intent to remain in Colorado indefinitely in the sense of making one's permanent home in the state. The distinction is that one may have any number of residences at one time, but never more than one domicile.

A particularly relevant point is that one retains a former domicile until a Colorado domicile is established by the 12-month residency.

Intent is determined by:

1) the student's written declaration of intent to remain in Colorado indefinitely, i.e., the student has no present intent to leave the state now or in the future;

2) documented evidence of overt actions that link the student to Colorado.

Examples which establish intent are: payment of Colorado state income tax, a Colorado driver's license, Colorado motor vehicle registration, the compliance with mandatory duty upon a domiciliary of the state, and voter registration. Obviously, the specific actions that establish intent vary according to the individual and the circumstances, but each individual must, with his/her circumstances, act

consistently with the stated intent. An information brochure pertaining to the establishment of residency for tuition purposes may be obtained by writing to the Office of Admissions.

A student's classification as a Colorado resident for tuition purposes is made by the university at the time of admission, according to Colorado statutes. Any student classified as a nonresident who believes that he/she can qualify as a resident may obtain a petition and a copy of the statutes governing tuition classification from the Office of Admissions. The petition is processed only if the student has an application for admission on file or is currently enrolled. The petition is due no later than the day before the first day of class for the semester in which the change is requested. Deadlines are published in each semester class bulletin.

Students 23 years of age or under who are independent from their parents must prove emancipation and demonstrate residency on their own qualifications. Students must notify the Office of Admissions if their status changes from resident to non-resident. Any student who willfully gives wrong information to avoid paying nonresident tuition is subject to legal and disciplinary action.

OFFICE OF FINANCIAL SERVICES

TUITION AND FEES

Tuition and Fee rates and payment deadlines are published in the class schedule bulletins for each semester. All fees and charges listed **in the class schedule bulletin** are subject to change because of action by the governing board prior to the beginning of the semester. The governing board normally acts on tuition and fee charges at its June meeting prior to the start of the academic year. Current information may be obtained from the class schedule bulletin available in the Registrar's office or by calling the Office of Financial Services at (719) 549-2753.

Payment of Tuition and Fees

Tuition and fees are assessed in accordance with approved policies. Instructions for payment and payment deadlines are stated in the class schedule bulletins. Specific information about tuition and fees is given in the *Student Expenses* section of this catalog. Contact Student Financial Services office at (719)549-2753 Administration building room 212 for more information.

Tuition rates are established by the State Board of Agriculture following budget action of the Colorado General Assembly. Tuition rates for any succeeding fiscal year are not known until the period of March to June of each year, when appropriations are made. The State Board of Agriculture therefore reserves the right to change the tuitition and fees at any time.

OTHER SPECIAL FEES

There may be other fees associated with certain classes offered at the University. Please verify the outstanding balance due by contacting the Office of Student Financial Services at (719) 549-2753.

PARKING:

Parking decals may be obtained at the Cashier's Window in the Administration building. Parking decal fees are non-refundable.

OPTIONAL COPIRG FEE

In the spring of 1989, students voted to establish a chapter of the Colorado Public Interest Research Group (CoPIRG), to be funded by a $5 waivable fee. CoPIRG is a statewide, student-directed, non-partisan, non-profit organization that conducts research, advocacy, and public education on such issues as voter registration, safe drinking water, air quality, toxic waste clean-up and prevention, consumer protection and good government. CoPIRG chapters also operate at Colorado State University, the University of Northern Colorado, and Metro State College.

Students interested in becoming involved with CoPIRG projects may call (719) 549-2198 or (303) 355-1861. The CoPIRG fee will be added to other charges automatically unless you **initial the appropriate space on your registration form to waive the fee.** If you do not wish to be charged for CoPIRG and forget to initial the appropriate space, a refund can be requested from the CoPIRG office in the Occhiato Center.

PAYMENTS

Extended payment plans are available. Please refer to the current semester course bulleting for specific due dates.

ADDITIONAL PROCEDURES

Additional procedures are published before the beginning of each semester in the semester course bulletin. The procedures described include the distribution of financial aid, payment-due date, drop/add and withdrawal, administrative withdrawal for non-payment and refund policies. Students will be held responsible for adhering to the policies and procedures contained in the bulletin.

DELINQUENT STUDENT ACCOUNTS

Students are subject to any or all of the following actions if they have a delinquent debt to the university:

- Administrative withdrawal
- Transcripts held
- Degree not conferred
- No future course registrations allowed

Reasonable collection/legal costs will be added to the amount due. Any student who pays with a check that is returned unpaid by his/her bank will be subject to all of the penalties for late payment and also will be charged an additional $17 fee.

ADJUSTMENTS

The Tuition Adjustment Appeals Committee will consider requests for adjustment to billed tuition and fee charges when a student must withdraw due to extenuating circumstances. Please see the semester course bulletin for procedures on how to file an appeal.

Any student expelled from the University is not eligible for an adjustment. No adjustment/refunds of tuition and fees will be made to a student who is suspended, dismissed or expelled for a breach of discipline.

FINANCIAL ASSISTANCE

Financial aid is a resource for students and parents seeking monetary assistance to help defray the costs of higher education. Eligible students who demonstrate financial need may receive assistance from the federal government and/or the State of Colorado in the form of grants, loans, work-study and/or scholarship funds. Students may obtain applications and other necessary forms from the **Office of Student Financial Services,** Administration building, room 212, phone (719) 549-2753.

The primary responsibility for educational costs resides with the student and the student's family. Assistance offered through the Office of Student Financial Services is intended to supplement the family contribution. Requests for assistance always exceed the funds available and federal monies are allocated according to documented financial need.

STUDENT FINANCIAL SERVICES POLICIES

Students must complete all necessary forms and submit requested documents to be considered for financial aid. Funds are awarded on a first-come, first-served, need basis.

Financial Aid Application Steps

1) To be considered for financial aid, students must be accepted for admission in a degree program. (Please note: Financial aid students can receive funds as "undeclared" until they have earned 45 credit hours, including transfer credits. After reaching 45 credit hours, a major area of study must be declared.)

2) Complete and mail (to the processor) by **March 1**, a **Free Application for Federal Student Aid** (FAFSA), available at local high schools, colleges and universities.

   The **USC school identification code is: 001365**

3) Once the FAFSA has been processed, students will receive a **Federal Student Aid Report**, which will be electronically submitted to all the schools listed on the FAFSA.

4) Students whose data has been selected for **verification** will be required to submit a verification form and a signed copy of the tax return(s) used to complete the FAFSA prior to being awarded.

5) Students who transfer mid-year must submit a Financial Aid Transcript (obtained in any financial aid office) for each college, university, technical and/or trade school previously attended.

Definition of Good Standing

Students are considered to be in good standing for financial aid purposes if they are eligible to be enrolled in accordance with the guidelines established by the university and the Office of Student Financial Services.

Continuing students must be in good standing and comply with the financial aid Satisfactory Academic Progress Policy; and **must reapply for aid each year.**

Students may **not** receive financial aid if they are:

1) on financial aid suspension or academic suspension;

2) in default on student loans or owe refund or repayment on grants previously received to attend USC or other institutions; and

3) non-citizens or are not permanent residents of the United States.

SATISFACTORY ACADEMIC PROGRESS POLICY

Federal and state financial aid regulations require that all students receiving or applying for financial aid must maintain satisfactory academic progress toward degree completion to remain eligible for financial aid. Students must meet the requirements for satisfactory academic progress toward a degree, as outlined in this policy, to retain eligibility for financial aid, whether or not they were previously receiving financial aid.

The student financial services office reviews satisfactory academic progress for fall and spring semesters at the end of each academic year (May) for each student receiving financial aid.

Regular Progress

Below are the criteria considered when academic progress is reviewed to determine if students met the minimum requirements of the financial aid Satisfactory Academic Progress Policy. There is no probationary status prior to suspension.

Students who fail to meet any one of the criteria will be placed on financial aid suspension.

I. Earn 70 percent of credit hours attempted

Credit hours attempted include all credit hours for which registration charges are incurred. To maintain satisfactory academic progress for financial aid, a student must attempt or be enrolled for the appropriate number of credit hours. Listed below are the definitions for full-time, three-fourths time and less-than-half-time status.

Undergraduates - Enrollment Status

Full-time . . . . . 12 + credit hours/semester
Three-fourths time . . . . . 9 to 11 credit hours/semester
Half-time . . . . . 6 to 8 credit hours/semester
Less-than-half-time . . . . . 1 to 5 credit hours/semester

Graduates - Enrollment Status

Full-time . . . . . 9 credit hours/semester
Three-fourths time . . . 6 to 8 credit hours/semester
Half-time . . . . . 4 to 5 credit hours/semester

Students must earn 70 percent of all credit hours attempted (i.e., all credit hours for which the student registers or enrolls).

Following are three examples of the 70 percent rule:

1) Students who attempt 12 credit hours during fall and 12 credit hours during spring must earn 70 percent of the 24 credit hours they attempted.

   70 percent X 24 (credit hours attempted) = 16.8

   Rounded down, 16 credit hours must be earned with a passing grade. If the student earned 16 of 24 hours attempted, he/she would not be placed on financial aid suspension due to current hours earned.

If the student earned less than 16 credit hours, he/she would be placed on financial aid suspension.

2) Another example includes a student who attempted 8 credit hours (half-time) during fall semester and 12 credit hours (full-time) during spring semester, a total of 20 credit hours.

   70 percent X 20 (credit hours attempted) = 14 credit hours minimum must be completed with a passing grade. If the student earned 14 of 19 hours, there would be no financial aid suspension due to current hours earned. However, if the student earned 13 credit hours or less, he/she would be placed on financial aid suspension.

3) Student attempts 18 credits fall and 15 credits spring. The student must earn (18 + 15 = 33 X 70 percent) 23 credits with passing grades. If the student earned fewer that 23 credit hours, financial aid suspension would result.

The following are considered passing or not passing grades:

Passing Grades:	Grades not acceptable as passing:
A, B, C, D, S	F, U, W, WN, IN, NC

II. Minimum cumulative grade-point average (GPA)

The required minimum cumulative grade-point average is based on the total number of credit hours a student has attempted, including transfer hours and academic renewal hours.

Undergraduates must maintain the following minimum cumulative grade-point averages:

Credit Hours Attempted	Required Minimum Cumulative GPA
1-12	1.5000
13-24	1.6000
25-36	1.7000
37-48	1.8000
49-59	1.9000
60+	2.0000

Degree plus (students working on a second undergraduate degree) and those students who have a baccalaureate degree but are working towards teacher certification must have a minimum cumulative grade-point average of 2.0000.

Graduate students (those pursuing a master's degree) must have a minimum cumulative grade-point average of 3.0000.

III. Maximum credit hours attempted

Students must maintain satisfactory academic progress within the maximum credit-hour limits listed below. A student will be placed on financial aid suspension at USC once the total credits attempted, plus transfer and academic renewal credits, exceed the following number of credits:

Undergraduate Degree	144
Graduate (Master Level)	60
Second Undergraduate Degree	50
Teacher Certification Elementary	60
Teacher Certification Secondary	45

Note: Transfer hours and academic renewal credits are included in the maximums. Students exceeding maximum credit hours will be suspended and have the right to appeal.

IV. Total withdrawal

Any financial aid recipient who processes a total withdrawal from the university will be placed on financial aid suspension. Total withdrawal means all classes are officially dropped and the student is no longer enrolled or in attendance at USC. **TOTAL WITHDRAWAL IS MONITORED EVERY SEMESTER**, including summer. Any aid previously accepted (including work-study), loans, grants and scholarships) for the remainder of the academic year is canceled. Reinstatement of the funds upon appeal approval is subject to the availability of funds. Scholarship recipients must check with the donor to find out if they are still eligible.

The following definitions and terms are used in the Financial Aid Satisfactory Progress Policy.

Incompletes and Grade Changes

Grade changes or grades of "incomplete" which affect a student's financial aid suspension status must be changed or completed prior to the drop/add deadline of the subsequent fall semester in which the student enrolls. Students must deliver documentation of grade changes to the Office of Student Financial Services no later than the end of the second week after the drop/add period of the next semester.

"**Credit hours attempted**" are all credit hours for which the student registers (enrolls).

Remedial Courses

Remedial courses (below 100 level) are counted toward hours attempted per semester, but not counted toward the maximum credit hours attempted, nor toward a degree program.

Academic Renewal

Students who are approved for academic renewal are considered under the same criteria as the transfer student, with regard to the GPA and total hours earned. Contact the Office of Admissions for the academic renewal policy.

Transfer Students

Transfer hours accepted at USC are counted in the total hours attempted. Therefore, transfer students must earn the USC grade-point average required for the credit-hour level that includes transfer hours accepted in order to maintain eligibility for financial aid.

For example, a student who transfers 30 hours from another college and has attempted 30 at USC for a total of 60 hours is expected to maintain a 2.0000 cumulative GPA.

Financial Aid Probation

There is no probation period prior to financial aid suspension.

Financial Aid Suspension

Financial aid suspension is defined as a condition in which students are no longer eligible to receive financial aid of any kind including all loans, grants, work-study and scholarships.

Academic progress will be reviewed at the end of each academic year (after spring semester). Students will be notified in writing regarding suspension of financial aid eligibility.

Students will be suspended from financial aid eligibility for any of the following reasons:

1) Completing, with passing grades, less than 70 percent of all hours attempted.
2) Low cumulative grade-point average, based on the number of credit hours attempted (including academic renewal and transfer credits).
3) Exceeding the maximum credit hours allowed.
4) Total withdrawal from USC in any semester, including summer.

Appeals Procedure

Both undergraduate and graduate students follow the same financial aid appeals procedure. The appeals process is initiated by the student following written notification of the suspension in cases where there are mitigating circumstances that have affected the student's academic performance.

Mitigating exceptional circumstances include, but are not limited to:

1) Serious illness or injury,
2) death or severe illness of immediate family members,
3) divorce or separation of student and spouse or student's parents.

A student who wishes to appeal suspension due to failure of meeting satisfactory progress standards must submit a one-page letter of appeal along with documentation of the mitigating circumstances no later than the end of the drop/add period for fall and/or spring. Appeals received after these dates will be considered for the following semester. For example, if the last day to drop or add a class is Sept. 11, the appeal letter must be received no later than 5 p.m. that day.

Students who exceed the maximum enrollment limitations and who desire continued eligibility for financial aid should submit a letter of appeal indicating the reasons for not having completed a degree.

Also, the student must submit a copy of the senior planning sheet and/or a written statement from their academic adviser(s) indicating course work necessary for completion of degree and when the courses will be taken.

Reinstatement

Students whose appeals are approved will be awarded based on available funds. Those reinstated must meet the criteria established in the Financial Aid Satisfactory Academic Progress Policy. If they fail to meet criteria, they will be suspended and, again, have an opportunity to appeal.

FINANCIAL AID PROGRAMS/GRANTS

Federal Pell Grant

A Federal Pell Grant is an award to help undergraduates pay for an education after high school. The Federal Pell Grant program describes an undergraduate as one who has not earned a bachelor's degree.

For many students, Federal Pell Grants provide a foundation of financial aid to which aid from other federal and non-federal sources may be added.

Students must re-apply each year. The period of eligibility is the length of time required for completion of the first baccalaureate course of study.

Colorado Student Grant (CSG)

The CSG is awarded to undergraduate residents on the basis of financial need. The amount of the grant cannot be greater than $2,000 per academic year and generally will not exceed one-half the documented financial need. Funds are provided by the Colorado General Assembly.

Federal Supplemental Education Opportunity Grant (FSEOG)

The FSEOG is a form of non-repayable financial aid and is designed to assist undergraduate students with exceptional need, targeted to Federal Pell Grant recipients and other exceptional need students. Awards may not exceed $4,000 per year.

Part-time Student Grant (Colo.)

The part-time student grant is awarded to undergraduate Colorado residents, with financial need, who are enrolled less than full-time. The amount of the grant cannot exceed $2,000 per year.

State Student Incentive Grant (SSIG)

The SSIG is awarded to undergraduate resident students on the basis of financial need. Stipends range from $200 to $2,500 per academic year and generally will not exceed one-half of the documented financial need. The SSIGs consist of one-half state and one-half federal funds.

WORK-STUDY

College Work-Study Program (CWSP)

The CWSP is designed to provide jobs to students who, without the earnings from the employment, could not attend the university. The program is funded by both the federal government (Federal work-study) and the Colorado General Assembly. The university annually employs approximately 700 students in the work-study program.

Full-time Work-study

Full-time work-study is a program designed to provide students with employment during the summer. A portion of the earnings from the employment must be used to offset educational costs of the next academic year.

To be eligible, students must:

1) enroll at the university for the next academic year as degree-seeking (classified) students;
2) have an award letter which indicates an offer of work study,
3) complete separate applications for the summer full-time work-study and for the next academic year by the specified date;

No-need Work-study

The no-need work-study program is funded by the Colorado General Assembly. To be eligible, students must be undergraduate Colorado residents.

Students are selected for the program if qualifications are met and if funds are available. The average no-need work-study award for the academic year is $1,800. Students must apply for need-based financial aid and must be found not eligible for need-based assistance in order to qualify for the no-need program. They must complete the Free Application for Federal Student Aid (FAFSA). Students should not assume that they will be found ineligible for need-based financial aid. Those who are declared ineligible for need based work-study, however, may qualify for no-need work study.

FEDERAL FAMILY EDUCATION LOANS

Prior to any federal education loan (Federal Stafford or Federal PLUS) being certified by USC, the applicant must complete the financial aid application process (including the free application for Federal Student Aid).

Federal Perkins Student Loan

(Formerly titled National Direct Student Loan-NDSL) a Federal Perkins Loan is a low-interest (5 percent) loan to help exceptional need students pay for post-secondary education. USC must disclose the loan disbursement and default status to a credit bureau organization.

Students may be eligible to borrow up to a total of:

- $3,000 a year as an undergraduate if they are enrolled in a degree program, leading to a bachelor's degree;
- $5,000 a year as graduate students enrolled in a master's degree program;
- $15,000 aggregate if they are undergraduates working toward a bachelor's degree; or
- $30,000 aggregate for graduate or professional study (total includes any amount borrowed under Federal Perkins Loan or NDSL for undergraduate study).

Repayment of the loan begins nine months after students cease to be enrolled half-time. Students may be allowed up to 10 years to repay the loan. The amount of payment depends upon the size of the debt but usually is in payments of at least $30 or $40 per month for first time borrowers. The university may agree to a lesser amount because of extraordinary circumstances such as prolonged unemployment.

In case of default on a Federal Perkins Loan, which the university is unable to collect, the federal government may take action to recover the loan. Questions about the terms of the loan, repayment obligations, deferment or cancellation should be directed to the financial aid office or to the accounting office.

Federal Stafford Loans

The Federal Stafford Loan program is designed to enable students to secure long-term loans from private lending institutions, such as banks, savings and loan associations, and credit unions.

The loans have a low interest rate for students in school and enrolled at least half-time.

Students who receive a need-based Federal Stafford Loan pay no interest on the loan while in school or in deferment. This type of Federal Stafford Loan is referred to as "**subsidized.**"

An "**unsubsidized**" Federal Stafford Loan is available to students who are not eligible for a need-based (subsidized) Federal Stafford Loan. With an unsubsidized Federal Stafford Loan, students are responsible for the interest during the in-school and deferment periods.

The Federal Stafford Loan Program is intended solely to aid students pursuing a degree in higher education. Students should borrow only the amount they believe is necessary to pay for educational costs. Keeping the amount of a loan at a minimum will ease repayment.

Student Loan Amounts

Federal Stafford Loans cannot exceed the student's unmet financial need, as determined by the financial aid office and the grade-level loan limits per academic year which are determined by the federal government.

$2,625 freshman
$3,500 sophomore
$5,500 junior, senior and degree plus
$8,500 graduate and professional

Federal Stafford Loan Check Distribution

Federal regulations require that all loans be disbursed in multiple disbursements regardless of loan amount or length of the loan period. Therefore, students who borrow for both fall and spring semester will receive two disbursements, one each semester. Students who borrow for summer, fall, and spring, will receive three disbursements, one each semester. For one semester loans, the student will receive two disbursements. **The second disbursement cannot be made until at least one-half of the loan period has elapsed.**

First-time freshmen must be in attendance 30 days of the first semester of the loan period before receiving the first loan check.

Electronic Funds Transfer is available to students whose loans are guaranteed through the Colorado Student Loan Program (CSLP). Funds are transferred to a university account. On a weekly basis, with student permission, funds received will be credited to the student's account and/or paid to the student directly.

Lending institutions send the loan check to the accounting office where the check is recorded. The student's academic progress, enrollment status, and eligibility will be checked by the Office of Student Financial Services. Once these measures have been taken, with proper identification, the student may sign for the check and sign it or apply it to their university account.

Loan checks may be disbursed after the end of the loan period or when a semester is over, under certain conditions.

A school cannot hold a student loan check for more than 45 days after it has been received. The check will be returned to the lender.

Federal PLUS - Parent Loan for Dependent Students

The Federal PLUS loan is a non-need-based parent loan for dependent students and has a variable interest rate not to exceed 9 percent. The rate is adjusted every July 1 by the U.S. Department of Education. Credit checks are conducted by the lender to determine loan approval. If the loan is denied the lender is responsible for notifying the parent (borrower).

Parents of dependent undergraduate students may borrow up to the cost of education minus financial aid per year for each child who is enrolled at least half-time and is a dependent student. The PLUS loan must be disbursed in multiple disbursements (similar to the Federal Stafford). The borrower (parent) must begin monthly payments of a Federal PLUS loan 60 days after the final loan check is disbursed.

Parents may request deferment of repayment under certain conditions established by the lender.

Student Success Loan

The Student Success Loan is intended only for those financial emergencies that present extreme hardship which could not reasonably be foreseen and which seriously threaten the continuation of the student's enrollment at the university.

Students must be enrolled for at least 6 semester credits, must be in good standing and must not have an unpaid university account. Student Success Loans will not be made at any time when the university is not in session.

Maximum loan amount is $350 per semester.

Loans are to be repaid within a short period of time (normally within 60 days). If the loan has not been repaid or arrangements made for its repayment by the due date, the delinquent loan will be treated as an overdue student account and handled in accordance with university policy. Applications for Student Success Loans are available in the Office of Student Financial Services. A $3 fee, assessed for processing the loan, will be deducted from the loan amount.

SCHOLARSHIPS

USC President's Scholarship

The President's Scholarship program is designed to provide recognition for outstanding academic performance and talent (art, creative writing/journalism, music, speech/ theatre). Scholarships of $1,000 are awarded to selected undergraduate U.S. citizens or resident aliens who are incoming freshmen, community or junior college transfer students or continuing students at USC.

Freshmen recipients are selected on the basis of high school grade-point average, class rank, and Scholastic Aptitude Test or American College Test scores. All others are selected on the basis of the cumulative GPA. These parameters may vary from year to year and are dependent on the availability of funds. Recipients of the scholarships are selected by a special committee. Currently enrolled USC students must complete 24 semester credits per year (courses with grades of S/U are not included). Renewal of the scholarship is based on the student's cumulative grade-point average at the end of **each semester**. Grade-point averages of transfer students are not considered in determining cumulative grade-point averages. The award cannot be used for

more than eight academic terms or beyond the time that the bachelor's degree is awarded. The funds are provided by the Colorado General Assembly.

USC Diversity Grant

The Diversity Grant program is designed to recruit and retain students from under-represented groups (who contribute to a diverse educational environment). Honors Diversity Grants of $1,000 are available to minority, single parent and handicapped students in the Honors Program. Additional USC Diversity Grants of $1,000 will be awarded on the basis of GPA and overall qualifications. Applications are available in the Office of Student Financial Services. The grants are designed to supplement other aid programs available to students. The number of awards is dependent upon the level of state funding for the program. Funds are provided by the Colorado General Assembly.

Awards to Out-of-State Students

A portion of the undergraduate scholarship funds may be awarded to non-resident (out-of-state) students provided all established criteria is met. Applications are available in the Office of Student Financial Services.

Private Scholarship Program

The University of Southern Colorado Foundation administers many scholarships awarded by corporations, businesses, foundations, individuals and other private sources. Various scholarships also are financed by local groups, service clubs, cultural societies and similar organizations.

The following procedure has been established for scholarship disbursements from the USC Foundation each semester.

1) The scholarship recipient is notified of the award and *must* send the donor a thank you letter for the scholarship and provide the USC Foundation office with a copy of the letter;

2) When scholarship recipients receive their bills for tuition, they should report to the cashier to endorse checks made payable to themselves AND the university and have their account credited;

3) When all charges are cleared, any surplus remaining from the check will be paid to the recipient if so allowed by the donor.

Questions about private scholarships may be directed to the USC Foundation. Information about most scholarships is available in the USC Foundation office, Administration building, room 320, phone (719) 549-2380, and from high school counselors.

ADDITIONAL ASSISTANCE PROGRAMS

Student Employment Services

The Career Center coordinates a variety of student employment opportunities to include the university's work-study program, on-campus student hourly, and off-campus temporary, seasonal, and part-time jobs. Additional information can be obtained in the Psychology building, room 232, phone (719) 549-2980.

VETERANS

Veterans must follow the admission requirements and procedures outlined in this catalog. For certification of eligibility for education benefits under one of the Public Laws, students can apply for Veterans Administration benefits through the Office of Veterans Affairs in the Administration building, room 212, phone, (719) 549-2587.

Veteran's Benefits

Programs offered by the University of Southern Colorado, with certain exceptions, are approved by the Community College and Occupational Education System for the education and training of those veterans and dependents of veterans eligible under applicable laws. A veteran or dependent planning a course of training in a special program not described in the university catalog or identified as approved for veteran's benefits should check with the certifying official before enrolling in such a program, if benefit assistance is desired.

Veterans and dependents who plan to apply for Veterans Administration benefits while attending the University of Southern Colorado should contact the Office of Veterans Affairs as soon as the decision to enroll is made. Two months is the normal processing time required for the Veterans Administration to establish an applicant's file. Further information may be obtained from the Office of Veterans Affairs, Administration building, room 317A, phone (719) 549-2360 or 2368.

Bureau of Indian Affairs

Students who are at least one-fourth American Indian, Eskimo or Aleut, as recognized by a tribal group served by the Bureau of Indian Affairs, may apply for a BIA grant. The amount awarded is based on financial need and availability of funds from the area agency. For additional information, write to: Joseph Gregory, Scholarship Office, U.S. Department of the Interior, Bureau of Indian Affairs, P.O. Box 370, New Town, ND 58763.

Disabled/handicapped Students

The Learning Assistance Center, Psychology building, room 232, provides information and appropriate services for disabled and handicapped students.

REFUNDS

A refund will be calculated for students with financial aid who completely withdraw from all classes on or before 60 percent of the semester is completed, and whose institutional charges (tuition/fees and on-campus room and board) were paid with financial aid funds, will have a refund calculated. The refund will be credited back to the financial aid programs.

U.S. Department of Education regulations require an institution to have a fair and equitable refund policy. The Higher Education Amendments of 1992 define a "fair and equitable refund policy" as one that provides for a refund of at least the largest amount.

For each financial aid recipient who does not complete the enrollment period (completely withdraws from all classes) for which they were charged, the school must calculate all possible refunds to see which is the largest. Normally, an institution would use the largest refund amount applicable by state law or by the accrediting agency. Neither Colorado nor North Central Accreditation have a refund policy in place. Because neither of these apply, the financial aid officer must compare the institutional amount of refund to one of two federal refund formulas, (1) Statutory Pro-Rata or (2) Federal Refund, to determine the largest refund.

The (Statutory) Pro-Rata formula is used for first-time students (both freshmen and transfer students) who withdraw on or before the 60 percent point of the semester.

A federal refund is calculated for students who are continuing students and who withdraw on or before the 60 percent point of the semester.

For information on the institutional refund policy, refer to the semester course bulletin.

Once the largest amount of refund has been determined, the funds will be credited to the following accounts, as prescribed by federal regulation in the order given below:

1) Unsubsidized Federal Stafford Loan
2) Subsidized Federal Stafford Loan
3) Federal PLUS Loan
4) Federal Perkins Loan
5) Federal Pell Grant
6) FSEOG
7) Other Title IV Aid programs
8) Other federal, state, private, or institutional aid
9) The student

REPAYMENT

Repayment may result if the student received funds for non-institutional costs. Non-institutional costs generally include off-campus room and board, transportation, and miscellaneous expenses.

Federal Stafford Loans received and work-study funds earned are not considered when the repayment is calculated.

The financial aid officer will calculate a weekly amount for non-institutional expenses and multiply this amount by the number of weeks the student is enrolled. If these expenses are less than the amount of cash received, the student must repay the difference. If total expenses exceed the amount of cash received, no repayment is necessary.

Repayment of funds, as prescribed by federal regulations, will be distributed as follows:

1) Federal Perkins Loan
2) Federal Pell Grant
3) FSEOG
4) Other Title IV Aid programs
5) Other federal, state, private, or institutional aid

Following is an example of a refund and repayment:

Jennifer, who lives at home, withdrew during the third week of classes. This is Jennifer's second semester at USC. She received a Federal Pell Grant of $1,170 and a subsidized Federal Stafford Loan of $1,312.

Refund Example

The institution calculated Jennifer's refund at $960. Because she is a continuing student, a federal refund must also be calculated. This calculation indicates that $920 would be refunded.

The institutional refund of $960 will yield the largest refund. Therefore, the $960 will be returned to the lender who paid her subsidized Federal Stafford Loan.

Repayment Example

Jennifer received all of her Federal Pell Grant ($1,170) to use for non-institutional costs.

The total allowed for her non-institutional costs totaled $2,498. This figure divided by 15 (number of weeks in the semester) averages $166.53. Therefore, her allowable non-institutional costs total $499.60 ($166.53 x 3 weeks).

Jennifer must repay $670.40 ($1,170 - $499.60) of the Federal Pell Grant she received.

Students who owe a repayment of financial aid dollars are not eligible to receive additional assistance until the amount is repaid in full.

Note: Policies subject to change without prior notice.

PROGRAMS, SERVICES, AND POLICIES

The Division of Student Life operates a number of offices, facilities, programs and organizations which exist primarily to enhance and support students' academic lives at the university.

HOUSING

Belmont Residence Hall (BRH) houses nearly 500 students. BRH consists of three wings which are joined by a large commons area. A main lounge serves as a gathering area and a large-screen satellite television viewing area. The housing office and student mailroom are located adjacent to the lounge. The lower level of the commons area consists of a recreation area (including a court for volleyball and basketball), study lounge, music room, and a full service laundry room. BRH also has a computer lab, pool table, video arcade, and ice machine, for use by residents only. Our 24-hour front desk is available to answer questions and to check out equipment.

All rooms are designed for two people, although single occupancy is available. Rooms contain beds, desks, bookshelves, study lamps, closets, dressers, and chairs. Linen service is available for a nominal charge.

Freshman Live-in Policy

All full-time (enrolled for 12 or more hours), single, non-veteran freshman students under 21 years of age, enrolled in any university program must live in the residence hall and participate in one of three meal plans. Students who make application to USC with permanent home addresses and high school transcripts from communities that are within a 50-mile radius of the campus are exempt from the live-in requirement. Applications for appeals from the live-in requirement are due by the first day of classes each semester.

A $100 security/damage deposit must accompany each application for space in the BRH. The deposit is not applied to room-and-board payment and is held in escrow for the duration of the student's occupancy. Occupancy and damage deposit payments may not be deferred.

University Village

University Village at Walking Stick offers a unique housing opportunity for sophomores, juniors, seniors, and graduate students. Located on the west side of Belmont Residence Hall, these four-bedroom townhomes allow students to experience private living while in the heart of campus life. The two-story townhomes feature two bedrooms and a bathroom on each floor, with a main level dining area and living room, as well as a second-floor study loft.

Complete with fully equipped kitchens, the townhomes allow students to do their own cooking. As a result, apartment residents are not required to purchase a meal plan. The dining areas in the university center, however, are just a short walk away for those times when a quick, already-prepared meal is more convenient. For townhome leasing information call (719) 549-2860.

Off-campus Housing

The Occhiato Center office maintains a file of off-campus, privately owned rooming houses and apartments. Since listings change rapidly, prepared housing lists are not furnished.

Housing for Married Students

Presently, no housing is available on campus for married students. Married students should contact the Occhiato Center office (Room 113) for referral to housing in the community.

Contract Board Policies

Belmont Residence Hall students are required to contract for meals at the university. Meal plans are purchased each semester and allow the student full dining privileges for that term. Meal passes are not transferable. Special diets prescribed by a physician are given consideration.

FOOD SERVICE

Most campus food services are located in the Occhiato Center. The main cafeteria is on the ground floor. Serving hours are:

Monday through Friday

Breakfast	7:15 a.m. - 8:30 a.m.
Continental breakfast	8:30 a.m. - 9:30 a.m.
Lunch	11:15 a.m. - 1:30 p.m.
Dinner (except Friday)	5:00 p.m. - 6:30 p.m.
Friday dinner	5:00 p.m. - 5:45 p.m.

Saturday and Sunday

Continental breakfast	10:30 a.m. - 11:00 a.m.
Brunch	11:00 a.m. - 1:00 p.m.
Dinner (Sat.)	5:00 p.m. - 5:45 p.m.
Dinner (Sun.)	5:00 p.m. - 6:00 p.m.

The snack bar and pub, La Cantina, is on the first floor of the Occhiato Center and is open weekdays.

A small restaurant, the Aspen Leaf, is on the top floor of the center. Serving hours are from 11:15 a.m. to 1:30 p.m. weekdays when classes are in session.

Student meal plan ID's may be purchased by commuters as well as resident students. Discounted cash cards are available in small denominations of $25 in the Auxiliary Services office, Occhiato Center, Room 114.

STUDENT LIFE PROGRAMS AND SERVICES

Counseling

The mission of the Counseling Center at the University of Southern Colorado is to provide practical, creative services designed to enhance the emotional well-being of members of the university community, in a way that is consistent with the academic, social, and career goals that are intrinsic to the purpose of the university. The Counseling Center exists as one of many cooperative assets within the university community that promote student wellness and success. With a focus that is preventative as well as curative, it is the intent of the Counseling Center to provide (to properly enrolled students) opportunities that respond to personal, as well as systemic needs for well-being, growth, and development.

The dignity, privacy and worth of all client systems will be honored. Diversity of all sorts will be respected including but not limited to the following: lifestyles, origins, racial and ethnic background, religion, sex, gender orientation, disability, and age. In all instances, the needs and best interests of the client system will supersede any competing interests.

Experiential Learning Center

The Experiential Learning Center offers opportunities to learn how to use experience as a primary vehicle for learning. Experiential education subscribes to the proposition that the learning process is integrally bound with the activities of everyday life -- that "doing" is the fundamental component of learning. The center can serve existing and developing USC programs by offering a wide variety of outdoor and wilderness ventures designed to facilitate personal growth for participants. Programs offered by the center are the USC Outdoor Program, the W.I.L.D. Program (Wilderness Individual Leadership Development), and the USC Challenge Ropes Course.

Las Hermanas

Las Hermanas focuses on higher education for Hispanic women, although the organization assists women in need regardless of color or origin. Programs offered by Las Hermanas are as follows: orientation workshops, women's leadership conferences, self-esteem classes, math and English review classes, and support groups. The primary objective is to help women who have been out of school for many years make the transition back to college less stressful.

T.L.C. (Tackling Life's Choices)/Drug Prevention and Awareness Program

The Tackling Life's Choices program is a dynamic and proactive approach to changing the perception of the USC community and of the college culture by the promotion of healthy lifestyle choices. Its mission statement is to create an environment on campus that promotes healthy lifestyle choices for health and spiritual wellness and the prevention of alcohol and drug abuse.

Leadership Education and Development (LEAD Program)

The LEAD Program is a planned, structured approach to building and enhancing leadership and inter-personal skills. The purpose of the LEAD Program is to enroll and retain students with proven leadership ability. The program also provides students with opportunities to volunteer in the community, develop leadership abilities and contribute to academic and student life at the university.

USC -- Pueblo School District No. 60 Student Mentoring Program

USC students who have been accepted as student mentors may undertake activities, under faculty supervision, for the following objectives: to increase the high school graduation rates of higher risk students enrolled in District No. 60 schools; to increase the college admission rates of District No. 60 students; and to engage in a meaningful community service experience to promote educational and personal growth.

Women and Non-Traditional Students Services (WANTS)

Many adults and re-entry students use the services of the WANTS Programs Center, which provides university and community resources information. Special programs and peer counseling are available, and staff members are particularly sensitive to the needs and concerns of non-traditional students.

Student Health Services

Student Health Services at USC contributes to a learning environment that encourages the development and enrichment of the whole individual and the campus as a whole. The goal of Student Health Services is to provide educational programs and quality treatment programs to help increase student productivity.

The clinic is operated by a registered nurse and a secretary; a physician is on duty part-time. Students are encouraged to visit the health clinic whenever necessary. It is located in the back courtyard of the Occhiato University Center , to the left of the cafeteria exit. Most common sicknesses are treated free of charge and any medications given by the doctor are also free.

The Clinic is open from 8:00 a.m. - 4:00 p.m. Monday through Friday. Evening clinic is open from 5:30 - 7:30 p.m. on Thursday. Doctors hours: Monday-Wednesday, 11:00 a.m. - 1:00 p.m.; Tuesday, 1:00 - 3:00 p.m.; Thursday, 5:30 - 7:30 p.m., and Friday, 11:00 a.m. - 1:00 p.m.

Referrals to other physicians may be made when appropriate or if requested by the student. All medical records are confidential.

Student Activities

The Office of Student Activities, located in the Occhiato Center, room 036, houses the Student Activities Board, which is funded by student fees. The board is responsible for planning, coordinating and implementing student-oriented activities. The board is composed of several committees: Special Events, Cultural Events, Town and Gown, Ethnic and Minority Programs, On-Stage, Outdoor Programs, and Production.

Co-Curricular Transcript Service

Co-Curricular transcripts are official USC transcripts of all the activities a student is involved in other than classes. Its purpose is to help students in the process of searching for jobs as an official part of the application. The transcript provides potential employers with information relating to various skills, leadership opportunities, and experiences of the applicant. Students interested in the service should contact the Student Activities Office, Occhiato University Center, room 036.

Student Government

All registered USC students who have paid fees are members of the Associated Students' Government (AS). AS is the students' governing body and addresses student concerns and/or complaints regarding any campus issue. AS also works to make students aware of administrative decisions on campus by having Senators act as representatives on most of the boards and committees on campus.

AS functions through three branches of government: legislative, executive and judicial. The legislative branch, the AS Senate, is composed of 14 senators elected from the student body and is presided over by the AS executive vice president. The executive branch consists of the president and the vice president. The judicial branch is composed of five justices, one of whom is designated the chief justice. The senate meets weekly.

AS's main purposes are promoting student life and maintaining the general welfare of the student body.

Clubs

USC students have opportunities to take part in the activities of a number of clubs, organizations, and honor societies. Membership often is based on special qualifications. Students interested in starting a new official campus group must first find a faculty or staff member willing to sponsor the group. Students then must obtain a charter packet from the Associated Students Government (AS) office and complete and return the forms to AS. Five copies of a proposed constitution should be submitted to the chairperson of the Club Organization and Facilitating Committee (COFC).

Following is a list of the Campus Clubs:

Every effort has been made to list all chartered student clubs at the time this catalog went to press. For further information or an updated list of student clubs or organizations, contact the Associated Students' Government office, Occhiato Center, room 201, or call (719) 549-2866.

Alpha Chi National Honor Society
Alpha Sigma Alpha (Sorority)
American Society of Mechanical Engineers
Association of General Contractors of America
Association of Technology Professionals
Association for Worksite Health Promotion
Automotive Booster Club
Belmont Residence Hall Association
Beta Sigma Phi
Black Student Organization
Catholic Students' Union
Chemistry Club
College Republicans
Colorado International Student Association
CoPIRG
Data Processing Management Association
Economics Club
Epsilon Delta
Epsilon Sigma Alpha
Engineering and Technology Student Leadership (Council)
English Club
Facility Managers Club
Finance Club
Re:FOCUS
Hungry Eye Literary Club
IFMA Student Chapter USC
Institute of Electrical and Electronic Engineers
Institute of Industrial Engineers
Institute of Management Accountants
Inter-Varsity Christian Fellowship
International Facilities Mgmt. Association
Kappa Sigma (Fraternity)
Lambda Chi Alpha (Fraternity)
Lambda Psi Chapter of Sigma Tau Delta
Language Society
Las Hermanas Sorority
M.E.Ch.A.
Medical Science Society
Mexican American Engineers and Scientists
National Hispanic Institute Collegiate Leadership Network
Non Traditional Club
Omega Psi Phi (Fraternity)
One-in-Ten
Past Masters History Club
Phi Alpha National Honor Society
Phi Beta Lambda
Phi Kappa Phi Honor Society

Physical Educators
Political Science Club
Pool and Ping Pong Club
Psi Chi
Psychology Club
Recreation Professionals' Society
Sigma Tau Delta
Soc. of Mex-Am Engineers & Scientists/ Soc. of Hispanic Professional Engineers
Society of Physics Students
Society of Women Engineers
Southern Colorado Association of Nursing Students
Students in Free Enterprise
Student Social Worker's Association
Student Chapter of the Institute of Management Accountants
Teacher Education Association
The Hungry Eye Writing Club
Tri Beta Biology Club
Truth and Light Ministries
Upward Bound Alumni Club
USC Ambassadors
USC Art Club
USC Honors Student Council
USC Japanese Animation Club
USC Marketing Club
USC Philosophical Society
USC Racquetball Club
USC Recreation Professionals
USC Rodeo Club
USC Sign Language Club
USC Ski Club
USC Speech and Debate Club
USC Veterans' Club
Zero Hero

ATHLETICS

USC views participation in intercollegiate athletics as a beneficial experience and a worthwhile part of the entire educational process. Sports contribute significantly to student life at USC, the sports offered take place either in the spring or fall. Fall sports include: men's and women's soccer, women's volleyball, golf, wrestling, and men's and women's basketball. Those sports played in the spring include: women's softball, men's baseball, golf, and tennis. All students are invited to participate.

The university is a member of the National Collegiate Athletic Association Division II and the Colorado Athletic Conference. USC sponsors the following intercollegiate sports:

Men: basketball, baseball, soccer, wrestling, golf and tennis

Women: volleyball, basketball, soccer, softball, and tennis

INTRAMURAL

Intramural involve students and staff in organized recreation and sports activities. Coeducational and men's and women's activities are offered in a variety of sports. All students are encouraged to participate, either as individuals or with teams.

MASSARI ARENA AND SAM JONES SPORTS CENTER

This facility is located directly east of the Occhiato University Center. It includes a large indoor swimming pool, four racquetball courts, a weight room (including free weights, stationary bicycles, stair climbers, etc.), and the gymnasium. Racquetball equipment may be checked out at the Massari Arena office.

RAWLINGS OUTDOOR SPORTS COMPLEX

The Rawlings Outdoor Sports Complex consists of tennis courts, baseball and softball fields and a soccer field. These areas are used by sports teams for training and for use by student and public groups.

DISCIPLINARY PROCEDURE

The primary responsibility for administering student discipline rests with the Dean of Student Life. In this capacity, the dean receives and investigates all disciplinary complaints and administers the judicial disciplinary process involving unacceptable student conduct and infractions of USC rules and regulations (other than academic rules and regulations).

Decisions of the judicial disciplinary process may be appealed to the Campus Appeals Board, the highest hearing and appeal board for non-academic matters at the university. Decisions involving academic infractions, appeals, etc., must follow the procedures established by the academic division of the university.

Students participating in the university's intercollegiate athletic programs are also subject to the Athletic Department's Code of Conduct.

If the judicial disciplinary process or campus appeals board determines that a student has violated a university regulation, a sanction may be imposed. Sanctions range from warnings to expulsion from the university. Details of the hearing processes, including the associate provost and disciplinary ombudsman's authority to intervene, are contained in the *Standards of Conduct Handbook* which contains a detailed explanation and description of institutional disciplinary philosophy, rules and regulations.

STANDARDS OF CONDUCT

Members of the University of Southern Colorado community are expected to observe the laws of the city of Pueblo, the state of Colorado, and the federal government, and to respect the rights and privileges of other members of the community. USC students, non-students, faculty, and staff, upon entrance to the university, neither gain nor lose any of their rights or responsibilities of citizenship. As a community, USC has the obligation to establish those regulations that best serve and protect its integrity as an institution of higher learning. Activities which will render students or non-students subject to disciplinary action are as follows:

1) violation of federal, state and city laws and ordinances or any other conduct that adversely affects the functions of the university in the pursuit of its educational mission or objectives;

2) attempted or actual theft and/or damage to property of the university or of a member or guest of the university community;

3) unauthorized entry into or use of university or university-controlled facilities or property;

4) failure to comply with directions of university officials acting in the performance of their duties;

5) unauthorized possession, duplication or use of keys to any university premises or unauthorized entry to or use of university premises;

6) violation of the university's and/or residence hall's regulations and rules related to the use, possession or consumption of alcoholic beverages;

7) use, sale, distribution or possession of drugs, controlled substances, barbiturates, etc., not authorized by a physician or expressly permitted by law;

8) violation of published university, campus or residence hall policies, rules or regulations;

9) hazing, defined as an act which endangers the mental or physical health or safety of a student, or which destroys or removes public or private property, for the purpose of initiation, admission into, affiliation with, or as a condition for continued membership in, a group or organization;

10) disorderly conduct or loud, indecent or obscene conduct on university or university-controlled property or at university-sponsored functions;

11) physical or verbal abuse, threats, harassment, coercion or intimidation of anyone on university-controlled premises or at university-sponsored functions or any conduct that endangers or threatens to endanger the health, safety, or well-being of any person;

12) dishonesty, such as cheating, plagiarism, misrepresenting oneself or facts or knowingly furnishing false information to any person or agency within the university community;

13) any form of academic dishonesty, including the acquisition of tests or other academic material belonging to a member of the university community without proper authorization, whether for personal gain or for the benefit of someone else;

14) forgery, alterations or misuse of any university documents, records, of instruments of identification with intent to defraud or mislead;

15) tampering with the election of any university-recognized student organization;

16) violation of university traffic or parking regulations;

17) intentional obstruction or disruptions or inciting others to obstruct or disrupt teaching, meetings, research, administration, disciplinary proceedings or other authorized university activities;

18) obstruction of the free flow of pedestrian or vehicular traffic on university premises or at university-sponsored or supervised functions;

19) possessing or using illegal or unauthorized firearms, explosives, dangerous chemicals, or other weapons on university-owned or controlled property;

20) public intoxication, use, possession, distribution or consumption of alcoholic beverages on university property; except in those areas authorized by the university and then only those types of beverages authorized by the university;

21) failing to show proper identification to university police officers or other university staff (acting in an official capacity) when requested to do so; furnishing false information to any university official, faculty member or office;

22) abuse of the judicial system, including but not limited to:

   a) failure to obey a summons of a judicial body or university official;

   b) falsification, distortion, or misrepresentation of information before a judicial body;

   c) disruption or interference with the orderly conduct of a judicial proceeding;

   d) institution of a judicial proceeding knowingly without cause;

e) attempting to discourage an individual's proper participation in, or use of, the judicial system;

f) attempting to influence the impartiality of a member of a judicial body prior and/or during the course of, the judicial proceeding;

g) harassment (verbal or physical) and/or intimidation of a member of a judicial body prior to, during, and/or after a judicial proceeding;

h) failure to comply with the sanction(s) imposed under the Standards of Conduct;

i) influencing or attempting to influence another person to commit an abuse of the judicial system;

23) failure to meet financial obligations to the university;

24) tampering with fire equipment in any manner;

25) any fraudulent misuse of university computer hardware or software;

26) any violation of the Safety requirements for food sales by student groups;

27) any action which would violate the USC policy on demonstrations and mass gatherings;

28) stalking -- to follow or harass repeatedly another person so as to put that person in fear for their safety; and

29) attempt, conspiracy, or solicitation to commit any violation of items 1 - 28 as cited above.

GROUP OFFENSES

1) Societies, clubs, or similar organized groups in, or recognized by the university are subject to the same USC Standards of Conduct as those for individuals in the community.

2) The knowing failure of any organized group to exercise preventive measures relative to violations of the USC Standards of Conduct by member will constitute a group offense.

VIOLATIONS OF LAW ON CAMPUS

To protect its educational mission, the university takes a firm stand concerning violations of law on campus. The University Police are charged with the responsibility of maintaining law and order at the University of Southern Colorado and for enforcing all laws, local ordinances and regulations of the university, except when such enforcement is, by such law, made the responsibility of another department, official or agency.

Deliberate illegal activity which comes to the attention of USC officials is not tolerated. No one should assume that USC is a sanctuary for persons breaking the law. At USC, each individual is responsible for his or her behavior.

An offense necessitating police action also may be treated internally as a university disciplinary matter. A full document detailing police policies and statistics is available from the police upon request.

ACADEMIC POLICIES

Students are well advised to become familiar with the academic policies of the university. Each student owns the responsibility to comply with those policies.

UNIVERSITY STUDENT RECORDS POLICY

The University of Southern Colorado's practice in regard to student record keeping and access is based on the provisions of the Privacy Rights of Parents and Students, Section 438 of the General Education Provisions Act, as amended (P.L. 93-380), also known as the Family Educational Rights and Privacy Act of 1975 (FERPA), or the Buckley Amendment. For specific details, contact the Registrar, Administration building, room 201.

ACADEMIC CONDUCT

Any use of unauthorized assistance in preparing materials which students submit as original work is considered cheating and constitutes grounds for dismissal. Instructors use practical means of preventing and detecting cheating, but the responsibility for maintaining academic integrity and avoiding dishonest scholarship rests with the student. Any student judged to have engaged in cheating may receive a reduced grade for the work in question, a failing grade in the course, or any other lesser penalty which the instructor finds appropriate. Academic dishonesty violates the Student Code of Conduct (see *Student Life* section of this catalog) and subjects students to the university disciplinary procedure.

CLASSROOM BEHAVIOR

The classroom instructor is responsible for setting standards for all classroom conduct, behavior and discipline. Only enrolled students, administrative personnel and persons authorized by the instructor are permitted in classrooms and other instructional areas during scheduled periods. University policy and Colorado state law also prohibit all forms of disruptive or obstructive behavior in academic areas during scheduled periods or any action which would disrupt scheduled academic activity. Use of classrooms and other areas of academic buildings during non-scheduled periods is permitted only in accordance with university practices. Anyone in unauthorized attendance or causing a disturbance during scheduled academic activity may be asked to leave. If a person refuses such a request, he or she may be removed by the University Police and is liable to legal prosecution.

CATALOG REQUIREMENTS

Students may graduate under the catalog requirements for the year in which they are first enrolled, provided they complete graduation requirements within a continuous period of no more than 10 years. If a student withdraws or is withdrawn for any reason from the university and is subsequently readmitted after an absence of two or more semesters, readmittance will be governed by the catalog current at the time of readmission. Any exceptions to the policy must have prior approval from the associate provost. Students should obtain and keep a copy of the catalog under which they enter or are readmitted.

Students who transfer from Colorado community or junior colleges may graduate under the catalog requirements for the year in which they are first enrolled at the transfer college, provided they maintain continuous enrollment between the transfer college and USC and complete graduation requirements within 10 years. If a student withdraws or is withdrawn for any reason from the transfer college or USC and is subsequently readmitted after an absence of two or more semesters, readmittance will be governed by the catalog current at the time of readmission.

Students in the College of Applied Science and Engineering Technology, however, are required to meet the degree program requirements listed in the catalog in effect at the time they are admitted to that degree program, provided they subsequently complete graduation requirements within a continuous period of no more than 10 years.

TIME LIMITATION ON CREDIT

Any college credit earned more than 10 years before the date of admission or readmission is not applicable toward the degree desired unless it is approved by the chair of the department offering the course(s) [or equivalent(s)]. General education credit earned more than 10 years before the date of admission or readmission must be approved by the registrar.

CLASSIFICATION OF STUDENTS

Classification of students is based on semester credit hours earned as follows:

Freshman	0 - 29	semester hours earned
Sophomore	30 - 59	semester hours earned
Junior	60 - 89	semester hours earned
Senior	90 +	semester hours earned

Graduate Student See the *Graduate Studies* section for classification information.

Unclassified

A student who has made no commitment to earning a degree. An unclassified student may be classified as degree-seeking when and if admission status is determined. Students under suspension, or those denied regular admission, are not eligible to enroll as non-degree students. Additional information on unclassified students is contained in the *Admission* section of this catalog.

Degree Plus

A non-degree-seeking student who has completed a baccalaureate degree.

Auditor

A student who has been permitted to enroll in a course for which he or she will receive no credit. Auditors determine their own attendance, take no examinations, receive no grades, do not participate in classroom discussion except as permitted by the instructor and earn no credit. They pay the same tuition and fees as persons enrolled for credit. An auditor may not be reclassified to receive credit in the course after the final date for adding courses. In place of a grade, students receive the symbol NC (no credit) on their transcripts. Students wishing to register as auditors must declare their intention at registration and may not seek credit in the course after the drop/add period for the semester has expired. Likewise, a student may not change his or her regular enrollment to auditor (no credit) status after the end of the drop/add period. Auditor (or no credit) forms are available in the Office of the Registrar.

Persons 65 years of age or older, or 62 and retired, may audit courses without paying tuition on a space-available basis. Permission of the instructor is required in all cases.

FULL-TIME / HALF-TIME ENROLLMENT STATUS

Enrollment status (full-time, half-time) is determined by the number of credit hours which the student has completed or is pursuing for the term in which the certification is requested. (The following schedule for enrollment status may differ from the full-time/part-time schedule as recognized by the financial services area.) Credit hour requirements for enrollment verification (i.e., health insurance, auto insurance, loan deferments) are as follows:

Fall/Spring Semesters

Undergraduates

Full-time	12 or more credits
Half-time	6-11 credits
Less than half-time	Below 6 credits

Graduates

Full-time	9 or more credits
Half-time	6-8 credits
Less than half-time	Below 6 credits

Summer Session

Undergraduates

Full-time	6 or more credits
Half-time	3-5 credits
Less than half-time	Below 3 credits

Graduates

Full-time	6 or more credits
Half-time	3-5 credits
Less than half-time	Below 3 credits

Contact the Office of the Registrar for certification of enrollment status, level (class), grade point average and term(s) of attendance.

GRADES AND THE GRADING SYSTEM

Awarding of Grades

Grades are earned by students and awarded by faculty. Grade changes can only be made by the instructor with the approval of the department chairperson and the dean of the school.

The Grading System

The quality of a student's work is appraised according to letter grades and grade point averages. The University of Southern Colorado grading system includes the following grades: A, B, C, D, F, S, U, IN, W, WN, NC, IP.

A excellent achievement, credit given, 4 grade points per semester hour.

B Above average achievement, credit given, 3 grade points per semester hour.

C Average achievement, credit given, 2 grade points per semester hour.

D Below average achievement, credit given, 1 grade point per semester hour. (Although a D is passing, it does not constitute a satisfactory grade. Many departments do not permit D grades to count toward fullfillment of their requirements, even though the hours can be counted toward graduation requirements. D grades from other institutions are not accepted in transfer except as specified under Transfer of Credit admission section.)

F Failing work, zero credit given, 0 grade points per semester hour. Counted as a course attempted; does not constitute a passing grade nor does it satisfy major or institutional requirements.

S Satisfactory (equivalent to A, B, C, D achievement), credit given, 0 grade points per semester hour. This grade is not used in the computation of grade point average. Available only in certain approved courses.

U Unsatisfactory, zero credit given, 0 grade points per semester hour. This grade is not used in the computation of grade point average. Available only in certain approved courses.

W Withdrawal, zero credit, 0 grade points per semester hour. This grade is not computed in the grade point average. This grade is given under two conditions: 1) when a student withdraws from a course prior to the end of the regular withdrawal period; 2) when a student withdraws from the university after the end of the regular withdrawal period.

WN Administrative withdrawal/withdrawal for nonpayment. Zero credit, 0 grade points per semester hour. This grade is not computed in the grade point average.

IN Incomplete, zero credit given, 0 grade points per semester hour. Temporarily reported as a grade when a student is granted an extension of time to complete course work because course work could not be completed for reasons beyond the student's control. An incomplete course must be satisfactorily completed within one calendar year from the date the IN was given. An incomplete not removed within one calendar year shall be regarded as a failure and the IN grade will be changed to an F and included in the computation of the student's grade point average. Re-enrollment is not recommended.

IP In Progress, zero credit given, 0 grade points per semester hour. A grade of IP may be given at the close of the term in certain approved courses. Students receiving an IP must register in the same course the next term, pay tuition and must complete the work during that term. Courses for which IP grades are accrued are identified in the *Course Description* section of this catalog.

NC No credit, zero credit given, 0 grade points per semester hour. This grade is assigned for students choosing to audit a course rather than taking it for credit.

Grade-point Average Computation

Earned grade points are computed by multiplying the point value of A, B, C, D and F grades earned by the number of credit hours of the course(s) in which the student was enrolled. A student's semester GPA is calculated by dividing total grade points by total credit hours attempted. A student's cumulative GPA is calculated by dividing all grade points earned by all credit hours attempted. Earned grades of S, U, W, WN, IP, IN and NC are not computed in the grade-point average. For purposes of computing grade-point average, only USC hours are used.

Grade Changes/Academic Appeals

Students have the right to appeal any academic decision, including the assignment of grades. Final grades entered in the Office of the Registrar are unalterable unless a grade-change form is completed and signed by the instructor, the department chair, and the dean. A grade-change request should be extremely rare, resulting from an instructor's error in calculating the original grade or a similar occurrence. It is not appropriate to change a grade because the student submitted additional work. Letter grades of A, B, C, D or F may be changed by instructors to letter grades of A, B, C, D or F before the end of the following term (summer excluded) only with the approval of the college dean. Academic appeals should be made first to the classroom instructor, next to the department chair, then to the dean of the college involved. If a satisfactory resolution cannot be reached, a final appeal may be made to the provost. Grades of S, U, W and NC may not be changed. Students are responsible for initiating requests for grade changes.

DEANS' LIST

To qualify for placement on the deans' list, published fall and spring semesters, students must achieve a minimum grade-point average of 3.5000 and place in the upper 10 percent of all eligible full-time students. To be eligible, students must be degree-seeking and must earn at least 12 credit hours in the semester in which grade points were awarded.

ACADEMIC STANDING

The academic standing of all students is reviewed at the end of each semester. After a student has attempted 12 semester credit hours, he or she must have a cumulative grade-point average of 2.0000 or higher to remain in good academic standing.

Academic Probation

Students are placed on academic probation at the end of any semester in which the cumulative grade-point average falls below 2.0000. Probation status is noted on the grade report. Once good academic standing is again attained, (cumulative 2.0000 GPA), probationary status is removed. Students on probation are encouraged to contact the Academic Advising Center or their adviser for assistance.

Academic Suspension

Students on probation are subject to suspension if at the end of spring semester the cumulative grade-point average falls below the minimum level in the following table:

Hours attempted	Cumulative grade-point average
1-12	1.5000
13-24	1.6000
25-36	1.7000
37-48	1.8000
49-59	1.9000
60-72	2.0000
73-84	2.0000
85-96	2.0000
97-107	2.0000
108-120	2.0000

Transfer students must meet the academic standing requirements shown in the *Admission* section of this catalog. For purposes of measuring hours attempted, the number of hours used shall be the total of transfer credit hours accepted by USC and the number of hours attempted at USC. For purposes of computing grade-point averages, only USC hours are used.

Students who are suspended are ineligible to reenter for a period of two semesters after the date of suspension except by special permission of the associate provost. Suspended students are considered on probationary status upon return to the university, and remain under the catalog in effect at the time of regular admission. If the term of suspension is exceeded before the student is re-admitted, the catalog in effect at the time of reinstatement must be followed.

Appeals Process

A student wishing to appeal suspension must submit a letter of appeal to the Office of the Provost. All letters must be postmarked no later than June 30 for admission to the succeeding fall semester. Students submitting appeal letters after June 30 and before October 1 will be considered for spring semester admission. Letters of appeals must be addressed to the associate provost and must explain specific reasons for seeking readmission. Students are responsible for initiating the appeals process.

CLASS HOURS AND CREDIT HOURS

A class hour consists of 50 minutes. One class hour per week of lecture or discussion for a semester earns a maximum of one credit hour. Two or three class hours a week of laboratory activities for a semester earn a maximum of one credit hour. The number of credits awarded for a given course is determined by the number of lecture or laboratory hours spent each week in class and is authorized in accordance with guidelines of the Colorado Commission on Higher Education.

POLICY ON AWARD OF CREDIT

Instructional activity is broadly categorized into three categories: Type A, Type B and Type C by the Colorado Commission on Higher Education (CCHE) as published in its Policy for Reporting Full-time Equivalent Students.

I. Type A Instruction

Type A instruction is defined as consisting of "...those methods in which the consumption of faculty resources is reasonably concrete and measurable. In these instances, the criteria are established in terms of a faculty Base Contact Hour. The Base Contact Hour is a minimum of 750 minutes (this translates into a 50 minute period for 15 times). Type A instructional activities are audit; private instruction; lecture; rectation, discussion, and seminar; laboratory (vocational and technical; academic and clinical); physical education and recreation activity courses; studio (art and music) and field instruction.

II. Type B Instruction

Type B instruction is defined as consisting of "...those methods where the measurement of faculty resource consumption by students is less definitive and will vary depending on the activity. The activities occuring in these areas are, therefore, defined in a "contractual relationship" between faculty and students." Examples of Type B instruction are independent study/special or independent project; Master's thesis research project and practicum, student teaching, internship, and cooperative education.

III. Alternative Delivery Methods

These are courses delivered in non-traditional formats, including but not limited to, telecourses, self-paced instruction assisted by educational technologies, interactive video, telephone lines, computer based or computer assisted instruction, correspondence, videotapes or CD-Rom, Internet or Intranet, multimedia, etc... The credit hours for courses utilizing these alternative delivery methods shall be assigned based upon the equivalency or similarity of the course content's scope and depth and the course's evaluation methods to the same or similar courses currently offered at USC. Lecture courses delivered on-campus and also delivered via interactive video to approved off-campus sites are subject to Type A contact hour requirements for the lecture course and shall be counted as Type A instruction.

IV. Type C Instruction

These are activities that may generate credit, but the credit **cannot** be reported for FTE reimbursement. The activities involve relatively little faculty resource consumption or are considered as a student service.

Included in Type C instruction is credit by exam and credit for prior learning of life experience.

COURSE LOADS

Programs of study in excess of 18 semester credit hours are defined as overloads. Both resident and extended studies (continuing education) courses are counted in the credit-hour total.

Freshmen who have earned fewer than 15 semester credit hours may not take an overload. Students with 15 or more semester hours may enroll for an overload according to the limits set below.

GPA	Credit-hour overload permitted
less than 2.5000	0
2.5000 - 4.0000	3
3.4100 - 3.8000	6
3.8100 - 4.0000	7

Exceptions to these limits must be approved by the student's faculty adviser and department chair. Both signatures are required. Appeals may be made to the dean of the college of the student's major. **Under no circumstances** may a student enroll for more than a total of 25 semester credit hours in a single semester.

CREDIT BY EXAMINATION

Departmental faculty shall identify those undergraduate courses, if any, for which students may earn credit by examination.

A student may earn credit by examination in any of the approved courses subject to the following conditions:

- the student has not previously earned credit in the course at USC, has not previously failed a challenge exam for the course, or has not previously failed the course itself;
- the student has approval of the appropriate department chair (with appeal rights to the dean) to take the challenge examination;
- the student's performance on the examination is at the level of B or better;
- the student is currently accepted for admission to USC or is enrolled and in good academic standing at the time the examination is administered;
- the student does not use the challenged course to satisfy the residency requirement for graduation; and
- the student must satisfy any additional criteria as specified by the department.

A student may earn a maximum of 30 hours of credit by examination, with no more than 10 hours of general education courses included in the total.

If the student is successful in challenging a course, the title of the course, credit hours and notation of credit by examination will be recorded on the student's permanent record. Unsuccessful attempts are not recorded on the transcript.

The credit hours earned by examination do not count in the student's load for the semester or in the calculation of the student's grade-point average.

The non-refundable fee for credit earned by examination is $50 per course. Application forms for credit by examination are available in the Office of the Registrar.

FINAL EXAMINATIONS

Final examinations are not to be scheduled at times other than those published in the semester course bulletin. In some courses a final examination may not be appropriate to the material; however, classes meet through the period scheduled for the final examination.

FACULTY RECORDS

All faculty members keep appropriate records (such as grade books or sheets) of each student's progress in every course offered for university credit. The records are in addition to the final grade reports which are submitted to the Office of the Registrar at the end of each term. Records are retained by the faculty member's department for one year. They are treated in confidence by the faculty member and chair of the department.

REPEATING COURSES

A student who has received a low grade in a course can improve her/his cumulative grade point average by repeating that course and earning a higher grade. The first two times a course is repeated, only the higher grade and credit earned are computed into the student's grade-point average, provided the student has requested a recomputation of grade-point average by the Office of the Registrar. The previously attempted courses and grades remain in the academic record but are not computed in the overall average. However, if a student elects to repeat a course more than two times, all grades earned thereafter will be computed in the grade-point average.

If a student transfers a course to USC from another institution and subsequently repeats the course at USC, only the credit and grade points earned at USC will be allowed. Students should be aware that some academic departments place limitations on repetition of courses for majors and/or minors.

Transcripts contain an appropriate entry indicating that the grade-point average has been recomputed and stating the basis for recomputation. If a student fails a course twice, only one failure is computed into the grade-point average. Students are discouraged from repeating those courses for which a grade of C or better has been earned.

CLASS SCHEDULE CHANGES

Students are encouraged to secure adviser approval for all schedule changes. When students do not secure such approval, they assume full responsibility for their progress toward meeting degree requirements.

Students are responsible for processing schedule changes during the drop/add period. **Under no circumstances** shall the instructor assume this responsibility on behalf of the student.

Continuing students are strongly encouraged to take advantage of the pre-registration process in order to obtain the class schedule which best meets their needs.

Adding Courses

Courses may be added to a student's schedule during the drop/add period, as specified in the class schedules, with the permission of the instructor. Course additions must be processed through the Office of the Registrar. A $10 charge will be assessed for each course added after the end of the official add period.

Addition of Independent Study and Continuing Education

A resident student may enroll in independent study and continuing education courses only if the addition of such courses will not cause his or her program to exceed the maximum load allowable.

Dropping Courses

Courses may be dropped from a student's schedule through the drop/add period as specified in the semester course bulletin without a record of the dropped course appearing on the student's permanent record. Courses must be dropped officially through the Office of the Registrar. Short or mini-courses may be dropped in the same manner before 15 percent of the course duration has passed.

Withrawing from Courses

Following the end of the drop/add period, students may withdraw from classes according to the policies below.

When a student withdraws from a course before 80 percent of the course duration has passed, a grade of W will be assigned. After 80 percent of the course duration has passed, a student may not withdraw.

NOTE

- 80 percent of a 15-week course occurs at the end of the 12th week.
- 80 percent of a 10-week course occurs at the end of the eighth week.
- 80 percent of a 5-week course occurs at the end of the fourth week.
- 80 percent of an 8-week course occurs at the end of the sixth week.

Exceptions to the above policy must be approved by the instructor and the dean of the appropriate college.

A grade of W does not affect the student's grade-point average. Grades of W will not be accepted during finals week.

WITHDRAWAL FROM THE UNIVERSITY

To withdraw officially from the university, students must file a withdrawal form with the Office of the Registrar.

Students who withdraw after the end of the drop/add period are not refunded full tuition and fees. Students who withdraw after the 12th week of the semester also may suffer academic loss; a grade of F may be assigned by instructors if they are not notified officially of the student's withdrawal. To withdraw officially from the university, students must file a withdrawal form with the registrar's office. Withdrawals will not be processed after the last scheduled class day of the semester. Students residing in the residence hall also must check out at the housing office.

Retroactive Withdrawal

Students may request that all grades in a previous semester be retroactively removed and replaced by entries of W on the transcript if they have experienced, during that term, health and/or personal problems so severe that they could not reasonably have been expected to complete the semester satisfactorily. The requests must be submitted with documentation of the problem to the Registrar within one calendar year from the end of the semester for which retroactive withdrawal is being sought. With the associate provost's approval, the transcript will be changed with a notation of the retroactive withdrawal and the effective date.

Military Withdrawal

If military obligations interrupt the academic work of a member of the armed forces registered for courses, the student may ask instructors for an early termination of his or her courses. Early terminations may include, but are not limited to: 1) a grade of W; 2) an incomplete (IN) grade, if there is any chance the student will be able to complete the course requirements; 3) an early final examination and course grade; 4) partial course credit; or 5) an opportunity to complete the class by independent study. It is the student's responsibility to make such a request in writing to the instructor. After the student and instructor have agreed on the terms of early termination, the agreement must be approved in writing by the department chair and dean.

Withdrawal for Non-Payment / Administrative Withdrawal

This withdrawal process is initiated by the Office of Student Financial Services when a student has not made timely payment or arrangements for payment for tuition and fees. The resulting grade is "WN".

EXPERIENTIAL CREDIT COURSES

Through cooperative education, internships, field experiences and laboratory research, students in many degree programs have the opportunity to expand knowledge and apply theory in real-life situations. All experiential credit courses occur under the direction of an academic instructor and are included in the regular university curriculum. In some cases, such courses are required for majors. All such courses require registration, and payment of tuition, carry credit, are listed in the catalog and include a planned program of activities outlined in the course syllabus. The grading system is the same as the system used for regular courses. Supervised work-experience courses are approved for inclusion in veterans class schedules under Veterans Administration Regulation 14265.

Credit for Life Experience

Some students may seek academic credit for previous out-of-school work experiences in which the job responsibilities were similar to experiences offered in university-sponsored internships and other programs. Credit for such experiences may be given if the following conditions are met:

1) The experience must be directly similar to the content of internships, field courses and/or laboratory courses in the regular curriculum;

2) The student must describe in writing the nature of the experience and what he or she learned through it;

3) The experience and learning also must be documented by the student's on-the-job supervisor. Documentation must include a detailed account of the nature, frequency and duration of the duties; and

4) A paper integrating the experiences with subsequent or concurrent classroom instruction must be submitted and approved.

The maximum number of semester credit hours allowed for life experiences is six. Any amount over six must be approved and justified by the appropriate dean to the provost. Credit for life experiences is granted only for experience gained within 12 years of the date the degree is expected to be awarded. Credit for life experiences is subject to the approval of the department chair and the dean of the college in which credit is requested.

Changes of Major

All changes of major must be made through the registrar's office with the approval of the appropriate department chair.

CLASS ATTENDANCE

Students are expected to attend all classes for which they are enrolled unless excused by the instructor. No extensions of vacation periods are given to students regardless of the location of their homes. Non-attendance of classes caused by late registration is considered the same as absence. Students are not allowed to attend classes for which they are not properly enrolled unless permitted by the instructor.

The university does not have a policy permitting a specific number of cuts or absences from class. Each instructor establishes an attendance policy for his or her classes and must inform students in writing of the policy at the beginning of the term. However, the student's grades shall not be affected negatively solely due to absence from class because of participation in university-sanctioned events. Such university-sanctioned activities may include, but are not limited to: intercollegiate competition, participation on the forensics team, and field trips. Class absence due to university-sanctioned participation does not in any way excuse students from completing class preparations, assignments, examinations, or projects.

Although students may drop classes on their own initiative within timelines established by policy, faculty members have the right to drop students for non-attendance.

TRANSCRIPTS OF CREDIT

Official transcripts are issued by the registrar's office at the **written and signed** request of the student. Effective August 24, 1998, the non-refundable fee for each official transcript will be $5. (Transcript fees are $2 each up through August 23, 1998.) Transcript fees must be prepaid before official transcripts will be released. Acceptable methods of payment are cash, personal check, money order, VISA, MasterCard and Discover. Special fees are charged for special handling (overnight, FedEx, Priority). All accounts with the University of Southern Colorado must be settled before an official transcript can be issued. Transcripts are processed as rapidly as possible and are usually issued within three working days from the date of the signed request. Students should allow extra time for issuance near the end of semester. Official transcripts on file from other institutions cannot be relinquished. USC does not accept E-Mail transcript requests.

FAXING OF TRANSCRIPTS

A pre-paid $10 fee is required for a transcript to be faxed to a destination within the United States; the charge is $15 for a transcript faxed outside the country. Since faxed transcripts are considered as working (unofficial)

documents only, the fax will be followed up by an official (hard copy) version to follow by first class mail within three to four working days. In the event that the student is not eligible to receive an official transcript, i.e., outstanding accounts receivable balance, etc., only the (unofficial) faxed copy can be provided for the above fee.

HOW TO ORDER A TRANSCRIPT

Signed transcript requests should include the following information:

- Student's full name (including maiden or other name if applicable)
- Student ID number
- Date of birth
- The last term the student was enrolled at USC
- Instructions on whether the current semester grades are to be included (this is important when a transcript is ordered near the end of a term)
- The complete name and address of the agency, school or individuals to whom transcripts are to be sent
- The student's signature (This provides USC with the necessary authorization to release the transcript to the designee)

NOTES:

- Transcripts do **not** include Upward Bound, GED, ACT, SAT, GRE or college class rank information.
- If someone other than the individual named on the transcript has been authorized to pick up the document in person, they must provide a signed release from the person named on the transcript.

Payment

- If payment is to be made by credit card, please provide type (VISA, MasterCard or Discover), credit card number, expiration date, name of card holder, address of card holder and daytime phone number.
- If the order is for a faxed transcript, the following information is also needed:
  1) The fax number and name of the person to whose attention the transcript is to be sent
  2) The name and address to which the subsequent official, hard copy transcript will be mailed.

COMMENCEMENT

Commencement ceremonies are held twice each year, at the end of both the fall and spring semesters. Participation in these ceremonies is based on the understanding that all degree requirements will have been completed that term (summer graduates exempted). The official commencement brochure for each ceremony will contain only the names of those students eligible to graduate that particular semester. Tentative spring and summer graduates are eligible to participate in the spring ceremony. Fall graduates may choose to participate in either the fall or the spring ceremony (not both) but are strongly encouraged to attend the fall exercises. Fall graduates must inform the Associate Provost's Office of their choice by November 1. Candidates must appear in official academic regalia at commencement exercises.

Graduation with Honors

Students maintaining high scholastic averages are awarded undergraduate degrees cum laude, magna cum laude, and summa cum laude. A minimum of 32 hours must be earned at USC for a student to be considered for graduation cum laude, magna cum laude or summa cum laude. To graduate cum laude, a minimum cumulative grade-point average of 3.5000 is required; for magna cum laude, a minimum grade-point average of 3.7500 is required; and for summa cum laude, a minimum grade-point average of 3.9000 is required.

Transfer Graduation Cum Laude

A transfer student who wishes to be considered for cum laude, magna cum laude or summa cum laude at USC may request the registrar to recompute the GPA for honors eligibility. All course work transferred from accredited institutions will be used. The GPA will be computed by dividing total quality points earned by total credit hours attempted, including points and credits from all previously attended institutions of higher education.

DIPLOMAS

Diplomas are dated and awarded to graduating students each semester (Fall, Spring and Summer) upon graduation clearance of each student. The diploma is imprinted with the name of the degree awarded and the student's major. Minors or emphases are not printed on the diploma. Diplomas will be mailed to graduates approximately six to eight weeks after the end of the term in which the degree is conferred. Replacement diplomas may be issued for a specified charge upon a request from the original holder who certifies to the loss or damage of the original document.

PRIVACY RIGHTS OF STUDENTS/DIRECTORY INFORMATION

The university from time to time publishes several bulletins, lists, brochures, catalogs, directories, yearbooks, annuals, guidebooks, news releases, sports information, honor rolls, etc., containing information which specifically identifies students and information about them. The university is authorized to publish, and will publish such directory information, collectively or individually, unless a student, by the end of the second week of classes, notifies the student privacy office (registrar, Administration building, room 201) in writing that any or all of the categories listed below

(designated directory information) should not be released without prior written consent. The following information is considered directory information:

- student name
- address
- telephone number
- date and place of birth
- classification
- major field of study
- participation in officially recognized activities and sports
- weight and height of athletes
- dates of attendance
- degrees granted and dates conferred
- awards received
- most recent previous educational agency or Institution attended

The university may, however, disclose personally identifiable information from the educational records of a student as provided in section 99.31 of the Student Right to Know Campus Security Act of 1990 **without** the written consent of the parent or the eligible student if the disclosure is:

1) other school officials such as administrators, supervisors, faculty, staff or on-campus law enforcement unit personnel within the educational institution who are determined to have legitimate educational interests;

2) officials of another school or school system in which the student seeks or intends to enroll, subject to the requirements set forth in section 99.34 of the Act; or

3) subject to the conditions set forth in 99.31-99.35 of the Act.

The university may also disclose personally identifiable information from the educational records of a student to appropriate parties in connection with an emergency if knowledge of the information is necessary to protect the health or safety of the student or other individuals.

REGISTRATION

Advisement

All students are required to consult an academic adviser before registering for classes. Academic advisers are assigned by the major area. Degree-seeking students who have not selected a major and unclassified students should contact the Advising Center, Room 232 of the Psychology building.

Registration Procedures

Details on registration procedures are published in the class schedule bulletin distributed to students well in advance of each registration period.

Payment of Tuition and Fees

Tuition and fees are assessed in accordance with approved policies. Instructions for payment and payment deadlines are stated in the class schedule bulletins. Specific information about tuition and fees is given in the class schedule bulletin each semester. Contact the Office of Financial Services at (719) 549-2234, Administration building room 212 for more information.

Change of Address

Students should keep university authorities informed of their current address. A change in address should be reported immediately to the Office of the Registrar.

Completion of Student Courses

The university holds students responsible for completing all courses for which they have enrolled unless they obtain approval for a change in registration or file an official withdrawal. Students not following proper course or university withdrawal procedures will receive failing grades.

Immunization Requirement

Colorado law requires all college students born since January 1, 1957, to be immunized against measles, mumps and rubella.

Proof of immunity consists of:

- Measles - two doses of live measles vaccine administered after 12 months of age or a blood test showing immunity to measles.
- Mumps - two doses of live mumps vaccine administered after 12 months of age or a blood test showing immunity to mumps.
- Rubella - two doses of live rubella vaccine administered after 12 months of age or a blood test showing immunity to rubella.

Prior to registration please have verified immunization records sent to Student Health Services, University of Southern Colorado, Pueblo, Colorado 81001-4901 or fax records to (719) 549-2646.

Booster vaccinations are provided by Student Health Services free of charge if immunizations records indicate that a booster is necessary. For further information, contact the Student Health Services Office at (719) 549-2830.

UNDERGRADUATE PROGRAMS

DEGREE REQUIREMENTS

Candidates for the baccalaureate degree must satisfy institutional and general education requirements, as well as specific requirements for the major and minor or area of concentration. Students should plan to complete the basic competency requirements in the freshman year and should plan to complete the general education requirements in the freshman and sophomore years. Students must file an approved graduation planning sheet with the Office of the Registrar before midterm of the semester prior to the semester in which they plan to graduate.

INSTITUTIONAL REQUIREMENTS FOR ALL BACCALAUREATE DEGREES

1) Students must successfully complete a minimum of 128 semester hours of credit with an earned grade point average of 2.000 for all USC hours attempted and included in the GPA computation. Courses numbered below the 100-level **cannot** be applied toward graduation; (i.e. ENG 099, MATH 098, 099).

2) Students must successfully complete a minimum of 40 credit hours in upper-division courses (numbered 300-499). Upper division credit may be earned only through a four-year institution.

3) A minimum of 30 semester hours of resident instruction, as stated in the program of the major, must be earned in residence at USC. (Both on-campus and continuing education for-credit courses are considered resident credit.)

4) Students must complete a minimum of sixty-four (64) credit hours at an accredited four-year university or college. (For degree purposes, USC accepts a maximum of 64 credit hours from community or junior colleges.)

5) A maximum of 16 semester hours of nonresident credit (work completed at other colleges or universities) may be applied on the last 32 hours prior to graduation.

6) A maximum of 30 semester hours of correspondence credit may be applied toward the baccalaureate degree.

7) Students must successfully complete the requirements for an approved major including an approved capstone course and a minor or area of concentration outside the major.

8) Students must achieve a minimum grade point average of 2.000 in their major field of study. (Some majors and programs require higher GPA's. Refer to specific program sections of this catalog for details.)

9) Students must complete the Skills Component (English Composition I and II, Speech, Computer Usage and Mathematics) with a minimum overall GPA of 2.000.

10) Students must satisfactorily complete all general education (K) requirements as defined and explained in the following section, *General Education Requirements*.

11) Candidates for the bachelor of science degree must earn a minimum of 48 hours in the college of their major.

12) Candidates for the bachelor of arts degree must satisfy the foreign language requirement.

13) Degree candidates must file a completed *Graduation Planning Sheet* with the registrar's office the semester before they plan to graduate (check course bulletin for specific deadlines).

14) Degrees are issued only at the close of each semester and summer session.

15) Additional majors or minors will not be awarded or posted to a transcript after a baccalaureate degree has been granted.

16) Students must meet all financial obligations to the institution.

MAJOR REQUIREMENTS

A baccalaureate candidate must select a major and successfully complete all requirements prior to receiving a degree. The minimum number of required semester hours varies by major but must include a departmentally approved program of **at least 30 semester hours of course work in the program of study, including an approved capstone course.**

Emphasis area/option

Programs of study may specify emphasis or option areas within majors. Students may select emphasis areas within a major and may, with the approval of the department chair, have the emphasis area or option recorded on the transcript.

MINOR OR AREA OF CONCENTRATION REQUIREMENTS

In addition to a major, all students must complete either a minor or a concentration of interrelated courses totaling at least 20 semester hours. Minors consist of a sequence of courses in a specific academic discipline which are established by the department offering the minor. General education courses apply towards both the minor and the area of concentration. A double major satisfies the minor requirement. An area of concentration is a selection of interrelated courses supporting a specific academic major. Upon graduation, completed minors are recorded on the transcript; areas of concentration are not.

DOUBLE (SECOND) MAJOR

Students may choose to complete concurrently the requirements for two majors. Students seeking a double major must satisfy the requirements of both majors as stated by both departments involved under a single degree program. The single degree awarded is that degree appropriate for the first major. A single diploma is issued which displays both majors and both majors are recorded on the student's academic transcript.

After a degree has been awarded, the Office of the Registrar does not change the transcript to add additional majors, emphasis areas or minors.

BACHELOR OF ARTS DEGREE: FOREIGN LANGUAGE REQUIREMENT

Students seeking the degree of bachelor of arts must complete one of the two options listed below:

1) Completion of the second semester of a foreign language (FL course number 102).
   - Students may test out of the course.
   - Completion of an FL course above 102 with a grade of C or better will satisfy the requirement.
2) Completion of FL 100, Introduction to Comparative Linguistics, *and* ANTHR/ENG 106, Language, Thought and Culture.

International students for whom English is a second language may substitute two semesters of English courses for the foreign language requirement.

SECOND BACCALAUREATE DEGREE

A second baccalaureate degree may be granted in a major area other than that in which the first baccalaureate degree was granted provided the student has met all requirements for the second baccalaureate degree, including not fewer than 32 semester hours of University of Southern Colorado (resident) credit beyond the first degree with a minimum grade point average of 2.000. The additional 32 hours of credit must have the approval of the department from which the second degree is to be earned. Students seeking a second degree are eligible for the Dean's List and for graduation with distinction.

The additional credits required for the second degree may be completed concurrently with the credits applying to the first degree and the two degrees may be granted simultaneously, providing all requirements are completed for both degrees. Simultaneous degrees require two separately completed degree planning sheets as well as the permission of the associate provost.

If the student possesses a baccalaureate degree from a regionally accredited college or university, the general education and institutional requirements are considered complete.

GENERAL EDUCATION REQUIREMENT

The general education requirement for graduation includes a total of 39 semester credits in two categories:

Skills Component	14 credits
Knowledge Component	25 credits
TOTAL	39 credits

SKILLS COMPONENT

The requirements included within this component should be completed as early as possible, preferably during the freshman year.

English Composition I	3 credits
English Composition II	3 credits
Speech	3 credits
Computer Usage	2 credits
Mathematics	3 credits
TOTAL	14 credits

The **skills component** must be completed with a minimum overall GPA of 2.0000.

For illustrative purposes, the sub-areas of the **skills component** are:

Literacy and Communication Skills

ENG	101	Composition I
ENG	102	Composition II
SPCOM	103	Speaking and Listening

Computing Skills

ART	104	Computer Graphic Literacy
BUSAD	160	Introduction to Computers and Information Processing
CIS	101	Computers and You

CIS	103	Word Processing
CIS	110	Accessing the Information Superhighway
MUS	105	Introduction to Music and Computers

Quantitative Skills

The mathematics skills requirement can be met in one of three ways:

1) Successful completion of MATH 109 (Mathematical Explorations);

2) Scoring 23 or above on the mathematics component of the ACT Exam; or

3) Completion of any approved* math course of a higher level than Math 109 with a grade of C or better.

*Math 360, 361, 377, and 463 may not be used to satisfy this requirement.

Transfer students who wish to meet condition 3) by substituting a math course completed at another institution must obtain approval from the USC mathematics department.

KNOWLEDGE COMPONENT

The requirements of this component are distributed among the four domains listed below. The domains include a total of eight sub-areas (K^1 through K^8). At least one course in each of the sub-areas must be completed.

1. Aesthetic and Ethical Values

K^1 Visual and Performing Arts ..... 3 credits
K^2 Literature ..... 3 credits

2. Understanding People

K^3 International & Multicultural Experience 3 credits
K^4 Historical Consciousness ..... 3 credits
K^5 Health Consciousness and/or Awareness of Human Development, Experience & Behavior ..... 3 credits

3. Economic, Political and Social Systems

K^6 Economic, Political and Social Systems 3 credits

4. Science and Technology

K^7 Life Science* ..... 3 or 4 credits
K^8 Physical Science* ..... 3 or 4 credits

25 or 26 credits

*A laboratory experience is required in either area K^7 or K^8.

GENERAL EDUCATION REQUIREMENT COURSES

KNOWLEDGE COMPONENT

The gerneral education requirement for graduation includes a total of 14 semester hous in the **skills** component and **25** semester hours in the **knowledge** categories.

1. AESTHETIC AND ETHICAL VALUES

K^1 VISUAL AND PERFORMING ARTS

ART	100	Visual Dynamics
MUS	118	Music Appreciation
TH	111	Theatre Appreciation
TH	112	Film Appreciation

K^2 LITERATURE

CS	220	Survey of Chicano Literature
ENG	130	Introduction to Literature
CS	220	Survey of Chicano Literature
ENG	223	Modern World Literature
HONOR	120	Honors Literary Themes
PHIL	102	Philosophical Literature
PHIL	201	Classics in Ethics

2. UNDERSTANDING PEOPLE

K^3 INTERNATIONAL AND MULTICULTURAL EXPERIENCES

ANTHR	100	Cultural Anthropology
CS	101	Introduction to Chicano Studies
ENG	240	Survey of Ethnic Literature
FRN	102	Beginning Spoken French II
GER	102	Beginning Spoken German II
ITL	102	Beginning Spoken Italian II
PHIL	120	Non-Western World Religions
POLSC	105	Understanding Human Diversity
PSYCH	200	Understanding Human Conflict
PSYCH	105	Understanding Human Diversity
RUS	102	Beginning Spoken Russian II
SOC	105	Understanding Human Diversity
SPN	102	Beginning Spoken Spanish II
SW	105	Understanding Human Diversity
WS	105	Understanding Human Diversity

K^4 HISTORICAL CONSCIOUSNESS

ART	105	History through Art I
ART	106	History through Art II
CS	136	The Southwest United States
HIST	101	World Civilization to 1100
HIST	102	World Civilization from 1100 to 1800
HIST	103	World Civilization since 1800
HIST	136	The Southwest United States
HIST	201	U.S. History I
HIST	202	U.S. History II

K[5] HEALTH CONSCIOUSNESS AND/OR AWARENESS OF HUMAN DEVELOPMENT, EXPERIENCE AND BEHAVIOR

BIOL	162	Personal Health
EXHP	162	Personal Health
EXHP	201	Drugs and Healthy Lifestyles
HONOR	220	Honors Health Issues
MACOM	101	Media and Society
PHIL	204	Critical Reasoning
PSYCH	100	General Psychology
PSYCH	151	Human Development
SOC	101	Introduction to Sociology

3. ECONOMIC, POLITICAL AND SOCIAL SYSTEMS

K[6] ECONOMIC, POLITICAL AND SOCIAL SYSTEMS

ECON	102	Economics and Society
GEOG	103	World Geography
HONOR	230	Honors International and Economic Issues
POLSC	101	American National Politics
POLSC	260	Power: Political and Economic Systems
PSYCH	231	Marriage, Family and Relationships
SOC	201	Social Problems
SOC	231	Marriage, Family and Relationships
WS	231	Marriage, Family and Relationships

4. SCIENCE AND TECHNOLOGY

K[7] LIFE SCIENCE

BIOL	100	Principles of Biology
BIOL	100L	Principles of Biology Lab
BIOL	121	Environmental Conversation
BIOL	121L	Environmental Conversation Lab
HONOR	210	Honors Life Science and Technology
PSYCH	222	Understanding Animal Behavior

K[8] PHYSICAL SCIENCE

CHEM	101	Chemistry and Society
CHEM	101L	Chemistry and Society Lab
GEOL	101	Earth Science
GEOL	101L	Earth Science Lab
HONOR	110	Honors Physical Science
IST	205	Issues and Trends in Technology
MET	105	Materials for Engineering Applications
PHYS	110	Astronomy
PHYS	140	Light, Energy and the Atom
PHYS	140L	Light, Energy and the Atom Lab

GENERAL EDUCATION EXEMPTIONS

Exemptions from skills and **knowledge** component requirements may have been approved for certain major or minor areas. Please refer to the following for a complete listing of the General Education Exemptions. For current information, a student should consult with his or her academic adviser or the appropriate department.

COLLEGE OF APPLIED SCIENCE AND ENGINEERING TECHNOLOGY

	EXEMPTION AREA			
Department	**Component**	**Domain**	**Sub-domain**	**Credit Hours**
CET Major	Skills (I) Knowledge (II)	Computer Usage (C) Science & Technology (D)	_____ K^8 Physical Science	2 4
EET Major	Skills (I) Knowledge (II)	Computer Usage (C) Science & Technology (D)	_____ K^8 Physical Science	2 4
MET Major	Skills (I) Knowledge (II)	Computer Usage (C) Science & Technology (D)	_____ K^8 Physical Science	2 4
Industrial Engineering Major	Knowledge (II)	Science & Technology (D)	K^8 Physical Science K^7 Life Science	4 3
ISTTeaching Option	Knowledge (II)	Science & Technology (D)	K^8 Physical Science	4
Industrial Tech APSM Major	Knowledge (II)	Science & Technology (D)	K^8 Physical Science K^7 Life Science	4 3
Industrial Tech Facilities Major	Knowledge (II)	Science & Technology (D)	K^8 Life Science	4

COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

	EXEMPTION AREA			
Department	**Component**	**Domain**	**Sub-domain**	**Credit Hours**
English Major	Knowledge (II)	Aesthetic & Ethical Values (A)	K^2 Literature	3
Foreign Language Major	Knowledge (II)	Understanding People (B)	K^3 International & Multicultural Experiences	3

COLLEGE OF SCIENCE AND MATHEMATICS

Department	EXEMPTION AREA			Credit Hours
	Component	**Domain**	**Sub-domain**	
Biology Major	Knowledge (II)	Science & Technology (D)	K^7 Life Science K^8 Physical Science	7
Biology Minor	Knowledge (II)	Science & Technology (D)	K^7 Life Science	4
Chemistry Major	Skills (I) Knowledge (II)	Computer Usage (C) Science & Technology (D)	(not word processing) K^8 Physical Science	1 4
Chemistry Minor	Knowledge (II)	Science & Technology (D)	K^8 Physical Science	4
Geology Minor	Knowledge (II)	Science & Technology (D)	K^8 Physical Science	4
Mathematics Major	Skills (I) Knowledge (II)	Computer Usage (C) Science & Technology (D)	(not word processing) K^7 Life Science or K^8 Physical Science	1 4
Nursing Major	Knowledge (II)	Science & Technology (D)	K^7 Life Science K^8 Physical Science	7
All Physics & Physical Science Majors except Teaching Option	Skills (I) Knowledge (II)	Computer Usage (C) Science & Technology (D)	(not word processing) K^8 Physical Science	1 4
Physics Major Biophysics Option	Knowledge (II)	Science & Technology (D)	K^7 Life Science	3
Physics, Physical Science Majors	Skills (I) Knowledge (II)	Computer Usage (C) Science & Technology (D)	(not wordprocessing) K^8 Physical Science	1 4

SCHOOL OF BUSINESS

Department	EXEMPTION AREA			Credit Hours
	Component	**Domain**	**Sub-Domain**	
All Majors	Knowledge (II)	Economic, Political & Social Systems (C)	K^6 Economic, Political and Social Systems	3

TRANSFER STUDENTS

Transfer students will comply with the policy outlined in the university catalog in effect at the time of entry to the university.

The University of Southern Colorado may accept the general education requirements included in the Associate of Arts (AA) or Associate of Science (AS) degree from a regionally accredited two-year or four-year college as a substitute for USC's general education requirements. Transcripts will be reviewed on an individual basis by the Office of Admissions to determine if general education requirements are satisfied.

In addition, USC accepts the Colorado Community College and Occupational Educational System General Education Core Transfer Program (33 credit hours for the AS or 34 credit hours for the AA degree) as a substitute for the university's general education requirements for a student who is certified as having successfully completed the core curriculum. However, only courses with grades of C or higher will be accepted for credit in transfer. It is the student's responsibility to document that the general education requirements were satisfied at the transfer institution.

Transfer students from Colorado four-year colleges or universities who have completed general education requirements with a minimum 2.0000 grade-point average, will be considered to have fulfilled USC's general education requirements. However, only courses with grades of C or higher will be accepted for credit in transfer. It is the student's responsibility to document that the general education requirements were satisfied at the transfer institution.

READMIT STUDENTS

Students readmitted to USC must fulfill the requirements in the General Education program.

GENERAL EDUCATION COURSE SUBSTITUTIONS AND/OR WAIVERS

Substitutions and/or waivers for courses fulfilling general education requirements must be approved by the registrar.

GENERAL EDUCATION TEST-OUT POLICY

All courses satisfying general education requirements have a test-out procedure. Students wishing to test out of a course should contact the chair of the department offering the course. A student who successfully completes the test-out examination with a grade of B or better satisfies that particular general education requirement. The student does not receive a grade or credit for the course nor does the test-out apear on the transcript. General education test-out examinations are free of charge.

ASSESSMENT PROGRAM

Legislation enacted by the Colorado General Assembly requires that:

1) institutions of higher education be held accountable for demonstrable improvements in student knowledge, capacities and skills between entrance and graduation;
2) such demonstrable improvements be publicly announced and available;
3) institutions express clearly to students the expectations for student performance; and
4) such improvements be achieved efficiently through the use of student and institutional resources of time, effort and money.

The University of Southern Colorado, in response to the aforementioned requirement, has adopted an assessment plan which contains the following provisions:

1) the basic educational goals for all undergraduates shall be communicated to students in the form of performance expectations for all students;
2) each department shall develop and publish specific curricular, co-curricular, and appropriate student performance expectations for students by major;
3) information on student improvement from entrance to graduation shall be collected, used, and publicly reported;
4) information on after-graduation performance of students shall be collected by means of surveys of graduates, employers, and graduate/professional schools;
5) information on student and alumni satisfaction with their education shall be collected by means of surveys and interviews; and
6) information collected for the accountability report shall be reported annually to the State Board of Agriculture and the Colorado Commission on Higher Education and used for the purposes of improving the quality of the educational experience at the university.

In recognition of the evolutionary nature of an accountability and assessment program, the university acknowledges that the provisions of the plan, as they are stated in this catalog, may change at any time during a student's residence. The university will make reasonable efforts to inform students of any modifications to the plan.

BASIC EDUCATIONAL GOALS FOR ALL UNDERGRADUATES

The university requires all students to meet or exceed the following performance expectations:

1) Fields of Study Goals

Major Field

Students shall demonstrate outcomes (proficiency) in the major by a variety of assessments specified by the faculty of the department offering the major. Faculty will determine and publish the expected outcomes for each major offered, and the students in the major will be provided with career planning in terms of the expected outcomes.

Minor Field

Students shall demonstrate outcomes in the minor by a variety of assessments specified by the faculty of the department offering the minor. Faculty will determine and publish the expected outcomes for each minor offered.

2) Intellectual Skills Goals

Literacy Skills

Students shall demonstrate effective skills in reading, writing, speaking and listening (public and interpersonal communication), visualizing, computing, locating and documenting sources of information.

Quantitative Skills

Students shall demonstrate the ability to understand and interpret numerical and graphical data.

3) Intellectual Capacities Goals

Problem Solving, Logical Inquiry and Critical Analysis

Students shall demonstrate the abilities of identifying, defining and solving complex problems through logical inquiry and creative exploration; engaging in critical analyses; testing hypotheses; and discriminating between observation and inference.

4) Knowledge Goals

Aesthetic and Ethical Values

1) Creative and/or performing arts - Students shall demonstrate knowledge of aesthetic values and artistic processes.
2) Values (social/ethical) - Students shall demonstrate knowledge of ethical values and social and civic responsibilities.

Understanding People

1) International and multicultural experience - Students shall demonstrate knowledge of cultural differences and global interrelatedness.
2) Historical consciousness - Students shall demonstrate knowledge of the past as a means for analyzing contemporary issues.
3) Health consciousness - Students shall demonstrate knowledge of the principles of mental and physical health.

Economic, Political, and Social Systems

1) Students shall demonstrate knowledge of the social, economic, and political institutions and systems.

Science and Technology

1) Science - Students shall demonstrate knowledge of natural and physical phenomena.
2) Technology - Students shall demonstrate knowledge of technology and its interrelationship with society.

Assessment of Basic Educational Goals

To assess the extent to which students meet or exceed the above performance goals, the university requires that students who have completed at least 90 credit hours be subject to interviews, portfolio maintenance, or standardized tests relative to the assessment of basic educational goals.

To assist students in preparing to meet the performance expectations stated in the basic educational goals provision of the accountability program, the faculty recommend that students:

1) meet the institutional requirements as early as possible, preferably in the freshman year; and
2) meet the general education requirements by the end of the sophomore year, to the extent allowed by the degree program.

Educational Goals for Majors and Minors

Individual departments expect students to meet or exceed performance expectations as stated in each college/school section of this catalog.

Departmental assessment plans differ in accordance with requirements of specific disciplines; however, each plan typically includes the following information:

Departmental Goals
Expected Student Outcomes
General Requirements
Specific Requirements for Majors
Co-curricular Requirements (if any)
Outcomes Assessment Activities

In consideration of the evolutionary nature of departmental assessment plans, departments reserve the right to modify assessment plans as appropriate and necessary. Students will notified of any such changes.

Student Surveys

The university will conduct surveys during student attendance and for a period of five years after graduation to assess the level of educational satisfaction. Students are strongly encouraged to respond to these surveys and to provide other appropriate forms of feedback so that the university may use the results to continue to improve the quality of education at USC.

Dissemination of Results

Assessment results will be disseminated by the departmental faculty in accordance with the department assessment plan; other results will be available in the Office of the Provost.

Assessment program inquiries may be directed to the director of assessment in care of the Office of the Provost.

GRADUATION RATES

The graduation (or completion) rate is one of the most commonly cited measures of success. This is simply the percentage of a defined body of students who graduate in a specified period of time. For purposes of this brief report, the entering cohort of interest is defined to be first-time freshmen enrolling full-time in a fall term as degree-seeking students. Full-time students are those who enrolled for 12 or more hours during the initial term. The chart below provides the graduation rates for full-time students by entry cohort at the University of Southern Colorado.

USC graduation rates for full-time students:

	Fall 1989	Fall 1990	Fall1991
Graduating in 6 years	30%	30%	30%

These rates are comparable with graduation rates of other regional, public institutions in Colorado despite the fact that many USC students interrupt their studies for economic reasons.

SPECIAL ACADEMIC PROGRAMS AND SERVICES

THE UNIVERSITY LIBRARY

The University Library provides information services to students, faculty, staff and patrons throughout the city and region.

Library faculty and staff assist patrons in learning how to find and utilize books, periodicals, pamphlets and government documents through instruction for individuals, small groups or formal classes. Staff also prepare subject bibliographies for classes, arrange inter-library loans and provide computer-based reference searches.

Approximately 200,000 volumes are available, as well as more than 1,300 periodical titles. The University Library is a designated selective depository for U.S. Government documents and geological survey maps. Special collections include Colorado documents; the papers of Vincent Massari, former state senator; the Alva Adams family papers; Tobi Hopkins Black Literature; the Ralph Taylor Southwest collection, and the Edward O'Brien Western collection.

The audiovisual collection in Library 310 offers student carrels for playback of videos.

INTERDISCIPLINARY STUDIES

The Interdisciplinary Program offers students opportunities to experience courses which focus on particular problems or issues and which cover several disciplinary perspectives. The program includes the Honors program and several courses intended to provide students with interdisciplinary perspective and opportunities to study in courses not regularly offered through the disciplinary curricula.

INTERDISCIPLINARY STUDIES (IS)

UNDERGRADUATE COURSES

105 Academic Career Exploration 1(1-0)
Provides undeclared/declared students who are still deciding on their majors an opportunity to assess their abilities, interests and goals while investigating the university's degree programs. (F)

151 Introduction to Academic Life 2(2-0)
To provide an opportunity for students to learn and adopt methods to be successful in college. Critical thinking, writing and time management are emphasized. (F,S)

291 Special Topics (1-3 VAR)
Special topics are offered to students in areas where regular course offerings are not available. (*)

350 Orientation Leadership Training 3(3-0)
Course emphasis is to develop a student's leadership and communication skills, enhance knowledge and understanding of university policies and procedures and campus resources and services. (S)

355 Become an Effective Tutor 3(2-2)
Concepts and techniques of effective tutoring, including issues such as communication, rapport, confidentiality, learning styles, disabilities, and general study skills. Limited hands-on experience required.

UNIVERSITY HONORS PROGRAM

Director: Gayle Berardi

The university honors program, which offers a minor, provides intellectually invigorating challenges for academically talented students. In small, inter-disciplinary seminars, students explore the natural and applied sciences, social sciences, and the humanities. "Graduation with honors" is a significant designation for students applying to graduate or professional schools, or seeking employment.

Program Goals for the Minor in Honors

- To provide a sequence of thematic, interdisciplinary seminars that will enhance both the students' depth and breadth of knowledge.
- To offer intellectually invigorating challenges and opportunities to students.
- To provide a program that builds to a project undertaken in the student's senior year under the one-to-one supervision of a faculty mentor in the student's major field.

Expected Student Outcomes

General Requirements

Criteria for admission to the University of Southern Colorado Honors Program:

1) Incoming freshmen to the University of Southern Colorado are invited to apply for the honors program if they graduated high school with a GPA of 3.5000 or higher and have attained a minimum ACT score of 25.

2) Undergraduate students already enrolled at USC with a minimum grade point average of 3.5000 are invited to apply for membership in the honors program. Two letters of recommendation from faculty members at USC addressed to the honors program director are also required for admission into the honors program.

3) Transfer students with a minimum grade-point average of 3.5000 are invited to join the honors program. In addition, transfer students with a minimum grade point average of 3.5000 may transfer up to six hours of honors credit to the USC honors program with the approval of the honors director. Two letters of recommendation from faculty members at the student's former institution addressed to the honors program

director are also required for admission into the honors program.

4) Students who do not meet the requirements for regular admission into the honors program may apply for provisional acceptance. The academic standing of these students will be addressed after one regular (i.e., fall, spring) semester at USC during which time 12 credit hours, including one three-hour honors, must be completed. Students who meet the standards for the honors program will be granted full admission into the honors program at that time. If they fail to meet the standards, they will be denied admission.

5) Admission of non-honors students into honors courses is at the discretion of the honors director. Students are responsible for communicating their interest to the faculty member teaching the course in the form of a letter detailing their interests and/or expertise in the topic. The student's letter will also outline his/her plan of study for the course, which will be filed with the honors director.

   Students may enroll in a maximum of two honors courses. They may, however, apply for admission to the honors program if their overall grade-point average and their honors coursework are commensurate with the general standards for admission.

6) Students enrolled in the honors program will be placed on probation if their overall grade-point average falls below 3.5000 or their grade-point average in honors courses falls below 3.0000. Students placed on probation will have two semesters in which to bring their grade-point average to acceptable levels. If they fail to do so within this time period, they will be suspended from the honors program.

Honors Curriculum

1) To graduate with honors designation the candidate must complete 16 credit hours consisting of the following course work:

   Introduction to Honors Seminar 1
   Honors general education courses 6
   Honors upper-division courses 6
   Senior Project/Thesis 3

2) A student in the honors program may complete a minor in honors, consisting of the following 22 credit hours:

   Introduction to Honors Seminar 1
   Honors general education courses 9
   Honors upper-division courses 9
   Senior Project/Thesis 3

3) Honors courses are of three types: (1) honors sections of standard courses already contained with the university's curriculum; (2) honors courses developed specifically for honors students; and (3) contract honors courses. A maximum of three hours of contract honors courses will be credited toward graduation with honors. A maximum of six hours of contact hours courses will be credited toward graduation with a minor in honors. Honors students wishing to take contract courses are responsible for contacting individual faculty members to work together to develop a written plan of study, which must be submitted to the honors director for final approval.

Outcomes Assessment Activities

Student portfolios are compiled by the office of the honors director for each freshman entering the honors program. The portfolios are maintained in the honors program office and include, but are not limited to, the following assessment items:

- the student's initial application to the program, including ACT or SAT scores, high school GPA, class rank, hobbies, awards and intended major;
- co-curricular inventories including evidence of awards, presentations, student government involvement and participation in campus organizations;
- selected examples of writing;
- the honors project; and
- an updated list of the honors courses completed and the grades received.

HONORS (HN)

UNDERGRADUATE COURSES

110 Honors Physical Science 3(3-0)
A thematic, interdisciplinary, small-group seminar dealing with the aesthetic, cultural, historical, sociological, scientific and technological aspects of physical science. (F)

120 Honors Literary Themes 3(3-0)
A thematic, interdisciplinary, small-group seminar dealing with the aesthetic, cultural, historical, sociological and scientific aspects of literary themes. (S)

210 Honors Life Science and Technology 3(3-0)
A thematic, interdisciplinary, small-group seminar dealing with the aesthetic, cultural, historical, sociological and scientific aspects of life science and technology. (S)

220 Honors Health Issues 3(3-0)
A thematic, interdisciplinary small-group seminar dealing with the aesthetic, cultural, historical, sociological, scientific and technological aspects of health issues. (S)

230 Honors International & Economic Issues 3(3-0)
A thematic, interdisciplinary, small-group seminar dealing with aesthetic, cultural, historical, sociological, scientific and technological aspects of international and economic issues. Prerequisite: three hours previous honors work. (*)

291 Special Topics (1-3 VAR) (*)

410 Senior Honors Seminar 3(3-0)
A thematic, interdisciplinary, small-group seminar dealing with scientific, technological, sociological, cultural, aesthetic, ethical, and historical aspects of issues of education and research. Guest speakers and visits to museums, exhibits and cultural events related to the course's theme. Senior honors project will be introduced. Prerequisite: Three hours previous honors work. (*)

490 Special Projects 2(2-0)
Prerequisite: three hours of previous honors work. (*)

491 Special Topics (1-3 VAR) (*)

CENTER FOR INTERNATIONAL PROGRAMS

The Center for International Programs at USC focuses on the needs of international students. Housing placement, immigration counseling, academic tutoring, part-time on campus employment and acculturation assistance are just a few of the support services offered free-of-charge. International Programs' staff maintains an open-door policy, ensuring that every international student has an opportunity to be heard and helped when needed. Typically, there are at least 40 countries represented during any given semester. Student academic success within the entire international population is our primary goal.

- ***Orientation***: All new international students to USC are required to participate in a two-day mandatory orientation upon arrival. During this activity, students will be administered an English placement exam. Results of the exam will indicate registration for the appropriate English course, and do not interfere with admission to the university.
- ***Activities***: International students are welcomed to participate in all activities offered by USC. In addition, the Center for International Programs hosts individual events throughout the academic year. Annual events include the International Kite Fly, welcome parties, the International Extravaganza, holiday celebrations and field trips.
- ***Sports***: International students are welcomed to participate in all intramural sports offered at USC. In addition, the Center for International Programs supports and organizes informal soccer, tennis, ping-pong and swimming teams.

INTERNATIONAL STUDENT EXCHANGE PROGRAM AND STUDIES ABROAD

The University of Southern Colorado values the benefit of an education in international settings. Consequently, the university encourages students with second language proficiency, when appropriate, to enroll in international study programs. Students wishing to increase their cultural awareness, second language proficiency or competency in subjects offered abroad are encouraged to contact the Center for International Programs. USC presently offers exchagne opportunities in England, France, Germany, Indonesia, Italy, Japan, Malaysia, Mexico, Spain, and Thailand.

For more information on any of the above mentioned topics, please call (719) 549-2329, e-mail: intprog@uscolo.edu or vist our website at http://www.uscolo.edu/intl.

American Language Academy

The American Language Academy leases facilities on the USC campus to provide an intensive English-language program for the international student.

Although USC credit is not provided for ALA courses, USC students may enroll in the academy's classes to improve English proficiency.

International students enrolled in the American Language Academy who are in the highest levels (4 or 5) may be permitted to enroll in USC classes for up to a maximum of nine semester hours of USC credit per semester. Approval by the university and the director of ALA is required. Students seeking admission to USC as potential degree-seeking students must meet the university's international admissions requirements. See above section for information.

American Language Academy offices are located in the Occhiato Center, Room 121. Contact American Language Academy by telephone at (719) 549-2222, Monday-Friday, 8 a.m. to 5 p.m., or write to the American Language Academy in care of the university.

CENTER FOR ACADEMIC AND CAREER DEVELOPMENT

Career Center

The Career Center is a centralized, comprehensive center, positioned to work with students and alumni, employers and organizations, and faculty and staff. Our goal is to provide opportunities for each USC student and graduate to develop a clear career objective, to obtain career-related work experience, and to learn the skills necessary to conduct a successful job search.

The center coordinates all on-campus student employment and advertises a variety of off-campus jobs. Other events coordinated by the center include Career Fairs and Education fairs where all USC students and alumni have the opportunity to network with employers. At the job fairs, students can learn about internship or co-op programs, and part-time, summer or full-time employment opportunities. The center also oversees on-campus interviewing, informational meetings, and other recruiting efforts by employers.

Student may schedule an appointment with one of the career advisors or attend one of the workshops to learn job-search strategies, résumé and cover letter preparation, or interviewing techniques. In addition, information can be obtained on how to find an internship or co-op program to gain valuable career related work experience. The Career Center also maintains a variety of career information including company literature and videos, company directories, and current job postings.

Student Employment Services

The Career Planning and Employment Center coordinates a variety of student employment opportunities to include the university's work-study program, on-campus student hourly, and off-campus temporary, seasonal, and part-time jobs. The center also includes summer full- and part-time positions as well as internships. As part of a comprehensive career center, the program is committed to serving the educational purposes of the university. The center offers career counseling and teaches effective job search skills.

Cooperative Education

Cooperative education provides an educational plan in which periods of study and periods of career-related work are combined in one program, individualized for each student. Students earn a salary and acquire academic credit in their majors while experiencing, on a temporary basis, their chosen career. The experience gives cooperative education students an opportunity to become well-acquainted with the employer which, in many cases, leads to permanent placement upon graduation. All cooperative programs are administered by the academic departments.

Academic Advising Center

The Academic Advising Center provides students with support and assistance to enhance student success, learning, personal, and career development during their college transition period and beyond. Services and programs include: academic advisement of undeclared students, career development and self-exploration exercises, computerized career guidance programs, interest inventories (Strong Interest Inventory, Holland Self-directed Search, Myers Briggs Personality Type Indicator, and other assessments). The Center develops continuous programs to expedite career decision making and declaration of academic majors via seminars, workshops, career exploration courses, academic, and career fairs.

Orientation

At the beginning of each semester and throughout the summer, orientation sessions for transfer and new students are offered. During orientation, students meet key academic and administrative personnel, learn about university policies, complete math and English placement tests, receive academic advising. All new and transfer students are encouraged to attend one of the orientation sessions.

The Admissions office provides information and schedules other opportunities for campus visits and orientation.

Learning Assistance Center

The focus of the Center is to provide activities directed toward the improvement of learning and study strategies for students. The activities include verifying the needs of students experiencing individualized learning problems; developing prescriptive plans and providing necessary aid and/or tutorial assistance; making advisory recommendations concerning educational planning; and providing workshops to upgrade learning and problem-solving skills.

The center is staffed by learning assistance specialists and academic tutors who provide services based on needs assessments conducted jointly with academic units and students.

Writing Center

The Writing Center is a place where everyone can come for help with any writing need. Writers can get help with essays, research papers, fiction, poetry, resumes, scholarship applications or any other type of writing challenge. Writing Center tutors provide information and guidance throughout the entire writing process.

The Writing Center is staffed by a center coordinator, faculty volunteers, and peer tutors. Services are free, and it is open five days a week. The Writing Center is located in Psychology Building, Room 232.

Appointments and walk-ins are always welcome. For an appointment or further information, call 549-2225.

Testing Services

USC is a national test center for standardized tests, including ACT, SAT, GRE, CLAP, and MAT, and provides other interest, aptitude and personality assessments.

Services for Individuals with Disabilities

USC strives to be accessible to persons with disabilities, and Belmont Residence Hall provides adequate living

facilities for students with disabilities. Through the Disabilities Services Office in the Learning Assistance Center, individualized support services such as transcribing, note taking, and tutors are available for qualified students. Students with physical, learning, or emotional/psychological disabilities are all encouraged to register with the Disabilities Services Office so that an accommodation plan, based upon individual documentation of the disabilities, can be implemented to allow students the best opportunity to succeed at USC.

FEDERALLY SPONSORED PROGRAMS

Minority Biomedical Research Support Program

Research opportunities in biology, chemistry and psychology are available to students interested in pursuing careers in biomedical science. Students gain hands-on experience working in modern laboratories with faculty mentors and other student researchers. Salaries and travel expenses to scientific meetings are supported by a grant from the National Institutes of Health.

Student Support Services

Student Support Services program provides low-income, first generation and students with physical or learning disabilities supportive services such as especially designed workshops, tutoring, personal counseling, academic advice and assistance in obtaining financial aid. The program is designed to improve the retention and graduation rate of low-income, first generation and handicapped college students. In order to qualify for Student Support Services, students must be enrolled or accepted for enrollment in the university and need academic support. They must meet the low-income criteria, be a first-generation student and/or show recent documentation of their disability. Students who meet the criteria established by the U.S. Department of Education are encouraged to apply.

Southern Colorado Educational Opportunity Center

The program provides and coordinates services in thirteen southern Colorado counties and one northern New Mexico county to assist eligible low-income, first generation and handicapped adults to enter into secondary and post-secondary educational programs. The program also provides academic guidance, needed counseling, and other support services for prospective and currently enrolled SCEOC students. Satellite offices are located at the community colleges in Lamar, La Junta, and Trinidad. Pueblo and Colorado Springs have community based service offices. The USC sponsored Center is the headquarters for the overall program.

Upward Bound

The Upward Bound Program at the University of Southern Colorado is a pre-college program which generates skills and motivation necessary for success in education beyond high school. The criteria for acceptance into the program includes low-income and potential first generation students who are enrolled in high schools seeking to prepare themselves for entry into a post-secondary education.

Eligible participants must:

1) have completed the eighth grade;
2) be between the ages of 13 - 19;
3) be currently enrolled in a high school;
4) be planning to attend college;
5) need the services of Upward Bound to help fulfill their goals; and
6) have a high school grade point average of 2.5000 or better.

Basic skills, counseling, tutoring and skills necessary for acceptance into and success in college are provided. An intensive six-week summer program offers six credits of college courses for graduating seniors. The remaining undergraduates attend evening classes emphasizing mathematics, science, English, and writing. Applications are available at high school counselors' offices. For more information, please call 549-2750.

UNIVERSITY SPONSORED PROGRAMS

KTSC-TV

KTSC-TV, Channels 8 and 15, a non-commercial public television station licensed by the Federal Communications Commission to the university, operates as a public service under the supervision of the provost. The station broadcasts 24 hours per day reaching western Kansas, to north of Colorado Springs, to northern New Mexico and to eastern Utah. The broadcast schedule consists of cultural, public affairs and educational programming for viewers of all ages.

KTSC-TV is affiliated with the Public Broadcasting Service and the Pacific Mountain Network. Television production courses offered through the department of mass communications are taught at the Buell Communications Center which is the home of KTSC-TV. Advanced students in mass communications and electronics receive academic credit for working in the daily operation of the station.

Occhiato Center

During the academic year, the Occhiato Center is open regularly from 6:30 a.m. to 8 p.m. weekdays and as scheduled events require. The center is open on Saturdays and Sundays during meal hours and as scheduled for events. Limited hours are established during summer and when classes are not in session. Center hours are extended to accommodate events and meetings.

USC Bookstore

The USC Bookstore is a modern 20,000 square-foot store in the Occhiato Center serving USC faculty, staff and students. Texts for classes, general-interest books, current magazines, classroom supplies, sundries, calculators, greeting cards, and sport and T-shirts are among the many items sold in the bookstore. Hours of operation are printed in the semester course bulletin and on the bookstore entryway.

Identification Cards

All students enrolled should obtain an ID card, provided by the Occhiato Center office, room 113, during regular working hours, Monday through Friday, from 8 a.m. to 5 p.m. To obtain an ID, students must provide a picture identification and the computer printout of a class schedule for the semester. Continuing students must have ID's validated each semester and must present confirmation of registration.

Vehicle Registration

All vehicles operated by students must be registered with the University Police before the first day of classes. A student parking permit costs $24 per year; $12 for a single semester. To register a vehicle, students must present a valid driver's license, a vehicle registration card or proof of ownership and valid university identification. The permit does not guarantee a parking space.

GRADUATE POLICIES AND PROCEDURES

Graduate Administration

Graduate programs and curricula at the University of Southern Colorado are developed by the faculty and administration in the instructional colleges, centers and schools and are administered with the assistance of the director of admissions and the registrar. Academic policy matters are reviewed by the University Graduate Studies Committee. Each graduate program has a director or coordinator functioning as the person to contact for specific information. Each program is responsible for its own guidelines for graduate assistantships.

GRADUATE DEGREE PROGRAMS

The University of Southern Colorado offers selected graduate courses and programs for degree-seeking and non-degree students. Graduate degrees are offered in applied natural science, industrial and systems engineering (MS), and business administration (MBA). In addition, the university participates in consortial arrangements with Adams State College for graduate degrees in elementary education (MA) and counseling (MA). A coordinated program is offered with Colorado State University for a master's degree program in social work (MSW). Although the latter programs are offered on the USC campus, the actual degrees are awarded by Adams State College or Colorado State University, respectively, and graduate regulations pertaining to the degrees follow the policies of the appropriate institution.

GRADUATE ADMISSIONS POLICIES AND PROCEDURES

A student who has received a baccalaureate degree from an accredited institution and who wishes to take either additional undergraduate courses or begin graduate courses must submit the following items to the Office of Admissions, University of Southern Colorado, 2200 Bonforte Boulevard, Pueblo, Colorado, 81001-4901. The following items shall constitute the admission file for each applicant:

1) A completed application for admission to graduate programs of the University of Southern Colorado and a $15 application fee. The fee is non-refundable and is not applicable towards tuition. (Effective for students applying for Fall 1999 and beyond, the application fee is $25.) For students previously enrolled as degree-seeking undergraduate students at USC, the fee is not required. An application form may be obtained by writing the USC Office of Admissions or by telephoning (719) 549-2461. Students in the elementary education/guidance and counseling consortium programs apply directly to Adams State College. Those students interested in the MSW program must apply to both Colorado State University and the University of Southern Colorado.
2) Official transcripts of all college and university work must be sent directly to the Office of Admissions by each institution attended. Records received directly from students cannot be accepted except for advisement purposes. The records of students who previously attended USC will be obtained from the registrar and do not require a student request.
3) The score from the aptitude portion of the Graduate Record Examination (GRE) or the score from the Graduate Management Admissions Test (GMAT) for students in business. Scores may influence the admission decision but are used primarily for advising.
4) For students whose native language is not English, a minimum score of 500 (TOEFL) or 80 (Michigan) is required for admission. A minimum score of 550 (TOEFL) is required for the master in business admin-istration (MBA). Level 5 from the American Language Academy also is accepted. Students who complete an undergraduate degree at an institution in the United States are exempt from this requirement.

GRADUATE ADMISSION

The student is admitted according to the following criteria approved by the program department.

Admission to graduate studies does not constitute admission to a particular graduate program. Admission to a particular degree program must be approved by the program director upon review of the student's credentials.

Regular Status

Regular status will be given to degree-seeking students who meet all of the published requirements of their selected graduate program department. The requirements include:

- a baccalaureate degree from an institution accredited by the regional accreditation agency;
- the minimum undergraduate GPA established for the program: applied natural science — 3.0000; business administration — 2.7000; systems engineering — 2.8000;
- submission of satisfactory scores from a standardized admissions test approved by the program department;
- a completed admissions file; and
- any additional requirements for the selected program, including completion of leveling courses to correct undergraduate deficiencies.

International students whose native language is not English must also meet the English language proficiency standard set forth in the Graduate Admissions section.

Conditional Status

The university provides a conditional status for students whose undergraduate grade-point average is between 2.50000 and the minimum required for the particular program. In addition, program departments may specify conditions which may include higher grade-point averages, required scores on entrance examinations, or undergraduate major or course requirements as specified by the department. The director of admissions, on recommendation of the program director, will admit the student under conditional status if the student's grade-point average is at least 2.5000, but not high enough for regular admission; or if the student has not met a condition specified by the program department. Such special action may be taken if there are positive indicators of graduate success, e.g., high GRE or GMAT scores, solid upper-division performance, or outstanding professional achievement.

The director of admissions will refer the student to an adviser appointed by the program director. The student will be notified to meet with the adviser to determine what conditions will be applied. Departments may specify additional course work beyond the degree requirements as conditions of admission to regular status. A statement of the conditions and a plan for meeting them will be filed by the director of admissions and the dean of the college/school and a copy provided to the student.

When the conditions are met, the director of admissions will notify the student that he/she has achieved regular degree-seeking status. Students on conditional status may count toward the degree a maximum of 12 hours of graduate course work taken in the degree program.

Non-Degree Status

The director of admissions will admit the student with non-degree status under the following conditions:

1) The student requests courses for professional development only.

2) The student's record shows that he/she does not meet the qualifications for admission to a degree program with conditional or regular status. In this case, with the approval of the program director, the director of admissions will notify the student of the deficiency, the procedure to follow to become qualified and the name of an adviser who can assist the student. The adviser will be sent a copy of the notification. Students applying for admission from non-regionally accredited institutions in the United States will be included in this category. A student with non-degree status who has completed 12 hours approved by an adviser with a 3.0000 GPA or better at USC may petition the program director for a change to the regular degree-seeking status.

Students admitted with non-degree status may take, with the instructor's permission, graduate courses for which they meet prerequisites. A maximum of 12 hours taken with non-degree status may be applied toward a degree, conditional upon the approval of the student's graduate committee.

Ineligible

Students who are denied admission to a graduate program will not be permitted to enroll in graduate courses.

Graduate Work Taken by Seniors

USC students who are in their senior year of undergraduate work, and who have an undergraduate grade-point average that meets the admissions requirements for the program, may take graduate courses for graduate credit with the approval of the appropriate program director and the director of admissions. Up to 12 graduate hours may be taken prior to graduation, but the combined undergraduate and graduate enrollment normally may not exceed 16 hours for a semester. **Graduate level courses (500 level) cannot be used simultaneously to satisfy baccalaureate and graduate degree requirements with the exception of approved joint-degree programs.**

CHANGE OF STATUS

The director of admissions will notify the student and the program director when the student has satisfied the conditions of admission and is changed to regular status.

GRADUATION REQUIREMENTS

Each graduate program at the university has specific graduation requirements which must be met prior to graduation. In addition, students must fulfill the following requirements for a graduate degree:

1) Have a cumulative graduate GPA of 3.0000 or better at graduation. A maximum of six semester hours of course work at the grade of C may apply toward graduation. A minimum of 24 semester hours of credit in the approved degree plan must be earned at USC.

2) Have regular student status.

3) Complete the program's minimum number of hours of approved course work. The MBA and systems engineering programs require a minimum of 36 semester hours. The applied natural science program requires a minimum of 30-32 semester hours.

4) Pass a final comprehensive and/or oral examination in the major area of study, if required by the program.

5) Submit a graduation planning sheet signed by the student's graduate adviser during the semester prior to the semester in which graduation is to occur. The deadline for submission is published in the semester schedule of courses.

6) Complete a thesis or directed research project, if choosing the thesis option. Submit two approved copies of the thesis, one to the program director and one to the University Library.

7) May repeat thesis and directed research project courses beyond the minimum hours required by a degree program. Satisfactory progress will be indicated by the grade IP. Enrollment for thesis or directed research credit is required for any academic term during which university resources (e.g., faculty time, computer use, library, etc.) are being used. A maximum of six semester hours of thesis or directed research course work will count toward meeting graduation requirements.

ACCEPTANCE OF TRANSFER CREDIT

A maximum of nine (9) semester hours of resident graduate credit from other regionally accredited graduate institutions may be applied to a graduate degree program. Transfer credits must be directly applicable to the degree program and must be approved by the applicant's graduate committee and the director of admissions. Graduate credits accepted in transfer must not be from a correspondence course, must be from a course in which a grade of A or B was earned, and must be from an institution where the student maintained a graduate GPA of at least 3.0000. Credits accepted in transfer do not apply to the GPA at USC.

GRADUATE ADVISING

Each graduate degree area has a program director appointed by the dean of the college, center, or school. The program director will serve as graduate adviser to all graduate students in the program, unless the dean of the college, center or school makes a different assignment. The adviser will assist in selecting a graduate committee for each student who chooses the thesis option. The graduate committee shall consist of at least two faculty members and is appointed by the dean of the college, center or school in consultation with the student. One member of the committee may be from outside the department of the student's graduate program. Changes in membership in the graduate committee may be requested by the student to the dean.

The responsibilities of the graduate adviser and the graduate committee include advisement, approval of the degree plan, approval of a thesis or directed research topic and final document (if appropriate), and administration and approval of comprehensive and/or oral examinations.

COURSE LOADS

Graduate students enrolled in nine or more hours shall be considered as full-time students (six hours, summer); those enrolled for six hours shall be considered as half-time students (three hours, summer).

TIME LIMITS

Courses completed six or more years before the date of graduation, either at USC or at some other institution, will not be accepted as satisfying graduation requirements. Petitions for waiver of the six-year limitation may be submitted to the registrar with the approval of the student's graduate adviser. Waivers will be approved only upon justification of unusual and extenuating circumstances and with the concurrence of the appropriate academic dean.

DEGREE PLAN

All degree-seeking graduate students are required to submit a degree plan, approved by all members of the graduate committee (if applicable) and program director, to the registrar. The degree plan should be submitted no later than upon completion of 12 hours of study. A course taken, prior to having any given degree plan approved, is subject to review for suitability in the program. Changes in the degree plan must be approved by the graduate adviser and program director and submitted to the registrar.

UNDERGRADUATE COURSES

Although undergraduate classes do not apply toward a graduate degree, students admitted to graduate study may be required to complete some undergraduate prerequisite courses in addition to their graduate work.

Courses taken for undergraduate credit by a graduate student do not enter into the graduate grade-point computation. A graduate program director may, however, stipulate a grade point to be achieved in such undergraduate courses.

Graduate programs may include courses which are dual numbered at the senior (400) and graduate (500) level. Students registered for graduate credit shall be required to perform at the graduate level. Dual-listed courses taken for undergraduate credit will not apply toward a graduate program. Graduate students may not repeat for graduate credit a dual-listed course which was taken in the undergraduate program.

DUAL DEGREE CREDIT

Students may receive dual credit for all common degree requirements in more than one graduate program if the degree plans are filed for both programs. In addition, up to six semester hours of elective credit may be applied to more than one graduate degree program pending approval of the graduate committee of the program involved and the registrar.

ACADEMIC STANDARDS

Graduate courses are graded in an alphabetical system with the following interpretation:

A	–	Excellent performance
B	–	Good performance
C	–	Passing, but below expected performance
D	–	Unsatisfactory performance
F	–	Failing
IN	–	Incomplete, no credit awarded
S	–	Satisfactory
IP	–	In progress
W	–	Withdrawal
NC	–	No credit

Students may apply no more than six semester hours of work with a grade of C toward graduation requirements. Grades of D, F, IN, U, do not fulfill graduation requirements for graduate programs. Graduate students may repeat a maximum of six semester hours of graduate credit. No course may be repeated more than once. When a course is repeated, only the higher grade and credit earned are computed into the student's grade-point average, provided the student has requested a recomputation of grade-point average by the records office. The previously attempted courses and grades remain in the academic record but are not computed in the overall average.

Transcripts contain an appropriate entry indicating that the grade-point average has been recomputed and stating the basis for recomputation.

To remain in good academic standing, a graduate student's GPA must remain at 3.0000 or better. If the graduate GPA falls below 3.0000, a graduate student will be placed on probation. Students have one semester to show progress toward good standing. Probationary students with 12 or more semester hours of graduate work will be suspended whenever progress toward good standing is not demonstrated. A graduate student will be suspended whenever the graduate GPA falls below 2.5000.

A student may appeal suspension by submitting a written petition to his/her program director. This petition must provide a justification for continued registration. The program director shall forward a recommendation through the appropriate dean to the Office of the Provost. The provost or his designee shall make a decision on the appeal and inform the student of that decision. Decisions by the provost are final.

COMPREHENSIVE EXAMINATIONS

Graduate programs may require a final comprehensive and/or oral examination at the time of defense of the thesis or directed research project or at the completion of course work. Scheduling is made through the graduate adviser. Students who fail a final examination may retake the examination once. A re-examination cannot be scheduled in the same semester as the original examination.

THESIS OR DIRECTED RESEARCH

Each graduate program provides an option that includes a thesis or a directed research project. This option also requires an oral defense of the thesis or research project. Each student must submit a research plan. The plan must define the topic of study and outline the research design. The plan must have the written approval of all members of the student's graduate committee, the program director, and the appropriate dean.

The research plan should be filed as soon as possible after the degree plan is filed and before 18 credit hours of the student's degree plan have been completed.

DIRECTED RESEARCH REPORT

Graduate students whose degree plan calls for a directed research project are required to submit a report on that project to their graduate committee. Although the report need not be as formal as a thesis, it must, however, be typed in an acceptable format and must include a title page comparable to thesis format.

The report should include the purpose of the study or project, limitations, sources of data, the procedure used, and a summary section with conclusions. The research report must be approved by all members of the graduate committee and the appropriate dean. The final approved report must be submitted at least five (5) days prior to the anticipated date of graduation.

THESIS INSTRUCTIONS

Students who will be writing a thesis in partial fulfillment of graduation requirements must submit two (2) official copies of the approved thesis and three (3) copies of the thesis abstract to the university. The department will retain one copy of the thesis and thesis abstract. The thesis and one copy of the thesis abstract shall be maintained in the University Library. The Registrar shall retain one copy of the thesis abstract.

The thesis or directed research must:

1) contain a certificate of acceptance;
2) contain a title page;
3) conform to the style and form approved by the major department and outlined in the thesis plan;
4) be printed on high-quality paper with a minimum of 25 percent rag content;
5) contain no erasures; and
6) be bound.

The university-duplicated copy of the thesis must be of high-quality printing and must use a paper of the same quality as the original. Other copies of the thesis may be duplicated in any manner the student desires.

It is imperative that the utmost care be taken in the preparation of the final copy of the thesis. The completion of the thesis, including typing and duplication, is the sole responsibility of the student.

The thesis abstract should consist of no more than five hundred (500) words and should include a title page. The thesis abstract should cover the following items:

1) purpose of study;

2) research materials and methods results; and

3) summary and conclusions.

The approved thesis and thesis abstract must be submitted to the registrar at least five (5) days prior to commencement.

ORAL DEFENSE OF RESEARCH

Upon completion of a master's thesis or directed research project, an oral defense/final comprehensive examination must be scheduled. Application for the oral defense is made to the graduate adviser.

A report of the outcome of the oral defense must be filed with the Office of the Provost. The report must be signed by all members of the graduate committee. Students must pass the oral defense to complete their thesis or directed research requirement successfully.

APPEALS

All graduate policies, procedures, and regulations may be appealed. Appeals must be made in writing to the Office of the Provost.

PROGRAMS OF STUDY

APPLIED NATURAL SCIENCE (MS)

The graduate program leading to the degree of master of science in applied natural science prepares students to apply basic scientific disciplines to the practical problems encountered in business, industry, government, and education. Graduates from the program will be able to apply the techniques of scientific research to real-world problems.

Course work emphasizes several important areas of applied natural science, including bio-technology, polymer chemistry, industrial chemistry, mathematical techniques in applied research, environmental concerns, scientific information systems and instrumentation. A unique feature of the program is a course addressing the ethical issues raised by scientific change.

The master of science in applied natural science requires 30 or 32 semester credit hours of approved graduate course work in either the thesis or non-thesis option. The program offers three emphasis areas — applied biological sciences, applied chemical sciences, and applied biochemical sciences.

Degree Requirements

The course of study requires four semester credits of work common to all students. Each student must select an emphasis area with a core of seven semester credits. Thirteen or twenty-one credits in elective courses are also required, depending on which option is chosen. The thesis option requires successful completion of six semester credits of thesis research (BIOL 599 or CHEM 599) and an approved thesis. The program of study for each student must be approved by a college committee.

Thesis option students are required to defend their research results before a thesis defense committee. Non-thesis option students must take a written comprehensive examination over courses taken in their program of study. A non-thesis option student must submit written evidence of her or his ability to understand and critique scientific literature.

Program requirements are summarized as follows:

	Plan A (thesis option)	**Plan B** (non-thesis option)
ANS 510 ANS 520 ANS 593 (X2) MATH 550	7	7
Emphasis Core Courses (Biological emphasis OR Chemical emphasis OR Biochemical emphasis OR Mathematical Sciences emphasis)	7-12	7-12
Thesis research	6	–
Graduate Internship	-	4
Elective courses	5-10	9-14
TOTAL	30 min.	32 min.

Specific course numbers, course titles, and credit hours for all core requirements, emphasis core requirements, and electives are cited as follows:

Required General Courses

ANS	510	Scientific Information Systems	1
ANS	520	Health and Safety in the Laboratory	1
ANS	593	Seminar (taken twice)	2
MATH	550	Statistical Methods	3
		TOTAL	7

Required Courses for Each Emphasis

Biological Sciences Emphasis Core

BIOL 540/540L	Molecular Genetics/Lab	3
BIOL 552/552L	Theory & Appl of Electron Microscopy	4
	TOTAL	7

Chemical Sciences Emphasis Core

CHEM	503	Polymer Chemistry	3
CHEM	529	Advanced Instrumentation	2
CHEM	550	Industrial Chemistry	2
		TOTAL	7

Biochemical Sciences Emphasis Core

BIOL	540/540L	Molecular Genetics/Lab	3
CHEM	512/512L	Biochemistry II/Lab	5
		TOTAL	7

Mathematical Sciences Emphasis Core

MATH	521	Intermediate Analysis	3
	527	Abstract Algebra	3
	541	Computers (Mathematica, etc)	3
	544	Mathematical Methods of Applied Science (Optimization and Modeling)	3
		TOTAL	12

Additional courses required for the Mathematical Science Emphasis:

For thesis option:

BIOL/CHEM Courses			2

For non-thesis option:

BIOL/CHEM Courses			3
MATH	530	Advanced Geometry	3

Elective Courses

A minimum of 13 (Plan A - thesis option) or (Plan B - non-thesis option credit hours must be selected from courses listed below:

Courses		Titles	Credits
ANS	510	Scientific Information Systems	1
	520	Health and Safety in the Lab	1
	593	Graduate Seminar	2
BIOL	512/512L	Cellular Biology/Lab	4
	521/521L	Histology/Lab	4
	526/526L	Plant Morphology/Lab	3
	532/532L	Embryology/Lab	4
	540/540L	Molecular Genetics/Lab	3
	541/541L	Freshwater Invertebrate Zoology/ Lab	4
	543/543L	Limnology/Lab	4
	552/552L	Theory and Application of Electron Microscopy/Lab	4
	572/572L	Radiation Biology/Lab	4
	549/579L	Ichthyology/Lab	3
	581/581L	Entomology/Lab	3
	582/582L	Parasitology/Lab	3
	583/583L	Mammalogy/Lab	3
	584/584L	Ornithology/Lab	3
	585/585L	Plant Taxonomy/Lab	4
	589	Medical and Veterinary Entomology	3
	591	Special Topics	1-4
	595	Independent Study	1-4
	598	Graduate Non-Thesis Internship	1-4
	599	Thesis Research	1-6
CHEM	501/501L	Advanced Organic Chemistry/Lab	4
	503	Polymer Chemistry	3
	511	Biochemistry I	3
	512/512L	Biochemistry II/Lab	4
	519/519L	Instrumental Analysis/Lab	4
	521	Advanced Inorganic Chemistry	3
	525	Environmental Chemistry	3
	529	Advanced Instrumentation	2
	531	Radiochemistry	2
	550	Industrial Chemistry	2
	591	Special Topics	1-4
	595	Independent Study	1-4
	598	Graduate Non-Thesis Internship	1-4
	599	Thesis Research	1-6
MATH	521	Intermediate Analysis	3
	527	Abstract Algebra	3
	530	Advanced Geometry	3
	541	Computers	3
	544	Mathematical Methods of Applied Science	3
	550	Statistical Methods	3
	591	Special Topics	3
	595	Independent Study	1-4
	598	Graduate Non-Thesis Internship	1-4
	599	Thesis Research	1-6

MASTER OF BUSINESS ADMINISTRATION (MBA)

The goal of the University of Southern Colorado's MBA program is to prepare students for high-level general management careers in business and other organizations. To this end, students acquire knowledge of management operations, an appreciation of the interrelationships involved, an understanding of the economic, political and social environment in which businesses function, and behavioral skills that are essential in the manager's role in the implementation of business decisions. The MBA program endeavors to provide an atmosphere conducive to the development of each student's ability to think in a creative and effective manner. The program makes extensive use of lectures, seminars, group projects, case studies and independent research.

The program is open to all applicants with a bachelor's degree, regardless of the undergraduate field of study, who can demonstrate, through academic or experiential preparation, an appropriate background in the key areas of accounting, economics, finance, quantitative methods, law and ethics, management, and marketing. Students without this background may be required to complete some undergraduate leveling requirements.

All MBA students are required to take the Graduate Management Admissions Test (GMAT). An admission formula of 200 times the undergraduate GPA (4.0000 system) plus the GMAT score will constitute a scaled admission score for each applicant. Regular admission will be given to those students who satisfy the univer-

sity's general admission requirements for graduate study, have a scaled admission score of at least 1,000 and have satisfactory preparation in the key areas. Conditional admission may be given to students with GPAs between 2.5000 and 2.7000. Undergraduate leveling requirements may be required of students in either regular or conditional status. Graduate students are required to take all leveling course requirements before finishing 12 hours of graduate work.

Specific requirements for the jont BSBA/MBA plans are included in the joint BSBA/MBA plan description of the Hasan School of Business, undergraduate-programs section of this catalog.

The Hasan School of Business offers a test-out course waiver for some business core courses. The Hasan School of Business does not offer credit for life experiences.

The MBA degree will be conferred upon students who successfully complete a minimum of 36 hours of approved course work. The curriculum is composed of two options with 27 semester hours of required core courses which are taken by all candidates. Option one requires the international business course and six semester hours of approved graduate electives in the Hasan School of Business. Option two requires six semester hours of coursework with directed research and three semester hours of approved graduate electives in the Hasan School of Business.

Core Courses		Titles	Credits
ACCTG	510	Managerial Accounting	3
BUSAD	502	Business Ethics and Environment	3
ECON	510	Managerial Economics	3
FIN	530	Financial Management	3
MGMT	511	Production/Operations Management	3
	520	Management of Organizational Behavior	3
	565	Management Information Systems	3
	585	Management Policy and Strategy	3
MKTG	540	Marketing Management Strategies	3
		TOTAL	27

Requirements for Option I

BUSAD	575	International Business	3
Approved Electives			6
		TOTAL	9

Requirements for Option II

BUSAD	580	Business Research Methodology	3
	592	Directed Research	3
Approved Electives			3
		TOTAL	9

All graduate courses for the MBA are listed in the appropriate department sections of accounting (ACCTG), business administration (BUSAD), economics (ECON), finance (FIN), management (MGMT), and marketing (MKTG).

COUNSELING (MA)

Adams State College/University of Southern Colorado Consortium Program

Through a consortial arrangement with Adams State College, the University of Southern Colorado provides students the opportunity to earn the master of arts degree in either school counseling or community counseling. All courses are offered in the evenings on the USC campus.

Courses are taught by instructors from the USC and Adams State College psychology departments. The program requires 48 credit hours and meets the academic requirements for the state license in professional counseling. Students complete 18 hours a calendar year, 3 years for completion. Those interested should contact the psychology department at USC (719) 549-2631 or the counseling department at Adams State College (719) 589-7626.

ELEMENTARY EDUCATION (MA)

Adams State College/University of Southern Colorado Consortium Program

The University of Southern Colorado cooperates with Adams State College in the delivery of a master of arts in elementary education degree. The continuation of the program is dependent upon student need, and the cooperating institutions reserve the right to cancel courses or the program as a result of insufficient enrollment.

The program is offered over a 24-month cycle. The current cycle began in fall 1996. To accommodate working students, the program is offered entirely in the evenings and summers on the USC campus.

Applicants for the program must have a valid teaching certificate with an elementary education endorsement, a cumulative GPA of 2.2500 or higher for all college and university work, and a baccalaureate degree. Those interested should apply to Adams State College.

The MA in elementary education will be conferred upon students who complete the prescribed curriculum with a minimum of 30 semester hours of approved course work. Students must maintain a graduate GPA of at least 3.0000, submit scores from the aptitude section of the GRE during the first semester of the program, pass the graduate English Usage Exam, and pass a final

comprehensive examination. A written plan for the degree must be filed with the adviser. A maximum of six semester hours of graduate work will be accepted in transfer if the transfer credits correspond to courses in the program. Requests to take the comprehensive exam must be filed one semester ahead.

MASTER OF SOCIAL WORK (MSW)

The University of Southern Colorado and Colorado State University cooperate to offer the master of social work program. The program specialization is directed toward advanced generalist practice with a focus on transitional and underserved communities. The program prepares social workers for autonomous independent practice in a variety of settings. Course work at USC is offered part-time in the evenings.

Students normally take six credit hours per semester for four semesters (two years). The third year of the program is full time and consists of a field placement with students periodically going to the campus of Colorado State University for intensive course work over several days.The field placement phase requires approximately 20 hours per week in agency and community placement. Three calendar years, which include approximately 60 credit hours of course work, are required for completion of the program.

Applications are accepted once a year in the spring for classes beginning the following fall. The program is fully accredited by the Council on Social Work Education (CSWE) and has WICHE designation. Applicants with a degree in social work from a baccalaureate social work program accredited by CSWE are eligible to examine out of foundation courses on a course-by-course basis. Those interested may apply to the University of Southern Colorado.

INDUSTRIAL AND SYSTEMS ENGINEERING (MS)

Industrial and systems engineering deals with the design and analysis of complex, human/machine systems. Industrial systems engineers, with the "big picture" or systems viewpoint, serve as management and operations analysts, focusing on the people, materials, equipment and procedures needed for the most efficient and effective systems performance. Industrial and systems engineers analyze and evaluate systems against specified performance criteria, such as quality, before new systems are created or old ones are modified. Industrial and systems engineering techniques can be applied in manufacturing and service industries, health care systems, governmental agencies and non-profit organizations.

The master of science in industrial and systems engineering degree program at the University of Southern Colorado provides students with practical knowledge in areas such as facilities planning, operations planning and control, economic and decision analysis, and project management. Methodologies employed by industrial and systems engineers include probability and statistics, mathematical programming, computer simulation, and human performance studies.

Degree Requirements

The master of science in industrial and systems engineering degree program consists of 30 semester hours of required courses and six semester hours of elective courses or thesis credit, for a total of 36 semester hours minimum. No more than two 400-level courses may be counted for graduate credit. Courses from the approved set of electives may be substituted, if approved, for required courses for which a student can demonstrate mastery as a result of previous course work.

Admission Requirements

The program is open to applicants with a quantitatively based baccalaureate degree from regionally accredited colleges or universities. Admission to the industrial and systems engineering program requires prior admission to graduate studies.

Regulations governing graduate studies are contained in the Graduate Policies and Procedures Guide, available from the Office of Admissions.

Prerequisite Requirements

Students will be required to demonstrate preparation for graduate study in industrial and systems engineering by completing prerequisite background courses in engineering, computer programming, and mathematics, or by documenting previous equivalent course or experiential work. Students who do not possess the specified prerequisite background may be admitted conditionally but will be required to complete prescribed prerequisites. Courses used as prerequisites for required graduate courses must be taken for credit.

Prerequisites: (USC Course Equivalents)

Computer Programming (EN 105)
Engineering Economy (EN 343)
Probability (MATH 256 or 350)
Statistics (MATH 356 or EN/MATH 456)

Required Courses

Courses		Title	Credits
EN	503	Ergonomics	3
	504	Scheduling and Sequencing	3
	520	Simulation and Stochastic Processes	4
	530	Project Planning & Control	3
	540	Advanced Engineering Economics	3

	571	Operations Research	3
	575	Facilities Planning and Design	3
	577	Operations Planning & Control	3
	591	Special Topics	3
	593	Graduate Seminar	2
Thesis Research or Elective Courses			6
		Total Semester Hours	36

Elective Courses

Courses (approval required)			Credits
ACCTG	510	Managerial Accounting	3
ECON	510	Managerial Economics	3
EN	440	Safety Engineering	3
	443	Quality Control and Reliability	3
	473	Computer Integrated Manufacturing	3
	500	Logistics, Maintainability and Life-Cycle Support	3
	501	Software Systems Engineering	3
	556	Design of Experiments	3**
	565	Stochastic Systems Engineering	3
	588	Graduate Design Projects	3**
	590	Special Projects	(1-3 var)
	599	Thesis Research	(1-6 var)
MATH	544	Mathematical Methods of Applied Science	3
MGMT	560	Management Information Systems	3

**Offered in summer, these electives, either or both, are required for those students who choose to attend summer school provided that the student has had the required prerequisites. If found ineligible to take either or both of these courses, a student may take other electives for which he or she is eligible.

Graduate Assistantships

Full-time students admitted to the program with regular status are eligible to apply for graduate assistantships. Graduate assistants pay in-state tuition and fees. Full-time assistantships require students to work an average of 20 hours per week and carry a stipend of $8,000 for the academic year. Half-time assistantships require students to work an average of 10 hours per week and carry a stipend of $4,000 for the academic year. Assistantships are renewable for a second academic year provided students perform satisfactorily in assistantship assignments, remain in good academic standing, and make satisfactory progress toward completion of their degree programs. An application for assistantship consists of a letter of interest and resumé, addressed to the department chair. The deadline for applications is April 1 for the following academic year.

Course Description Information

The University of Southern Colorado does not offer all the courses listed in this catalog every semester or every year.

Each semester the university publishes a bulletin listing a detailed schedule of courses offered and the times and places of instruction. Courses listed in the bulletin are subject to change.

EXPLANATORY NOTES

Numbering of Courses

Course numbering is based on the content level of material presented in courses.

Courses numbered:

000-099	remedial; do not count toward graduation
100-299	primarily for freshmen and sophomores (lower division)
300-499	primarily for juniors and seniors (upper division)
500-599	primarily for students enrolled in master's degree programs or the equivalent. Students may enroll if they have submitted and received approval on graduate planning sheets.
600-620	Colorado State University courses offered at the University of Southern Colorado toward a master's degree in social work.

Variable credit courses
(1-3 VAR) indicates variable credit; the minimum and maximum credit limitations. An example:

494 Field Experience (1-5 VAR)
Off-campus individual experience providing transition from classroom instruction to on-the-job experience. Supervised by instructor and job supervisor. Prerequisite: senior standing and permission of instructor.

Cross-listed courses
Courses in which students may earn credit under either of two prefixes (e.g., SOC or HIST) for the same offering.

Corequisite
A requirement which must be taken concurrently with another course of instruction.

Prerequisite
A requirement which must be fulfilled before a student can enroll in a particular course. Permission of the instructor for a student to attend a class is implied when the student has met the prerequisites specified by the department.

Cancellation of courses
The university reserves the right to cancel courses not selected by an adequate number of students or not suitably staffed by qualified faculty.

KEYS TO SYMBOLS

Course descriptions include a variety of symbols conveying essential information. The following standard course description with explanation of symbols serves as a model:

102 Composition II 3(3-0)
Sequentional course to provide intensive consideration of essay development and to introduce procedures and techniques in preparing the referenced paper. Prerequisite: ENG 101. (F,S,SS)

102	course number
Composition II	course title
3(3-0)	number of credits (clock hours in lecture per week – clock hours in laboratory demonstration or studio experiences per week)
"Sequential course..."	explanation of course content
Prerequisite ENG 101 . .	required to be taken before
(F,S,SS)	taught fall, spring and summer semesters

Note: Not all of the above information may be noted in each course. Additional symbols include:

F	Taught fall semester
S	Taught spring semester
SS	Taught summer session
*	Offered upon demand
O	Taught odd numbered years
E	Taught even numbered years
VAR	Variable credit course
L	Suffix indicating lab course
CE	Credit by exam allowed
IP	Grade of IP (In Progress) available

UNIVERSITY-WIDE "HOUSE-NUMBERED" COURSES

200, 300, 400, 500	–	Workshop
290, 390, 490, 590	–	Special Project
291, 391, 491, 591	–	Special Topics
292, 392, 492, 592	–	Research
293, 393, 493, 593	–	Seminar
294, 394, 494, 594	–	Field Experience
295, 395, 495, 595	–	Independent Study
296, 396, 496, 596	–	Cooperative Education
297, 397, 497, 597	–	Studio Series
298, 398, 498, 598	–	Internship
599	–	Thesis Research
600	–	Master's Degree in Social Work

COURSE PREFIXES

Courses of instruction are identified by the following approved prefixes:

ACCTG	–	Accounting
ANS	–	Applied Natural Science
ANTHR	–	Anthropology
APSM	–	Auto Parts and Service Management
ART	–	Art
BBE	–	Bilingual Bicultural Education
BUSAD	–	Business Administration
BIOL	–	Biology
CENT	–	Computer Engineering Technology
CET	–	Civil Engineering Technology
CIS	–	Computer Information Systems
CHEM	–	Chemistry
CS	–	Chicano Studies
ECON	–	Economics
ED	–	Education
EET	–	Electronic Engineering Technology
EN	–	Engineering
ENG	–	English
EXHP	–	Exercise Science and Health Promotion
FIN	–	Finance
FL	–	Foreign Language
FRN	–	French
GEOG	–	Geography
GEOL	–	Geology
GER	–	German
HIST	–	History
HN	–	Honors
IS	–	Interdisciplinary Studies
IST	–	Industrial Science and Technology
INTL	–	International Studies
ITL	–	Italian
MACOM	–	Mass Communications
MATH	–	Mathematics
MET	–	Mechanical Engineering Technology
MGMT	–	Management
MKTG	–	Marketing
NSE	–	National Student Exchange
MUS	–	Music
NSG	–	Nursing
PHIL	–	Philosophy
PHYS	–	Physics
POLSC	–	Political Science
PSYCH	–	Psychology
RDG	–	Reading
REC	–	Recreation
RUS	–	Russian
SOC	–	Sociology
SOCSC	–	Social Science
SPCOM	–	Speech Communication
SPN	–	Spanish
SW	–	Social Work
TH	–	Theatre
WS	–	Women's Studies

ACADEMIC CALENDAR 1998-1999

FALL AND SPRING SEMESTERS

Regular academic semesters consist of 15-week terms, including official holidays and the final examination period. Specific information about each academic semester is available in the class schedule bulletins published prior to the beginning of each term.

SUMMER COLLEGE

Summer College consists of multiple sessions. Specific information about Summer College is available in the class schedule bulletin published prior to the beginning of the first session from the Office of the Registrar.

Summer Semester 1998

April 17 ..... Fall 1998 Graduation Planning Sheets Due
March 30 - April 3 ..... Early Registration
July 3 ..... Independence Day (Observed)

First 5, 10, & 15-week sessions

May 4 ..... Registration
May 4 ..... Classes Begin

End of Drop/Add

May 7 ..... First 5-week
May 13 ..... 10-week
May 18 ..... 15-week

Classes End

June 5 ..... First 5-week
July 10 ..... 10-week
August 14 ..... 15-week

Second 5-week session

June 8 ..... Registration
June 8 ..... Classes Begin
June 11 ..... End Drop/Add
July 10 ..... Classes End

Third 5-week session

July 13 ..... Registration
July 13 ..... Classes Begin
July 16 ..... End Drop/Add
August 14 ..... Classes End

Fall Semester 1998

March 9 - March 20 ..... Advisement
March 30 - April 3 ..... Early Registration
August 19, 20 ..... Orientation (W, Th)
August 21 ..... Registration (F)
August 24 ..... Classes Begin (M)
September 7 ..... End Drop/Add
October 9 ..... Spring 1999 Graduation Planning Sheets Due
November 23-27 ..... Thanksgiving Break
December 4 ..... Classes End
December 7-11 ..... Final Exams
December 12 ..... Commencement

Spring Semester 1999

October 26 - November 6 ..... Advisement
November 9 - 13 ..... Early Registration
January 7 ..... Orientation (Th)
January 8 ..... Registration (F)
January 11 ..... Classes Begin (M)
January 25 ..... End Drop/Add
March 5 ..... Summer 1999 Graduation Planning Sheets Due
March 22-26 ..... Spring Break (*)
April 23 ..... Classes End
April 26-30 ..... Final Exams
May 1 ..... Commencement

Summer Semester 1999

The Summer 1999 schedule is currently under revision. Only the following dates are available for the printing of this catalog. The Summer 1999 semester will be offered in a 12-week (multiple session) format. Complete session dates will be available through the office of the Registrar after May 15, 1998.

April 16 ..... Fall 1999 Graduation Planning Sheets Due
March 29 - April 2 ..... Early Registration
July 5 ..... Independence Day (Observed)
May 10 ..... Summer school begins (Certain designated sessions only)
July 30 ..... Summer school ends

COLLEGE OF APPLIED SCIENCE AND ENGINEERING TECHNOLOGY

Dr. Hector Carrasco, dean

Academic Departments

Automotive Parts and Service Management and Industrial Science and Technology

Majors: Automotive Parts & Service Management (BS)
Industrial Science & Technology (BS)
Facilities Management Option
Facilities Technology Option
Technology Education Option

Minors: Automotive Parts & Service Management
Industrial Science & Technology (Teaching Option)

Computer Information Systems

Major: Computer Information Systems (BS)

Minor: Computer Information Systems

Engineering

Majors: Industrial Engineering (BSIE)
Industrial and Systems Engineering (MS)

Minors: Industrial Engineering

Engineering Technology

Majors: Civil Engineering Technology (BSCET)
Electronics Engineering Technology (BSEET)
Mechanical Engineering Technology (BSMET)

The College of Applied Science and Engineering Technology degree programs reflect USC's polytechnic emphasis and are designed to prepare graduates for professional positions in industry, business and governmental agencies.

The industrial engineering degree program prepares graduates to work with the design, improvement and installation of systems. Students learn to consider human characteristics along with those of materials and equipment to produce quality products and services more efficiently.

The BSIEN degree program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 050, Baltimore, MD 21202, Telephone: (410) 347-7700 .

USC's two-year engineering transfer program provides a solid foundation in basic engineering education for any specialty field the student ultimately selects at USC or at other engineering colleges.

USC's baccalaureate degrees in civil, electronics and mechanical engineering technology are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 050, Baltimore, MD 21202, Telephone: (410) 347-7700. In addition to practical, hands-on laboratory experience, students receive a rich academic education in small classes taught by faculty with industrial experience.

USC's automotive parts and service management degree program combines technical courses and practical labs on the automobile with management courses in business — an unequaled combination.

Industrial science and technology majors may select options in facilities management to serve in administrative and supervisory positions, or facilities technology to serve in operational positions for major facilities, campuses or complexes. The technology education option prepares majors to teach Technology Education with junior or senior high school state certification or to become technology trainers in industry.

The computer information systems degree program provides students with the necessary skills to integrate computer systems and applications into a business or technology environment.

Computer information science graduates are in high demand in today's computerized work force. Graduates of the program are consistently among the highest paid entry-level employees world wide. CIS faculty work closely with local companies to maintain the quality of programs and insure continued relevance of courses.

The master's degree program in industrial and systems engineering uses techniques from engineering disciplines, mathematics, behavioral and physical sciences to analyze and design large scale human/machine/software systems for commercial, governmental and non-profit organizations.

DEPARTMENT OF AUTOMOTIVE PARTS AND SERVICE MANAGEMENT AND INDUSTRIAL SCIENCE TECHNOLOGY STUDIES

Department Chair: Ronald Darby

AUTOMOTIVE PARTS AND SERVICE MANAGEMENT PROGRAM

FACULTY: Darby, Sefcovic

The major in automotive parts and service management leads to a bachelor of science (BS) degree designed to provide the student with a broad range of management, business and technical skills applicable to the automotive parts and service industries. The curriculum emphasizes personnel supervision, financial analysis, customer relations, warranty administration, sales promotions, techniques of technical problem-solving, service management, marketing, merchandising and distribution methods used by the automotive aftermarket, automotive manufacturer and import industries.

Program Goals

- To prepare students with the appropriate knowledge and skills necessary to become productive, accountable, and responsible employees upon entering the work force.
- To provide students with a comprehensive theoretical foundation, bolstered by hands-on laboratory experiences.
- To utilize a professional advisory committee to advise faculty of APSM courses for the purpose of keeping the curriculum current with industry needs.

Expected Student Outcomes

- Possess technical knowledge in the under-vehicle areas such as braking, steering, and suspension systems.
- Have an understanding of modern design, operation, and repair of engines and related accessory systems.
- Understand and demonstrate by testing; a knowledge of electronic computerized systems of the modern automobile.
- Possess technical knowledge and skills related to power transfer in the automobile to include automatic and manual transmissions, differentials and power transfer systems.
- Have a working knowledge of automotive parts management and operation.
- Be familiar with various computerized service and parts management systems.
- Possess knowledge and understanding of customer relations, automotive management styles and methods.
- Have a working knowledge of automotive-specific financial systems.

General Requirements for the APSM Program

- Graduates of the program are required to complete an approved curriculum with a minimum grade of C earned in all major courses.
- Graduates are required to demonstrate intellectual skills and knowledge in related business courses to satisfy the minor and institutional requirements.
- APSM majors shall demonstrate technological literacy by showing the ability to compose and edit, using a word processor, and to use a spreadsheet for quantitative analysis.
- All APSM students will be required to solve problems appropriate to their discipline; to be able to use the computer for design, analysis, and business transactions; and to demonstrate proper use of measurements and diagnostic equipment.
- Students in the APSM minor program are required to complete the approved curriculum with a minimum grade of C earned in all minor courses.

Specific Requirements for the APSM Major

APSM Courses		Titles	Credits
APSM	105	Intro to the Parts & Serv Indus..	1
	115	Automotive Engine Design & Operation	5
	125/125L	Automotive Susp & Brake Systems/Lab	4
	155	Automotive Parts Operations	4
	165/165L	Automotive Power Trains & Dr Lines/Lab	4
	235/235L	Automotive Fuel Sys & Exhaust Ems/Lab	4
	245/245L	Automotive Electrical Systems I/Lab	4
	255/255L	Automotive Electrical Systems II/Lab	4
	265	Automotive Parts Management Systems	4
	305	Automotive Customer Service Regulatory Issues	3
	325	Fuels & Lube Production, Mktg & Conservation	3
	335	Automotive Shop Practices	5
	345	Advanced Automotive Systems	5
	405	Personal Selling Methods & Techniques	4
	425	Automotive Financial Mgmt	5
		TOTAL	59

Other Required Courses

ACCTG	201	Principles of Financial Accounting	3
ACCTG	202	Principles of Managerial Accounting	3
BUSAD	302	Ethical Issues	3
PHYS	201/201L	Principles of Physics I/Lab (K8)	4
ECON	201	Principles of Macroeconomics (K6)	3
ECON	202	Principles of Microeconomics	3
FIN	330	Corporate Financial Management	3
MGMT	310	Principles of Management	3
MGMT	318	Personnel Management	3
MGMT	468	Total Quality Management	3
MKTG	340	Principles of Marketing	3
MATH	109	Survey of Mathematics	3
		TOTAL	37

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual program's curriculum sheet.

Specific Requirements for the APSM Minor

APSM	115	Automotive Engine Design & Operation	5
APSM	235/235L	Automotive Fuel Systems and Exhaust Emissions Systems Lab	4
APSM	245/245L	Automotive Electrical Systems I/Lab	4
Approved APSM Electives (min)			7
		TOTAL	20

Outcomes Assessment Activities

Students enrolled in the baccalaureate degree programs are expected to meet the following requirements:

1) Students are required to develop and maintain a portfolio containing a record of achievement, showing improvement in intellectual skills, knowledge edge and capacities between entrance and graduation. During the semester of graduation, the faculty shall evaluate each graduate portfolio. The program will keep a copy of each portfolio on file to be used as a summarization assessment to assist in the evaluation of programs.

2) In addition to the portfolio, survey information from both the graduate and his/her employer will be collected during the first, third and fifth year following graduation.

3) Students minoring in APSM must submit a portfolio containing a record of achievement.

AUTOMOTIVE PARTS AND SERVICE MANAGEMENT (APSM)

UNDERGRADUATE COURSES

105 Introduction to the Parts and Service Industry 1(1-0)
Introduction to the industry from viewpoint of history, social impact, organization structure, manpower needs, and future growth. (F)

115 Automotive Engine Design and Operation 5(3-4)
Design, operation and repair techniques of current and future automotive engines. (F)

125 Automotive Suspension and Brake Systems 3(3-0)
Design and theory of front and rear automotive suspensions, steering, and brake systems. (S)
125L Automotive Suspension and Brake Systems Lab 1(0-2) Corequisite: APSM 125. (S)

155 Automotive Parts Operations 4(4-0)
The complete spectrum of jobber and dealer parts department, from counter to manager operations, to include electronic cataloging, customer service, introduction of parts computers. (F)

165 Automotive Power Trains and Drive Lines 3(3-0)
Design and theory of standard and automatic transmissions, clutches, drive lines, differentials, and transaxles. Corequisite: APSM 165L (S)

165L Automotive Power Trains and Drive Lines Lab 1(0-2) Corequisite: APSM 165. (S)

225 Power and Energy Technology 3(3-0)
Current uses of different forms of energy, the technology involved in generating power from various sources and the impact on society and the environment. (S)

235 Automotive Fuel Systems and Exhaust Emissions 3(3-0)
Design and theory of automotive fuel systems, carburetion, fuel injection, turbo charging, and supercharging; functions and design of automotive emissions systems. (F)

235L Automotive Fuel Systems and Exhaust Emissions Systems Lab 1(0-2)
Corequisite: APSM 135. (F)

245 Automotive Electrical Systems I 3(3-0)
Design and theory of operation of automotive electrical circuits; ignition, starting, charging, and accessory circuits, with study of diagnostic equipment used to diagnose system malfunctions. (F)

245L Automotive Electrical Systems Laboratory I 1(0-2)
Corequisite: APSM 245. (F)

255 Automotive Electrical Systems II 3(3-0)
Design and operational theory of solid state ignitions systems and computer-controlled systems including engine, braking, transmission, emission, and comfort systems. Prerequisite: APSM 245/245L. Corequisite: APSM 255L. (S)

255L Automotive Electrical Systems II Lab 1(0-2)
Corequisite: APSM 255. (S)

265 Automotive Parts Management Systems 4(3-2)
A study of automotive parts service management software systems utilized by industry in distribution, inventory, basic procedures. Prerequisite: APSM 105 and 155. (F)

296 Cooperative Education Placement (1-5 Var)
Supervised industrial field work. Prerequisite: freshman or sophomore standing, APSM major. (F,S)

305 Auto Customer Service Regulatory Issues 3(3-0)
A study of automotive industry management theory, styles, equipment, communications and regulatory issues. Prerequisites: APSM 155 and 265. (S)

325 Fuels and Lubricant Production, Marketing and Conservation 3(3-0)
Petroleum industry; basic production processes, marketing techniques, alternate fuel sources, and conservation techniques. Prerequisite: senior standing or permission of adviser. (F)

335 Automotive Shop Practices 5(2-6)
Diagnosis of electrical, fuel, engine, brake and transmission systems; study of service management and service writer duties. Prerequisites: APSM 115, 125, 135, 245/245L, 255/255L and 345. (S)

345 Advanced Automotive Systems 5(3-4)
Theory and lab experience on new concepts in automotive electrical, fuel and suspension systems. Prerequisite: junior standing or permission of instructor. (F)

405 Personal Selling Methods and Techniques 4(3-2)
Research, preparation and presentation methods and techniques for selling in the automotive milieu. Prerequisite: junior or senior standing. (F)

425 Automotive Financial Management 5(4-2)
A study of financial management and analysis used by automotive aftermarket and original equipment businesses. Prerequisites: ACCTG 202, APSM 155, 265 and 305. (S)

491 Special Topics (1-5 VAR)
Prerequisite: permission of instructor. (F,S)

495 Independent Study (1-4 VAR)
Directed, independent study of topics agreed upon by the student and instructor. Prerequisite: APSM majors, junior standing, permission of instructor and department chair. (F,S,SS)

496 Cooperative Education Placement (1-5 VAR)
Supervised industrial field work. Prerequisite: junior or senior standing, APSM major. (F,S)

INDUSTRIAL SCIENCE AND TECHNOLOGY PROGRAM

Program Coordinator: Michael Hoots
Faculty: Baim, Bottini, Hoots

The major in industrial science and technology (IST) leads to a bachelor of science (BS) degree. The program has three options.

Option 1: Facilities Management

This option prepares students to serve in administration and supervisory positions. Graduates will be prepared to plan, program, and supervise operation, maintenance, and construction in major physical facilities, such as schools, industrial plants, malls, resorts/casinos, sports and hotel/motel complexes, hospitals, office buildings, etc.

Option 2: Facilities Technology

This option prepares students to serve in technical positions related to traditionally non-managerial facilities operations. Graduates will be prepared to apply general, facilities technology skills from the IST core curriculum as well as specific, technological skills gained from a degree and/or course work from an approved, transferable institution. These specialized skills may include fields such as occupational safety and health, architecture, building and grounds maintenance, construction, environmental technology, building systems and other areas related to facilities operations.

Option 3: Technology Education

This option is designed to prepare technology teachers for junior and senior high schools as well as technology trainers for industry. Graduates will be skilled in teaching methods, techniques, organization, curriculum, evaluative processes, safety and philosophy. Students will develop manipulative skills in the use and operation of the latest tools, machines, and products used in industry. They will learn technical information as related to our industrial society. State of Colorado (I.A.) certification requirements will be accomplished by completing the program and teacher certification.

Program Goals

- To prepare students with the appropriate career oriented knowledge and skills necessary to become productive, accountable, and responsible employees upon entering the work force.
- To provide students with a comprehensive theoretical foundation bolstered by hands-on laboratory experiences.
- To utilize professional advisory committees to advise faculty of IST options for purposes of keeping the curriculums current with industry needs.

The Facilities Management graduate will:

- be able to supervise facilities operations, maintenance, design and construction;
- understand and have working knowledge of commercial real estate;
- have knowledge and appreciation of human and environmental factors;
- be able to do planning and project management;
- analyze and solve problems relative to facilities functions;
- understand the procedures and processes of corporate finance;
- be able to develop and manage a quality assessment and innovation program; and
- communicate and do critical thinking and problem-solving in industrial science.

The Facilities Technology graduate will:

- be able to perform the same operational tasks as the facilities management graduate without the managerial and supervisory components.

The Technology Education (teaching) graduate will:

- acquire the knowledge and skills necessary to enter teaching positions in junior or senior high schools and in industry;
- be able to apply technical knowledge and state-of-the-art methods to solving problems in teaching technology;
- acquire a basic technical vocabulary and demonstrate hands-on skills in a variety of manufacturing, construction, transportation and energy processes;
- possess demonstrated competencies in understanding and completing a variety of graphic communications projects using equipment in communications.

General Requirements for the IST Program

- Graduates of this program are required to complete an approved curriculum with a cumulative GPA of 2.5000 or better for the technology education option and 2.0000 or better for the facilities options.
- Graduates in the technology education option of the IST program should satisfy all the requirements for a teaching certificate in the State of Colorado. Graduates also must complete the requirements of the Center for Teaching and Learning at the University of Southern Colorado.
- Graduates are required to demonstrate intellectual skills and knowledge in math and science as required in their specific disciplines, with a cumulative GPA of 2.0000 or better.
- All IST majors will be required to solve problems appropriate to their discipline, to engage in logical thinking and to use the tools for creative and logical inquiry specific to their field by completion of projects requiring both oral and written reports.
- Students in the technology education option minor program are required to complete the approved curriculum with a minimum grade of C earned in all minor courses.

Specific Requirements for the IST Major Facilities Management Option

Courses		Titles	Credits
CET	115	Civil Drafting I	3
CET	303	Construction Management	3
CET	304	Construction Cost Estimating	3
CET	313	Architectural Drafting I	3
CET	314	Architectural Drafting II	3
IST	103	Introduction to Facilities Management & Technology Studies	2
IST	140	Office & Furniture Design	3
IST	205	Issues & Trends in Technology	3
IST	206	Commercial & Residential Construction	3
IST	230	Environmental Issues in Facilities	3
IST	306	Building Mechanical Systems	3
IST	309	Building Electrical Systems	3
IST	341	Facilities Planning and Layout	3
IST	350	Facilities Management: Administration	3
IST	351	Facilities Management: Operations	3
IST	430	Industrial Safety	3
IST	431	The Facilities Supervisor	3
IST	493	Seminar (1-5 var)	3
IST	496	Cooperative Education Internship (1-5 var)	3
Approved Facilities Management Electives			6
		TOTAL	62

Other Required Courses

Courses		Titles	Credits
ACCTG	201	Principles of Financial Accounting	3
ACCTG	202	Principles of Managerial Accounting	3
BIOL	121	Environmental Conservation	3
BUSAD	302	Ethical Issues & the Legal Environment of Business	3
CHEM	111/111L	Principles of Chemistry/Laboratory	4
ECON	201	Principles of Macroeconomics	3
ECON	202	Principles of Microeconomics	3
MATH	121	College Algebra	4
MATH	156	Introduction to Statistics	3
MGMT	310	Principles of Management	3
MGMT	311	Production/Operation Management	3
MGMT	468	Total Quality Management	3
PSYCH	100	General Psychology	3
		TOTAL	41

Specific Requirements for the IST Major Facilities Technology Option

Courses		Titles	Credits
CET	115	Civil Drafting I	3
CET	303	Construction Management	3
CET	304	Construction Cost Estimating I	3
CET	313	Architectural Drafting I	3
CET	314	Architectural Drafting II	3
IST	103	Introduction to Facilities Management & Technology Studies	2
IST	140	Office & Furniture Design	3
IST	205	Issues & Trends in Technology	3
IST	206	Commercial & Residential Construction	3
IST	230	Environmental Issues in Facilities	3
IST	306	Building Mechanical Systems	3
IST	309	Building Electrical Systems	3
IST	341	Facilities Planning and Layout	3
IST	350	Facilities Management Administration	3
IST	351	Facilities Management Operations	3
IST	430	Industrial Safety	3
IST	431	The Facilities Supervisor	3
IST	493	Seminar (1-5 var)	3
IST	496	Cooperative Education Internship (1-5 var)	3
Approved Facilities Technology Electives			6
		TOTAL	62

Other Required Courses

Not less than 27 credit hours from an approved in-state institution with a transferrable, technology program, core curriculum directly related to facilities operations	27
TOTAL	27

Specific Requirements for the IST Major Technology Education Option

IST Courses		Titles	Credits
APSM	225	Power Energy Technology	3
ELT	106	Basic Electronics	3
IST	101	Woods Technology	3
IST	103	Introduction to Facilities Management & Technology Studies	2
IST	205	Issues & Trends in Technology	3
IST	206	Commercial & Residential Construction	3
IST	304	Transportation Technology	3
IST	307	Industrial Manufacturing I	3
IST	308	Industrial Manufacturing II	3
IST	341	Facilities Planning and Layout	3
IST	377	Curriculum Development & Evaluation in Technology Studies	3
IST	380	Communications Systems Technology	3
IST	401	Production Systems	3
IST	402	Methods/Techniques of Teaching Technology Studies	3
IST	430	Industrial Safety	3
MET	105	It's a Material World	4
MET	111	Introduction to Drafting	3
MET	112	Computer Aided Drafting	3
Approved Technology Education Electives			6
		TOTAL	58

Other Required Courses

Courses		Titles	Credits
BIOL	121/121L	Environmental Conservation	4
ED	202	Foundation of Education	3
ED	435	Classroom Management	3
ED	460	Educational Media & Technology	3
ED	461	Atypical Students in Secondary Schools	2
ED	488	Student Teaching Secondary	15
IST	205	Issues & Trends in Technology	3
IST	345	Career Education	2
MATH	121	College Algebra	4
PSYCH	100	General Psychology	3
PSYCH	151	Human Development	3
RDG	425	Teaching Reading in Content	2
		TOTAL	47

Specific Requirements for the IST Minor (Facilities Management)

IST Courses		Titles	Credits
IST	140	Office and Furniture Design	3
IST	206	Commercial and Residential Construction	3
IST	230	Environmental Issues in Facilities	3
IST	306	Building Mechanical Systems	3
IST	309	Building Electrical Systems	3
IST	350	Facilities Management: Admin	3
IST	351	Facilities Management: Oprs	3
		TOTAL	21

Specific Requirements for the IST Minor (Teaching Technology Option)

IST Courses		Titles	Credits
IST	100	Woods Technology	3
IST	206	Commercial & Residential Construction	3
IST	304	Transportation Technology	3

IST	377	Curriculum Dev & Evaluation in Technology Studies	3
IST	380	Communications Systems Technology	3
IST	401	Production Systems	3
IST	455	Methods/Techniques of Teaching Technology Studies	3
MET	105	It's a Material World	4
		TOTAL	25

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to each individual option's curriculum sheet.

Co-curricular Requirements

In all programs, the faculty support and encourage students to have co-curricular experiences that complement and reinforce the curricular experiences by participation in student organizations, clubs, employment or other activities related to these programs.

Outcomes Assessment Activities

Students enrolled in the baccalaureate degree programs of the program are expected to meet the following requirements:

1) Students are required to develop and maintain a portfolio containing a record of achievement, in showing improvement in intellectual skills, knowledge and capacities between entrance and graduation. During the semester of graduation, the faculty shall evaluate each graduate portfolio. The program will keep a copy of each portfolio on file to be used as a summarization assessment to assist in the evaluation of programs.

2) In addition to the portfolio, survey information from both the graduate and his/her employer will be collected during the first, third and fifth year following graduation.

3) Students minoring in technology education, must submit a portfolio containing a record of achievement.

INDUSTRIAL SCIENCE TECHNOLOGY (IST)

UNDERGRADUATE COURSES

101 Woods Technology 3(1-4)
Safe and efficient selection, utilization and maintenance of equipment to process forest products material used in construction and manufacturing. (F)

102 Wood Fabrication Technology 3(1-4)
Construction of cabinets, millwork, and furniture: design, construction details, production methods. Structure characteristics and physical properties of wood; strength values, grading and moisture relationships. Prerequisite: ACED. (F/O)

103 Intro to Facility Management and Technology Studies 2(2-0)
Qualifications, opportunities, preparation, and duties in the fields of teaching technology and facilities management. (F)

105 Industrial and Building Materials 3(2-2)
Properties and application of popular and innovative construction materials, including ceramics, forest product materials, metals, sealants, insulations, coatings and others. (*)

140 Office and Furniture Design 3(3-0)
Design aspects of the modern office including furniture and furnishings, facilty and space planning, productivity, comfort and efficiency. (F)

203 Wood Turning 3(0-6)
Basic skills in wood turning and the use of the lathe to supplement bench and machine woodworking. (F)

205 Issues and Trends in Technology 3(3-0)
Current aesthetic, economic, environmental, ethical, global, ideological, legal, personal, societal, etc., impacts, issues and trends of technology. (F,S,SS)

206 Commercial and Residential Construction 3(2-2)
Building systems and materials related to foundations, interior finishes, roofing, glazing, cladding used in wood, masonry, steel and concrete construction from a construction perspective. (S)

230 Environmental Issues in Facilities 3(3-0)
Develop and learn to implement practices that protect and promote health, safety, security, quality of work life, the environment and organizational effectiveness. (S)

296 Cooperative Education Internship (1-5 VAR)
For freshmen and sophomores. Work experience under direction of a field supervisor and faculty member. (F, S, SS)

302 Cabinet and Accessory Technology 3 (0-6)
Modern techniques in the manufacturing of prefabricated cabinets and accessories. Theory application through the implementation of new tooling available in the cabinet industry. Prerequisite: IST 102. (F/ E)

304 Transportation Technology 3(1-4)
A system analysis of transportation technologies. Study of transportation systems resources, processes and implementations. Participants develop a degree of technological literacy pertinent to transportation systems. Prerequisites: IST 103 and APSM 225. (S/E)

306 Building Mechanical Systems 3 (2-2)
Study of building mechanical systems including heating, ventilation, air conditioning, plumbing, and fire protection from a design perspective. (F)

307 Industrial Manufacturing I 3(1-4)
Industrial processes and techniques. Focus on casting, material removal and plastics. Includes manufacturing systems and cost estimating. Prerequisite IST 105. (F)

308 Industrial Manufacturing II 3(1-4)
Industrial processes and techniques. Focus on adhesive and cohesive joining, not and cold forming and heat treatment. Includes operations planning and process and quality control. Prerequisite: IST 307. (S)

309 Building Electrical Systems 3(2-2)
Study of building electrical systems including communication and control, transportation, security, power distribution and lighting from a design perspective. (S)

341 Facilities Planning and Layout 3(3-0)
The principles of facilities planning relating to location, material flow, placement of real and personal property, workstation configuration and developing a facilities plan. (F)

345 Career Education 2(2-0)
Design, implementation and conducting of career education programs. Selection and preparation of teaching materials for career education programs. (F,S,SS)

350 Facilities Management Administration 3(3-0)
Planning, organizing, staffing, budgeting and administering a facilities management organization and delivering facilities services. (F)

351 Facilities Management Operations 3(3-0)
Planning, programming, budgeting and managing facilities design, construction, renovation and sustainment operations. Prerequisite: IST 350. (S)

377 Curriculum Development and Evaluation in Technology Studies 3(3-0)
Organization of units of instruction, lesson plans, instruction sheets, evaluative procedures and tests. Prerequisite: IST 103 (F/O)

380 Communications Systems Technology 3(1-4)
Study of technical means by which humans extend their capabilities through the invention and use of communication systems, both electronic and graphic. Prerequisites: MET 111 and EET 206. (S/E)

401 Production Systems 3(1-4)
Exercise in the research and development, and production of a product. Industrial organization and production methods. Prerequisite: permission of instructor. (S/0)

402 Methods/Techniques of Teaching Technology Studies 3(3-0)
Methods and techniques of teaching industrial science technology courses in laboratory management, professional development, certification, accreditation, public relations and school policies. Prerequisite: IST 103 (F/E)

430 Industrial Safety 3(3-0)
Laboratory organizational patterns, administrative duties of the teacher, and safety regulations. Prerequisite: IST 103. (S)

431 The Facilities Supervisor 3(3-0)
Preparation for assuming leadership of facilities management organizations. Includes self-preparation, organizational effectiveness, motivational and other techniques. Prerequisite: IST 350 and 351. (S)

442 Computer Aided Facilty Management 3(2-2)
A study of the availability, capabilities, analysis, selection, justification, acquisition, installation and operation of computerized systems designed to enhance facilities management. Prerequisite: CET 115/IST 351. (S)

490 Special Projects (1-5 VAR)
Prerequisite: junior or senior standing; permission of instructor. (F,S,SS)

491 Special Topics (1-5 VAR)
Emerging Topics in Industrial Science not currently included in other courses. Prerequisite: junior/senior standing with program coordinator permission. (F,S)

493 Seminar (1-5 VAR)
Individual and small-group activities. Individual experimentation and expertise development in facilities management and/or technology studies. (F)

495 Independent Study (1-5 VAR)
For advanced students. Each student selects, outlines and pursues a project. Instructor approval and supervision provided. May be repeated. (F,S,SS)

496 Cooperative Education Internship (1-5 VAR)
Work experience under direction of field supervisor and faculty member. Prerequisite: junior or senior standing. (F,S,SS)

GRADUATE COURSES

545 Career Education 2(2-0)
Design, implementation and conducting career education programs. Selecting and preparing teaching materials for career education programs. Prerequisites: IST 345 or equivalent and graduate standing. (*)

555 Trends and Problems in Technology Studies 3(3-0)
Practical methods and techniques of organizing curriculum materials and controlling a typical technology education program. May be repeated. Prerequisite: graduate standing. (*)

557 Organization and Administration in Technology Studies 3(3-0)
Shop organizational patterns, administrative duties of the teacher, and new trends in selection and arrangement of equipment and facilities. Prerequisite: graduate standing. (*)

580 Problems in Technology Studies 3(3-0)
In-depth study by one or more students who wish to enrich their teaching ability in a specific area of technology education. May be repeated. Prerequisites graduate standing and permission of instructor. (*)

590 Special Projects (1-5 VAR)
For advanced students. Each selects, outlines and pursues a project. Instructor approval and supervision provided. May be repeated. Prerequisite: graduate standing. (*)

591 Special Topics (1-5 VAR)
Individual and small-group activities in individual experimentation and expertise development in technology education. May be repeated. Prerequisite: graduate standing. (*)

592 Research (1-5 VAR) (*)

593 Seminar (1-5 VAR)
Individual and small-group activities. Current topics, issues, resources, and practices. May be repeated. (*)

595 Independent Study (1-5 VAR)
For advanced students. Each selects, outlines and pursues a project. Instructor approval and supervision provided. May be repeated. Prerequisite: graduate standing. (*)

COMPUTER INFORMATION SYSTEMS DEPARTMENT

Department Chair: John Borton

Faculty: Borton, Cook, Huff, Knight, Myers, Padgett, Voss

The major in computer information systems leads to a bachelor of science (BS) degree designed to provide students with the technical and administrative skills necessary to develop and integrate computer applications in a business environment. Students complete a curriculum which provides them with marketable skills in application programming, system analysis and design, local area network (LAN) concepts and administration, database administration, Internet usage, PC operating systems, applications and architecture.

Program Goals

- To prepare students with the appropriate computer-related knowledge and skills necessary to become productive, accountable, and responsible employees upon entering the work force.
- To provide students with a comprehensive theoretical foundation bolstered by hands-on laboratory experiences.
- To utilize the computer information systems professional advisory committee to advise faculty of the currency of the curriculum based on relevant industry needs.

Expected Student Outcomes

- Demonstrate mastery of the skills necessary to design and code application programs using the C++ and COBOL programming languages.
- Possess a thorough understanding of the information systems analysis and design process as it applies to the development and implementation of computing applications in a business environment.
- Demonstrate skills in database design and administration.
- Have a basic knowledge of local area network (LAN) concepts and administration.
- Possess hardware and software skills necessary to configure and support PC-based computing operations.
- Demonstrate proficiency in an academic field outside the major which supports the student's career interests in the computer information systems discipline.
- Develop oral and written communications skills necessary to convey technical information in a business environment.

General Requirements for the CIS Program

- Students majoring in computer information systems must maintain grades of C or higher in all courses offered by the program.
- Students must complete at least 128 semester hours in an approved program of study, including 48 hours in the major.
- Students must complete a minimum of 21 credits of CIS upper-division course work. At least 75 percent of CIS upper-division credits must be taken in residence.
- Students must complete a course planning worksheet and participate in the advisement process with a member of the CIS faculty.

Specific Requirements for the CIS Major

CIS Courses		Title	Credits
CIS	102	Programming with BASIC	4
	121	Introduction to C++ Programming	4
	150	Operating Systems	3
	215	UNIX Operating System	2
	231	COBOL Programming	4
	240	Systems Analysis and Design I	3
	253	Advanced C++ Programming	3
	350	Data Base Systems	3
	385	PC Architecture	3
	389	Local Area Network Concepts	3
	430	System Analysis & Design Projects	3
	431	Professional Programming Projects	3
	493	Seminar	1
CIS Electives			9
		TOTAL	48

CIS electives may be selected from the following list of courses:

CIS Courses		Title	Credits
CIS	203	Creating and Accessing Internet Resources	2
CIS	303	Visual Programming	3
CIS	316	Operating Systems Design	3
CENT	321	Advanced Data Structures	3
CIS	357	JAVA Programming	3
CIS	401	Local Area Network Systems Admin	3
CENT	411	Windows Software Development	3
CIS	420	Knowledge Based Systems	3
CIS	450	Database Systems II	3
CIS	460	Enterprise Networking	3
CIS	496	Cooperative Education	1-5

Other Required Courses

ACCTG	201	Principles of Financial Acctg	3
ENG	305	Tech and Scientific Report Writing	3
MGMT	310	Principles of Management	3
MATH	121	College Algebra	4
MATH	156	Introduction to Statistics	3
		TOTAL	16

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual program's curriculum sheet.

CIS MINOR

The CIS minor consists of two core courses and five separate tracks which students may select from depending upon individual interests. Students must complete a minimum of six credits of upper-division CIS courses.

CIS Minor Core

CIS Courses		Titles	Credits
CIS	102	Programming with BASIC	4
CIS	240	Systems Analysis & Design I	3
		SUB-TOTAL	7

Personal Computers/Local Area Network Support

CIS Courses		Titles	Credits
CIS Minor Cores			7
CIS	121	Introduction to C++ Programming	4
CIS	150	Operating Systems	3
CIS	385	PC Architecture	3
CIS	389	LAN Concepts	3
		TOTAL	20

Systems Analysis & Design

CIS Courses		Titles	Credits
CIS Minor Core			7
CIS	121	Introduction to C++ Programming	4
CIS	150	Operating Systems	3
CIS	341	Systems Analysis and Design II	3
CIS Upper-Division Electives			3
		TOTAL	20

Information Analyst

CIS Courses		Titles	Credits
CIS Minor Core			7
CIS	150	Operating Systems	3
CIS	203	Access & Create Internet Resources	2
CIS	350	Database Systems	3
CIS Upper Division Electives			6
		TOTAL	21

Databases Systems

CIS Courses		Titles	Credits
CIS Minor Core			7
CIS	121	Introduction to C++ Programming	4
CIS	150	Operating Systems	3
CIS	350	Database Systems	3
CIS	450	Advanced Database Structures	3
		TOTAL	20

Software Engineer/Programmer

CIS Courses		Titles	Credits
CIS Minor Core			7
CIS	121	Introduction to C++ Programming	4
CIS	253	Advanced C++ Programming	3
CIS Upper Division Electives			6
		TOTAL	20

Co-curricular Requirements

The CIS faculty support and encourage students to have co-curricular experiences that complement and reinforce the curricular experiences by participation in student organizations, clubs, employment or other related activities.

Outcomes Assessment Activities

Students enrolled in the computer information systems program are expected to meet the following requirements:

1) Students are required to develop and maintain a portfolio containing a record of achievement, showing improvement in intellectual skills, knowledge and capacities between entrance and graduation. During the semester of graduation, the faculty shall evaluate each graduate portfolio on file to be used as a summarization assessment to assist in the evaluation of programs.

2) In addition to the portfolio, survey information from both the graduate and his/her employer will be collected during the first and third year following graduation.

COMPUTER INFORMATION SYSTEMS (CIS)

UNDERGRADUATE COURSES

101 Computers and You 2(1-2)
A general education computer skills course covering Windows, word processing, and spreadsheets. This is a competency-based course. (F,S,SS)

102 Programming w/BASIC 4(3-2)
Introduction to computer languages, computer awareness and fundamental skills with use and expression of computer languages. Focus on interactive person-machine exchanges, a programming language (BASIC), and the operating system commands. (F,S)

110 PC Productivity and the Internet 3(2-2)
A general education computer skills course. Covers the Internet, Netscape, E-Mail, Windows, word processing and spreadsheets. (F, S, SS)

121 Introduction to C++ Programming 4 (3-2)
A comprehensive study of the C++ programming language emphasizing modern software design and implementation. Prerequisite: CIS 102 or prior programing experience. (F,S)

130 Programming Methodology 1(1-0)
Practical concepts of structured programming design, including functional decomposition, program debugging and use of testing tools. Corequisite: CIS 102. (F,S)

150 Operating Systems and Concepts 3(3-0)
In depth examination of basic computer concepts and a current microcomputer operating system. Includes discussion of operating system software, Networks, and hardware. Prerequisite: CIS 101 or 110. (F,S)

203 Creating and Accessing Internet Resources 2 (2-0)
Creating and accessing information on the Internet, e-mail, FTP, Gopher, and news groups. How to build HTML home pages on the World Wide Web. Prerequisite: CIS 101 or equivalent. (F, S)

215 Unix Operating System 1(0-2)
Explore UNIX features, covering command language, file system, mail, and editing. Shell language tools include pipes, filters and I/O redirection. Prerequisite: Any C programming course. Corequisite: CENT 225 or CIS 121 or equivalent. (F)

240 Systems Analysis and Design I 3(3-0)
Practical methods for analyzing business problems and designing appropriate computer solutions. Concepts include modern system modeling techniques, interview methods, and computer assisted software engineering practice. Prerequisites: CIS 121. (F)

253 Advanced C++ Programming 3(3-0)
An advanced course in C++ programming extending the concepts of CIS-121. Object-oriented programming concepts using the C++ language. Data structures are used. Prerequisite: CIS 121. (F, S)

270 File Processing 3(3-0)
Foundation for applications of data structures and file processing techniques, including sequential access, data structures, random access storage and file input and output. Prerequisite: CIS 122. (S)

280 Telecommunications 3(3-0)
Examines telecommunications using the ISO open systems interconnection reference model, incuding communication media, hardware, message flow networking, analysis and management of telecommunication systems. Prerequisite: CIS 150. (S)

290 Special Projects (1-5 VAR)
Selected projects in computer programming in cooperation and interaction with local business and industry. Maintaining industrial standards in programming and documentation mandatory. Prerequisites: sophomore standing and permission of instructor. (*)

291 Special Topics (1-5 VAR)

296 Cooperative Education Placement (1-5 VAR)
Industrial cooperative education work experience under the direction of a field supervisor and faculty member. Prerequisite: freshman or sophomore standing. (F,S,SS)

316 Operating Systems Design 3(3-0)
Theory and design of supervisors, concepts of job tasks and data management, scheduling, queuing, multi-programming site management. Prerequisites: junior standing. (S)

350 Data Base Systems 3(3-0)
Design, implementation and use of data base management systems; comparison of available software packages; concepts of query languages and security considerations. Laboratory assignments utilize a relational data base system. Prerequisite: CIS 121 and CIS 240. (F)

357 JAVA Programming 3(3-0)
JAVA language, syntax and semantics. Study applications for stand-alone programs and applets designed for WWW presentations. Object-oriented programming. Prerequisite: CIS 253. (S)

385 PC Architecture 3(3-0)
In depth study of personal computer hardware, peripherals, and interfaces. Course examines processors, disk drives, buses, video cards, memory and diagnostic software. Prerequisite: CIS 150 and Junior standing. (F)

389 Local Area Network Concepts 3(3-0)
Fundamental hardware, software, and data communication concepts necessary to understand a local area network. Prerequisite: CIS 385. (F/S)

401 Network Systems Administration 3(3-0)
Concepts necessary to function as a network system supervisor. Topics such as login scripts, security, directory structure, print servers, and network utilities. Prerequisites: CIS 389. (F)

405 Computer Graphics I 3(3-0)
Introduction to the theory and applications of computer graphics. Graphics images will be produced in two-and three-dimensional representations. Prerequisite: CIS 253 or permission of instructor. (F)

420 Knowledge Based Systems 3(3-0)
Expert systems and their applications. Knowledge based problem solving including heuristic classification, knowledge engineering, rule based expert systems, analogy, symbolic processing, and causal models. Prerequisite: senior standing or permission of instructor.

430 System Analysis & Design Projects 3(3-0)
Student teams complete major computer design projects in the local community using modeling techniques, interview methods and business problem analysis. Prerequisite: CIS 240. Corequisite: CIS 350 or permission of instructor. (F)

431 Professional Programming Projects 3(3-0)
Students work together in teams to complete a major software project. Prerequisites: CIS 253, CIS 350, CIS 430. (S)

435 Local Area Network Software Development 3(3-0)
Write C language software accessing data structures, libraries and primitives of Novell NetWare. Includes bindery objects, file structures, queue structures, communications, and NetWare Loadable Modules. Prerequisites: CIS 253, 389 or equivalent. (S)

450 Advanced Database Structures 3(3-0)
Investigation and study of data modeling, system development and data technology, including database engineering and design, hardware, student projects, administration and selection. Prerequisite: CIS 350, or permission of instructor. (S)

460 Enterprise Networking 3(3-0)
Examines enterprise-wide multi server networks. Systems administration and operating systems software appropriate to world-wide networks consisting of interconnected local, metropolitan, and wide area networks. Prerequisite: CIS 401. (S)

490 Special Projects (1-5 VAR)
Prerequisite: permission of instructor. (F,S,SS)

491 Special Topics (1-5 VAR)
May be repeated for credit. Prerequisite: junior or senior standing. (F,S,SS)

493 Seminar 1(1-0)
Seminar concerning appropriate career topics in computer information systems. Speakers may include guests, faculty or students. Student outcomes will be assessed. Required of majors. Prerequisite: senior standing. (F)

496 Cooperative Education Placement (1-5 VAR)
Industrial cooperative education work experience under the direction of a field supervisor and faculty member. Prerequisite: junior or senior standing. (F,S,SS)

530 System Analysis and Design Projects 3(3-0)
Student teams complete major computer design projects using modeling techniques, interview methods and business problem analysis. Prerequisites: CIS 240 or MGMT 365 or MGMT 565. (F)

550 Data Base Systems 3(3-0)
Design implementation and use of database management systems. Comparison of available software packages. Discussion of query languages, security, and recovery. Prerequisite: CIS 240 or MGMT 365 or MGMT 565. (F)

591 Special Topics (1-5 VAR) *

DEPARTMENT OF ENGINEERING

Department Chair: Hector Carrasco

Faculty: Carrasco, Hale, Keyser, Massey, Sarper

The industrial engineering major leads to a bachelor of science in industrial engineering (BSIEN) degree. This program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 050, Baltimore, MD 21202, Telephone: (410) 347-7700.

The department also provides courses for the first two years of other engineering disciplines for potential transfer students, courses for engineering options in chemistry and physics, and a master of science in industrial and systems engineering (MS) degree.

As defined by the Institute of Industrial Engineers: Industrial Engineering is concerned with the design, improvement and installation of integrated systems of people, materials, information, equipment, and energy.

It draws upon specialized knowledge and skill in the mathematical and physical sciences, together with the principles and methods of engineering analysis and design, to specify, predict and evaluate the results to be obtained from such integrated systems.

Industrial engineers design, improve, and manage the factories and facilities that produce the goods and services at reasonable prices that everyone enjoys every day.

Industrial engineering is a major branch of engineering with applications in manufacturing, service, governmental, and non-profit organizations. Industrial engineers are productivity and quality specialists who deal with the human aspects of work in addition to the advanced technologies of computer software and production-related hardware.

The program also offers the Master of Science in Industrial and Systems Engineering. For more information, see the Graduate Studies section of this catalog.

A minor is offered in industrial engineering for students interested in a technical, applied science addition to their major area of study. Engineering options are also available in chemistry and physics, offering students in these majors an opportunity to achieve specific employment or graduate educational goals. The program requirements for the chemistry and physics engineering options are described in the Chemistry and Physics sections of the catalog.

Department Goals

- To provide students with high-quality instruction in industrial engineering which is broad-based and strongly rooted in mathematics, physical science and engineering science.
- To prepare graduates in industrial engineering to function effectively in the workplace and make immediate contributions to the efficient and effective operation of manufacturing industries, service organizations and governmental agencies.
- To maintain accreditation by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

Expected Student Outcomes

General Requirements

- Graduates are required to complete an approved program of study with a cumulative GPA of 2.0000 or better in their major courses.
- Students attempting required industrial engineering courses are expected to have completed all pre-requisite courses with a minimum grade of C.
- Graduates are required to demonstrate the ability to formulate mathematical models, develop and use computer solutions as appropriate, collect and statistically analyze data, and prepare both written and oral reports of their analysis.

Specific Requirements for the Industrial Engineering Major

EN Courses		Titles	Credits
EN	103	Introduction to Engineering	2
	105	FORTRAN	3
	107	Engineering Graphics	2
	211	Engineering Mechanics I	3
	212	Engineering Mechanics II	3
	231/231L	Circuit Analysis/Lab	5
	315	Intro to Indus. & Sys Engineering	3
	321	Thermodynamics	3
	324/324L	Mechanics of Materials/Lab	4
	340	Human Performance Engineering	4
	342	Manufacturing Processes	4
	343	Engineering Economy	3
	420	Simulation & Stochastic Processes	4
	440	Safety Engineering	3
	443	Quality Control & Reliability	3
	471	Operations Research	3
	473	Computer Integrated Manufacturing	3
	475	Facilities Planning and Design	3
	477	Operations Planning and Control	3
	488	Indus Engineering Design Projects	3
		TOTAL	64

Other Required Courses

MATH	126	Calculus and Analytic Geometry I	5
MATH	224	Calculus and Analytic Geometry II	5
MATH	256	Probability for Engineers and Scientists	3
MATH	207	Matrix & Vector Algebra	2
MATH	337	Differential Equations I	3
MATH	356	Statistics for Engineers and Scientists	3
PHYS	221/221L	General Physics I/Lab	5
PHYS	222/222L	General Physics II/Lab	5
CHEM	121/121L	General Chemistry I/Lab	5
		TOTAL	36

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual program's curriculum sheet.

Typical Schedule of Courses for the Industrial Engineering Major

Freshman Year

Courses		Titles	Credits
CHEM	121/121L	General Chemistry/Lab	5
EN	103	Introduction to Engineering	2
EN	105	FORTRAN	3
EN	107	Engineering Graphics	2
ENG	101	Composition I	3
ENG	102	Composition II	3
MATH	126/224	Calculus & Analytic Geometry I/II	10
PHYS	221/221L	General Physics I/Lab	5
		TOTAL	33

Sophomore Year

Courses		Titles	Credits
EN	211/212	Engineering Mechanics I/II	6
EN	231/231L	Circuit Analysis/Lab	5
EN	321	Thermodynamics	3
EN	324/324L	Mechanics of Materials/Lab	4
MATH	207	Matrix & Vector Algebra	2
MATH	256	Probability for Engr. & Scientists	3
MATH	337	Differential Equations I	3
PHYS	222/222L	General Physics II/Lab	5
SPCOM	103	Speaking & Listening	3
		TOTAL	34

Junior Year

Courses		Titles	Credits
EN	315	Intro to Industrial & Systems Engr.	3
EN	340	Human Performance Engr.	4
EN	342	Manufacturing Processes	4
EN	343	Engineering Economy	3
EN	420	Simulation & Stochastic Processes	4
EN	443	Quality Control & Reliability	3
MATH	356	Statistics for Engrs. & Scientists	3
General Education (K1-K6)			9
		TOTAL	33

Senior Year

Courses		Titles	Credits
EN	440	Safety Engineering	3
EN	471	Operations Research	3
EN	473	Computer Integrated Manufacturing	3
EN	475	Facilities Planning & Design	3
EN	477	Operations Planning & Control	3
EN	488	Industrial Engr. Design Project	3
General Education (K1-K6)			9
General Education (K7)			3
		TOTAL	30

Specific Requirements for the Minor in Industrial Engineering

EN Courses		Titles	Credits
EN	103	Introduction to Engineering (CST 101 may be substituted)	2
	105	FORTRAN	3
	107	Engineering Graphics	2
	315	Intro to Indus. & Sys Engineering	3
	343	Engineering Economy	3
		PLUS three of the following:	
EN	340	Human Performance Engineering	4
	342	Manufacturing Processes	4
	420	Simulation & Stochastic Processes	4
	440	Safety Engineering	3
	443	Quality Control & Reliability	3
	471	Operations Research	3
	473	Computer Integrated Manufacturing	3
	475	Facilities Planning and Design	3
	477	Operations Planning and Control	3
		TOTAL	22-25

Co-curricular Requirements

Engineering graduates should be introduced to the professional world and encouraged to develop a sense of obligation to the development and ethical practice of engineering. Consequently, the faculty support the activities of the local chapters of the Institute of Industrial Engineers (IIE) and the Society of Women Engineers (SWE), encourage student participation and promote the operation of student chapters.

Outcomes Assessment Activities

- During the final semester of study and after successfully completing necessary prerequisite courses, all industrial engineering students are required to demonstrate their ability to apply and integrate the skills learned in the IE program by producing a capstone engineering design project. This project must incorporate subject material covered in two or more of the major courses, illustrate the student's ability to do independent project work, and include written and oral reports to demonstrate the student's communication skills.
- All senior industrial engineering students are required to take the Fundamentals of Engineering (Engineer-In-Training or EIT) Exam administered by the Colorado State Board of Registration for Professional Engineers, on a regularly scheduled examination date. Students must take the exam to be eligible to graduate, although the results of the exam will not effect GPA or graduation.
- Employment, progress toward profession registration, and enrollment in graduate degree programs will be tracked to the extent possible.

Engineering Transfer Program

Students seeking to major in some area of engineering other than industrial engineering (civil, electrical, mechanical, etc.) can complete at least 60 credits (two years of work) that will transfer to other engineering schools. All accredited engineering programs require students to complete at least one semester of college chemistry (CHEM 121 and 121L), a two semester sequence in calculus based physics (PHYS 221, 221L, 222, 222L), three semesters of calculus (MATH 126, 224, 325), one semester of differential equations (MATH 337), and one course in computer applications and programming. Courses in engineering technology are not accepted for transfer to engineering programs.

Recommended courses for a student planning to transfer to another engineering school includes:

Courses		Titles	Credits
CHEM	121/121L	General Chemistry/Lab	5
PHYS	221/221L	and	
	222/222L	General Physics I and II/Lab	10
MATH	126,224	Calculus I and II	10
MATH	325	Intermediate Calculus	3
MATH	207	Vector and Matrix Algebra	2
MATH	337	Differential Equations	3
		Humanities and Social Sciences	9-15
		Engineering Courses and/or	
		Additional science courses	12-18

The engineering or additional science courses taken would depend on the major chosen.

A one or two year program should be planned in consultation with an advisor at USC and the university to which the student is planning to transfer. During the first semester, a typical engineering program would include a course in chemistry, (CHEM 111, 111L for a student who did not complete a year of chemistry in high school or CHEM 121, 121L for those who did), a course in mathematics (college algebra MATH 121, precalculus MATH 124, or calculus MATH 126 depending on the high school background), an introduction to engineering course (EN 103), and a computer programming class (EN 105 or CIS 121).

To transfer to another engineering school will require a good grade point average. Eighteen credits is the maximum number of credits a student would be allowed to take as a freshman. A student working part-time should not enroll in more than 12 to 15 credits depending on the number of hours worked.

ENGINEERING COURSES (EN)

UNDERGRADUATE

103 Introduction to Engineering 2(2-0)
Introduction to engineering curriculum and careers. Problem solving and creativity. Spreadsheets, word processing and other computer skills. (F)

105 FORTRAN 3(3-0)
Introducing FORTRAN-77 programming with algebraic problem solving for science, engineering and technology majors. Covering computer systems, language specifications, function, arrays, character strings, subroutines, files. Corequisites: MATH 121, 124 or 131. (F,S)

107 Engineering Graphics 2(0-4)
Introduction to the preparation of engineering drawings using freehand sketching and computer graphics software. (S)

211 Engineering Mechanics I 3(3-0)
Introduction to the relationship between forces and moments acting on an object that is in equilibrium (statics). Prerequisite: PHYS 221, or permission of instructor. (F)

212 Engineering Mechanics II 3(3-0)
Introduction to the relationship between forces and moments acting on rigid objects and the motion of objects (dynamics). Prerequisite: EN 211. (S)

231 Circuit Analysis I 4(4-0)
Circuit concepts, conventions and network equations. Initial conditions and classical methods of obtaining transient and steady-state solutions. Prerequisite: MATH 224. Corequisites: EN 231L and PHYS 222. (F)

232 Circuit Analysis II 4(4-0)
Continuation of EN 231 including waveform synthesis, network theorems, Fourier series, pole-zero diagrams and two-port network theory. Introduction to Laplace transforms. Prerequisite: EN 231. (*)

270 Material and Energy Balances 3(3-0)
Material and energy balances with or without chemical reactions in chemical engineering applications. Prerequisites: CHEM 121, PHYS 221, and MATH 126. (*)

291 Special Topics (1-5 VAR)
Selected topics in engineering. (*)

296 Cooperative Education Placement (1-5 VAR)
Work experience under direction of a field supervisor and a faculty member. Prerequisite: freshman or sophomore standing. (F,S)

301 Fluid Mechanics 4(4-0)
Introduction to the relationship between the forces applied to a fluid, the motion of the fluid, and the mechanical properties of the fluid. Prerequisite: EN 212. (*)

312 Materials Science 2(2-0)
The nature of engineering materials, emphasizing the relationship between macroscopic and atomic and microscopic structures. Prerequisites: PHYS 332 and CHEM 121. Corequisite: EN 312L. (*)

312L Materials Science Lab 1(0-2)
Experimental studies of material properties, characteristics and micro structures. Effects of plastic deformation and heat treatment. Corequisite: EN 312. (*)

315 Introduction to Industrial and Systems Engineering 3(3-0)
Engineering viewpoints of the principles of organization for production and the operations applicable to accomplishing organizational responsibilities. Prerequisite: EN 103. (F)

321 Thermodynamics I 3(3-0)
Introduction to energy equations and flows, entropy, kinetic theory and statistical mechanics. Prerequisite: PHYS 221. (F)

322 Thermodynamics II 4(4-0)
Application of laws of thermodynamics to chemically reacting thermodynamic systems, vapor cycles, gas engine cycles, propulsion systems, refrigeration and air-water vapor mixtures. Prerequisite: EN 321. (*)

324 Mechanics of Materials 3(3-0)
Stress-strain relationships, fundamentals of elasticity, torsional loading, flexural loading, combined stresses. Prerequisite: EN 211. Corequisite: EN 324L. (S)

324L Mechanics of Materials Lab 1(0-2)
Measurements of stress-strain relationships and other destructive and non-destructive testing. Prerequisite: EN 211. Corequisite: EN 324. (S)

333 Computer Components Engineering 3(3-0)
Engineering design and fabrication of silicon-based, bipolar, MOS microcircuits and other computer elements. Microcircuit design and layout. Prerequisites: EN 231 and 342. (*)

340 Human Performance Engineering 4(3-2)
Principles and techniques of methods analysis and work measurement, human performance in man-machine systems. Corequisite: EN 315. Prerequisite: EN 103. (F)

342 Engineering of Manufacturing Processes 4(3-2)
Materials and processes for manufacturing including machining, casting, and forming processes: design, modeling and control. Prerequisites: EN 105, 107, CHEM 121 and PHYS 221. (S)

343 Engineering Economy 3(3-0)
Modeling, analysis and decision making involving time value of money, depreciation, income taxes and replacement analysis. Prerequisite: EN 103, or permission of instructor. (F)

351 Heat Transfer 3(3-0)
Steady and unsteady conduction of heat. Convection heat transfer in boundary layer and duct flows. Forced and free convection. Thermal radiation. Prerequisite: EN 321. (*)

420 Simulation and Stochastic Processes 4(3-2)
Analysis of stochastic systems through analytical and experimental methods. Application of simulation emphasizing Monte-Carlo and discrete event modeling. Introduction to queuing theory and Markov chains. Prerequisites: EN 105, 343, MATH 256 and 356. (S)

421 Structural Analysis 3(3-0)
Analysis if indeterminate beams, frames and trusses by methods of moment of distribution, slope deflection, real work, virtual work and least work. Prerequisite: EN 324. (*)

435 Microprocessor Control Systems 3(2-2)
Components of a microprocessor control system, digital processing, survey of state-of-the-art microprocessor control systems. Prerequisite: EN 333 (*)

436 Computer Systems Engineering 3(3-3)
Analysis, mathematical modeling and design of integrated control and physical systems used in product and process design engineering. Prerequisites: EN 333 and MATH 337. (*)

440 Safety Engineering 3(3-0)
Industrial safety using systems approach: fault tree, risk and decision analysis. Environmental hazards and accident causes, costs and prevention. Prerequisites: EN 340, 343, and MATH 356. (S)

442 Manufacturing Processes II 3(3-0)
Materials and processes for manufacturing including sheet metal forming, welding, machining and advanced manu-facturing processes. Prerequisites: EN 342. (*)

443 Quality Control and Reliability 3(3-0)
Control charts, acceptance sampling, rectifying inspection, standard sampling plans. Failure time distribution models, reliability of systems. Prerequisites: EN105 and MATH 356. (S)

456 Applied Statistics I 3(3-0)
Probability space, discrete and continuous random variables: distributions, mathematics expectation, sampling, statistical inference. Bayesian rule and linear regression. Prerequisites: MATH 256 and 356. (*)

461 Engineering Hydraulics 3(3-0)
Steady and unsteady flow in pipes, open-channel flow, hydraulic measurements, critical depth and hydraulic jump, and design of spillways. Prerequisite: EN 301 or permission of instructor. (*)

465 Stochastic Systems Engineering 3(3-0)
Analysis and design of systems containing elements of uncertainty in demand and performance capability. Time varying measures and approximate are emphasized. Prerequisites: MATH 256 and EN 356. (*)

471 Operations Research 3(3-0)
Techniques for analysis and solution of problems in industrial and management systems. Linear programming, duality theory, sensitivity analysis, and network analysis techniques. Prerequisite: MATH 207 or permission of instructor. (F)

473 Computer Integrated Manufacturing 3(2-2)
Engineering design, modeling and applications in production: automation, flowlines, robotics, numerical control, and computer usage in manufacturing. Prerequisites: EN 340 and 342. (F)

475 Facility, Planning and Design 3(3-0)
Application of industrial and systems engineering techniques to problems related to an organization's physical resources. Facilities planning and plant layout, material handling, site selection and facilities location. Prerequisites: EN 471 or permission of instructor. (F)

477 Operations Planning and Control 3(3-0)
Techniques for analysis and management of manufacturing operations and production with emphasis on inventory systems and forecasting. Prerequisite: EN 471 or permission of instructor. S)

488 Industrial Engineering Design Projects 3(3-0)
Application of industrial engineering principles to a design project. Prerequisites: EN 420, 471, 475 and 477. (F,S)

491 Special Topics (1-5 VAR)
Prerequisite: junior standing. (*)

495 Independent Study (1-5 VAR)
Prerequisite: junior standing. (*)

496 Cooperative Education Placement (1-5 VAR)
Work experience under the direction of a field supervisor and a faculty member. Prerequisite: junior or senior standing. (F,S)

GRADUATE COURSES

500 Logistics, Maintainability and Life-cycle Support 3(3-0)
Application of management systems analysis to problems of system maintainability and maintenance. Models of repair and failure, wear-out processes, maintenance and inspection policies and spare parts policies. Prerequisite: graduate standing. (*)

501 Software Systems Engineering 3(3-0)
Software systems development and life cycles to include applications development stratagem, system development life cycle and phases, system development management, group dynamics in the development process, user requirements determination, and analysis and logical specification of the system. Cost forecasting of the engineering design through modeling. Prerequisite: graduate standing. (*)

503 Ergonomics 3(3-0)
Theory and practice of human performance measurement and human factors engineering. Study of human sensory, perceptual mental, psychomotor, and other characteristics applied to the design of man-machine systems for performance effectiveness, productivity and safety. Prerequisite: graduate standing. (S)

504 Scheduling and Sequencing 3(3-0)
Theory of determining scheduling and sequencing with stochastic extensions. An introduction to the complexity of computations in systems varying from single machine to job shop. Prerequisite: EN 571 or permission of instructor. (S)

520 Simulation and Stochastic Processes 4(3-2)
Analysis of stochastic systems through analytical and experimental methods. Application of simulation emphasizing Monte-Carlo and discrete event modeling. Introduction to queuing theory and Markov chains. Additional work required of graduate students. Prerequisites: EN 105, 343, MATH 256 and 356. (S)

530 Project Planning and Control 3(3-0)
Engineering project management including project selection, organization, planning, budgeting, scheduling and resource allocation, tracking and control, and evaluation. Application of network analysis techniques such as PERT and CPM. Prerequisite: Graduate standing. (F)

540 Advanced Engineering Economics 3(3-0)
Advanced topics in engineering economy featuring income tax consideration, treatment of inflation, risk and uncertainty models, cost-effectiveness concepts, and project comparison methods. Prerequisite: EN 343, or permission of instructor. (S)

556 (MATH 556) Design and Analysis of Experiments 3(3-0)
Foundations of experimental design, outline efficient methods to implement experiments, develop statistical methods to sort signal from noise, and analyze information derived from the experiment. Prerequisite: MATH 256 or 356. (S)

565 Stochastic Systems Engineering 3(3-0)
Analysis and design of systems containing elements of uncertainty in demand and performance capability. Time varying measures and approximations are emphasized. Additional work required of graduate students. Prerequisites: MATH 256 and 356. (*)

571 Operations Research 3(3-0)
Techniques for analysis and solution of problems in industrial and management systems. Linear programming, duality theory, sensitivity analysis, and network analysis techniques. Additional work required of graduate students. Prerequisites: MATH 207, or permission of instructor. (F)

575 Facility Planning and Design 3(3-0)
Application of industrial and systems engineering techniques to problems related to an organization's physical resources. Facilities planning and plant layout, material handling, site selection and facilities location. Additional work required of graduate students. Prerequisite: EN 571 or permission of instructor. (F)

577 Operations Planning and Control 3(3-0)
Techniques for analysis and management of manufacturing operations and production with emphasis on inventory systems and forecasting. Additional work required of graduate students. Prerequisite: EN 571 or permission of instructor. (S)

588 Graduate Projects 3(3-0)
Application of graduate industrial engineering principles to a capstone design project. Prerequisite: EN 520, 571, 575, & 577. (SS)

591 Special Topics (1-3 VAR)
Selected topics in systems engineering Heuristic design, expert systems, multi-criteria decision analysis, analytical facility location and site selection models. Not every topic offered each year. May be repeated. Prerequisite: Permission of instructor. (S)

593 Graduate Seminar 2(2-0)
Seminar for students entering the systems engineering program. Philosophical, methodological and ethical issues in systems engineering are discussed (S/U grading). Prerequisite: Permission of instructor. (F)

599 Thesis Research (1-6 VAR)
Preparation of thesis to meet degree requirements. Arranged with major adviser. May be repeated (IP and S/U grading). Prerequisites: graduate standing and adviser approval. (F,S)

ELECTRICAL ENGINEERING (EE)

UNDERGRADUATE COURSES

100 Electrical Engineering Fundamentals 3(3-0)
Electrical engineering fundamentals and problem solving using design and visualization tools. (F)

102 Digital Circuit Logic 4(3-2)
Boolean algebra, Karnaugh maps, multiplexers, decoders, ROMs, PLAs, flip-flops, counters, sequential networks, state tables. (S)

201 Circuit Theory 3(2-2)
Basic circuit analysis techniques and applications to engineering design problems. Corequisite: MATH 224, PHYS 222. (F)

202 Circuit Theory Applications (4(3-3)
Step and Sinusoidal Response of networks; modeling of active devices. Prerequisite: EE 201. (S)

251 Introduction to Microprocessors 4(3-1)
Microprocessor organization assembly language, I/O techniques, real time interfaces, applications, hardware/software. Prerequisite: EE 102. (S)

MECHANICAL ENGINEERING (ME)

UNDERGRADUATE COURSES

250 Computer Applications in Engineering 2(2-0)
Use of digital computers in instrumentation, control, and analysis. Prequisites: EN 105 and MATH 126. (S)

DEPARTMENT OF ENGINEERING TECHNOLOGY

Department Chair: Wolfgang Sauer

CIVIL ENGINEERING TECHNOLOGY PROGRAM

Program Coordinator: Womack

Faculty: Cheng, Hirth, Holderness, Womack

The major in civil engineering technology leads to a bachelor of science in civil engineering technology (BSCET) degree. The major is designed to produce competent field engineering technologists, surveyors, soil and concrete technologists, construction estimators, project managers and engineering design technologists, who have supervisory capabilities. The curriculum places emphasis on surveying, construction, design and estimating. The upper-division courses provide a broader and more detailed understanding in areas such as land surveying, water supply systems, architectural drafting and civil design projects. Managerial and supervisory capabilities are developed in the estimating and project management classes.

Students seeking a degree in civil engineering technology should have a mathematics/science background including algebra, geometry and trigonometry.

Program Goals

- To prepare graduates in civil engineering technology to function effectively in the engineering, surveying or construction teams.
- To provide our students with a broad based curriculum and quality instruction.
- To maintain accreditation as defined by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

Expected Student Outcomes

General Requirements

- Graduates are required to complete an approved program of study with a cumulative GPA of 2.0000 or better in their major courses.
- Graduates are required to demonstrate skill and knowledge in the areas of quantitative analysis and science by having a cumulative GPA of 2.0000 or better in the mathematics and physics courses common to all programs.
- Civil engineering technology majors are required to demonstrate the ability to solve problems appropriate to their discipline, acquire computer skills, and to complete a final senior-year technical project requiring an oral and written presentation.

Specific Requirements for the CET Major

It is expected that CET graduates should have the appropriate skills and knowledge regarding surveying and drafting. In addition, they should have a knowledge of basic construction materials along with the fundamentals of statics, strength of materials, hydraulics, structural analysis and design.

This program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 050, Baltimore, MD 21202, Telephone: (410) 347-7700.

Engineering Technology Core Courses

Courses		Titles	Credits
ET	101	Introduction to Engineering Technology	4
	202	Statics	3
	206	Strengths of Materials	4
	300	Project Planning, Scheduling and Management	3
	356	Design Seminar	1
	456	Senior Project	3
		TOTAL	18

Civil Engineering Technology Courses

Course		Titles	Credits
CET	102	Surveying I	3
	103	Surveying II	3
	115	Civil Drafting I	3
	116	Civil Drafting II	3
	203	Dynamics	1
	207	Construction Materials & Methods	3
	208	Concrete & Asphalt Materials	3
	215	Advanced Surveying I	3
	304	Construction Cost Estimating I	3
	305	Construction Cost Estimating II	3
	315	Soil Mechanics Technology	3
	404	Structural Steel Design	3
	405	Reinforced Concrete Design	3
	411	Hydraulics	3
Approved CET Electives			9
Approved Technical Electives			6
		TOTAL	55

Math, Science and Computer Courses

Course		Title	Credits
CENT	226	Intro to Programming	2
MATH	131	Algebra and Trig for Engineering Technology I	4
MATH	132	Algebra and Trig for Engineering Technology II	4
MATH	231	Calculus for Engineering Tech I	3
MATH	232	Calculus for Engineering Tech II	3
PHYS	201/L	Principles of Physics I/Lab	4
PHYS	202/L	Principles of Physics II/Lab	4
CHEM	111	Principles of Chemistry	3
		OR	
GEOL	101	Earth Science	
		TOTAL	27

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual program's curriculum sheet.

Co-curricular Requirements

The faculty supports and encourages the involvement of engineering technology majors in at least one technical organization specific to each discipline and actively encourages student participation in such organizations.

Outcomes Assessment Activities

- To be eligible for graduation, all civil engineering technology majors are required to take an exami na tion. The results of the examination will be used in the evaluation of the program. Test results will have no effect on student's GPA.
- Graduates and their employers will be surveyed as to program satisfaction and job performance following their graduation.

Civil Engineering Technology Typical Schedule of Courses

Freshman - Fall

Courses		Titles	Credits
ENG	101	Composition I	3
MATH	131	Math for Engineering Technology I	4
ET	101	Introduction to Engineering Tech	4
CET	102	Surveying I	3
CET	115	Civil Drafting I	3
		TOTAL	17

Freshman - Spring

Courses		Titles	Credits
ENG	102	Composition II	3
MATH	132	Math for Engineering Tech II	4
CET	103	Surveying II	3
CET	116	Civil Drafting II	3
General Education, (K1-K7)			3
		TOTAL	16

Sophomore - Fall

Courses		Titles	Credits
MATH	231	Calculus for Engineering Tech I	3
ET	202	Statics	3
CET	203	Dynamics	3
CET	215	Advanced Surveying I	3
CENT	226	Introduction to Programming	2
General Education, (K1-K7)			3
General Education, (K1-K7)			3
		TOTAL	18

Sophomore - Spring

Courses		Titles	Credits
MATH	232	Calculus for Engineering Tech II	3
ET	206	Strength of Materials	4
CET	207	Construction Materials & Methods	3
SPCOM	103	Speaking and Listening	3
General Education, (K1-K7)			3
		TOTAL	16

Junior - Fall

Courses		Titles	Credits
PHYS	201L	Physics I/Lab	4
CET	208	Concrete and Asphalt Materials	3
CET	304	Construction Cost Estimating II	3
CET	404	Reinforced Concrete Design	3
ET	300	Project Planning, Scheduling & Management	3
		TOTAL	16

Junior - Spring

Courses		Titles	Credits
PHYS	202/L	Physics II/Lab	4
CET	305	Construction Cost Estimating II	3
CET	405	Reinforced Concrete Design	3
CHEM	111	Principles of Chemistry OR	
GEOL	101	Earth Sciences	3
ET	356	Design Seminar	1
General Education, (K1-K7)			3
		TOTAL	17

Senior - Fall

Courses		Titles	Credits
ET	456	Senior Project	3
CET	411	Hydraulics	3
CET Elective			3
Technical Elective			3
General Education, (K1-K7)			3
		TOTAL	15

Senior - Spring

Courses		Titles	Credits
CET Elective			3
CET	315	Soil Mechanics Technology	3
CET Elective			3
Technical Elective			3
General Education, (K1-K7)			3
		TOTAL	15

Total required credit hours 130

ELECTRONICS ENGINEERING TECHNOLOGY PROGRAM

Program Coordinator: William Huffine
Faculty: Grubbs, Huffine, Tappen

The major in electronics engineering technology leads to a bachelor of science degree in electronics engineering technology (BSEET). The EET program prepares graduates for positions in the electronic and computer industries. This unique, interdisciplinary program combines electronics, computer technology, and computer science in an integrated curriculum. Basic design concepts, as well as construction, testing, analysis, and computer applications, are included.

Theory and laboratory work cover the design, testing, analysis, and computer applications of conventional and state-of-the-art circuits and systems. Advanced programming concepts are taught using modern software.

Creative design projects relating to typically-used circuits and systems involving both discrete components and integrated circuits are included as part of the course work in the junior and senior years. The program provides the student with the comprehensive academic background needed for many advanced positions in the electronics and computer industries. It also prepares graduates to analyze computer problems and design solutions across a broad spectrum of hardware and software.

Students seeking a degree in EET should have a mathematics/science background including algebra, geometry, trigonometry and science.

Program Goals

- To prepare graduates to function effectively in the electronics and computer engineering spectrum.
- To graduate students who can apply the theoretical foundations and skills of their discipline to solve practical engineering problems by using existing technology.
- To maintain accreditation as defined by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

Expected Student Outcomes

General Requirements

- Graduates are required to complete an approved program of study with a cumulative GPA of 2.0000 or better in their major courses.
- Graduates are required to demonstrate skill and knowledge in the areas of quantitative analysis and science by having a cumulative GPA of 2.0000 or better in the mathematics and physics courses common to all programs.
- Majors are required to demonstrate the ability to solve problems, to use computer techniques, and to complete a final senior-year technical project requiring a hardware and/or software model and an oral and written presentation.

Specific Requirements for the EET Major

All EET majors will be required to learn the use of basic electronic laboratory instruments, and to demonstrate such knowledge through appropriate laboratory experiences. In addition, all EET majors should have a knowledge of electrical circuits, discrete electronic devices, digital circuits, advanced integrated circuits (both digital and analog), microcomputers, programming, and analog and digital communications.

The EET program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering Technology, 111 Market Place, Suite 050, Baltimore, MD 21202, Telephone: (410) 347-7700.

Engineering Technology Core Courses

Courses		Titles	Credits
ET	101	Introduction to Engineering Technology	4
MET	105	It's a Material World	4
ET	300	Project Planning, Scheduling, and Management	3
ET	356	Design Seminar	1
ET	456	Senior Project	3
		SUB-TOTAL	15

Electronics Engineering Technology Courses

Courses		Titles	Credits
CENT	255	Introduction to Microprocessors	4
CENT	354	Computer Architecture Design	4
CENT	357	Digital Communications	4
CENT	358	Computer Networks	3
EET	121	DC Circuits	4
EET	122	AC Circuits	4
EET	211	Electronics I	4
EET	212	Electronics II	4
EET	254	Introduction to Digital Electronics	4
EET	351	Electronics III	4
EET	412	Communication Systems	4
Tech Elect		Approved Technical Electives	7
		SUB-TOTAL	50

Math, Science, and Computer Courses

Courses		Titles	Credits
MATH	131	Algebra/Trig for Engineering Tech I	4
MATH	132	Algebra/Trig for Engineering Tech II	4
MATH	231	Calculus for Engineering Tech I	3
MATH	232	Calculus for Engineering Tech II	3
PHYS	201/L	Principles of Physics I	4
PHYS	202/L	Principles of Physics II	4
CIS	102	Intro to Basic Programming	4
CIS	121	Introduction to C++ Programming	4
CIS	215	Unix Operating Systems	2
CIS	385	PC Architecture and Systems Software	3
		SUB-TOTAL	35

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog, or refer to your individual department's curriculum sheet.

Outcome Assessment Activities

- Completion of all required courses as determined by the department.
- Students must successfully complete a Senior Project incorporating what they have learned.
- Faculty advisors monitor each student's progress toward completing major requirements.
- Annual Industrial Advisory Committee meetings are held to solicit industry feedback and support.
- Graduates and their employers will be surveyed as to program satisfaction and job performance.

Electronics Engineering Technology Typical Schedule of Courses

Freshman - Fall

Courses		Titles	Credits
ENG	101	Composition I	3
MATH	131	Math for Engineering Technology I	4
MET	105	It's a Material World	4
ET	101	Introduction to Engineering Technology	4
		TOTAL	15

Freshman - Spring

Courses		Titles	Credits
ENG	102	Composition II	3
MATH	132	Math for Engineering Technology II	4
EET	121	DC Circuits	4
CIS	102	Introduction to BASIC Programming	3
		TOTAL	15

Sophomore - Fall

Courses		Titles	Credits
MATH	231	Calculus for Engineering Tech. I	3
PHYS	201/L	Physics I/Lab	4
CIS	121	Introduction to C++ Programming	4
EET	122	AC Circuits	4
SPCOM	103	Speaking and Listening	3
		TOTAL	18

Sophomore - Spring

Courses		Titles	Credits
MATH	232	Calculus for Engineering Tech. II	3
PHYS	202/L	Physics II/Lab	4
EET	211	Electronics I	4
EET	254	Introduction to Digital Systems	4
General Education, (K1-K7)			3
		TOTAL	18

Junior - Fall

Courses		Titles	Credits
EET	212	Electronics II	4
CENT	255	Introduction to Microprocessors	4
ET	300	Project Planning, Scheduling, & Management	3
CIS	215	Unix Operating System	2
CIS	385	PC Architecture and System Software	3
		TOTAL	16

Junior - Spring

Courses		Titles	Credits
EET	351	Electronics III	4
CENT	354	Computer Architecture Design	4
ET	356	Design Seminar	1
Technical Elective			4
General Education, (K1-K7)			3
		TOTAL	16

Senior - Fall

Courses		Titles	Credits
CENT	357	Digital Communications	4
EET	412	Communication Systems	4
ET	456	Senior Project	3
Technical Elective			3
General Education, (K1-K7)			3
		TOTAL	17

Senior - Spring

Courses		Titles	Credits
CENT	358	Computer Networks	3
General Education, see (K1-K7)			12
		TOTAL	15

Total required credit hours 130

MECHANICAL ENGINEERING TECHNOLOGY PROGRAM

Department Chair: Wolfgang Sauer
Faculty: Bailey, Chen, Sauer, Sweet

The major in mechanical engineering technology leads to a bachelor of science degree in mechanical engineering technology (BSMET). The MET program is structured to provide the student with a mix of theory and practical applications in the classroom. Classroom material is reinforced with hands-on application in laboratories. The majority of classes include laboratories. Three areas of the discipline that are emphasized in the MET program are manufacturing, design, and applied mechanics. Computers and design form a common thread throughout each area. Upon graduation, the student has the knowledge and skills that make him or her an immediate asset to employers. The MET graduate can expect to fill positions in industry

that use mechanical engineering concepts in a mix of manufacturing, product development, instrumentation, or experimentation.

Students seeking a degree in one of the engineering technology disciplines should have a mathematics/ science background including algebra, geometry and trigonometry.

Program Goals

- To prepare graduates in mechanical engineering technology to function effectively throughout the engineering spectrum.
- To graduate students who can apply the theoretical foundations and skills of their discipline to solve practical engineering problems by using existing technology.
- To maintain accreditation for all programs as defined by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

Expected Student Outcomes

General Requirements

- Graduates are required to complete an approved program of study with a cumulative GPA of 2.0000 or better in their major courses.
- Graduates are required to demonstrate skill and knowledge in the areas of quantitative analysis and science by having a cumulative GPA of 2.0000 or better in the mathematics/physics, and chemistry courses common to all programs.
- All mechanical engineering technology majors are required to demonstrate the ability to solve problems appropriate to their discipline, to use computer skills and to complete a final senior-year technical project requiring design and fabrication of a working model followed by written and oral presentations.
- All mechanical engineering technology majors are required to study at least one computer language and to demonstrate their knowledge by applying computer programs to their daily class problems.

Specific Requirements for the MET Major

MET majors should have a knowledge of drafting, computer-aided design, materials, fluids, thermodynamics, all phases of manufacturing, robotics, and the design process. This program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 050, Baltimore, MD 21202, Telephone: (410) 347-7700.

Engineering Technology Core Courses

Courses		Titles	Credits
ET	101	Introduction to Engineering Technology	4
ET	202	Statics	3
ET	206	Strengths of Materials	4
ET	300	Project Planning, Scheduling and Management	3
ET	356	Design Seminar	1
ET	456	Senior Project	3
		SUB-TOTAL	18

Mechanical Engineering Technology Courses

Courses		Title	Credits
MET	105	It's a Material World	4
MET	112	Mechanical Drafting (CAD)	3
MET	203	Manufacturing Processes I	4
MET	204	Manufacturing Processes II	3
MET	311	Quality Control	3
MET	322	Dynamics of Machinery	3
MET	341	Thermal and Fluid Principles I	3
MET	352	Design of Machine Elements	3
MET	361	Computer Integrated Manufacturing	3
MET	441	Thermal and Fluid Principles II	3
MET	442	Design of Energy Systems	3
MET	460	Instrumentation and Control	3
		Approved MET Electives	6
		Approved Technical Electives	6
		SUB-TOTAL	50

Math, Science and Computer Courses

Courses		Title	Credits
CENT	226	Introduction to Programming	2
EET	250	Electrical Fundamentals and Applications	4
MATH	131	Algebra and Trig for Engineering Technology I	4
MATH	132	Algebra and Trig for Engineering Technology II	4
MATH	231	Calculus for Engineering Tech I	3
MATH	232	Calculus for Engineering Tech II	3
PHYS	201/L	Principles of Physics I/Lab	4
PHYS	202/L	Principle of Physics II/Lab	4
CHEM	111/L	Principles of Chemistry/Lab	4
		TOTAL	32

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual department's curriculum sheet.

Outcomes Assessment Activities

- To be eligible for graduation, all mechanical engineering technology majors are required to take an examination. The results of the examination will be used in the evaluation of the program. The results

for individual students will be kept in strict confi dence; however, any individual student can obtain her/his results for advisory purposes. Test results will have no effect on student's GPA.

- Graduates and their employers will be surveyed as to program satisfaction and job performance during the first, third and fifth years following graduation.

Mechanical Engineering Technology Typical Schedule of Courses

Freshman - Fall

Courses		Titles	Credits
ENG	101	Composition I	3
MATH	131	Math for Engineering Tech. I	4
ET	101	Introduction to Engineering Tech.	4
MET	105	It's a Material World	4
		TOTAL	15

Freshman - Spring

Courses		Titles	Credits
ENG	102	Composition II	3
MATH	132	Math for Engineering Tech II	4
CHEM	111/L	Principles of Chemistry/Lab	4
MET	112	Mechanical Drafting (CAD)	3
SPCOM	103	Speaking and Listening	3
		TOTAL	17

Sophomore - Fall

Courses		Titles	Credits
MATH	231	Calculus for Engineering Tech. I	3
PHYS	201/L	Physics I/Lab	4
ET	202	Statics	3
MET	203	Manufacturing Processes I	4
CENT	226	Introduction to Programming	2
		TOTAL	16

Sophomore - Spring

Courses		Titles	Credits
MATH	232	Calculus for Engineering Tech. II	3
PHYS	202/L	Physics II/Lab	4
ET	206	Strength of Materials	4
MET	204	Manufacturing Processes II	3
General Education, (K1-K7)			3
		TOTAL	17

Junior - Fall

Courses		Titles	Credits
MET	322	Dynamics of Machinery	3
MET	341	Thermal and Fluid Principles I	3
MET	352	Design of Machine Elements	3
ET	300	Project Planning, Scheduling, & Management	3
General Education, (K1-K7)			6
		TOTAL	18

Junior - Spring

Courses		Titles	Credits
MET	361	Computer Integrated Manufacturing	3
MET	441	Thermal and Fluid Principles II	3
EET	250	Electrical Fundamentals	4
ET	356	Design Seminar	1
General Education, (K1-K7)			6
		TOTAL	17

Senior - Fall

Courses		Titles	Credits
ET	456	Senior Project	3
MET	442	Design of Energy Systems	3
MET	460	Instrumentation and Control	3
Technical Elective			3
General Education, (K1-K7)			3
		TOTAL	15

Senior - Spring

Courses		Titles	Credits
MET	311	Quality Control	3
MET Electives			6
Technical Elective			3
General Education, (K1-K7)			3
		TOTAL	15

Total required credit hours 130

ENGINEERING TECHNOLOGY (ET)

UNDERGRADUATE COURSES

101 Introduction to Engineering Technology 4(2-4)
An introduction to the different engineering technology disciplines: technology teams, career opportunities, the design process, tools-of-the-trade, professional ethics. Team projects. (F)

202 Statics 3(3-0)
Basic concepts and application of static forces; couples, resultants, equilibrium, trusses, cables, friction and centroids. Prerequisite: MATH 132. (F)

206 Strength of Materials 4(4-0)
A study of stress-strain relationship; elastic and plastic behavior in materials; materials responses to various loads; Experimentation to demonstrate these principles. Prerequisites: MET 202, CET 202 or ET 202. (S)

300 Project Planning, Scheduling and Management 3(3-0)
Project management including organization, plans, specifications, and administration. Project network planning, scheduling, and updating using CPM. Prerequisite: junior standing. (F)

356 Seminar 1(1-0)
Introduction to the senior project course in which the student formulates the project proposal and makes both a written and an oral presentation of the proposal. Prerequisite: junior standing. (S)

456 Senior Project 3(1-4)
The design, analysis, and fabrication of an individual mechanical engineering technology project. Prerequisite: ET 356. (F,S)

CIVIL ENGINEERING TECHNOLOGY (CET) UNDERGRADUATE COURSES

102 Surveying I 3(0-6)
Beginning course in plane surveying; covers proper chaining techniques, care and use of engineering levels, differential leveling, traversing, and construction surveying. (CE,F)

103 Surveying II 3(0-6)
Introduction to land, topographic, and construction surveying. Prerequisite: CET 102, or permission of instructor. Corequisite: CET 116. (CE,S)

115 Civil Drafting I 3(0-6)
An introduction to basic drafting, AutoCAD and Structural Detail drafting. Corequisite: CET 102. (F)

116 Civil Drafting II 3(0-6)
An introduction to maps, traverses, contours, plans and profiles, cut and fills. An introduction to architectural plans, elevations and section. Prerequisite: CET 115. Corequisite: CET 103. (CE,S)

203 Dynamics 1(1-0)
The application of kinematics to rigid bodies in motion. Prerequisite: MATH 132. Corequisite: CET 202. (F)

207 Construction Materials and Methods 3(3-0)
Properties, uses and methods of assembly of building materials as they apply to the construction industry. (F)

208 Concrete and Asphalt Materials 3(2-2)
Study of Portland cement concrete and bituminous pavements. Manufacturing, mix design, placing and finishing of these materials. The laboratory includes ASTM testing of these materials. (S)

215 Advanced Surveying I 3(0-6)
Develops professional skills in surveying, electronic traversing, state plane coordinates, and global positioning. Prerequisites: CET 102 and MATH 132. (F)

216 Advanced Surveying II 3(0-6)
Highway and route surveys, horizontal and vertical curves, grades, slope staking and earthwork. Prerequisites: CET 103 and MATH 132. (S)

303 Construction Management 3(3-0)
Job specifications, contractor, organization, bonding, contracts, insurance and labor relations. Prerequisite: junior standing or permission of instructor. (S)

304 Construction Cost Estimating I 3(3-0)
Estimating related to building construction industry. Quantity take-off, labor and material costs, records and assembling a general contractor's bid. Prerequisite: CET 207 or permission of instructor. (F)

305 Construction Cost Estimating II 3(3-0)
Estimating relating to heavy and highway construction. Covers heavy equipment selection, use and production rates. Prerequisite: junior standing or permission of instructor. (S)

313 Architectural Drafting I 3(0-6)
Preparation of a complete set of working drawings for a modern residential building. Prerequisite: CET 115. (F)

314 Architectural Drafting II 3(0-6)
Introduction to architectural design, design sketches and working drawings for a light commercial building. Prerequisite: CET 313. (S)

315 Soil Mechanics Technology 3(2-2)
Basic principles of soil mechanics and foundation design as they apply to design and construction. ATSM field tests will be done in the laboratory. Prerequisite: ET 206. (S)

401 Land Surveying 3(3-0)
Boundary control, property descriptions, deeds, subdivisions, emphasizing the legal aspects of land law and surveying. Prerequisite: CET 103 or permission of instructor. (F)

402 Civil Design Projects 3(0-6)
Practical, realistic project relating to civil engineering technology is selected for development, designed and reported. Prerequisite: senior CET or permission of instructor. (F,S,SS)

404 Structural Steel Design 3(3-0)
Structural steel design of beams, columns, girders and trusses to AISC standards. Prerequisite: ET 206. (S)

405 Reinforced Concrete Design 3(3-0)
Design of reinforced concrete beams, columns, girders and floor systems to conform to current ACI code. Prerequisite: ET 206. (F)

411 Hydraulics 3(2-2)
Study of non-compressible fluids including the flow of water in pipes and open channels. Laboratory involves measuring static pressure, head losses, and flow rates. Prerequisite: ET 202. (F)

412 Hydrology 3 (3-0)
Hydrologic cycle including precipitation, streamflow, groundwater runoff and the preparation of hydro graphs and frequency analysis. Prerequisite: junior standing. (S)

414 Bridge Design 3(3-0)
Design of bridge slabs, beams, abutments, wingwalls, piers, and footings. Prerequisite: senior status. (*)

415 Water and Sewer System Design 3(3-0)
Fundamental principles of water supply and sewage design. Prerequisite: senior status. (*)

425 Construction Scheduling 3(3-0)
Construction project network scheduling using CPM and PERT scheduling techniques. Manual and computer solutions. Prerequisite: CET 304, or permission of instructor. (S)

491 Special Topics (1-6 VAR)
Prerequisite: permission of instructor. (*)

495 Independent Study (1-3 VAR)
Directed study for students interested in specific areas of CET. Prerequisite: junior standing in CET and permission of instructor. (F,S)

496 Cooperative Education Placement (1-5 VAR)
Industrial cooperative education work experience under the direction of a field supervisor and faculty member. Prerequisite: junior or senior standing. (F,S,SS)

ELECTRONICS ENGINEERING TECHNOLOGY (EET)

UNDERGRADUATE COURSES

121 DC Circuits 4(3-2)
DC circuits including voltage, current, resistance, energy, power, mesh and nodal analysis, and network theorems. Corequisite: MATH 131. (S)

122 AC Circuits 4(3-2)
AC circuit analysis, sine waves, phasors, impedance, mesh and nodal analysis, network theorems, frequency response and resonance. Prerequisite: EET 121. Corequisite: MATH 132. (F)

211 Electronics I 4(3-2)
Principles and basic applications of semiconductor diodes and transistors. Unfiltered and filtered rectifier circuits. Clippers, clampers, and other diode circuits. Detailed dc and ac analysis of transistor circuits, including transistor dc biasing, the use of transistor ac models and equivalent circuits, and the ac analysis of small signal transistor amplifiers. Corequisites: EET 122 and MATH 132. (F,S)

212 Electronics II 4(3-2)
Frequency response of BJT and FET amplifier circuits. Multi-stage transistor amplifier analysis and design considerations. Differential and operational amplifiers, and their basic circuit applications. Negative feedback principles and circuit analysis. LF and HF oscillator circuits. Voltage regulators and regulated power supplies. Prerequisites: EET 211, Corequisite: MATH 231. (F,S)

250 Electrical Fundamentals 4(3-2)
DC and AC circuit analysis, circuit theorems, power, resonance, filters, transformers, polyphase circuits, and transient-analysis. (NON-MAJORS). Corequisite: MATH 132. (S)

254 Introduction to Digital Systems 4(3-2)
Digital techniques, including binary codes, Boolean algebra, gates, flip-flops, counters, shift registers and arithmetic operations. Prerequisite: EET 121 or 250, or permission of instructor. Corequisite: EET 211. (F)

350 Electronic Devices and Control 4(3-2)
Semiconductor devices, transistor amplifiers, OP amps, OP amp applications, power amplifiers, digital electronics, digital control, PLCs, microprocessors, micro controllers, interfacing, control systems, motors. (NON-MAJORS). Prerequisite: EET 122 or 250. (F)

351 Electronics III 4 (3-2)
Theory and applications of operational amplifiers and linear circuits, including non-inverting voltage amplifiers, I-V and V-I converters, the effects of negative feedback on input and output impedance, DC offset considerations, high differentiators and integrators, and other selected topics. Prerequisite: EET 212. (F,CE)

356 Electronics IV 4(3-2)
Continuation of Electronics III. Theory and applications of operational amplifiers and analog circuits, including voltage comparators, oscillators and waveform generators, active filters, rectifiers and voltage regulators, D-A and A-D conversion, phase locked loops, and other selected topics. Prerequisite: EET 351. (S,CE)

393 Seminar 2(2-0)
Introduction to the senior projects course in which the student formulates the project proposal and makes both a written and an oral presentation of the proposal. Prerequisite: junior standing. (S)

412 Communication Systems 4(3-2)
Basic principles of electronic communications. Time-domain and frequency-domain representations of signals. AM, SSB, FM, and PM communication systems and circuit analysis. Fundamentals of digital communication techniques and systems. Transmission lines, waveguides, and wave propagation. Microwave, satellite, and fiber optic communications. Prerequisites: EET 351, MATH 232. (S)

456 Design Projects 2(1-2)
Application of theory to practical design of technical projects. The student designs, builds, tests and writes a technical report for his or her project. Prerequisites: EET 393 and senior standing. (F)

491 Special Topics (1-5 VAR)
Topics in electronics not now included in other courses. Prerequisite: permission of department chair. (*)

493 Seminar (1-5 VAR)
Participation by electronics students and presentation of recent developments in the electronics field. Prerequisite: qualified junior or senior students. (*)

495 Independent Study (1-5 VAR)
Prerequisite: permission of department chair. (F,S,SS)

496 Cooperative Education Placement (1-5 VAR)
Industrial cooperative education work experience under direction of field supervisor and faculty member. Prerequisite: junior or senior standing. (F,S,SS)

COMPUTER ENGINEERING TECHNOLOGY (CENT)

UNDERGRADUATE COURSES

226 Introduction to Programming 2(1-2)
An introductory course in programming using the Basic language. Prerequisite: ET 101. (F,S)

255 Introduction to Microprocessors 4(3-2)
Analysis of microcomputer systems including both hardware and software considerations, with emphasis on machine language programming. Includes microcomputer design projects. Prerequisite: EET 254. (S)

321 Advanced Data Structures 3(3-0)
Algorithm development and analysis, including sorting, searching, recursion, linked lists, trees, queues, graphs, and other advanced data structures. Prerequisites: CIS 253 and MATH 231 or MATH 245. (S)

354 Computer Architecture Design 4(3-2)
Computer architecture, with emphasis on operation and design. Students must complete an extensive laboratory project which requires the design, instruction and testing of an operational computer. Prerequisite: CENT 255. (F)

355 Microcomputer Assembly Language 4(3-2)
Assembly language for advanced microcomputer systems. An in depth coverage of the Intel 8086 assembler language and associated linkers and debuggers. Introduction to interface programming. Prerequisite: CENT 226, CENT 255. (S)

357 Digital Communications Concepts 4(3-2)
Data communications and telecommunications concepts for computers and terminals, including data transmission, media, software, protocols, switching, coding, and simple networks. Prerequisite: CENT 255, C-MATH 224 or MATH 232. (F)

358 Computer Networks 3(2-2)
Computer communication techniques and computer networks including topics such as topology, protocols, routing and reliability analysis. Prerequisites: CENT 255 and CENT 253 or CIS 253. (*)

411 Windows Software Development 3(3-0)
Microsoft Windows program design and testing, using C language. Resource editors and project manager utilities will be used. Prerequisite: CENT 253 or CIS 253. (F)

MECHANICAL ENGINEERING TECHNOLOGY (MET)

UNDERGRADUATE COURSES

105 It's a Material World 4(3-2)
Studies and laboratory experiments on modern materials, their behavior and their role in the environment. Review of materials' impact on society. (F,S)

111 Introduction to Drafting 3(0-6)
Professional drafting techniques, lettering, line quality, scales and measurements to include metric, geometric constructions, orthographic projections, technical sketching, sectioning, isometric and auxiliary views. (F,S)

112 Computer-aided Drafting 3(1-4)
Computer-aided drafting to include geometric con-structions, orthographic projections, sectioning and dimensioning. Prerequisite: MET 111. (F,S)

203 Manufacturing Processes I 4(3-2)
Introduction to basic processing of materials into useful products. A study of materials selection process based on manufacturing operations. Laboratory study of manufacturing techniques. Prerequisite: MET 105. (F)

204 Manufacturing Processes II 3(2-2)
A continuation of MET 203. Prerequisite: MET 203 or permission of instructor. (S)

291 Special Topics (1-3 VAR) (*)

311 Quality Control 3(3-0)
A study of quality control, program planning and production analysis. (S)

315 Nondestructive Testing 3(2-2)
Determination of quality without change to the material through non-obtrusive examination. Laboratory using dye penetrants, X-ray, etc. to perform NDT. Prerequisite: MET 105. (*)

322 Dynamics of Machinery 3(3-0)
Basic concepts and application of forces in dynamic and accelerated situations. Prerequisites: ET 202 and MATH 232. (F)

341 Thermal and Fluid Principles I 3(3-0)
An introduction to the basic principles of thermal and fluid energy and flow relationships. Prerequisites: PHYS 202 and MATH 232. (S)

352 Design of Machine Elements 3(2-2)
Fundamental concepts in the correct design of the separate elements which compose machines, application of properties and mechanics of materials modified by practical considerations. Prerequisite: ET 206. (F)

356 Basic Design Principles 2(2-0)
A study of the progressive stages of investigating, designing, developing, building and testing of a mechanical process or product. Prerequisite: MET 352. (F,S)

361 Computer Integrated Manufacturing 3(2-2)
A study of computer control in the manufacturing process. Laboratory in operation of computer control processes. Prerequisites: MET 204 and MATH 132. (*)

371 CNC Machine Tools 3(2-2)
Principles of numerical control and computerized numerical control machine tool programming and operation. Fabricating parts and programming using CNC lathe and milling machines. Prerequisites: MET 204 and MATH 132. (*)

441 Thermal and Fluid Principles II 3(2-2)
A study of the controlling factors that influence the design of thermal and fluid systems. Conduct experiments to confirm effects on these systems. Prerequisite: MET 341. (S)

442 Design of Energy Systems 3(2-2)
A study of applied technology topics in the conversion, storage, and use of a variety of energy sources. Experimental study of selected energy technologies. Prerequisite: MET 441. (F)

451 Industrial Robotics 3(2-2)
An inspection of the history of robotics. Study of control and application of robotics in society. Laboratory in programming and operation of robotics. Prerequisite: permission of instructor. (*)

452 Heating, Ventilating and Air Conditioning 3(2-2)
Principles and applications of heating, ventilation and air-conditioning (HVAC). Extensive experimentation with a climate controlled laboratory to measure HVAC effectiveness. Prerequisite: MET 341. (*)

460 Instrumentation and Control Systems 3(2-2)
A study of the use of instrumentation in experimental measurements, laboratory and production environments, and control of processes. Laboratory study of instrumentation and control. Prerequisites: EET 350 and ET 206. (F)

491 Special Topics (1-3 VAR)
Prerequisite: junior standing in MET. (*)

493 Seminar (1-3 VAR)
Prerequisite: junior standing in MET. (*)

495 Independent Study (1-3 VAR)
Prerequisite: junior standing in MET. (F,S,SS)

496 Cooperative Education Placement (1-5 VAR)
Work experience under the direction of field supervisor and faculty member. Prerequisites: permission of co-op coordinator; junior or senior standing in MET. (F,S,SS)

THE COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

Edward N. Wright, interim dean

Academic Departments	Majors	Minors
Art	Art (BA, BS)	Art
English/ Foreign Languages	English (BA) Foreign Languages Spanish (BA)	English French Italian Spanish
History/ Political Science/ Social Science/ Philosophy/ Chicano Studies	History (BA) Political Science (BA, BS) Social Science (BA, BS)	History Political Science Social Science Philosophy Chicano Studies
Interdisciplinary Studies		
University Honors Program		Honors
Mass Communications	Mass Communications (BA, BS)	Mass Communications
Music	Music (BA)	Music
Psychology	Psychology (BA, BS)	Psychology
Sociology/ Anthropology	Sociology (BA, BS)	Sociology/ Anthropology
Social Work	Social Work (BSW)	
Speech Speech Communication/	Speech Communication	Communication
		Women's Studies

Consortium Master Programs:

Master of Counseling (Adams State College)
Counseling (MA)

Master of Social Work (Colorado State University)
Social Work (MSW)

The mission of the College of Humanities and Social Sciences is to help students to develop critical thinking skills, aesthetic awareness, and ethical perspectives, to provide them with the tools and expertise necessary to function as responsible citizens and professionals, and to engage in intellectual and artistic pursuits. Faculty members are committed to quality teaching, theoretical and applied research, scholarship, and creativity, and to effective service to the university, the profession, and the region, and to the innovative use of technology in these endeavors. The college strives to be a community of learners, teachers, and scholars responsive to the challenges of a diverse society, a vulnerable environment, and an increasing technological and interdependent world.

ART DEPARTMENT

Chair: Jensen
Faculty: Aviña, Dalton, R. Hansen, V. Hansen, Marino

The art curriculum is designed to increase the student's understanding of art and its relationship to society. Course offerings in art provide the student with the opportunity to integrate art and appropriate technology.

The art major prepares the student to be a practicing artist, to enter graduate school for further professional education or to enter the job market in art related-careers. Students also may select art courses as a means of achieving a greater sense of personal accomplishment. Students, faculty, and invited professional artists display works in the USC Art Gallery. An active visiting artist program provides contact with successful regional and national professionals.

The major in art leads to the degrees of bachelor of arts (BA) and bachelor of science (BS). A minor in art is also available.

Department Goals

To prepare students in the discipline of fine art and design, to be visually creative individuals with skills in studio processes, knowledgeable in art history, and with experience to enter art-related careers in the job market.

Expected Student Outcomes

General Requirements

- The art faculty firmly believes that a quality undergraduate art program must be built from the strong foundation of basic concepts and techniques provided by the required ART CORE courses. Art history, drawing and design combined with an introduction to the basic art processes, provide the necessary background of information and skills for individual artistic growth and maturity. A strong grounding in the fundamentals of art, as provided in the ART CORE, indicates the department's insistence upon respect for and commitment to the academic discipline of art as a professional career.
- Art majors must complete the required courses known as the ART CORE, except Art 410, before proceeding into the beginning courses.
- No grade lower than a C will count toward either an art major or minor.

Specific Requirements for the Art Major

ART CORE

ART Courses	Titles	Credits
ART 105 and 106	History thru Art I and II	6
110	Art Career Orientation	1
115 and 116	2D and 3D Design	6
141 and 142	Drawing I & II	4
206	Art History: Contemporary	3
233	Sculpture I	
	OR	
245	Ceramics I	3
234	Painting I	3
274	Computer Imaging	
	OR	
275	Computer Animation	3
281	Introduction to Graphic Design I	
	OR	
270	Printmaking I	3
410	Senior Career Orientation	3
	TOTAL	35

PLUS

Emphasis area 9

Choose One Emphasis Area Prior to Junior Year

Two-Dimensional – Painting & Drawing
Three Dimensional – Ceramics & Sculpture
Printmaking
Graphic Design
Photography
Art History
Computer Animation

PLUS

Art electives selected with an art adviser 6

TOTAL 50

Specific Requirements for the Art Minor

ART 141 or 142	Drawing I or II	2
115 or 116	2D and 3D Design	3
105 or 106	History thru Art	3
Art electives approved by minor adviser		12
	TOTAL	20

Co-curricular requirements

The faculty supports and encourages the involvement of art majors and minors in the Art Club and related activities specific to each discipline and actively encourages student participation in such organizations.

Outcomes Assessment Activities

- Art majors will successfully demonstrate competencies required by the department. Competencies will be evaluated by use of portfolio review.
- Each art major is required to produce and maintain a portfolio of work done at USC as a record of achievement. The contents and objectives of the portfolio will be described, discussed and planned in the career orientation class (Art 110). Final evaluation of the progressive portfolio will take place during the student's last semester as part of the senior orientation class (Art 410). The format of the portfolio may vary according to subject matter and content but in general the presentation materials will consist of 35mm color slides, prints, graphic design samples and/or video tapes, as appropriate.
- As a competency indicator of achievements in the area of art history, part of the portfolio may contain samples of a student's written material as related to art history, analysis and criticism, as well as a departmental art history exam.
- The intent of the portfolio is to faithfully reflect the ability and competency level of the art student as he or she progresses in the program. The makeup of the portfolio will reflect the personal accomplishments of each individual.
- A complete set of, course outlines and examination examples of each art instructor's classes will be maintained and updated by each faculty member and made available to the student upon request. Class objectives and skills attained during the class will be denoted clearly in the materials. The complete portfolio will be available in the art office.

ART (ART)

UNDERGRADUATE COURSES

100 Visual Dynamics 3(3-0)
Appreciation and understanding of visual experiences and techniques reflecting the cultural dynamics of creativity. (F,S*)

103 Art History Survey III 3(3-0)
Development of style, iconography and function of art in non-western cultures. (F,S,SS)

104 Computer Graphic Literacy 1(1-2)
Basic to all microcomputer software applications containing graphic components such as business presentations, medical molecular modeling, cartography or graphic design. (F,S*)

105 History Through Art I 3(3-0)
A survey of history as a means of understanding people of the past and present through a perusal of major works of art. (F,S,*)

106 History Through Art II 3(3-0)
A study of historical ideas and events as reflected in the major art monument of the time. (*)

110 Art Career Orientation 1(1-0)
Guided development of individual job objectives. (F,S,SS)

115 Two-Dimensional Design 3(1-4)
The foundation of visual form, emphasizing two-dimensional design and color theory. (F,S)

116 Three-Dimensional Design 3(1-4)
The foundation of visual form, emphasizing three dimensional design. (F,S)

141 Drawing I 2(0-4)
Development of perception and technical skills in rendering. (F,S,SS)

142 Drawing II: Figure 2(0-4)
Studio class studying the human figure. (F,S,SS)

206 Art History: Contemporary 3(3-0)
Development of style and iconography of contemporary art since 1950. Prerequisite: permission of instructor. (F,S)

233 Sculpture I 3(0-6)
Basic problems in sculpture relating specific concerns of visual form and process. (F,S,SS)

234 Painting I 3(0-6)
Introduction to painting in oil and acrylic where the control of space will be approached through the use of color. Prerequisite: art core. (F,S,SS)

241 Drawing III 2(0-4)
Advanced course in pursuit of increased skills of perception. Prerequisites: ART 141 and 142. (F,S,SS)

242 Drawing IV: Figure 2(0-4)
Continuation of ART 142 with expanded interpretational and compositional awareness of the figure. Prerequisite: ART 142. (F,S,SS)

247 Ceramics I 3(0-6)
Essential skills in ceramic processes; emphasis on form and function as related to students' needs and creative intent. Prerequisite: Permission of instructor. (F,S,SS)

270 Printmaking I (1-3 VAR)
Introduction to multiple image production through traditional and non-traditional methods, including woodcut, linocut, intaglio, serigraphy and lithography. (F,S*)

274 Computer Imaging (1-3 VAR)
The production of original imagery through the use of art-oriented software on microcomputers with video input. Prerequisites: art core or permission of instructor. (Repeatable once.) (F,S,SS)

275 Computer Animation I (1-3 VAR)
The creative application of microcomputers and interactive software to produce 3-D animations or video tape. No programming required. Prerequisite: Art core or permission of instructor. (*)

276 Photography (1-3 VAR)
Photography as an art form and as an adjunct to other art media. Prerequisite: art core or permission of instructor. (F,S,SS)

281 Introduction to Graphic Design I 3(1-4)
A basic treatment of graphic processes and techniques related to advertising design and visual communication. Prerequisite: art core or permission of instructor. (F,S)

282 Calligraphy (1-3 VAR)
Styles of hand lettering and layout of calligraphic forms. Prerequisite: art core or permission of instructor. (F,S)

284 Designing on the Macintosh I (1-3 VAR)
An introduction to the Macintosh computer for artists and designers. Prerequisite: permission of instructor. (*)

291 Special Topics (1-5 VAR) (F,S,SS)

333 Sculpture II: Site Art 3(0-6)
Creating sculptural elements whose form and content are a response to its site and context. Prerequisite: art core or permission of instructor. (F,S,SS)

334 Painting II 3(0-6)
Techniques in oil and acrylic emphasizing the application of materials to subject matter and composition. Prerequisite: ART 234 (F,S,SS)

347 Ceramics II 3(0-6)
In-depth development of specific ceramic techniques; skills and personalization of style. Students will load and fire all the kilns as well as mix glazes. Prerequisite: ART 247 or permission of instructor. (F,S,SS)

370 Printmaking II (1-3 VAR)
Investigation into multiple image production through traditional and non-traditional methods. Special attention given to specialized area of student interest. (F,S,*)

371 Printmaking: Photo Processes 3(0-6)
Basic processes of printing from raised and lowered surfaces. Prerequisite: ART 270. (F,S,SS)

372 Printmaking: Computers and Photo Processes 3(0-6)
Investigation into prepress software and its application to multiple color image production. Description of photo processes and platemaking/ dark-room techniques. Prerequisite: Art 370 or 371. (F,S,SS)

373 Serigraphy (1-3 VAR)
Process of screen printing including preparation of photographic stencils. Prerequisite: art core or permission of instructor. (F,S)

374 Computer Imaging (1-3 VAR)
The use of microcomputers to produce original slides or prints and animation on video tape. Prerequisite: art core or permission of instructor. (Repeatable once.) (F,S,SS)

375 History of Art Film 3(3-0)
Significant art films illustrating the development style, subject matter and techniques of film making from the late 19th-century to the present. (F,S)

376 Photography (1-3 VAR)
Photography as an art form and an adjunct to other art media. Prerequisite: ART 276 or permission of instructor. (F,S)

377 Principles of Elementary Art Education 1(1-0)
Lecture course dealing with the development of visual concepts within the child. (F,S,SS)

381 Introduction to Graphic Design II 3(1-4)
Intermediate graphic design techniques including layout and camera-ready art work. Prerequisite: ART 281 or permission of instructor. (F,S,SS)

382 Illustration 2(0-4)
Images rendered in varying techniques to express ideas related to commercial application. Prerequisite: ART 381 or permission of instructor. (F,S,SS)

383 Exhibition Design 2(0-4)
Communication and design principles applied to the display of objects. Special attention to museum and gallery installations. Prerequisite: permission of instructor. (F,S,SS)

384 Designing on the Macintosh II (1-3 VAR)
Advanced instruction in technique and concept on the Macintosh Computer for artists and designers. (*)

397 Studio Series 3(1-3VAR)
Advanced studio offerings for students who have completed all other course offerings in a specific discipline. Scheduled concurrently with lower-division studios. Repeatable for a maximum of nine credits. Prerequisite: permission of instructor. (F,S,SS)

405 Art History: Modern 3(3-0)
Development of style and iconography of 19th- and early 20th-century art in Europe and United States. Prerequisite: permission of instructor. (F,S)

410 Senior Career Orientation 3(3-0)
Formal presentation of stuent's academic and creative portfolio to the art faculty. Senior exhibition and artist's statement, resumes and job placement interviews. Prerequisite: senior standing. (F,S,SS)

433 Advanced Site Art 3(0-6)
Advanced projects in Site Art that involve the presentation and creation of site specific sculptural forms. Prerequisite: art core or permission of instructor. (F,S,SS)

434 Painting III 3(0-6)
Advanced painting with an emphasis on individual development. Focus pertains to formal, pictorial and technical problems met in developed personal imagery. Prerequisite: ART 334 (F,S,SS)

447 Advanced Ceramics / Kiln Construction 3(0-6)
This course explores advanced theories and techniques involved in working with clay: forming, firing, glazing, kiln design and construction. (Repeatable to 9 hours.) Prerequisite: permission of instructor. (F,S,SS)

470 Printmaking III (1-3 VAR)
Advanced investigation into multiple image production through individual techniques and interest. Prerequisite: Art 270, Art 370 or permission of instructor. (*)

475 Computer Animation II (1-3 VAR)
The creative application of microcomputers and interactive software to produce advanced 3-D animations on video tape. No programming required. Prerequisite: Art core or permission of instructor. (Repeatable once.) (*)

481 Advanced Graphic Design I 3(1-4)
Using advanced principles, this workshop operates as a professional studio with designers, an art director, production manager, copywriter, computer manager, etc. producing posters, logos and brochures. Prerequisite: ART 281, 381 or permission of instructor. (F,S,SS)

482 Advanced Graphic Design II 3(0-6)
Further development of professional practice in the studio workshop with fully advanced participation as designers, managers, and directors. Prerequisite: ART 281, 381 and 481 or permission of instructor. (F,S,SS)

491 Special Topics (1-5 VAR) (F,S,SS)

494 Field Experience (1-5 VAR)
Off-campus individual experience providing transition from classroom instruction to on-the-job experience. Prerequisites: senior standing and permission of instructor. (F,S,SS)

495 Individual Projects (1-5 VAR)
Individual tutorial experience. Prerequisites: junior or senior standing and permission of instructor. (F,S,SS)

496 Cooperative Education Placements (1-4 VAR)
Prerequisite: permission of instructor. (F,S,SS)

497 Studio Series 3(1-3 VAR)
Advanced sections of studio offerings. Repeatable. Prerequisite: ART 397 or permission of instructor. (F,S,SS)

GRADUATE COURSES

500 Workshop (1-5 VAR)
Using materials and techniques based on advanced concepts and ideas. Prerequisite: permission of instructor and graduate standing. (F,S,SS)

591 Special Topics (1-3 VAR)
Prerequisite: permission of instructor and graduate standing. (F,S,SS)

ENGLISH/FOREIGN LANGUAGES DEPARTMENT

Chair: Sheidley
Faculty: Barber, Cobian, Covi, Fogelquist, Griffin, Hochman, Illick, Morales, Rodriguez-Arenas, Senatore, C. Taylor, T. Taylor

ENGLISH PROGRAM

The major in English leads to a degree of bachelor of arts (BA) and provides graduates with an understanding of language and literature as a basis for aesthetic, ethical, social, and academic ways of thinking, creating, and researching. Critical, analytic, and composing skills, which provide excellent preparation for professional careers such as teaching, editing and publishing, business, media, public service, and the arts, are emphasized.

Program Goals

- Students will become familiar with significant traditions and historical and cultural contexts of literature.
- Students will become familiar with various theories of literature and various techniques in the analysis and understanding of literature.
- Students will gain aesthetic appreciation of literary works.
- Students will become familiar with the structure, history and functions of language.
- Students will gain proficiency in writing and thinking with clarity, creativity and accuracy, and in analyzing and synthesizing information and ideas.

Expected Student Outcomes

The English faculty believes that students' grades are valid indicators of a student's progress and performance; therefore, students must complete, with a grade of C or better, all courses counting toward the major or minor.

Requirements for the English Major

- Specific requirements for the English major are listed below. Students should consult with an adviser in English before registration.
- Students must fulfill the university language requirements for the BA degree.

Requirements for the English Minor

Minor requirements are 20 or more semester credit hours of course work in English, of which 12 must be upper division. Courses must be chosen in consultation with an adviser in English.

For teaching endorsement requirements, see the Center for Teaching and Learning section of this catalog.

Co-curricular Requirements

The English faculty supports and encourages English majors' involvement in student organizations and participation in tutoring activities in the community and on campus.

Outcomes Assessment Activities

Assessment of the English program is the responsibility of the English Program Assessment Committee, consisting of the chair of English and Foreign Languages and three other faculty members. The committee's annual reports evaluating the program and proposing any needed changes are compiled from the following information:

- A central file of course syllabi with representative assignments is maintained by the department for inspection by the committee and other qualified persons.
- Faculty advisers monitor each student's progress toward completing major requirements and meeting the Program Goals listed in the catalog. Advisers report any problems or deficiencies in the program encountered by their students to the Program Assessment Committee through the department chair.
- All English majors take a senior-year seminar (English 493) emphasizing professional standards and synthesizing the writing and analytical skills students have acquired in other English classes. All students in English 493 write a senior research paper, one copy of which is submitted to the Program Assessment Committee for review. In order to pass English 493, students must demonstrate satisfactory levels of achievement in the five areas of the program goals.
- The Program Assessment Committee reviews or has reviewed the papers from English 493 on an annual basis and prepares an analysis of what they reveal about the program's success.
- The Program Assessment Committee administers a student-satisfaction questionnaire to all senior English majors each year. A similar questionnaire is sent to recent graduates on a periodic basis.

- The Program Assessment Committee monitors the English curricula at leading comparable institutions and apprises the department of innovations worthy of consideration.

English Major

- Faculty advisers meet individually with each of their students on a regular basis to help plan schedules and discuss educational and career goals. Advisers maintain an accurate and up-to-date record of each students' progress towards completion of the requirements for the major.

- All English majors will participate in a senior-year seminar in which all of the writing and analytical skills acquired in other English classes will be synthesized. Students in the class will be expected to complete a senior research project.

Specific Requirements for the Bachelor of Arts in English

ENG Courses		Title	Credits
	121	The Writer's Response*	3
		(Can be taken in place of ENG 102)	
	215	Poetry	3
One of the following courses:			3
	240	Survey of Ethnic Literature	
	260	Women in Literature	
Two of the following survey sequences			12
	310/312	American Literature I & II	
	341/342	Western World Literature I & II	
	360/362	Literature of England I & II	
One of the following writing courses:			3
	203	Composition III	
	315	Creative Writing: Poetry	
	316	Creative Writing: Fiction	
	317	Creative Nonfiction	
	325	Nature Writing in the West	
	440	Magazine Writing	
All of the following courses:			
	352	English Syntax and Usage	3
	381	Drama of Shakespeare	3
	481	Literary Criticism	3
	493	Senior Seminar	3

At least 6 additional credits in English selected in consultation with the adviser.

Specific Requirements for the Bachelor of Arts in English with Secondary Teacher Endorsement

A minimum of 41 credits in English beyond ENG 101 and 102 including:

ENG Courses		Title	Credits
ENG	121	The Writer's Response*	3
		(Can be taken in place of ENG 102)	
	215	Poetry	3
One of the following courses:			3
	240	Survey of Ethnic Literature	
	260	Women in Literature	
Two of the following survey sequences:			12
	310, 312	American Literature I and II	
	341, 342	Western World Literature I and II	
	360, 362	Literature of England I and II	
One of the following writing courses:			3
ENG	203	Composition III	
	315	Creative Writing: Poetry	
	316	Creative Writing: Fiction	
	317	Creative Nonfiction	
	325	Nature Writing in the West	
	440	Magazine Writing	
All of the following courses:			
ENG	352	English Syntax and Usage	3
	381	Drama of Shakespeare	3
	412	Literature for Adolescents	3
	452	History of the English Language	3
	481	Literary Criticism	3
	493	Senior Seminar	3

Specific Requirements for the Bachelor of Arts in English with Elementary Teacher Endorsement

A minimum of 35 credits in English beyond English 101 and 102, including:

ENG Courses		Titles	Credits
ENG	121	The Writer's Response	3
		(Can be taken in place of ENG 102)	
One of the following courses:			3
	240	Survey of Ethnic Literature	
	260	Women in Literature	
Two of the following survey sequences:			12
	310, 312	American Literature I and II	
	341, 342	Western World Literature I and II	
	360, 362	Literature of England I and II	
One of the following writing courses:			3
	203	Composition III	
	315	Creative Writing: Poetry	
	316	Creative Writing: Fiction	
	317	Creative Nonfiction	
	325	Nature Writing in the West	
	440	Magazine Writing	
All of the following courses:			
	351	Children's Literature	2
	352	English Syntax and Usage	3
	381	Drama of Shakespeare	3
	452	History of the English Language	3
	493	Senior Seminar	3

***English majors may substitute ENG 121 for ENG 102.**

****First year foreign language (6-10 credit hours) OR English 106 (3 credit hours) and Foreign Language 100 (3 credit hours). For International students, English 101 and 102 fulfill the Foreign Language Requirement.**

ENGLISH (ENG)

UNDERGRADUATE COURSES

099 Developmental Writing Skills 3(3-0)
Sentence, paragraph and essay structure. Basic grammar and writing skills. (F,S) (S/U) Does not count toward graduation.

100 English as a Second Language 3(3-0)
Intensive practice in English Language skills with an emphasis on writing for non-native speakers of English. (*)

101 Composition I 3(3-0)
Beginning course in expository writing, emphasizing skills of written expression, organization, and presentation. (F,S,SS)

102 Composition II 3(3-0)
Sequential course to provide intensive consideration of essay development and to introduce procedures and techniques in preparing the referenced paper. Prerequisite: ENG 101. (F,S,SS)

106 (ANTHR 106) Language, Thought and Culture 3(3-0)
Cross-cultural introduction to language processes in human society. (F*)

121 The Writer's Response: Evaluating Literature 3(3-0) Explication of literary texts. Use of evidence in forming evaluations and conclusions about novels, poems and short stories. Introduction to modern literary criticism. Prerequisite: ENG 101 or permission of instructor. (F)

130 Introduction to Literature 3(3-0)
Introduction to the three major literary genres: fiction, poetry, and drama. The main emphasis is on close reading and textual analysis. (*)

161 Careers for English Majors 1(1-0)
Identifies career options and presents employment opportunities for English majors. (*)

203 Composition III 3(3-0)
Intermediate course in expository writings; intensive practice in various academic and practical forms, including essays, articles, and reports. (F)

215 Poetry 3(3-0)
Poetry as a literary genre, survey of major periods and writers of poetry in English. (F)

220 (CS 220) Survey of Chicano Literature 3(3-0)
Survey of outstanding contemporary Chicano works. Literature deals with Chicano themes, including analysis of folklore and myth. (F)

223 Modern World Literature 3(3-0)
Introduction to modern world literature and to international social, political and economic issues through literary works by authors from around the world. (*)

240 Survey of Ethnic Literature 3(3-0)
This course provides an introduction to the literature of four major ethnic groups in the U.S.: Native American, African American, Chicano, and Asian American. (*)

251 Traditional Grammar Theory 3(3-0)
Primarily for non-majors who wish to improve their understanding of how language works, for teacher education majors, and for English majors who want additional background for advanced language courses. Prerequisite: ENG 102. (*)

254 Literature of Science Fiction 3(3-0)
Imaginative literature of fact and fiction, reading, lectures, movies, and television. (*)

260 (WS 260) Women in Literature 3(3-0)
Examines female stereotypes deeply carved in literature and developments toward breaking up these stereotypes; opens the study of literature to feminist thinking, treats both female and male authors. (*)

291 Special Topics (1-3 VAR) (*)

305 Technical and Scientific Report Writing 3(3-0)
Emphasis on discrete professional formats and styles in writing manuals, proposals, government contracts and reports. For upperclassmen in technical and professional fields. Prerequisite: ENG 102, or permission of instructor. (F,S)

310 American Literature I 3(3-0)
Literature from colonial times to 1900, including the growth of naturalism and the rise of Romanticism and Realism. Prerequisite: junior standing or permission of the instructor. (F)

312 American Literature II 3(3-0)
Continuation of ENG 310; literature from 1900 to the present. Prerequisite: junior standing or permission of the instructor. (S)

315 Creative Writing: Poetry 3(3-0)
Introduction to writing poetry. A studio workshop for students to grow in their appreciation of poetic processes. Prerequisite: ENG 102, or permission of instruction. (*)

316 Creative Writing: Fiction 3(3-0)
Introduction to creating character, situation, and overall structure, emphasis on imaginative and real-life portrayal. Prerequisite: ENG 102, or permission of instructor. (*)

317 Creative Nonfiction 3(3-0)
Introduction to writing the reflective essay. (S)

321 American Romanticism 3(3-0)
A study of the major figures in the development of American Romanticism. Prerequisites: ENG 310 and 312, or permission of instructor. (*)

322 American Literary Realism, 1870-1910 3(3-0)
A study of the development of Realism and Naturalism in American literature during the late 19th century and the early 20th century. Prerequisites: ENG 310 and 312, or permission of instructor. (*)

323 Modern American Literature 3(3-0)
A study of major writers' themes, and developments in American literature from the 1910s to the 1960s. Prerequisites: ENG 310 and 312 or permission of instructor. (*)

325 Nature Writing in the West 3(3-0)
Studies in writings about the western landscape an environment by American nature writers; intensive practice in nature writing. (S)

330 Modern European Drama 3(3-0)
Survey of major developments in modern European drama. Prerequisite: ENG 101. (*)

331 Development of the Novel I 3(3-0)
Emphasis on social problems and European influences, focus on trends coming to full development in the 20th century. Includes recent works. (*)

341 Western World Literature I 3(3-0)
Historical and thematic study of major writers from ancient Greece to the Renaissance. (F)

342 Western World Literature II 3(3-0)
Continuation of ENG 341; literature from the Renaissance to the present. Prerequisite: junior standing or permission of the instructor. (S)

351 Children's Literature 2(2-0)
Classic and contemporary children's literature with emphasis on selection and evaluation. (*)

352 English Syntax and Usage 3(3-0)
English usage and language systems, emphasis on forms and functions of language analysis. (*)

360 Literature of England I 3(3-0)
Literature and literary history of England from the Anglo-Saxon period to the Romantic period. Prerequisite: junior standing or permission of the instructor. (F)

362 Literature of England II 3(3-0)
Continuation of ENG 360; literature and literary history of England from the Romantics and Victorians through the 20th-century. Prerequisite: junior standing of permission of the instructor. (S)

363 17th-Century British Literature 3(3-0)
Drama, prose, and poetry of Bacon, Donne, Jonson, Herbert, Milton, Marvel, Pepys, Behn, and others. (*)

364 18th-Century British Literature 3(3-0)
Dryden, Swift, Defoe, Boswell, Johnson, Pope, Fielding, Blake, Austen, Radcliffe, or other major writers. (*)

365 19th-Century British Literature 3(3-0)
Arnold, Tennyson, E. Browning, R. Browning, Eliot, Ruskin, Carlyle, Mill and the poetry of women writers. (*)

381 Drama of Shakespeare 3(3-0)
Shakespeare's dramaturgy and developments of Shakespearean criticism, major histories and tragedies. (*)

391 Special Topics (1-3 VAR)
Prerequisite: ENG 102, or permission of instructor. (*)

412 Literature for Adolescents 2(2-0)
Literature suitable for adolescents, including classical and contemporary authors, and issues in selection and evaluation. (*)

422 Contemporary Literature 3(3-0)
Study of contemporary literary techniques, subject matter, and themes in fiction, drama, and poetry from 1960 to the present. (*)

440 (MACOM 440) Magazine Writing 3(3-0)
Instruction and practice in writing nonfiction magazine articles with emphasis on story research and market selection. Prerequisite: ENG 203 or 317 or permission of instructor. (*)

441 Chaucer and His Age 3(3-0)
Chaucer and his contemporaries in their cultural and historical setting. (*)

452 History of the English Language 3(3-0)
English language from Anglo-Saxon period to present; emphasis on hsitory linguistic and structural changes. Prerequisite: ENG 251, 352, or permission of instructor. (*)

461 Careers for English Majors 1(1-0)
Identifies and explores graduate school and employment opportunities. (*)

481 Literary Criticism 3(3-0)
Traditional and contemporary critical approaches to literature and their applications. (*)

491 Special Topics (1-3 VAR) (*)

493 Seminar 3(3-0)
In-depth analysis of specific topics, themes, authors, and works in American, English or world literature. (*)

494 Field Experience (1-5 VAR)
A semester-long internship. Student performs professional duties using English-related skills required by the cooperating agencies. (*)

495 Independent Study (1-3 VAR)
Directed, intensive study and guidance in studying major literary figures or movements, arranged with the chair of the department. (*)

GRADUATE COURSES

511 Seminar: American Literature 3(3-0)
In-depth analysis of specific topics, themes, authors, and works. Prerequisite: graduate standing. (*)

512 Literature for Adolescents 2(2-0)
Literature suitable for adolescents, including classical and contemporary authors as well as issues in selection and evaluation. Prerequisite: graduate standing. (*)

578 Workshop in the Teaching of Writing 3(3-0)
Theories of composition, methods, sources and resources for teachers of writing. Prerequisite: graduate standing. (*)

591 Special Topics (1-3 VAR)
Prerequisite: graduate standing (*)

595 Independent Study (1-3 VAR)
Directed, intensive study and guidance for studying major literary figures or movements; arranged with the chair of the department. Prerequisite: graduate standing. (*)

FOREIGN LANGUAGES PROGRAM

The Foreign Languages Program offers a bachelor of arts in Spanish (BA) intended to prepare students for public school teaching and certification, for admission to graduate school, and for careers in international organizations, government and business.

Minors in French, Italian, and Spanish complement a wide variety of majors in other disciplines to enhance the students' ability to compete for jobs where knowledge of a foreign language is desirable.

Courses in German, Russian and Comparative Linguistics (listed under FL) are taught each semester. Other foreign languages are offered as permitted by enrollment.

Program Goals for Spanish Majors

- Students will achieve satisfactory levels of proficiency in speaking, listening, reading, writing and culture to be measured by examination prior to admission to the required senior seminar.
- Students will acquire a basic knowledge of the traditions and historical and cultural contexts of the literature of both Latin America and Spain.
- Students will develop the critical, analytical and composing skills in Spanish essential to careers in teaching, business, the media, government and the arts.

Program Goals for Minors in Spanish, French and Italian

Students minoring in French, Italian and Spanish will be required to demonstrate a level of proficiency sufficient to converse comfortably on everyday topics as well as intermediate levels of proficiency in writing, reading and culture.

Majors or minors who fail to complete a course with a grade of C or better are required to repeat the course with a satisfactory grade before proceeding to more advanced offerings.

NOTE:
Any language 101 and 102 may be waived for students participating in the Advanced Placement Program with a grade of 4 or 5 or by satisfactory completion of a departmental exam.

Specific Requirements for the Spanish Major

SPN Courses		Titles	Credits
SPN	201	Spanish Grammar & Composition I	3
	202	Spanish Grammar & Composition II	3
One of the following courses			2
	211	Intermediate Spanish Conversation I	
	212	Intermediate Spanish Conversation II	
All of the following courses:			
	281	Readings in Hispanic Civilizations I	3
	282	Readings in Hispanic Civilizations II	3
	301	Advanced Spanish Grammar & Conversation	3
	302	Advanced Spanish Composition & Conversation	3
	311	Survey of Spanish Literature	3
	312	Survey of Spanish American Literature	3
	360	Literary Theory Trends in Hispanic Literature	3
	493	Senior Seminar	3
Spanish Electives			13
		TOTAL	45

*Incoming students with prior study of Spanish will be placed in the program on the basis of scores on a departmental placement exam administered at the beginning of each semester.

Other Required Courses for Spanish Majors

CS	101	Introduction to Chicano Studies	3
HIST	102	World Civilization 1100 to 1800	3
		OR	
HIST	103	World Civilization Since 1800	3

Additional Requirements for Prospective Spanish Teachers

SPN	311	Survey of Spanish Literature	3
	312	Survey of Spanish American Lit	3
	360	Literary Theory Trends in Hispanic Literature	3
	380	Studies in Spanish Linguistics	2

A course at the 102 level in another Foreign Language.

Specific Requirements for the Spanish Minor

SPN	101	Beginning Spoken Spanish I	5
	102	Beginning Spoken Spanish II	5
	201	Spanish Grammar & Composition I	3
	202	Spanish Grammar & Composition II	3
	211	Intermediate Spanish Conversation I	2
	212	Intermediate Spanish Conversation II	2
	281	Readings in Hispanic Civilizations I	3
	282	Readings in Hispanic Civilizations II	3
		TOTAL	26

Specific Requirements for the French Minor

FRN	101	Beginning Spoken French I	4
	102	Beginning Spoken French II	4
	201	Intermediate French I	4
	202	Intermediate French II	4
French Electives Above 300			7
		TOTAL	23

Specific Requirements for the Italian Minor

ITL	101	Introduction to Italian I	4
	102	Introduction to Italian II	4
	201	Intermediate Italian I	4
	202	Intermediate Italian II	4
Italian Electives Above 300			7
		TOTAL	23

Specific Requirements for Teaching Endorsements in Spanish and French

A minimum of 32 semester credit hours as approved by a departmental adviser.

For teaching endorsement requirements, see the *Center for Teaching, Learning and Research* section of this catalog.

Outcomes Assessment Activities

Assessment of the foreign languages program is the responsibility of the Foreign Languages Program Assessment Committee, consisting of the chair of English and Foreign Languages and three other faculty members. The committee's annual reports evaluating the program and proposing any needed changes are compiled from the following information:

- A central file of course syllabi with representative assignments is maintained by the department for inspection by the committee and other qualified persons.
- Faculty advisers monitor each student's progress towards completing major requirements and meeting the program goals listed in the catalog. Advisers report any problems or deficiencies in the program encountered by the students to the program assessment committee through the department chair.
- All Spanish majors take a senior-year seminar emphasizing professional standards and sharpening the writing and speaking skills students have acquired in other Spanish courses. All students in the seminar will be required to write a senior research paper, one copy of which is submitted to the Program Assessment Committee for review. An exit exam administered prior to admission to the senior seminar tests the students' oral and writing competency and mastery of required reading material.
- The Program Assessment Committee reviews the papers from the senior seminar and the results of the exit exam on an annual basis and prepares an analysis of what is revealed about the program's success.
- The Program Assessment Committee administers a student-satisfaction questionnaire to all senior foreign languages majors and minors each year. A similar questionnaire is sent to recent graduates on a periodic basis.
- The Program Assessment Committee monitors the foreign languages curricula at leading comparable institutions and apprises the department of innovations worthy of consideration.

FOREIGN LANGUAGE (FL)

UNDERGRADUATE COURSES

100 Introduction to Comparative Linguistics 3(3-0)
Basic concepts in linguistics; comparison of languages. (F,S)

101 Introduction to a Critical Foreign Language I 3(3-0)
Study of a foreign language not offered regularly. Different languages are offered when enrollment permits. (*)

102 Introduction to a Critical Foreign Language II 3(3-0)
Prerequisite: FL 101, or permission of instructor. (*)

110 Foreign Language for Travel 1(1-0)
Fundamental vocabulary for basic tourist communication. (*)

270 Foreign Language Field Trip (2-6 VAR)
Communication, lectures by writers, artists, political leaders and specialists. Visits to museums, attendance at movies, theatre and excursions. Prerequisite: permission of instructor. (*)

291 Special Topics (1-3 VAR) (F,S)

494 Field Experience (1-7 VAR)
Communication, lectures by writers, artists, political leaders and specialists. Visits to museums, attendance at movies, theaters and excursions. Prerequisite: two years of college study in the language of the country or countries visited and permission of instructor. (*)

495 Independent Study (1-3 VAR)
Specific themes which address particular problems of literature or civilization. May be repeated for credit with approval of major adviser. Prerequisite: two years of college study of the language used for project. (*)

GRADUATE COURSE

591 Special Topics (1-3 VAR) (*)

FRENCH (FRN)

UNDERGRADUATE COURSES

101 Beginning Spoken French I 4(3-2)
Grammar and pronunciation with aural-oral training to develop skills in understanding and speaking. Written exercises to develop reading and writing skills. Introduction to French culture. (F,S)

102 Beginning Spoken French II 4(3-2)
Students are placed by the department. Practice in oral, aural, reading and writing experiences. Prerequisite: FRN 101 OR equivalent. (F,S)

201 Intermediate French I 4(3-2)
Grammar review, idioms and writing of compositions. Selected readings with oral and written exercises. Prerequisite: FRN 102 or equivalent. (F)

202 Intermediate French II 4(3-2)
Grammar review, idioms and writing of compositions. Selected readings with oral and written exercises. Prerequisite: FRN 201 or equivalent. (S)

301 Advanced French Grammar I 3(3-0)
Systematic review of grammar; presentation of the more sophisticated syntactical patterns to enable students to write correctly. Required for teacher certification. Prerequisite: FRN 202, or permission of instructor. (*)

311 Advanced French Conversation I 3(3-0)
Emphasis on acquisition of vocabulary and idiomatic expressions. Advanced oral practice. Required for teacher certification. Prerequisite: FRN 202, or permission of instructor. (*)

312 Advanced French Conversation II 3(3-0)
Alternate for teacher certification. Prerequisite: FRN 202, or permission of instructor. (*)

341 Masterpieces of French Literature 3(3-0)
Close study of outstanding French works with emphasis on literary forms, critical methods and techniques. Required for teacher certification. Prerequisite: FRN 202, or permission of instructor. (*)

351 French Phonetics and Diction 3(2-2)
French pronunciation: theory, correction and practice of diction and intonation. Phonetic transcription and remedial exercises. Required for teacher certification. Prerequisite: FRN 202, or permission of instructor. (*)

381 French Civilization I 3(3-0)
Geography, art, architecture, economics and social problems, correlated with history from the origins to contemporary France. Required for teacher certification. Prerequisite: FRN 202, or permission of instructor. (*)

382 French Civilization II 3(3-0)
Alternate for teacher certification. Prerequisite: FRN 202, or permission of instructor. (F)

387 Intensive French Study Abroad (6 -12 VAR)
Study of French in an immersion setting abroad preparing the student to become fluent in the language through the study of grammar, civilization and culture. Prerequisite: permission of instruction; FRN 201. (*)

494 Field Experience (1-7 VAR)
Communication, lectures by writers, artists, political leaders and specialists. Visits to museums, attendance at movies, theaters and excursions. Prerequisite: two years college French. (*)

495 Independent Study (1-3 VAR)
Specific themes which address particular problems of literature or civilization. May be repeated for credit with approval of major adviser. (*)

GERMAN (GER)

UNDERGRADUATE COURSES

101 Beginning Spoken German I 4(3-2)
Pronunciation and grammar with oral-aural training. Easy reading and conversation. (F)

102 Beginning Spoken German II 4(3-2)
Students are placed by the department. Practice in oral, aural, reading and writing experiences. Prerequisite: GER 101 or equivalent. (F,S)

201 Intermediate German I 5(5-0)
Review and expansion of first-year grammar. Compositions, reading and discussion of contemporary German life. Prerequisite: GER 102 or equivalent. (*)

202 Intermediate German II 5(5-0)
Prerequisite: GER 201 or equivalent. (*)

301 Advanced German Grammar I 3(3-0)
Prerequisite: GER 202 or permission of instructor. (*)

302 Advanced German Grammar II 3(3-0)
Prerequisite: GER 202 or permission of instructor. (*)

381 German Civilization I 3(3-0)
German geography, culture and history from the beginning to the present. Prerequisite: GER 202 or permission of instructor. (*)

382 German Civilization II 3(3-0)
Prerequisite: GER 202 or permission of instructor. (*)

ITALIAN (ITL)

UNDERGRADUATE COURSES

101 Introduction to Italian I 4(3-2)
Pronunciation and grammar with oral-aural training. Easy reading and conversation. (F,S)

102 Beginning Spoken Italian II 4(3-2)
Students are placed by the department. Practice in oral, aural, reading and writing experiences. Prerequisite: ITL 101 or equivalent. (F,S)

201 Intermediate Italian I 4(3-2)
Reading and conversation in Italian, review of grammar, study of idioms, theme writing in Italian. Prerequisite: ITL 102 or equivalent. (F)

202 Intermediate Italian II 4(3-2)
Prerequisite: ITL 201 or equivalent. (S)

301 Advanced Italian Grammar I 3(3-0)
Linguistic analysis, vocabulary building and composition. Prerequisite: ITL 202 or permission of instructor. (S)

302 Advanced Italian Grammar II 3(3-0)
Linguistic analysis, vocabulary building and composition. Prerequisite: ITL 202 or permission of instructor. (S)

381 Italian Civilization I 3(3-0)
Italian geography, culture and history from the Roman Empire to the present. Prerequisite: ITL 202 or permission of instructor. (F)

382 Italian Civilization II 3(3-0)
Prerequisite: ITL 202 or permission of instructor. (S)

387 Intensive Italian Study Abroad (6-12 VAR)
Study of Italian in an immersion setting abroad preparing the student to become fluent in the language through the study of grammar, civilization and culture. Prerequisite: permission of instructor; ITL 201. *)

494 Field Experience (1-7 VAR)
Communication, lectures by writers, artists, political leaders and specialists. Visits to museums, attendance at movies, theaters and excursions. Prerequisite: 2 years of college Italian. (*)

495 Independent Study (1-3 VAR)
May be repeated for credit with approval of major adviser. (*)

RUSSIAN (RUS)

UNDERGRADUATE COURSES

101 Introduction to Russian I 3(3-0)
Pronunciation, conversation, grammar, alphabet, easy reading and writing. (F)

102 Beginning Spoken Russian II 3(3-0)
Students are placed by the department. Practice in oral, aural, reading and writing experiences. (F,S)

201 Intermediate Russian I 5(5-0)
Grammar and vocabulary. Reading of short stories, oral and written reports. Prerequisite: RUS 102 or equivalent. (*)

202 Intermediate Russian II 5(5-0)
Prerequisite: RUS 201 or equivalent. (*)

211 Russian Conversation 2(2-0)
Intensive practice. Prerequisite: RUS 102 or equivalent. (*)

311 Advanced Russian Conversation 2(2-0)
Intensive practice. Prerequisite: RUS 211 or permission of instructor. (*)

341 Russian Short Story 2(2-0)
Selected short stories. Discussion of ideas, art and authors. Stress on both oral and written work. Prerequisite: RUS 202 or permission of instructor. (*)

SPANISH (SPN)

UNDERGRADUATE COURSES

101 Beginning Spoken Spanish I 5(5-0)
Development of skills in speaking, reading and writing; an introduction to Hispanic Culture. (F,S)

102 Beginning Spoken Spanish II 5(5-0)
Development of skills in speaking reading and writing; an introduction to Hispanic Culture. Prerequisite: SPN 101 or departmental placement test. (F,S)

201 Spanish Grammar and Composition I 3(3-0)
Review of intermediate grammar and practice in writing compositions. Prerequisite: one year of college Spanish or equivalent. (F)

202 Spanish Grammar and Composition II 3(3-0)
Further study of grammar, increased emphasis on composition. Prerequisite: SPN 201 or permission of instructor. (S)

211 Intermediate Spanish Conversation I 2(1-2)
Conversation in small groups divided according to students' fluency. Prerequisite: one year of college Spanish or equivalent. (F)

212 Intermediate Spanish Conversation II 2(1-2)
Conversation in small groups divided according to students' fluency. Prerequisite: one year of college Spanish or equivalent. (S)

281 Readings in Hispanic Civilizations I 3(3-0)
Reading and discussion based on cultures of Spain. Prerequisite: one year of college Spanish or equivalent. (F)

282 Readings in Hispanic Civilizations II 3(3-0)
Reading and discussion based on Hispanic America. Prerequisite: one year of college Spanish or equivalent. (S)

301 Advanced Spanish Grammar and Conversation 3(3-0)
Required of all Spanish majors. Prerequisite: SPN 202. (F)

302 Advanced Spanish Composition and Conversation 3(3-0)
Required of all Spanish majors, except bilingual track. Prerequisite: SPN 301. (S)

311 Survey of Spanish Literature 3(3-0)
A panoramic overview of Castilian literature from the earliest works in the vernacular to the writings of the post-Franco era. Prerequisite: SPN 202. (F)

312 Survey of Spanish American Literature 3(3-0)
An introduction to the literary and cultural texts of Spanish America and their social, political, intellectual, creative and historical implications. Prerequisite: 202. (S)

321 18th and 19th Century Spanish Literature 3(3-0)
The study of representative works of Spanish literature from 1700 to 1898. Prerequisite: SPN 311. (F,O)

322 Spanish American Literature from 1900 to 1950 3(3-0)
Intensive analysis of Spanish American literature of the first half of the twentieth century. Selected readings by Azuela, Quiroga, Rivera, Onetti, Borges, etc. Prerequisite: SPN 312. (F,O)

351 20th-Century Spanish Literature 3(3-0)
Critical reading of selected masterpieces of 20th-Century Spanish literature. Prerequisite: SPN 311. (S,O)

352 Contemporary Spanish American Literature 3(3-0)
Spanish American literature. Works by Carpentier, Cortazar, Neruda, Vallejo, Castellanos, etc. Prerequisite: SPN 312. (S,E)

360 Literary Theory Trends in Spanish and Spanish American Literature 3(3-0)
The application of contemporary theory to the reading of Hispanic literature. Prerequisite: SPN 202. (F)

380 Studies in Spanish Linguistics 3(3-0)
Analysis of phonology and other language patterns crucial to learning Spanish as a second or foreign language. Prerequisite: SPN 202. (S, O)

461 Cervantes 3(3-0)
The study of Cervantes, his major works and the period in which they were written. Prerequisite: SPN 311. (S,E)

462 19th Century Spanish American Literature 3(3-0)
The study of representative 19th Century writers: works by Olmedo Bello, Heredia, Palma, Prieto, Jotabeche, Isaacs, etc. Prerequisite: SPN 312. (F,E)

471 Medieval and Golden Age Spanish Literature 3(3-0)
This course is designed to give an overview of Spanish literature of the Middle Ages and Golden Age, including the evolution of the Spanish language and dominant literary genres. Prerequisite: SPN 311. (F,E)

472 Colonial Spanish American Literature 3(3-0)
An introduction to the literary and cultural texts of Spanish America before Independence. Prerequisite: SPN 312. (S,O)

491 Special Topics (1-3 VAR)
Prerequisite: permission of instructor. (*)

493 Senior Seminar 3(3-0)
In-depth analysis of specific topics, themes, authors, and works in the language literatures and cultures of the Spanish -speaking world. (S)

494 Field Experience (1-7 VAR)
Communication, lectures by writers, artists, political leaders and specialists. Visits to museums, attendance at movies, theaters and excursions. Prerequisite: two years of college Spanish and permission of instructor. (F,S)

495 Independent Study (1-3 VAR)
Specific themes which address particular problems of literature or culture. May be repeated for credit with approval of major adviser. Prerequisite: two years of college Spanish. (F,S)

HISTORY/ POLITICAL SCIENCE/ PHILOSOPHY/CHICANO STUDIES/ GEOGRAPHY DEPARTMENT

Chair: E. Wright
Faculty: Aichele, Berardi, Carter, Driscoll, Loats, Nicholl, Otis, Sandoval, Spade

The programs in history, political science, philosophy, Chicano studies and geography are intended to provide domains of study both for students who desire knowledge for personal enrichment and for students who desire to apply knowledge toward career objectives. Students who major or minor in the fields of the department should expect to develop and refine knowledge of other cultures and the historical and political development of the modern world. Students should also expect to engage in methodical research. Other expectations of students include the ability to prepare rationally cogent papers and the ability to understand political theories, historical movements, and the connections between each.

Departmental programs not only prepare students for occupations in government, business, education, and industry, but also are central to the university's traditional function of transmitting culture from generation to generation.

HISTORY PROGRAM

The major in history leads to the degree of bachelor of arts (BA) and prepares students for careers in teaching, law, government, and private enterprise, as well as entry into graduate programs.

Program Goals

- To provide students with a general knowledge of history and historical methodology;
- To prepare students, through training in communication skills and skills in research methods to gain knowledge of a given area of history; and
- To prepare students to continue personal study and learning about specific subject areas in the discipline on an independent basis.

Expected Student Outcomes

General Requirements

No grade below C is acceptable in the major or minor.

Specific Requirements for the History Major

HIST Courses		Titles	Credits
HIST	101	World Civilization to 1100	3
	102	World Civilization 1100 to 1800	3
	103	World Civilization since 1800	3
	201	United States History I	3

	202	United States History II	3
	300	Historiography	3
	493	Seminar	3
History Electives			15
		TOTAL	36

Secondary Education Track for the History Major

Complete course listing for this track may be obtained from a History Program adviser or from the College of Humanities and Social Sciences office, Psychology 100.

Specific Requirements for the History Minor

HIST Courses		Title	Credit Hours
Nine hours selected from the following courses			**9**
HIST	101	World Civilization	3
	102	World Civilization to 1100	3
	103	World Civilization Since 1800	3
	201	United States History I	3
	202	United States History II	3
	211	Colorado History	3
	PLUS		
	300	Historiography	3
History Electives approved by the minor adviser			9
		TOTAL	21

Outcomes Assessment Activities

- Demonstrated proficiency in writing coherent and accurate essays on specific topics within the discipline, as determined by the history faculty.
- Portfolios, will be maintained for each student who has declared history as a major or minor. Portfolios will include academic transcripts, major papers written for courses in the discipline, co-curricular data, and other pertinent information. The portfolios will be on file in the department chair's office or with the academic adviser. Updated copies of all course syllabi, [handouts, assignments and exams] will be kept in a central file in the department office to enable qualified students to discover how courses are adapted towards program goals.

HISTORY (HIST)

UNDERGRADUATE COURSES

101 World Civilization to 1100 3(3-0)
Cultural and political growth of civilizations from prehistoric times to 1100; emphasis on the unique contributions of independent cultures to world history. (*)

102 World Civilization From 1100 to 1800 3(3-0)
Cultural and political interaction of civilizations from 1100 to 1800; emphasis on common problems and goals of mankind. (*)

103 World Civilization Since 1800 3(3-0)
Cultural and political interaction of civilization since 1800; emphasis on conflict and resolution. (*)

136 (CS 136) The Southwest United States 3(3-0)
This course traces the culture and historical development of the southwestern United States, including cultural contributions of the American Indian and Hispanic peoples. (F)

201 U.S. History I 3(3-0)
United States history from founding of North American colonies to 1877 Reconstruction era. (*)

202 U.S. History II 3(3-0)
United States from 1877 Reconstruction era to contemporary era. (*)

211 Colorado History 3(3-0)
History, government and economic factors important to the settlement and development of Colorado. (*)

246 (CS 246) History of Mexico 3(3-0)
This course surveys the major political, economic, social and cultural developments of Mexico from pre-Columbian times to the present. (S)

295 Independent Study (1-3 VAR)
An individualized program of study designed by ranked, full-time History professor for a promising student. Prerequisite: Permission of Instructor. (*)

300 Historiography 3(3-0)
Enhances student knowledge of historical profession through developing historical research skills. (*)

301 U.S. Emergence: Building a Nation 3(3-0)
The trends, events and people involved in the shaping of the United States and its national character. (*)

305 Development of a World Power (1850-1920) 3(3-0)
The growth of U.S. politically, economically and socioculturally, into a major power. (*)

306 20th-Century America 3(3-0)
United States from the New Deal to the present. (*)

311 History of United States Foreign Policy 3(3-0)
United States foreign policy from the founding of the republic to the present. (*)

362 History of Russia 3(3-0)
Cultural and political development of Russian and Soviet history from 800 to the present; emphasis on impact of the Bolshevik Revolution on history. (*)

372 History of Modern China 3(3-0)
Cultural and political developments in modern China; emphasis on the interplay between Chinese tradition and western challenges. (*)

395 Independent Study (1-3 VAR)
An individualized program of study designed by a ranked full-time Historian for a promising student who has demonstrated ability in a regular History class. Prerequisite: Previous work in History and permission of Instructor. (*)

413 American West 3(3-0)
Role of the individual and the group in the development of the frontier into the 20th century. Prerequisite: permission of instructor. (*)

415 Historical Biography 2(2-0)
Introduction to biography as a form of history. Students select, study and critique the lives of great men and women. (*)

427 (WS 427) Women in Industrializing Europe 3(3-0)
Changes and continuities for European women from the sixteenth century to the present, including work, family, sexuality, and movements for social and political change. Prerequisites: HIST 103 or permission of instructor. (*)

446 History of Empires (500-1500) 3(3-0)
Survey of the rise of great empires of the world, including Arab, Gupta, T'ang, Sung, and Yuan empires to 1500. (*)

447 History of the Decline of Empires (1500-Present) 3(3-0)
Survey of the decline of empires and the impact of European conquest in all areas of the world. WWI and WWII are included in this course. (*)

457 Early Modern Europe 3(3-0)
Important events, movements, and social changes of the early modern period of European history, including the Renaissance, Reformation, Absolutism, the Scientific Revolution, and the Englightenment. (F)

458 Modern Europe 3(3-0)
Important changes and continuities in recent European history, including the effects of the Industrial Revolution, Victorian culture and society, science and technology, rivalries, and fascism. (S)

489 (CS 489) Borderlands 3(3-0)
History of the Mexican cession to the United States from its Indian and Hispanic origins to the present. Prerequisite: CS/HIST 136 or HIST 201 or HIST 202 or HIST 211, or permission of instructor. (*)

491 Special Topics (1-3 VAR)
Prerequisites: junior or senior status with adequate preparation and permission of instructor. (*)

493 (CS 493) Seminar 3(3-0)
Seminar devoted to special topics and issues in history; emphasis on research paper. Prerequisite: advanced standing with a major or minor in history, or permission of instructor. (S)

495 Independent Study (1-3 VAR)
An individualized program of study designed by a ranked full-time Historian for a History major or minor. Prerequisite: History major or minor and permission of Instructor. (*)

498 Internship (3-6 VAR)
For advanced students. Practical experience through internship with museums, libraries with historical collections, and other community organizations. Prerequisites: junior or senior standing and departmental permission. (*)

GRADUATE COURSES

501 American Empire 3(3-0)
The development on the United States as a world power. Prerequisite: graduate standing. (*)

513 Frontier America 3(3-0)
Analysis of the role of the frontier in the development of America. Prerequisite: graduate standing. (*)

558 Modern Europe 3(3-0)
Important changes and controversies in recent European history, including the ffects of the Industrial Revolution, Victorian culture and society, science and technology, rivalries, and fascism. Prerequisite: graduate standing. (S)

589 Borderlands 3(3-0)
History of the Mexican cession to the United States from its Indian and Hispanic origin to the present. Prerequisite: graduate standing. (*)

591 Special Topics (1-3 VAR) (*)

593 Seminar 3(3-0)
Seminar devoted to specific areas and issues in history; emphasis on research paper. Prerequisite: graduate standing (*)

POLITICAL SCIENCE PROGRAM

The major in political science leads to the degrees of bachelor of arts (BA) and bachelor of science (BS), and prepares undergraduates for careers in law, government and politics. Courses in political science also serve to complement the liberal arts core at USC and to prepare students for acceptance into graduate programs leading to professional degrees in law, public administration, or to specialized academic degrees.

While encouraging an exposure to a number of the subfields of the discipline, three areas of emphasis are offered in the political science major: public administration and policy, comparative and international politics, and American political institutions and politics.

Program Goals

To prepare students majoring in the discipline to:

- demonstrate a basic understanding of historical, philosophical and empirical foundations of political science;
- demonstrate a general command of knowledge about the American political system, comparative and international politics, the history of political thought, and standard political science research approaches; and
- demonstrate an ability to continue personal study and learning on an independent basis about specific subjects in the discipline.

To prepare students minoring in the discipline to:

- demonstrate a basic understanding of the nature of the discipline; and

- demonstrate a general knowledge and understanding of the American political system and of comparative and world politics.

Expected Student Outcomes

General Requirements

- Students in the major must complete a minimum of 36 semester credit hours in political science, including 15 hours in the political science core. Students are required to earn a grade of C or better in all courses and to maintain a cumulative GPA of 2.5000 or better.
- Students in the minor must complete a minimum of 24 semester credit hours in political science, including 6 semester credit hours in the political science core. Students are required to earn a grade of C or better in all courses and to maintain a cumulative GPA of 2.5000 or better.
- Electives are selected in accordance with one of four basic course orientations in political science: 1) public administration and policy, 2) American political institutions and politics, 3) comparative and international politics, 4) independently designed emphasis in preparation for graduate or professional education.
- A maximum of six credit hours of POLSC 480, Practicum in Politics and Public Service, may be applied towards the 36 hours required for the major, or the 24 hours required for the minor.
- Depending on individual interests and goals, students are encouraged to take one year of foreign language, courses in statistics, and PHIL 204, Critical Thinking.

Specific Requirements for the Political Science Major

POLSC Courses		Titles	Credits
Political science core (required of all majors)			
POLSC	101	American National Politics	3
	201	Comparative Politics	
		OR	
	202	World Politics	3
	250	Scope and Methods	3
	370	Political Thought	3
	493	Senior Seminar	3
		TOTAL	15

Emphasis in Public Administration and Policy*

POLSC	102	State and Local Government	
		OR	
	103	Urban Politics	3
	330	Introduction to Public Admin	3
	340	Public Policy	3
	490	Practicum in Politics and Public Service	3
MGMT	310	Principles of Management	3
MGMT	320	Organizational Behavior	3
ECON	330	Public Finance (ECON 201/202 Preq.)	3
		TOTAL	21

*Especially appropriate areas of concentration or minors include criminal justice, environmental studies, not-for-profit administration and management, and urban and state politics. See a political science adviser for further information.

Emphasis in Comparative and International Politics

POLSC	201/202	Comparative Politics or World Politics (whichever was not taken in the POLSC Core)	3
	305	International Relations	3
	440	Area Studies: Europe	3
	445	Area Studies: Latin America	3
	450	Area Studies: Asia and the Pacific	3
	455	Area Studies: Africa and the Middle East	3
		Political Science Elective	3
		TOTAL	21

Emphasis in American Institutions and Politics

POLSC	102	State and Local Government	
		OR	
	103	Urban Politics	3
	300	Political Parties and Elections	3
	340	Public Policy	3
	405	American Presidency	3
	411	Legislatures and Legislation	3
	473	American Political Thought	3
		Political Science Elective	3
		TOTAL	21

Secondary Education Track for the Political Science Major

Complete course listing for this track may be obtained from a Political Science Program adviser or from the College of Humanities and Social Sciences office, Psychology 100.

Specific Requirements for the Political Science Minor

POLSC	101	American National Politics	3
	201	Comparative Politics	
		OR	
	202	World Politics	3
Political Science Electives			18
		TOTAL	24

International Studies Minor

The political science program coordinates an international studies minor comprised of the following courses.

Lower Division Requirements 12

POLSC	201	Comparative Politics	3
		OR	
	202	World Politics	3

Six credits of a foreign language at the 200 level or above 6

One three credit elective from the following list . . . 3

Lower Division Electives

ART	101	Art History Survey I	3
ART	102	Art History Survey II	3
ART	103	Art History Survey III	3
BIOL	121	Environmental Conservation	6
BIOL	121L	Environmental Conservation Lab	3
ENG	341	Western World Literature I	3
ENG	342	Western World Literature II	3
ENG	223	Modern World Literatue	3
GEOG	103	World Regional Geography	3
HIST	101	World Civilization to 1100	3
HIST	102	World Civilization from 1100-1800	3
HIST	103	World Civilization from 1800	3
CS	246	History of Mexico	3
PHIL	120	Non-western World Religions	3
SPN	281	Readings in Hispanic Civilizations I	3
SPN	282	Readings in Hispanic Civilizations II	3

Upper Division Requirements 12

POLSC	305	International Relations	3
POLSC	491	International Organizations	3
		OR	
An area course:			
POLSC	440	Europe	3
POLSC	445	Latin America	3
POLSC	450	Asia and the Pacific	3
POLSC	455	Africa/Middle East	3

Six credits of electives from the following list 6

Upper Division Electives

BUSAD	475	International Business	3
ENG	330	Modern European Drama	3
FRN	341	Masterpieces of French Literature	3
FRN	381	French Civilization I	3
FRN	382	French Civilization II	3
HIST	362	History of Russia	3
HIST	372	History of Modern China	3
ITL	381	Italian Civilization I	3
ITL	382	Italian Civilization II	3
MKTG	350	International Marketing	3
PHIL	313	History of Philosophy Seminar I	3
PHIL	314	History of Philosophy Seminar II	3
PHIL	315	History of Philosophy Seminar III	3
POLSC	440	Area Study: Europe	3
POLSC	445	Area Study: Latin America	3
POLSC	450	Area Study: Asia and the Pacific	3
POLSC	455	Area Study: Africa/Middle East	3
SPN	311	Survey of Spanish Literature	3
SPN	351	20th Century Spanish Literature	3
SPN	462	19th Century Spanish American Literature	3
SPN	471	Medieval and Golden Age Spanish Literature	3

Outcomes Assessment Activities

- Demonstrated proficiency in writing coherent and accurate essays on specific topics within the discipline, as determined by the political science faculty.
- Portfolios will be prepared for incoming freshmen and/or transfer students with two or more years before graduation. Portfolios will include academic transcripts, major papers written for courses in the discipline, co-curricular data, and other pertinent information. The portfolios will be on file in the office office of the department chair. Updated copies of all course syllabi, handouts, assignments and exams will be available from a central file in the office of the department chair to enable qualified students to discover how courses are adapted towards program goals.

PRE-LAW PROGRAM

Although a political science major, or minor, is not required, students interested in attending law school should consult the department's pre-law adviser as early as possible.

POLITICAL SCIENCE (POLSC)

UNDERGRADUATE COURSES

101 American National Politics 3(3-0)
Basic processes in American politics. Principles and structure of national governments. (*)

102 State and Local Government and Politics 3(3-0)
Behavioral aspects, government organization and interrelationships of state and local politics, relations with federal government and other states. Special attention to Colorado government. (S)

105 Understanding Human Diversity 3(3-0)
Americans live in a complex and diverse society. This course examines the nature, impact and strategies for dealing with diversity in personal and social contexts. (*)

150 The Human Experience 3(3-0)
Human efforts to organize societal activity and relationships for group development and survival through political, economic, and social institutions. (F)

200 Understanding Human Conflict 3(3-0)
Study of conflict: personal, social, institutional, ethnic, and international. Conflict resolution and management also will be addressed. (*)

201 Comparative Politics 3(3-0)
Introduction to comparative political analysis through study of selected political systems. Emphasis on basic political functions and processes in developed countries. (F)

202 World Politics 3(3-0)
Study of political problems and issues which face the world. Emphasis on conflict, arms transfers, economic change and world commons. (S)

250 Scope and Methods in Political Science 3(3-0)
Introduction to the discipline of political science and its subfields as well as the basic methods and tools of research in political science. (*)

260 Power: Political and Economic Systems 3(3-0)
This course focuses on the idea of power. Included are basic concepts, philosophies, and effects of political and economic power. (*)

300 Political Parties and Elections 3(3-0)
Examines the organization and function of political parties and the roles of political parties, pressure groups, and public opinion in American elections. Prerequisite: POLSC 101. (F)

305 International Relations 3(3-0)
Study of international systems and organizations. Special emphasis on the principal sources of conflict and the study of conflict management. Prerequisite: POLSC 201 or 202. (S)

320 Legal Research Methods 3(3-0)
Introduction to the basic reference materials of legal research. Use of law libraries, interpretation of statutes and judicial decisions and preparation of legal memoranda. (*)

321 American Constitutional Development 3(3-0)
Political context of the origin of the U.S. Constitution, Supreme Court procedures, court decisions defining uses and scope of the powers of the court, the Congress and the presidency. Prerequisite: POLSC 101. (F)

322 American Constitutional Law 3(3-0)
Survey of American constitutional law; emphasis on Supreme Court decisions defining the extent and limits and of governmental authority and the rights and liberties of individual citizens. Prerequisite: POLSC 321 or permission of instructor. (S)

323 Criminal Law and Procedure 3(3-0)
Content and characteristics of criminal law and procedures. Roles and functions of persons and agencies involved in judicial administration. Prerequisite: POLSC 101. (F)

324 Family Law 3(3-0)
Survey of legal issues concerning domestic relations; Supreme Court decisions and legislative enactments. Prerequisites: POLSC 101 and 320. (S)

330 Introduction to Public Administration 3(3-0)
Role of public bureaucracy in modern society. Principles and processes of public administration, personnel management and administrative responsibility. Prerequisite: POLSC 101. (*)

340 Public Policy 3(3-0)
Introduces the process of formulation, implementation, and evaluation of public policy. Examines program development and execution in the context of political, economic, and institutional environments. Prerequisite: POLSC 101. (*)

370 Political Thought 3(3-0)
Systematic survey of political thought from beginnings in Ancient Near East to present. Emphasis on contributions relevant to contemporary political theory. Prerequisite: previous work in political science or philosophy. Prerequisite: POLSC 250 or permission of instructor. (F)

395 Independent Study (1-3 VAR)
Independent study involving specialized reading and research. Prerequisite: permission of instructor. (*)

405 The American Presidency 3(3-0)
Analysis of the powers and politics of the American presidency and those who have held the office. Presidential decision making, legislative and judicial relationships, elections. Prerequisite: POLSC 101. (S)

411 Legislatures and Legislation 3(3-0)
Organization, function, and process of American legislatures at national, state and local levels. Party organization, legislative procedures, lobbying and legislative reorganization. Prerequisite: POLSC 101. (S)

440 Area Study: Europe 3(3-0)
Introduction to the political, economic and military structures and processes of the region. (*)

445 Area Study: Latin America 3(3-0)
Introduction to the political, economic, and military structures and processes of the region. (*)

450 Area Studies: Asia and The Pacific 3(3-0)
Introduction to the political, economic and military structures and processes of the region. (*)

455 Area Study: Africa/Middle East 3(3-0)
Introduction to the political, economic and military structures and processes of the region. (*)

473 American Political Thought 3(3-0)
Development of American segment of modern political thought from colonial times to present. Interrelationship of individuals, ideas and institutions shaping modern American political responses. (*)

480 Practicum in Politics and Public Service (3-6VAR)
For advanced students. Practical experience as interns in governmental agencies, political parties or legal offices. Prerequisite: departmental permission. (*)

491 Special Topics (1-3 VAR)
Independent study involving seminars and research. Prerequisites: junior or senior status with adequate preparation and approval of instructor. (*)

492 Research (1-3VAR) (*)

493 Seminar (1-3 VAR)
Application of research methods and materials. Emphasis on in-depth study of specific political topics. Involves writing and discussion of research papers at advanced level. Prerequisite: POLSC 250 and 370. (S)

PHILOSOPHY PROGRAM

The minor in philosophy complements majors and careers in politics, law, literature, health care, business, technologies, and the liberal arts.

Program Goals

- To provide individual courses as well as an academic minor in general philosophy;
- To help students understand and appreciate the great ideas from philosophy, to see such ideas in relation to the cultural settings, to develop the abilities to think, speak, and write in a clear, analytical manner, and to allow students to develop a viable philosophy of life.

Expected Student Outcomes

General Requirements

Students who wish to minor in philosophy must complete a minimum of 21 credit hours of approved philosophy courses with grades of C or better.

Specific Requirements for the Philosophy Minor

PHIL Courses		Titles	Credits
PHIL	101	Intro to Problems in Philosophy	
		OR	
	102	Philosophical Literature	
		OR	
	200	Plato and the Greeks	3
	201	Classics in Ethics	3
	205	Deductive Logic	3
	313	History of Philosophy Seminar I	3
	314	History of Philosophy Seminar II	3
	315	History of Philosophy Seminar III	3
	401	Epistemology Seminar	
		OR	
	402	Metaphysics Seminar	3
		TOTAL	21

Outcomes Assessment Activities

- Students must demonstrate proficiency in writing defenses of theses on philosophical topics as determined by the philosophy faculty. A file of representative samples of philosophical writing by students will be retained to document to qualified persons that students are accomplishing the goal of developing the ability to think and write in a clear analytical manner.

PHILOSOPHY (PHIL)

UNDERGRADUATE COURSES

101 Introduction to Problems in Philosophy 3(3-0)
Some of the crucial problems in philosophy, with solutions from the major philosophers. (*)

102 Philosophical Literature 3(3-0)
Philosophical literature that focuses on such questions as what is the nature of reality, how do we know what we know, and for what kind of life should we strive. (*)

103 Civilization 1(1-0)
Kenneth Clark's acclaimed film series "Civilization." Thirteen 50-minute films exploring the concept of civilization from the primary viewpoint of the arts and philosophy. (*)

108 Philosophy of Religion I 1(1-0)
A philosophical scrutiny of some of the main concepts of the world's religious traditions through discussion on the thought of outstanding philosophers and theologians with respect to such topics as the existence of God and other supernatural entities, the problem of evil, theodicies, etc. (*)

109 Philosophy of Religion II 1(1-0)
A philosophical study of some of the main concepts of the world's religious traditions through discussions on the thought of outstanding philosophers and theologians with respect to such topics as life after death, metempsychosis, palingenesis, anabiosis, etc. (*)

110 Philosophy of Religion III 1(1-0)
A philosophical examination of some of the main concepts of the world's religious traditions through discussions on the thought of outstanding philosophers and theologians with respect to such topics as libertarianism, prescient persons, thaumaturges and thaumatology, etc. (*)

120 Non-western World Religions 3(3-0)
A study of major world religions including Buddhism, Confucianism, Hinduism, Islam, Jainism, Sikhism, Shinto, Taoism, Zoroastrianism. (*)

200 Plato and the Greeks 3(3-0)
Introduction to the realm of philosophical thinking through a study of select dialogues by Plato. Special emphasis on "The Republic." (*)

201 Classics in Ethics 3(3-0)
The logic of objective norms and standards of "good" vs. "bad," "right" vs. "wrong," from major philosophers and classics of literature. Application to contemporary issues. (F,S)

204 Critical Reasoning 3(3-0)
Survey of the general principles of correct reasoning with emphasis on the role of language in the reasoning process. Major concern with induction and fallacy detection. (*)

205 Deductive Logic 3(3-0)
Study of the principles and methods used to distinguish valid from invalid patterns of deductive reasoning. Especially useful for students in computer- or mathematics-related fields. (F,S)

291 Special Topics (1-3 VAR)
Students who have an area of special interest are encouraged to contact the department. Special topics and authors of philosophical interest. May be repeated for 12 credits maximum.(F,S)

295 Independent Study (1-3 VAR)
Specialized study of select persons, ideas, schools, historical trends or problems in philosophy. May be repeated up to 9 credits. Prerequisite: permission of instructor. (*)

303 Philosophy of Science 3(3-0)
Study of the philosophical issues underlying scientific knowledge. Special consideration to the logical structure of scientific theory. Prerequisite: PHIL 205 or a strong background in experimental science. (#)

305 Medical Ethics 3(3-0)
Current problems of medical ethics such as experimentation on humans, genetic counseling, right to die, abortion, and allopathic medicine. (S)

313 History of Philosophy Seminar I 3(3-0)
Greek, Latin, and medieval philosophy. (S)

314 History of Philosophy Seminar II 3(3-0)
Early modern period (Renaissance) in Western philosophy from Hobbes to Hume. Emphasis on the continental ratio nalists and the British empiricists. (S)

315 History of Philosophy Seminar III 3(3-0)
Later modern period in philosophy beginning with Kant and continuing to the beginning of the 20th century. (S)

401 Epistemology Seminar 3(3-0)
Study of the philosophical principles and issues relevant to various claims of knowledge. Prerequisites: PHIL 205, 313 and 314. (*)

402 Metaphysics Seminar 3(3-0)
Ontology, cosmology, space, time, causality, change, freedom, and other topics of metaphysics. Prerequisites: PHIL 313 and 314. (F)

491 Special Topics (1-3 VAR)
Special topics and authors of philosophical interest. May be repeated for 12 credits maximum. More advanced than PHIL 291. Students who have an area of special interest are encouraged to contact the department. (F,S)

495 Independent Study (1-3 VAR)
Specialized study of select persons, ideas, schools, historical trends or problems in philosophy. May be repeated up to 9 credits. Prerequisite: permission of instructor. (*)

GRADUATE COURSES

505 Advanced Philosophical Psychology 3(3-0)
Advanced philosophical study of the concept of mind, of human consciousness, of such mental phenomena as emotions, and of the dynamics of how people think. Prerequisite: graduate standing. (*)

CHICANO STUDIES PROGRAM

The Chicano studies minor complements majors and careers in law, sociology, social work, languages, education, government, business and other disciplines. Courses offer unique undergraduate preparation for those who seek entrance to graduate studies in law, humanities or the social sciences.

Students who plan to live and work in the American Southwest or aspire to careers that involve relations in the American continents are likely to be well served by Chicano Studies courses. The interdisciplinary approach emphasizes history and cultural studies, and selected courses provide the student with in-depth knowledge of specific aspects of the Chicano community.

Program Goals

- To provide individual courses as well as a minor to fulfill the unique role and mission of the University of Southern Colorado.
- To offer an individually designed minor in support of students' majors.

Expected Student Outcomes

General Requirements

- Students in Chicano studies courses will display an adequate and measurable knowledge of the subject matter within the course.
- Students in Chicano studies courses will develop an understanding of the relationships of ethnic groups within American society by viewing the academic study of Chicanos as a paradigm for the study of other ethnic groups.

- Students must earn a C or better in all courses applicable to the minor.

Specific Requirements for the Chicano Studies Minor

Twenty-four hours: 15 required, nine elective. The student will choose three of the first four classes, and the seminar.

CS Courses		Titles	Credits
CS	101	Introduction to Chicano Studies	3
	136	The Southwest United States	3
	205	La Chicana	3
	246	History of Mexico	3
	493	Seminar in Chicano Studies	3
Electives			9
		TOTAL	24

Electives may be selected from Chicano studies courses, several of which are cross-listed with other departments, or by approval of the Chicano studies coordinator, from courses in such areas as Spanish, history, psychology, sociology, and social work, among others.

CS	220	Survey of Chicano Literature	3
	230	Chicano: Social and Psych Study	3
	291	Special Topics	1-3
	303	Chicano Labor History in the U.S.	3
	335	Health in the Chicano Community	3
	489	Borderlands	3
	495	Independent Study	1-3

Outcomes Assessment Activities

- Upon identification of a Chicano studies minor, the Chicano studies coordinator will initiate a "Chicano studies program" file on the student, with the student's permission. The file will contain the program of design, the student's orientation (research interest, general interest, personal interest, employment interest, etc.), a history of the student's academic progress, the substantive research paper completed in CS 493, a record of meetings with the coordinator, and other examples of the student's academic performance.
- At three-, seven-, and 10-year intervals, the graduate will be contacted and asked to evaluate the program's influence.
- In addition to course syllabi, the Chicano studies coordinator will retain a copy of examinations administered in Chicano studies courses for a 10-year period. At five-year intervals, the coordinator and the faculty will determine if consistency and academic integrity are being maintained by reviewing instruments of cognitive measurement, student perception forms and trends, alumni comments, and comparative analysis of grade distribution patterns.

CHICANO STUDIES (CS)

UNDERGRADUATE COURSES

101 Introduction to Chicano Studies 3(3-0)
Overview of the historical, political and socio-cultural experience of the Chicano. (F,S,SS)

136 (HIST 136) The Southwest United States 3(3-0)
This course traces the culture and historical development of the southwestern United States, including cultural contributions of the American Indian and Hispanic peoples. (F)

205 (WS 205) La Chicana 3(3-0)
A social cultural and historical overview of the Chicana experience and contributions. (S)

220 (ENG 220) Survey of Chicano Literature 3(3-0)
Survey of outstanding contemporary Chicano works. Literature deals with Chicano themes, including analysis of folklore and myth. (S)

230 Chicano: Social and Psychological Study 3(3-0)
Social and psychological forces faced in the Chicano community. (*)

240 Chicana Writers (WS 240) 3(3-0)
Survey of Chicana writers from the early 1900's to the present. Along with the literature, aspects of history, sociology and politics will be incorporated. (*)

246 (HIST 246) History of Mexico 3(3-0)
This course surveys the major political, economic, social and cultural developments of Mexico from pre-Columbian times to the present. (S)

250 (MUS 250) Ballet Folklorico I 3(2-2)
This is a beginning course designed to acquaint students with the different regional "danzas" and "bailes" from Mexico, both on a theoretical and practical basis. (F,S)

291 Special Topics (1-3 VAR)
Topics in Chicano studies, identified by student/faculty interest. Prior work in Chicano studies desirable. (*)

303 Chicano Labor History in the United States 3(3-0)
Chicano experience in the American labor market from 1848 to present. (*)

335 Health in the Chicano Community 3(3-0)
Health care traditions and current health care systems in the barrio. (*)

401 (WS 401) Third World Feminisms 3(3-0)
This course focuses on Third World women's challenging views of global feminism and feminist representations of other women. (*)

450 (MUS 450) Ballet Folklorico II 3(2-2)
This is an intermediate course designed to acquaint students with the different regional "danzas" and "bailes" from Mexico,both on a theoretical and practical basis. Prerequisite: CS 250 and permission of instructor. (F,S)

489 (HIST 489) Borderlands 3(3-0)
History of the Mexican cession to the U.S. from its Indian and Hispanic origins to the present. Prerequisite: CS/HIST 136 or HIST 211 or HIST 201 or HIST 202, or permission of instructor. (*)

491 Special Topics 3(3-0)
Topics in Chicano Studies, identified by student/faculty interest. Prior work in Chicano Studies desirable.

493 Seminar (1-3 VAR)
Various problems within the realm of Chicano studies; in-depth, integrated approach. Prerequisite: CS 101. (S)

495 Independent Study (1-3 VAR)
Special topics dealing with the Chicano and society. Prerequisite: CS 101. (F,S,SS)

GEOGRAPHY (GEOG)

UNDERGRADUATE COURSES

101 Physical Geography 3(3-0)
Three Earth spheres: the hydrosphere (oceanography, hydrologic cycle); the atmosphere (meteorology and climatology) and the lithosphere (geology, internal/external processes) are emphasized and examined. (F,S,SS)

102 Cultural Geography 3(3-0)
Emphasis on cultural regions, cultural diffusion, and cultural landscape. Major themes are culture, population, agriculture, language and religion, ethnicity, urbanization, industry, and political geography. (F/S/SS)

103 World Regional Geography 3(3-0)
The interconnectivity and interrelationship of the world regions by stressing physical, economic development, agricultural, cultural and population characteristics. Strengthening of one's mental world map. (F,S)

104 Urban Geography 3(3-0)
The geography of urbanization, including problems, theories and comparisons between urban areas in Western and other cultures. Selected cities will be used as well as case studies. (*)

MASS COMMUNICATIONS DEPARTMENT

Chair: Orman
Faculty: Anderson, Ebersole, Joyce, Miller, Mullen, Pavlik

The mass communications department supports the polytechnic role and mission of the university through the introduction and use of technology, while maintaining deep traditional ties within the College of Humanities and Social Sciences. The department offers a pragmatic and professionally oriented program aimed at preparing majors for successful careers in the media and related areas while fostering the essential ethical and aesthetic foundations to make those careers meaningful.

The major in mass communications leads to the degrees of bachelor of arts (BA) and bachelor of science (BS). A degree in mass communications leads to careers in reporting, writing, editing, broadcast news direction and production, public relations, advertising, video production, and interactive media.

Emphasis areas, or sequences, require 21 to 22 additional credit hours of course work beyond the mandatory 24-credit hour core for completion of the major. Selected professional courses may have course specific fees. Please consult your adviser.

USC TODAY, the university's weekly newspaper, is published each Wednesday of the regular academic year as a laboratory tool of the mass communications department. The newspaper serves the students, faculty and staff of USC in addition to the Pueblo community. Editorial and management positions are awarded each semester after review of all applications from qualified students.

The newspaper is funded through advertising revenue. The newspaper's adviser is a member of the mass communications faculty.

KTSC-FM is licensed to USC as an educational radio station by the Federal Communications Commission. Operated by the mass communications department, the 10,000-watt station serves a 50-mile radius of the campus. Advanced mass communications students are involved in daily programming, production, and news. Prerequisites: Declared major or minor in mass communications, MACOM 224 and 260.

USC's Public Broadcasting System affiliate, KTSC-TV, provides laboratory training and on-campus jobs for television students. Prerequisites: Declared major or minor in mass communications, MACOM 226 and 260.

Department Goal

The primary goal of the mass communications department is to offer a pragmatic and professionally oriented program aimed at preparing majors for successful careers in the media and related areas and to prepare students for graduate study as appropriate.

Expected Student Outcomes

General Requirements

- Majors are required to specialize in one of four emphasis areas offered by the department:
  - News-Editorial - Journalism
  - Advertising
  - Telecommunications (TV or Radio Production)
  - Public Relations

- Successful mass communications majors will demonstrate sufficient knowledge, comprehension and analytical skills by the ability to evaluate specific communication events in the proper context of their emphasis area.
- Each mass communications faculty member will keep, in the mass communications department's central file, a set of course outlines or syllabi that list the objectives and skills achieved during the semester. This central pool of materials describes the detailed expectations and accountability elements for the mass communications major on a course-by-course basis.
- Together with faculty advisers, students enrolled in the mass communications program should complete all required lower-division courses (100-200 level) by the end of the sophomore year in the program. Upper-division students (300-400 level) must have special permission to enroll in lower-division courses.
- Writing skills form the basic platform for the entire program of mass communications at USC. Students are required to maintain a minimum grade-point average of 2.5000 through a prerequisite sequence of writing classes beginning with MACOM 201, 202, 222, and 223 as appropriate to the selected emphasis area. Courses must be satisfactorily completed before advanced work in an emphasis area will be encouraged.
- Consistent with general USC policy, no student enrolled in mass communications courses may accumulate unexcused absences, or arrive late for scheduled classes more often than five percent of the total number of scheduled contact hours without penalty.
- The mass communications department believes that grades are valid quantitative indicators of student performance. Students' GPAs in the major or minor will be used by emphasis area advisers for both formative and summary evaluations of majors and minors.
- Students graduating with a degree in mass communications must achieve a total grade-point average of 2.5000 within the major. The GPA will be calculated on all courses with the MACOM prefix appearing on the student's transcript.
- Students graduating from the University and majoring in Mass Communications should pass all MACOM courses with a grade of C or better, but students will not be required to repeat D grades as long as the 2.5000 MACOM grade point average is achieved.
- While it is necessary for mass communications majors and minors to meet the minimum GPA standards set by the department and the university, it is expected that graduates will exceed these standards.

The Mass Communications Major:

Specific Requirements for the Mass Communications Major Core

MACOM Courses		Titles	Credits
MACOM	101	Media and Society	3
	110	Career Orientation	1
	201	News Writing	3
	216	Advertising	3
	265	History of Journalism	3
	280	Public Relations	3
	411	Journalism Law and Ethics	5
	493	Mass Media Seminar	3
		TOTAL	24

Specific Requirements for the Emphasis in Telecommunications (Radio Production Track)

MACOM Courses		Titled	Credits
MACOM	222	Broadcast News Writing	3
	223	Radio-TV Script Writing	3
	224	Broadcast Announcing	3
	250/350	Media Lab/Radio (variable) (Prerequisite MACOM 224, 260)	3
	260	History/Reg of Telecom	3
	320	Broadcast Programming	3
	425	Audience Research Methods	3
		TOTAL	21 + 24 Core = 45

Specific Requirements for the Emphasis in Telecommunications (Television Production Track)

MACOM Courses		Titles	Credits
MACOM	223	Radio-TV Script Writing	3
	226	Introduction to TV Production	4
	260	History/Reg of Telecom	3
	326	Advanced TV Production	4
	425	Audience Research Methods	3
	426	TV Documentary Production	5
		TOTAL	22 + 24 Core = 45

Specific Requirements for the Emphasis in Public Relations

MACOM Courses		Titles	Credits
MACOM	202	Feature Writing	3
	311	Copy Editing and Makeup	3
	421	PR Case Problems	3
	422	PR Campaigns	3

	423	Writing for Public Relations	3
	425	Audience Research Methods	3
MACOM Electives			3
		TOTAL	21 + 24 Core = 45

Specific Requirements for the Emphasis in Advertising

MACOM Courses		Titled	Credits
MACOM	302	Advertising Writing	3
	316	Advertising Campaigns	3
	425	Audience Research Methods	3
MKTG	340	Principles of Marketing	3
MACOM Electives			9
		TOTAL	21 + 24 Core = 45

Specific Requirements for the Emphasis in News-Editorial Journalism

MACOM Courses		Titled	Credits
MACOM	202	Feature Writing	3
	250/350	Media Lab	1-2
	305	News Reporting	3
	311	Copy Editing and Makeup	3
	445	Reporting Public Affairs	5
MACOM Electives			6
		TOTAL	21 + 24 Core = 45

Co-curricular Requirements

1) The thrust of the mass communications department is pragmatic, therefore, all students are encouraged to be involved in opportunities provided by participation in the following media labs:

   - Advertising
   - Desktop Publishing and design
   - USC TODAY newspaper
   - KTSC-FM (campus radio)
   - KTSC-TV (campus PBS affiliate)
   - USC Communique (alumni/foundation news letter)

The media labs provide the necessary entry to strongly suggested field experience programs. Field placements are not required, but students may earn up to eight credit hours in such internships.

2) In addition, mass communications majors and minors are encouraged to join and participate in additional co-curricular activities on campus and through community and university projects.

Specific Requirements for the Mass Communications Minor

Students desiring a minor in mass communications must complete 21-credit hours approved by their minor area advisor and MUST include MACOM 101, 110 and 201. The minor may not include more than 3 credits of laboratory work. Minors should provide work samples for inclusion in an academic portfolio. Minors must achieve no less than a 2.000 GPA in MACOM-prefix courses.

Outcomes Assessment Activities

Each mass communications major or minor is required to complete a diagnostic writing sample during the first year on campus and preferably during the assessment period established in Career Orientation, (MACOM 110). Writing samples will be evaluated through blind review, scored, and returned to the student. A copy of the writing sample will initiate the student's academic portfolio.

Each mass communications major or minor is required to maintain an academic portfolio of all salient work or projects completed while in the department.

The expectations and requirements for the academic portfolio are described for each student during the Career Orientation class required of all mass communications majors and minors. The portfolios are proctored by the emphasis advisers and progress is monitored during advisement. The department chair, in collaboration with emphasis advisers, will review and evaluate a selection of portfolios in the spring of each year to track student progress.

The mass communications department insists that the academic portfolio demonstrate a pattern of sustained academic growth and development of the major and minor, appropriate to the student's emphasis area.

A student may be required to participate in an exit interview during his or her final semester. Students are selected on a random basis from enrollments in the department's capstone course, Mass Media Seminar.

The academic portfolio should reflect the quality and level of intellectual and scholarly work undertaken by the student while in the department, relative to the qualitative, quantitative, ethical, legal and aesthetic dimensions of the field. The appropriateness of the content is dictated by the student's emphasis area and is prescribed by the individual's adviser.

All academic portfolios will remain in the department's central files for two years after the student's graduation, to enable qualified persons to determine how well student performance measures up to program goals. The graduate can claim the material after that period. The department will continue every effort to track graduates in order to gather further indicators of success.

During 1998-99, the department will be developing Integrated Communications offerings in advertising and public relations. See your adviser for details.

MASS COMMUNICATIONS (MACOM)

UNDERGRADUATE COURSES

101 Media and Society 3(3-0)
The development, functions and effects of the mass media in relation to the individual, society and the global community. (F,S,SS)

110 Career Orientation 1(1-0)
Survey of career opportunities in the communication industry with emphasis on the mass media and related agencies. Required for majors and minors in mass communications. (F,S)

201 News Writing 3(3-0)
Instruction and practice in basic news writing including the public's right to know, newsworthiness, and writing style. Required of all majors and minors. Word processing skills required. Prerequisites: ENG 101 and 102. (F,S, SS)

202 Feature Writing 3(3-0)
Reporting campus events via interpretive articles, news features, straight features, seasonal stories and in-depth articles. Prerequisite: MACOM 201. (F,S)

211 Desktop Publishing 3(1-4)
To develop computer publishing and design skills with varied software packages and within PC and Mac environments, preparing students for publication design and editing careers. Prerequisite: word processing literacy. (F,S,SS) Fee required.

212 Advanced Desktop Publishing 3(2-2)
An advanced study of electronic publishing and design skills, within the Windows and MacIntosh environments, preparing students for advertising & publication design, production and editing careers. Prerequisite: MACOM 211 or permission of instructor. Fee required. (S)

216 Advertising 3(3-0)
Principles of advertising on local and national levels for newspapers, magazines, radio and television. (F,S)

222 Broadcast News Writing 3(3-0)
Preparation of copy for radio/television news reports, interviews and commentary. (F,S)

223 Radio-TV Script Writing 3(2.2)
Techniques, styles, formats, treatments, outlines, and scenarios for script forms used in the electronic media are covered with emphasis upon preparing scripts for production. Prerequisite: MACOM 201. (F,S)

224 (SPCOM 224) Broadcast Announcing 3(3-0)
Study and application of the principles of oral communication to radio and television announcing. (F,S)

226 Introduction to Television Production 4(2-4)
Concepts, skills and technical facilities involved in production of television programs. Emphasis on the understanding of the technical equipment used in program broadcasting. Prerequisite: MACOM 101. (F,S) Fee required.

235 (WS 235) Women and Media 3(3-0)
The historical and cultural implications of the mass media's portrayal of women and the extent of their media participation from colonial to contemporary times. (*)

250 Media Lab 1(0-2)
A laboratory course for students involved in university publications and campus broadcast operations. May be repeated for up to four credits. Prerequisite: permission of instructor. (F,S,SS)

251 Sports Writing and Statistics 3(2-3)
Study and practical application of sports writing and statistics; emphasis on press box experience at intercollegiate athletic events. Repeatable once. Prerequisites: MACOM 201 and 202. (*)

260 History and Regulation of Telecommunications 3(3-0)
The historical and legal structures of radio, television, cable, and new technologies of mass communciations are explored with emphasis upon inventors, innovation, and social development. Prerequisite: MACOM 101. (F,S)

265 History of Journalism 3(3-0)
History of the press in America from colonial times to the present day; political and economic impact of newspapers and magazines during the 19th and 20th centuries. (F,S)

280 Public Relations 3(3-0)
Historical, theoretical and practical approach to contemporary public relations focusing on the public relations process, communication strategies, publics,and organizational distinctions. (F,S)

301 Editorial Writing 3(3-0)
Study of editorial page management and policy, with emphasis on preparation of editorials, columns and critical reviews. Prerequisites: MACOM 201 and 202. (*)

302 Advertising Writing 3(3-0)
Copy writing essentials and formats for print, broadcast and direct mail advertising. Emphasis on developing writing techniques for practical application in both retail and product advertising. Prerequisite: MACOM 216 or permission of instructor. (S)

305 News Reporting 3(3-0)
Course covers the principles and practices, skills and ethics of professional beat and general assignment news reporting – specifically in-depth interviewing and other news gathering techniques. Prerequisite: MACOM 201 and 202. (F,E)

311 Copy Editing and Makeup 3(3-0)
News evaluation, copyreading, rewriting, headline writing, page makeup and similar duties of the newspaper copy editor. Prerequisites: MACOM 201 and 202. (F)

316 Advertising Campaigns 3(3-0)
Practical application of planning and development of advertising campaigns for print and broadcast media; emphasis on the use of creative strategy. Prerequisites: MACOM 216 and 302, or permission of instructor. (F)

317 Advertising Strategy 3(3-0)
Seminar emphasizing tactics and strategies of advertising planning, utilizing media techniques, marketing posture and creative media buying. Prerequisites: MACOM 216 and 316. (S)

318 Retail Advertising 3(3-0)
The need, direction and potential of local advertising and the media associated with retail communication, with emphasis on retail campaign design, client services and problem solving. Prerequisites: MACOM 216 and 316. (*)

319 Direct Advertising 3(3-0)
An advanced course stressing the philosophy, objectives, content and development of direct response advertising, particularly direct mail and computer-generated messages. Prerequisite: MACOM 216. (F)

320 Broadcast Station Programming 3(3-0)
Program types used on broadcast stations; analysis of network structure and local station programs; ethical requirements in programming. Prerequisites: MACOM 222, 224 and 226. (*)

326 Advanced Television Production 4(2-4)
Single-camera location production and video post-production: emphasis on location videography, location audio, location lighting, videotape editing and audio post-production. Prerequisite: MACOM 226. (S) Fee required.

330 (WS 330) Gender and Film 3(3-0)
A discussion course which examines gender roles in theatrical and documentary film while considering the perspective of producers, actors and spectators and salient film theories. Prerequisite: upper division standing in MACOM or Women's Studies. (*)

336 Intro to Interactive Media 3(3-0)
An overview of interactive media systems and the computer applications used to create interactive media content. Prerequisite: MACOM 101, CIS 101 or 110. (F)

346 Non-Linear Editing 3(2-2)
Concepts, skills, and application of non-linear video editing technology and digital video post-production with an emphasis on broadcast industry standard techniques. Prerequisite: MACOM 326. (S)

350 Advanced Media Lab (2-4 VAR)
An advanced laboratory course for students involved in university publications and campus broadcast operations. May be repeated for up to 8 credits. Prerequisites: junior or senior standing; permission of instructor. (F,S,SS)

401 Photographic Procedures 4(3-2)
Practical course in pictorial reporting; emphasis on spot news features, picture stories and photographic essays. Prerequisite: junior or senior standing. (S)

402 Photojournalism 4(3-2)
Practical course in pictorial reporting; emphasis on spot news feature, picture stories and photographic essays. Prerequisite: MACOM 401 (*)

411 Journalism Law and Ethics 5(5-0)
Ethical and legal factors of mass communications related to the structure and substance of laws at federal, state and local levels, including freedoms, restraints and contemporary issues. Prerequisite: junior or senior standing. (F,S)

415 Theories of Mass Communications 3(3-0)
Application of information theories to mass communication problems. Nature of the communication process in groups and between mass media and audiences. Contribution of theoretical concepts to solving specific problems. Prerequisite: senior standing or permission of instructor. (*)

421 Public Relations Case Problems 3(3-0)
Emphasis on analyzing public relations scenarios involving non-profit, private sector and government organizations and their impact on such publics as employees, consumers, voters, and volunteers. Prerequsites: MACOM 201, 202 and 280. (F)

422 Public Relations Campaigns 3(3-0)
Student produced independent public relations plans for non-profit, private sector, and government organizations. Emphasis on conceptual and practical knowledge related to all aspects of the public relations process. Prerequisites: MACOM 311 and 421. (S)

423 Writing for Public Relations 3(3-0)
A specialized course in persuasive writing techniques in different formats. Emphasis is on print and electronic news releases, public service announcements, brochures, newsletters, speeches, and proclamations. Prerequisite: MACOM 280. (S)

425 Audience Research Methodology 3(3-0)
Generalized research methodology course. Effective and appropriate research tools to define and describe various publics contained within the mass audience. Emphasis on sampling practices, encoding and interpretation of results. Pragmatic task activities via Nielson, Arbitron, SRDS, content analysis and related data sources. (F,S)

426 TV Documentary Production 5(3-4)
Actual experience in planning, scripting and producing documentary video production on locations throughout southeastern Colorado for broadcast and public service agencies. Prerequisite: MACOM 326. Fee required. (F)

440 (ENG 440) Magazine Writing 3(3-0)
Instruction and practice in writing nonfiction magazine articles, with emphasis on story research and market selection. Prerequisites: MACOM 201 and 202. (*)

445 Reporting Public Affairs 5(4-3)
Instruction and practice in reporting public affairs, including crime and the courts, and news originating in city and county governments, state legislature, and school boards. Interpretive and investigative reporting skills. Attendance at public meetings required. Prerequisites: MACOM 201 and 202. (S,O)

450 Film Criticism in the Media 3(3-0)
The role and function of the film critic in television and print journalism, with emphasis on writing the critical review. Prerequisite: senior standing. (S)

470 (SW 470) Non-Profit Communication 3(3-0)
Introduction to the world view issues and practical aspects of not-for-profit organizations. Prerequisite: senior standing or permission of instructor. (SS)

490 Special Projects 3(0-3)
Individualized instruction within a special interest area, under supervision of a member of the department. Repeatable once. Prerequisite: junior or senior standing, or permission of instructor. (F,S,SS)

491 Special Topics (1-3 VAR)
Prerequisite: junior or senior standing, or permission of instructor. (F,S)

493 Seminar 3(3-0)
Seminar devoted to special problems in mass media; emphasis on interrelationships of media, understanding media, and the role of criticism. Prerequisite: senior standing. (F,S)

494 Field Experience (3-10VAR)
A semester-long internship. Student performs the professional duties required by the cooperating commercial mass medium, business or public service agency. May be taken for a maximum of 8 hours. Prerequisite: junior or senior standing, minimum of 30 hours in major, or permission of program chair. (F,S,SS)

495 Independent Study 2(0-2)
Prerequisite: junior or senior standing, or permission of instructor. (F,S)

GRADUATE COURSE

591 Special Topics (1-3 VAR)
Prerequisite: graduate standing. (*)

MUSIC DEPARTMENT

Chair: Beck
Faculty: Brewer, Cedrone, Chi, Duncan, King, Markowski, Muller

It is the mission of the music department to instill in students an understanding of both traditional and technological musical approaches as a basis for aesthetic, ethical, social, academic and cultural ways of thinking, creating/composing, improvising, performing and researching. The major leads to a degree of bachelor of arts (BA) with multiple emphasis areas: music education (K-12), music performance, and various liberal arts focus areas. Relevant skills, which provide excellent preparation for professional careers in teaching, the music industry, performance, composition, multi-media and music technology are emphasized. The department has been accredited by the National Association of Schools of Music since 1963.

Department Goals

- To educate students in the fields of music performance, education, theory, history and technology, and various focus areas of the ever-changing music industry.
- To develop increased aesthetic, global, and multicultural awareness, and the capacity to evaluate diverse music activities. Currently, two professional music tracks and multiple liberal arts focus areas address the above goals: professional degree in music education, professional degree in music performance, liberal arts degree in music. Under the liberal arts degree, the following are offered as career oriented tracks: conducting, church music, community musician, electro-acoustic/experimental music, multi media/music technology, recreation/ management, and music/ business.
- The music curriculum prepares students with a knowledge of the various methodological systems contained within the broad field of music education and a knowledge of current and emerging pedagogical trends and paradigms directly affecting the teaching and performance of music. Students attend a variety of performances and are exposed to a diversity of musical experiences during their studies at the University. A minor in music is also available.

Expected Student Outcomes

General Requirements

- Students are required to complete all major and minor courses with a grade of C or better and to maintain a cumulative GPA of 2.5000 or better.
- A BA degree with an emphasis in music education K- 12, music performance of the various liberal arts tracks are excellent preparation for a wide variety of careers and a large number of graduate programs, including those of major universities and professional schools and conservatories. Music majors must complete the department's MUS 110 Career Planning in Music course and design an individualized career plan prior to the beginning of the senior year. The course also assists music minors in career choices.
- The ability to think across disciplines contributes significantly to the educational experience. Music majors must successfully complete an approved minor or area of concentration in a discipline other than music with a cumulative GPA of 2.5000 or better. For the music education emphasis, education is the appropriate minor.

- Literacy and quantitative skills are prerequisite to advanced study or careers. Appropriate academic music courses for majors will require students to demonstrate the abilities to compose, sequence and perform musical compositions at a computer/synthesizer workstation and to demonstrate basic word-processing skills.
- The attainment of minimum performance skills is required to participate successfully in an ever-changing and competitive world. The minimum *Performance Standards*, published by the USC music department, provide representative examples of music literature and repertoire and must be successfully completed for each of the musical areas of concentration. In addition, **all music majors** will be required to complete successfully the piano proficiency requirement.
- Knowledge of specific subject areas, as identified by the Colorado Department of Education and recommended by the National Association of Schools of Music, in music education, music theory, music history, music technology, and music performance will be measured through outcomes-testing. An organized portfolio for each student will be maintained by the music department.

Specific Requirements for the Music Major

MUS Courses		Titles	Credits
MUS	105	Intro to Music and Computers	1
	110	Career Planning In Music	1
	118	Music Appreciation	3
	161/162	Applied Major	4
	147/147	Functional Piano Class/ Proficiency	2
	170-4;182	Major Ensemble (4 semesters)	4
	185	Symposium (4 semesters) (S/U)	0
	201/201L	Theory I/Lab I	4
	202/202L	Theory II/LabII	4
	261/262	Applied Major	4
	301/301L	Music Theory III/Lab III	4
	302/302L	Theory IV/Lab IV	4
	305	Computer and Electronic Technology in Music	1
	321/322	Music History/Form I, II	6
	349	Conducting I, Choral	2
	361/362	Applied Major	4
	370-4;382	Major Ensemble (2 semesters)	2
	385	Symposium (2 semesters) (S/U)	0
	400	Orchestration	3
		TOTAL	53

Additional Specific Requirements for the Music Education Major K-12 (Professional Track)

MUS	144	Woodwind Class	1
	145	Brass Class	1
	186	Guitar Class I	1
	241	String Class	1
	242	Percussion Class	1
	246	Voice Class	1
	350	Conducting II, Instrumental	2
	352	Teaching Mus in the Elem School	1
	377	Materials & Tech of Teaching Choral Music	1
	378	Materials & Tech of Teaching Instrumental Music	1
	382	Lab Band	1
	385	Symposium (1 semester) (S/U)	0
	461	Applied Major	2

Two additional semester hours are required of piano K-12 majors.

For Piano Majors: MUS	347		2
		TOTAL	14-16

For the teaching endorsement requirements for K-12, see the *Center for Teaching, Learning and Research* section of this catalog.

Additional Specific Requirements for the Music Performance (Professional Track)

MUS	382	Lab Band	1
	350	Conducting II, Instrumental	2
	370-4;382	Major Ensemble (2 semesters)	2
	385	Symposium (2 semesters) (S/U)	0
	461/462	Applied Music	4
	384	Junior Recital	1-4
	484	Senior Recital	1-5
For Piano Majors:			
MUS	324	Piano Literature	2
	347	Piano Pedagogy	2
		TOTAL	15/22

Additional Specific Requirements for the Music Performance (Liberal Arts Track)

Upper-division Music Electives		12/14
	TOTAL	12/14

Specific Requirements for the Music Minor

110	Career Planning In Music	1
118	Music Appreciation	3
147	Functional Piano Class	1
170-174;182	Two semesters of large ensemble	2
185	Symposium (4 semesters)	0
201/201L	Theory I/LabI	4
202/202L	Theory II/Lab II	4
263	Applied Minor Lesson	1
264	Applied Minor Lesson	1
363	Applied Minor Lesson	1
364	Applied Minor Lesson	1
349	Conducting I, Choral OR	
350	Conducting II, Instrumental	2
370-374;382	Two semesters of large ensemble	2
	TOTAL	23

Co-curricular Requirements

Prior to graduation, students must document evidence of participation in student music organizations, musical performance groups, music-related employment or experiences, or other activities related to the program of study in music.

Outcomes Assessment Activities

- Students must prepare a senior music thesis/writing project and give a performance recital or composition recital to a committee of peers and faculty no later than their penultimate semester of enrollment. The music thesis/ writing project and/or musical compositions must be bound and the recital must be recorded for inclusion in the music department's library collection.
- Students must document proof of having submitted for juridical criticism a minimum of three different projects and/or recitals before the end of classes in their final semester of enrollment.
- Advisers will supervise the development of portfolios for a cross section of music majors. Portfolios will contain evidence of the projects and recitals, and relevant curricular and co-curricular activities.

MUSIC (MUS)

UNDERGRADUATE COURSES

100 Fundamentals of Music 3(3-0)
An in-depth study of the elements and basic principles that relate directly to the structure and function of musical composition. (*)

105 Introduction to Music and Computers 1(1-0)
Introduction to MIDI with MacIntosh and PC computer platforms (DOS/Windows), assorted equipment, and software dedicated to composing, sequencing, digital recording, performing and printing music. (*)

110 Career Planning in Music 1(1-0)
Identifying career options in music and creating a personalized educational program.(*)

118 Music Appreciation 3(3-0)
Significant musical compositions, composers and historical eras; analysis and description of music forms and terms; includes women composers and multi-cultural issues. (*)

119 How to Read Music 1(1-0)
To enable the non-music major or minor to acquire the fundamentals of notation; to apply the principles of notation to music performance. (*)

120 Jazz and Folk Music 3(3-0)
Beginning and development of jazz and folk music in the United States. (*)

126 Introduction to Opera 3(3-0)
A survey of operas performed by major opera companies today. (*)

144 Woodwind Class 1(0-2)
Techniques employed and problems confronted in teaching and playing woodwind instruments. For K-12 music education students. (*)

145 Brass Class 1(0-2)
Techniques employed and the problems confronted in teaching and playing brass instruments. For K-12 music education students. (*)

147 Functional Piano Class 1(0-2)
For students with little or no background in keyboard instruments. Explores the basic fundamentals of piano playing. Additional rehearsals and performance activities may be required. (*)

161 Applied Music Major 2(0-1)
In-depth study of the performance practices of keyboard, brass, woodwind, percussion, string instrument, or voice. One hour per week symposium attendance required. (*)

162 Applied Music Major 2(0-1)
Continuation of 161. One hour per week symposium attendance required. (*)

163 Applied Music Minor 1(0-.5)
One-half hour per week private lesson designed for music minors or music majors studying a second instrument. One hour per week symposium attendance required. (*)

164 Applied Music Minor 1(0-.5)
A continuation of MUS 163. One hour per week symposium attendance required. (*)

170 Band 1(0-2.5)
Prerequisite: permission of instructor. (*)

171 Choir 1(0-2.5)
Prerequisite: permission of instructor. (*)

172 Piano Ensemble 1(0-2.5)
Prerequisite: permission of instructor. (*)

173 Guitar Ensemble 1(0-2.5)
Ensemble specializing in the performance of appropriate guitar literature. May be repeated for credit. Additional rehearsals and performance activities may be required. Prerequisite: permission of instructor. (*)

174 Orchestra 1(0-2.5)
Ensemble specializing in the performance of appropriate string chamber music literature. Additional rehearsals and performance activities may be required. Prerequisite: permission of instructor. (*)

175 Private Lesson 1(0-.5)
Applied music study for the non-music major. Prerequisite: permission of instructor. (*)

176 Flute Choir 1(0-2.5)
Ensemble specializing in the performance of appropriate flute literature. May be repeated for credit. Prerequisite: permission of instructor. (*)

182 Lab Band 1(0-2)
A concert band in which students of varied performance backgrounds can gain experience in performance with an instrumental ensemble. (*)

185 Symposium 0(0-1)
Required course for all majors and minors, student performance, both solo and ensemble, faculty and guest lectures, clinics, demonstrations and public performance preparation. (F/S) (S/U)

186 Guitar Class I 1(0-2)
For the non-musician. Application of both melodic and chordal (rhythmic) media; introduction to the basic folk music of America. Also for K-12 music education students. Prerequisite: permission of instructor. (*)

187 Guitar Class II 1(0-2)
For the student with slight knowledge of the instrument. Finger-picking techniques and chordal harmonization; chords covering the entire spectrum of the instrument. Prerequisite: MUS 186 or permission of instructor. (*)

188 Jazz Band 1(0-2.5)
Open to all regularly enrolled university students by audition. May be repeated for credit. Prerequisite: permission of instructor. (*)

189 Brass Choir 1(0-2.5)
Explores special brass literature from all style periods. May be repeated for credit. Prerequisite: permission of instructor. (*)

192 Percussion Ensemble 1(0-2.5)
Explores unique percussion literature. May be repeated for credit. Prerequisite: permission of instructor. (*)

193 Small Ensemble 1(0-2.5)
For students desiring to perform in a small group other than the major ensemble. (*)

201 Theory I 3(3-0)
A study of diatonic relationships in four-part homophonic and contrapuntal forms of 18th century styles. Analysis and application of the concepts of Baroque perofrmance practice. Prerequisites: MUS 100 or test-out. Co-requisite: MUS 201L. Prerequisite: MUS 102. Corequisite: MUS 201L. (*)

201L Theory I Lab 1(0-2)
Keyboard harmony, sight singing, ear training, playing, singing and discriminatory listening to music toward the ends of developing concepts of melody harmony and rhythm. Co-requisite: MUS 201. (*)

202 Theory II 3(3-0)
Continuation of MUS 201. Use of chromatic harmonic principles employed in the late Baroque and Classical Styles. Analysis and application of these principles to performance practice. Prerequisite: MUS 201. Corequisite: MUS 202L. (*)

202L Theory II Lab 1(0-2)
Keyboard harmony, sight, singing and ear training. Prerequisite: MUS 201. Corequisite: MUS 202. (*)

210 Electronic Music 3(3-0)
Scientific and aesthetic practices employed in sound recording studio and electronic music. Experience with various types of synthesizers. Several computer music software programs are introduced. (*)

241 String Class 1(0-2)
Techniques employed and problems confronted in teaching string instruments. For K-12 music education students. (*)

242 Percussion Class 1(0-2)
Techniques employed and problems confronted in teaching and playing percussion instruments, tuned and untuned. For K-12 music education students. (*)

246 Voice Class 1(0-2)
Fundamental approach to beginning techniques of singing presented in a group situation. For K-12 music education students. (*)

250 (CS 250) Ballet Forlklorico I 3(2-2)
This is a beginning course designed to acquaint students with the different regional "danzas" and "bailes" from Mexico, both on a theoretical and practical basis. (F,S)

261 Applied Music Major 2(0-1)
In-depth study of performance practices of keyboard, brass, woodwind, percussion or string instruments. One hour per week symposium attendance required. Prerequisite: MUS 162. (*)

262 Applied Music Major 2(0-1)
Continuation of MUS 261. One hour per week symposium attendance required. Prerequisite: MUS 261. (*)

263 Applied Music Minor 1(0-.5)
One-half hour per week private lesson designed for music minors or music majors studying a secondary instrument. One hour per week symposium attendance required. (*)

264 Applied Music Minor 1(0-.5)
A continuation of MUS 263. One hour per week symposium attendance required. (*)

275 Beginning Jazz Improvisation 2(2-0)
For students with little or no background in performing jazz. Explores the basic fundamentals of playing jazz. May be repeated for lower-division credit. (*)

276 Jazz Improvization I 2(2-0)
Continuation of MUS 275. May be repeated for lower-division credit. (*)

291 Special Topics (1-3 VAR) (*)

301 Theory III 3(3-0)
A contunation of MUS 202. Applications of chromatic and altered harmonies of the Romantic, post-Romantic and pre-modern compositions within functional harmonic idioms. Prerequisites: MUS 201 and 202. Corequisite: MUS 301L. (*)

301L Theory III Lab 1(0-2)
Development of keyboard skills, keyboard harmony, sight singing and ear training exercies to accompany appropriate analytical/compositional techniques. Prerequisite: MUS 202, 202L. Corequisite: MUS 301. (*)

302 Theory IV 3(3-0)
A continuation of MUS 301. A harmonic study of the emergence of 20th century compositional techniques from chromatic functional harmonic schemes. Prerequisites MUS 301 and 301L. Corequisite MUS 302L. (*)

302 Theory IV Lab 1(0-2)
Continuation of MUS 201L. Prequisites MUS 301 and 301L. Corequisite: MUS 302. (*)

305 Computer and Electronic Technology in Music 1(0-2)
Continued study of computer hardware, MIDI hardware, and software involved in composing, sequencing, digital recording, performing and printing music. Expansion of MIDI: introduction to multimedia. Prerequisites: MUS 105, 201, 202 or permission of instructor. (*)

321 Music History I 3(3-0)
A comprehensive survey of music history and forms from the Medieval Era, with consideration of ancient sources, through the Baroque Era and Pre-Classic Style. Prerequisite: MUS 118, 201, 201L, 202, 202L. (*)

322 Music History II 3(3-0)
A comprehensive survey of music history and forms from the Classic Era through the present. Prerequisites: MUS 118, 201, 201L, 202, 202L. (*)

324 Piano Literature 2(2-0)
Survey of piano literature from the 18th-century to the present. (*)

347 Piano Pedagogy 2(2-0)
Introduction to the practices in teaching private and class piano. (*)

349 Conducting I, Choral 2(2-0)
Techniques and methods of conducting choral music. (*)

350 Conducting II, Instrumental 2(2-0)
Techniques and methods of conducting instrumental ensembles. Prerequisite: MUS 349. Corequisites: MUS 182 or 382, or MUS 378. (*)

351 Principles of Music in the Elementary School 1(1-0)
A lecture course dealing with the principles and methods of teaching music in the elementary school, for the elementary education major. (*)

361 Applied Music Major 2(0-1)
Continuation of MUS 262 for the junior music student. One hour per week symposium attendance required. Prerequisite: MUS 262. (*)

362 Applied Music Major 2(0-1)
Continuation of 361. One hour per week symposium attendance required. Prerequisite: MUS 361. (*)

363 Applied Music Minor 1(0-.5)
One-half hour per week private lesson designed for music minors or music majors studying a second instrument. One hour per week symposium attendance required. (*)

364 Applied Music Minor 1(0-.5)
Continuation of MUS 363. One hour per week symposium attendance required. (*)

370 Band 1(0-2.5)
Continuation of MUS 170. May be repeated for credit. Prerequisite: MUS 170 or permission of instructor. (*)

371 Choir 1(0-2.5)
Continuation of MUS 171. May be repeated for credit. Prerequisite: MUS 171 or permission of instructor. (*)

372 Piano Ensemble 1(0-2.5)
Continuation of MUS 172. May be repeated for credit. Prerequisite: MUS 172 or permission of instructor. (*)

373 Guitar Ensemble 1(0-2.5)
Continuation of MUS 173. May be repeated for credit. Prerequisite: MUS 173 or permission of instructor. (*)

374 Orchestra 1(0-2.5)
Ensemble specializing in performance of appropriate string chamber literature. Continuation of MUS 174. May be repeated for credit. Prerequisite: MUS 174 or permission of instructor. (*)

376 Flute Choir 1(0-2.5)
Continuation of MUS 176. May be repeated for credit. Prerequisite: MUS 176 or permission of instructor. (*)

377 Materials and Techniques of Teaching Choral Music 1(0-.5)
Comprehensive study in materials, techniques, methods and problem-solving necessary for the teacher of choral music in the public schools. Prerequisites: MUS 144, 145, 186, 241, 242, and 246. (*)

378 Materials and Techniques of Teaching Instrumental Music 1(0-.5)
Comprehensive study of materials, methods, and problem solving techniques for the teacher of instrumental music in the public schools. Prerequisite: MUS 144, 145, 186, 241, 242, 246. (*)

382 Lab Band 1(0-2)
A concert band in which students of varied performance backgrounds can gain experience in performance with an instrumental ensemble. May be repeated for credit. Prerequisite: MUS 182. Corequisite: MUS 350 or 378. (*)

383 Percussion Ensemble 1(0-2.5)
Continuation of MUS 192. May be repeated for additional credit. Prerequisite: MUS 192 or permission of instructor. (*)

384 Junior Recital-Professional Track (1-4 VAR)
Preliminary recital of major applied music study, with public performance. Prerequisite: five semesters, or equivalent, of major applied study. (*)

385 Symposium 0(0-1)
Required course for all majors and minors, student performance, both solo and ensemble, faculty and guest lectures, clinics, demonstrations and public performance preparation. (F/S) (S/U)

388 Jazz Band 1(0-2.5)
Continuation of MUS 188. May be repeated for credit. Prerequisite: MUS 188 or permission of instructor. (*)

389 Brass Choir 1(0-2.5)
Continuation of MUS 189. May be repeated for credit. Prerequisite: MUS 189 or permission of instructor. (*)

393 Small Ensemble 1(0-2.5)
For students desiring to perform in a small group other than the major ensemble. (*)

400 Orchestration 3(3-0)
Techniques of scoring for instrumental combinations. Prerequisites: MUS 201, 201L, 202, 202L, 301, 301L, 302, and 302L. (*)

420 Counterpoint 2(2-0)
A re-creative course in 16th-, 18th- and 20th-century contrapuntal styles. Composing music in two, three and four voices as appropriate to the three periods. Prerequisite: MUS 202. (*)

421 Analytical Techniques 2(2-0)
A study of form and style in music in a historical context. Analysis of music from several style periods, Middle Ages into the 20th-century. (*)

430 Practicum in Music I 2(0-4)
For the advanced music student to practice the teaching of music by assisting in the teaching of applied music groups within the department. (*)

431 Practicum in Music II 2(0-4)
Continuation of MUS 430. (*)

450 (CS 450) Ballet Folklorico II 3(2-2)
This is an intermediate course designed to acquaint students with the different regional "danzas" and "bailes" from Mexico, both on a theoretical and pracital basis. Prerequisite: MUS 250 and permission of instructor. (F,S)

461 Applied Music Major 2(0-1)
Continuation of MUS 362 for the senior music student. One hour per week symposium attendance required. Prerequisite: MUS 362. (*)

462 Applied Music Major 2(0-1)
Continuation of MUS 461. One hour per week symposium attendance required. Prerequisite: MUS 461. (*)

463 Applied Music Minor 1(0-.5)
One-half hour per week private lesson designed for music minors or music majors studying a second instrument. One hour per week symposium attendance required. (*)

464 Applied Music Minor 1(0-.5)
A continuation of MUS 463. One hour per week symposium attendance required. (*)

484 Senior Recital-Professional Track (1-5 VAR)
Culmination of applied music study, with public performance. Prerequisite: Completion of Junior Recital MUS 384, seven semesters or equivalent of applied study. (F,S) (*)

491 Special Topics (VAR 1-4)
Prerequisite: permission of instructor. (F,S,SS)

495 Independent Study (1-4 VAR) (*)

GRADUATE COURSES

501 Special Methods in Music Education 2(2-0)
Combination of lecture and lab appropriate to the project. For graduate students. In-depth study of techniques and materials for teaching music in the elementary and middle school. Involvement in research and practical application of approved methods. Prerequisite: graduate standing. (*)

591 Special Topics (VAR 1-3)
Prerequisite: graduate standing. (*)

593 Seminar (VAR 1-3)
Practical application of current music techniques to secondary teaching. Prerequisite: graduate standing. (*)

PSYCHOLOGY DEPARTMENT

Chair: S. Krinsky
Faculty: Cameron, Frankmann, Hernandez, R. Krinsky, Kulkosky, Levy, Madrid, Mo, Post-Gorden, Yescavage

The bachelor's degree in psychology offers students an opportunity to gain deeper insight and understanding into human behavior and of how it can be useful for career, advanced training, personal, and professional life experiences. The psychology major emphasizes both RESEARCH, through which fundamentals of behavior are learned, and PRACTICE through which that knowledge is applied in helping to solve human problems, Both normal and abnormal behavior are studied. Although many employment opportunities exist for bachelor's degree holders, students who seek careers as professional psychologists should consider studies at the graduate level.

Psychology is the study of thoughts, feelings, and behaviors in humans and animals. The bachelor's degree program in psychology at USC offers a diverse curriculum providing the student with an overview of the major subdisciplines of psychology. Requirements provide students with exposure to several of the subdisciplines in psychology along with the opportunity for students to select courses to fit their personal needs or interests. The major in psychology leads to a bachelor of arts (BA) or bachelor of science (BS) degrees. Through psychology, a student can enhance their career opportunities and gain an academic grounding

for professional and graduate training. Students are encouraged to take advantage of many opportunities in the psychology department including career-related field placements, research, and independent studies. Research facilities are available and students have the opportunity to be involved with faculty in applied research activities.

There is a local chapter of Psi Chi, the National Honor Society in Psychology, at USC which encourages students to maintain excellence in scholarship. Students are encouraged to participate in both Psi Chi and the Psychology Club.

Expected Student Outcomes

- Psychology graduates should have factual knowledge about significant theories, issues, and methods of inquiry. They should be able to compare the major theoretical perspectives represented in psychology.
- Psychology graduates should have acquired the skills needed to comprehend basic psychological concepts such as critical thinking, statistical thinking, the need for control groups, not confusing correlation with cause, and identifying valid and invalid conclusions based on empirical evidence.
- Graduates should be able to read and write complex prose to comprehend journal articles, and to present a coherent and persuasive argument on a psychological topic.
- Graduates should have skills of information gathering and synthesis including appropriate use of library materials and the ability to derive conclusions after surveying a variety of sources.
- Psychology graduates should be able to demonstrate an understanding of theoretical biases, especially as they relate to minority groups and sexist thinking.
- Students should gain practical experience in the form of relevant volunteer activities, field experience, work experience, or research assistantships.

Requirements

A total of 42 hours in psychology is required for the major.Each psychology major **must** consult a faculty adviser who will assist in selecting additional hours of psychology courses to complete the major.

Basic Core Requirements

PSYCH Courses		Titles	Credits
PSYCH	100	General Psychology	3
	201	Introduction to Data Analysis	3
	202	Data Analysis Methods	2
	301	Intro to Psych Experimentation	3
	302	Psychology Experimentation Methods	2
	401	History & Systems of Psychology	3
Psychology Emphasis 12, Electives 5; and Breadth 9			26
		TOTAL	42

Breadth Requirement

Students must select one upper division course from each of the three emphasis areas (educational/ developmental, mental health and experimental) for a minimum total of nine hours.

Emphasis Area

Psychology majors may choose one of three emphasis areas. Students electing an emphasis must complete 12 credit hours from the courses listed in that area.

Emphasis Area I
Educational/Developmental Psychology
(Select 12 credits)

PSYCH	205	Sport Psychology	3
	251	Infancy, Childhood & Preadolescence	3
	252	Adolescence, Adulthood & Aging	3
	335/335L	Motivational/Lab	4
	342	Educational Psychology	3
	351	Psychology of Exceptional Individual	3
	353	Theory & Research in Development	3
	465	Behavior Modification	3

Emphasis Area II
Mental Health (Select 12 credits)

PSYCH	231	Marriage, Family and Relationships	3
	311	Theories of Personality	3
	362	Abnormal Psychology	3
	381	Principles of Psychological Testing	4
	463	Psychopathology of Childhood	3
	464/464L	Counseling and Psychotherapy/Lab	4
	465	Behavior Modification	3
	475	Group Process	3
	484	Diagnosis and Assessment	3
	494	Field Experience	3-6

Emphasis Area III
Experimental (Select 12 credits)

PSYCH	314	Environmental Psychology	3
	315	Organizational & Administrative Psych	3
	331/331L	Physiological Psychology/Lab	4
	334/334L	Perception/Lab	4
	336/336L	Learning/Lab	4
	337/337L	Memory and Cognition/Lab	4
	352	Social Psychology	3
	410	Advanced Data Analysis	3
	466	Psychology of Biofeedback	3

Specific Requirements for the Psychology Major

- A minimum grade of C in all psychology courses counting toward the major.

- A minimum of 24 credits of upper-division coursework in psychology.
- A maximum of six credit hours of field experience and/or individual projects may be applied towards the 35 hours required.

Specific Requirements for the Psychology Minor

- Twenty credits of psychology, which must include PSYCH 100 and nine credits of upper-division coursework. Credits in PSYCH 494 and 496 do not count toward the minor. A maximum of three credits of PSYCH 495 may count towards the minor if the project undertaken is research based.
- A minimum grade of C in all psychology courses counting toward the minor.

Career/Employment for Psychology Majors

Psychology is a diverse field with hundreds of career paths. Some specialties, like caring for mentally ill people, are familiar to most of us. Others, like studying how we know and remember things, are less well known.

Across the nation, psychology is the second most popular undergraduate major, though many may not be interested in psychology as a career. Only 10 percent pursue graduate training. Most find jobs in administrative support, public affairs, education, business, sales, service industries, health, the biological sciences, and computer programming. With a bachelor's degree in psychology they work as employment counselors, correction counselor trainees, interviewers, personnel analysts, probation officers, and writers.

Psychology majors cite courses in the principles of human behavior as especially important to life after college. Additional insight gained from these courses into what motivates people to perform at their peak helps them, whether they are functioning as parents at home, coaching athletics, or managers on the job.

Training in the scientific method - the need to do thorough, objective research, analyze data logically, and put forth the findings with clarity - stands psychology majors in good stead as they pursue future careers. Employers find that psychology graduates also possess strong people skills, and psychology majors also value these skills themselves.

PSYCHOLOGY (PSYCH)

UNDERGRADUATE COURSES

100 General Psychology 3(3-0)
Overview of the field of psychology including learning, perception, motivation, emotion, heredity, personality, development, abnormal and psychotherapy. (F,S,SS)

105 Understanding Human Diversity 3(3-0)
Americans live in a complex and diverse society. This course examines the nature, impact and strategies for dealing with diversity in personal and social contexts. (*)

110 Improving Memory 2(2-0)
Practical guide to understanding and improving memory. Emphasis on the application of study techniques for memory improvement. Exercises designed to increase memory ability. (S)

151 Introduction to Human Development 3(3-0)
Survey of human development through life span. (F,S,SS)

201 Introduction to Data Analysis 3(3-0)
Introduction to descriptive and inferential statistics. Probability and hypothesis testing procedures will be considered. Parametric and nonparametric techniques will be described. Prerequisites: PSYCH 101 and two years high school algebra or equivalent. (F,S)

202 Data Analysis Methods 2(2-0)
Introduction to use of the computer to perform statistical applications/analysis. Co-requisite: PSYCH 201. (F,S)

205 Introduction to Sport Psychology 3(3-0)
An introduction to psychological theories and constructs affecting performance in sports and athletics. (F)

211 Women and Society 3(3-0)
Statistical overview of the current status of women, followed by examination of theories concerning equality of the sexes. (F)

212 Sexism and Racism in America 3(3-0)
Dynamics of prejudice and discrimination in terms of sex and race; special attention to analysis of strategies for improving relations. (S)

220 Drugs and Behavior 3(3-0)
Principles of drug action with attention to beneficial and harmful uses of drugs. (F,S)

222 Understanding Animal Behavior 3(3-0)
Basic comparative and ethological perspectives regarding animal behavior. Scientific techniques for observation of animal behavior are demonstrated at the Pueblo Zoo. (F,S)

231 (SOC 231) (WS 231) Marriage and Family Relationships 3(3-0)
Marriage and family from an institutional and relationship perspective: cross-cultural diversity, mate selection, marital dynamics, parenting, divorce, remarriage, emerging patterns. (F,S,SS)

241 Human Sexuality 2(2-0)
Psychological and biological aspects of human sexual behavior. Prerequisites: sophomore standing and permission of instructor. (F)

251 Infancy, Childhood and Preadolescence 3(3-0)
Physical, social, cognitive and emotional growth of the individual from conception through preadolescence. Topics include prenatal development, language development, attachment, and sexual development. Prerequisite: PSYCH 100. (F,S)

252 Adolescence, Adulthood and Aging 3(3-0)
Physical, social, cognitive and emotional growth of the individual from adolescence through old age. Topics include identity, intimacy, relationships, intellectual functioning, and issues of aging. Prerequisite: PSYCH 100. (F,S)

301 Introduction to Psychological Experimentation 3(3-0)
Introduction to basic methods and procedures for data collection and analysis of psychological experiments. Both survey and laboratory-based research designs will be described. Prerequisites: PSYCH 100 and 201. (F,S)

302 Psychological Experimentation Methods 2(2-0)
Introduction to methods of psychological experimentation in animals and humans. Co-requisite: PSYCH 301. (F,S)

311 Theories of Personality 3(3-0)
Major theories of personality and the methods of personality investigation. Prerequisite: PSYCH 100. (F,S)

314 Environmental Psychology 3(3-0)
The influence of the physical and social environment on the individual. Variables considered include architecture, city size, noise, pollution and allocation of resources. Prerequisite: PSYCH 100. (S)

315 Organizational and Administrative Psychology 3(3-0)
Application of psychological principles to methods of selection, placement evaluation, motivation of personnel to work, and problems of human relations in business and industry. Prerequisite: PSYCH 100. (S)

331 Physiological Psychology 3(3-0)
Structure and function of the brain, nervous and endocrine systems; biological basis of sensation, perception, sleep and arousal, motivation, learning and memory, and drug action. Prerequisites: PSYCH 100, or BIOL 203 and 204, or permission of instructor. Corequisite: PSYCH 331L. (S)

331L Physiological Psychology Lab 1(0-2)
Corequisite: PSYCH 331. (S)

334 Perception 3(3-0)
The senses and how they cooperate with the brain to provide awareness and knowledge of the world about us. Empirical findings and theoretical analysis of the processes of seeing, hearing, tasting, smelling and touching. Role of learning in normal and illusory perception is considered. Prerequisite: PSYCH 100 or permission of instructor. Corequisite: PSYCH 334L. (F)

334L Perception Lab 1(0-2)
Corequisite: PSYCH 334. (S)

335 Motivation 3(3-0)
Goal-directed behavior, survey of biosocial approaches to motivation. Behavioral, cognitive and biological perspectives applied to eating, sexual behavior, aggression, affection and affiliation, obedience, achievement and cooperation. Prerequisite: PSYCH 100. Corequisite: PSYCH 335L or permission of instructor. (S)

335L Motivation Lab 1(0-2)
Corequisite: PSYCH 335. (S)

336 Learning 3(3-0)
Principles of learning and memory. Empirical findings and theoretical analyses of topics including conditioning, reinforcement and punishment. Research and application. Prerequisite: PSYCH 100 or permission of instructor. Corequisite: PSYCH 336L. (S)

336L Learning Lab 1(0-2)
Corequisite: PSYCH 336. (S)

337 Memory and Cognition 3(3-0)
Theory and research on current topics in cognition, including attention, concept formation, imagery, memory, decision making, language acquisition, problem solving and text comprehension. Prerequisite: PSYCH 100.(F)

337L Memory and Cognition Lab 1(0-2)
Corequisite: PSYCH 337. (F)

342 Educational Psychology 3(3-0)
The contribution of psychology theory, research and methods to our understanding of teaching and learning. Prerequisite: PSYCH 100. (F)

351 Psychology of the Exceptional Individual 3(3-0)
Survey of characteristics of those individuals considered significantly above or below the norm of the population. Emphasis on behavioral identification and modification of the home, school and social environment. Prerequisite: PSYCH 100. (F,S)

352 (SOC 352) Social Psychology 3(3-0)
General and applied psychological principles of the individual's interaction with a group. Prerequisite: PSYCH 100 or permission of instructor. (F,S,SS)

353 Advanced Child Psychology 3(3-0)
Emphasis on theoretical foundations of developmental psychology. Research strategies used in conducting developmental research. Prerequisite: PSYCH 151 or PSYCH 251 and 252. (S)

362 Abnormal Psychology 3(3-0)
Etiology, diagnosis and therapy of maladaptive or abnormal behaviors and mental functioning. Prerequisite: PSYCH 100. (F,S)

381 Principles of Psychological Testing I 4(4-0)
Theories and principles of psychological testing are applied to the selection, use and evaluation of available tests. Prerequisites: PSYCH 100 and 201. (F)

401 History and Systems of Psychology 3(3-0)
The historical development of modern psychology from its roots in classical philosophy and the social, cultural, and political context within which psychological theory emerged. Prerequisites: PSYCH 100 and senior standing or permission of instructor. (F,S)

405 Applied Sport Psychology 3(3-0)
The application of psychological theories and techniques for the enhancement and personal growth of athletes from youth sports to elite levels. Prerequisite: PSYCH 205. (S)

410 Advanced Data Analysis 3(3-0)
Advanced techniques in data analysis, including analysis of varience/ covariance, post-hoc tests, multiple regression and non-parametric tests. Use of computer software programs will be stressed. Prerequisites: PSYCH 201 and 201L. (S)

463 Psychopathology of Childhood 3(3-0)
A survey of the unique conceptual models of etiology, assessment and therapy appropriate to the study of the psychological disorders of childhood. Prerequisites: PSYCH 100 and 362 or equivalent. (F)

464 Systems of Counseling and Psychotherapy 3(3-0)
Traditional and contemporary theories of counseling and psychotherapy through use of case studies and other selected materials. Prerequisites: PSYCH 100 and 311. Corequisite: PSYCH 464L or permission of instructor. (F)

464L Systems of Counseling and Psychotherapy Lab 1(0-2)
Corequisite: PSYCH 464. (F)

465 Behavior Modification 3(3-0)
Advanced methods and techniques of behavior modification as practiced in various agencies and institutions. Prerequisites: PSYCH 100 and upper division standing. (S)

466 Psychology of Biofeedback 3(3-0)
Psychophysiological aspects of biofeedback. Theoretical and applied instrumentation and clinical use. Project required. Prerequisites: PSYCH 100 and upper division standing. (F)

471 Clinical Psychology 3(3-0)
Survey of clinical psychology as a profession. Training requirements, opportunities, future directions, current research and ethical problems. Prerequisites: PSYCH 100, 311, 362, 381, 464. (F)

475 Group Process 3(3-0)
Study and practice of basic group theory and approaches as they are applied in mental health. Basic group therapeutic techniques and procedures will be demonstrated in an experiential setting. Prerequisites: PSYCH 464 and 464L. (S)

484 Diagnosis and Assessment 3(3-0)
Continuation of PSYCH 381. A survey of major psychological assessment and diagnostic techniques including interviewing strategies. Intelligence and personality tests as well as clinical instruments and procedures will be utilized in a case study approach. Prerequisites: PSYCH 100 and 381, permission of instructor. (*)

491 Special Topics (1-3 VAR)
Prerequisite: permission of instructor. (*)

493 Seminar (1-3 VAR)
Discussion and synthesis of psychological issues important to psychology majors. Prerequisites: PSYCH 100, psychology major, or permission of instructor. (*)

494 Field Experience (4-12 VAR)
In-depth, on-the-job experience in psychology, individually designed. Ability to use psychological tests and counseling techniques recommended. Prerequisites: PSYCH 100, 362, junior or senior standing, and written permission of instructor of record prior to registration. (F,S,SS)

495 Independent Study (1-3 VAR)
Prerequisites: PSYCH 100, psychology major and prior written permission of instructor of record. (F,S,SS)

GRADUATE COURSES

515 Psychology of Minorities 3(3-0)
Designed to provide a systematic analysis of the forces that shape the behavior of minorities and consequent counseling methods with this population. (*)

524 Philosophy and Theories of Counseling 3(3-0)
Designed to acquaint students with the range of theories currently directing the work of the counselor and to facilitate the development of a personal model of counseling. Personal professional ethics emerge as a major course focus. (*)

525 Tools and Techniques of Guidance Services 3(3-0)
Open to graduate students in the secondary school counseling program. A study of materials and methods used in secondary schools and of the counselor as a consultant and coordinator. The importance and role of the secondary school counselor will be the focus of this class. (*)

526 Organizational Development 3(3-0)
Designed to provide the graduate student with experience and skills necessary to improve programs and organization. (*)

527 Group Counseling 3(3-0)
Leads to an understanding of the function of group methods in the guidance program and assists the student in developing group facilitation skills. (*)

528 Career Development 3(3-0)
Designed to help students gain insight and understanding of the development process of occupational decision. Explores career counseling provided by counselors for clients in the areas of future education and in the world of work. (*)

530 Family Therapy 3(3-0)
This course is an introduction to Family Systems Theory. Emphasis is on the history and development of treatment models in family interventions and techniques. Prerequisite: graduate standing. (*)

536 Practicum 3(3-0)
Designed to provide the beginning counseling student with basic interpersonal training experience. Individual and group contact focuses on personal growth and skill development. (*)

538 Elementary Counseling 3(3-0)
Designed to provide methods and techniques for elementary school counselors. (*)

546 Assessment in Counseling 3(3-0)
This course provides students with an understanding of group and individual educational and psychometric theories and approaches to appraisal. Prerequisite: graduate standing. (S)

563 Psychopathology of Childhood 3(3-0)
Unique conceptual models of etiology, assessment, and therapy appropriate to psychological disorders of childhood. Graduate students complete an independent project and consider treatment and management techniques. Prerequisites: graduate standing, permission of instructor and PSYCH 362 or equivalent. (*)

592 Research 3(3-0)
Designed to assist students with the knowledge and skills necessary for a consumer of research. The fundamentals of research procedure and analysis of statistics are stressed. (*)

598 Internship 3(0-3)
Designed to provide the student with actual field work experience in counseling and guidance. (*)

SOCIAL WORK DEPARTMENT

Chair: Lazzari
Faculty: Baca, Diehm, Gonzales, Lopez-Pacheco, Wintermute

Social work is a professional field dedicated to helping individuals, families, groups, institutions and communities meet basic human needs and enhance their quality of life. The generalist curriculum, which leads to the bachelor of social work (BSW) degree, prepares students for employment in public and private agencies and community programs. The applied nature of social work practice builds upon a strong liberal arts base.

Course work in the junior and senior year focuses on skill development and application in a 448-hour field placement. Students select placements in a wide variety of settings such as hospitals, corrections facilities, child welfare agencies, community agencies, and mental health centers, to name a few. The program also prepares students for admission to graduate programs, many of which offer USC graduates advanced standing or equivalent credit of up to one year. The program is accredited by the Council on Social Work Education.

The program also offers a collaborative MSW degree with Colorado State University, with a specialization in advanced generalist practice. Further information on the degree may be obtained by contacting the social work program faculty at USC.

SOCIAL WORK PROGRAM GOALS

The primary goals of the social work program are to:

- prepare students for entry-level generalist social work practice;
- prepare students for graduate-level social work education; and
- maintain accreditation of the social work major as defined by the Commission on Accreditation, Council on Social Work Education.

General Requirements

- Graduates are expected to possess and demonstrate the generalist skills and knowledge necessary for beginning social work professional practice with an understanding and appreciation of the cultural diversity of the Southwest.
- Graduates are required to complete an approved program of courses described below with a minimum cumulative overall GPA of 2.0000, a minimum GPA of 2.5000 within the major, and no lower than a grade of C in every course required for the social work degree.
- Graduates are expected to demonstrate social work values and ethics in their work as professional students. Flagrant violation of the Code of Ethics may be grounds for dismissal from the program.
- Graduates are required to complete a minimum of 52 semester credit hours in social work courses (see specific courses listed below).
- Graduates are required to spend at least 448 hours of supervised field experience in a community agency under the supervision of a professional social worker (SW 488, 489).
- Graduates are required to complete 21 semester hours in courses that support the knowledge base and skills for social work..
- Majors must complete and have an approved upper level review prior to enrolling in 300 and 400 level courses.

Specific Requirements

SW Courses		Titles	Credits
SW	100	Introduction to Social Work	3
SW	201	Human Behavior & Social Environment I	3
SW	202	Human Behavior & Social Environment II	3
SW	205	Social Welfare in the U.S.	3
SW	222	Intro to Social Work Practice	3
SW	320	Human Diversity in Practice	3
SW	322	Social Work Intervention I	3
SW	323	Social Work Intervention II	3
SW	324	Social Work Intervention III	3

SW	340	Social Work Theory	3
SW	350	Social Welfare Policy	3
SW	430	Social Work Research	3
SW	481	Field Seminar I	3
SW	482	Field Seminar II	3
SW	488	Field Placement I	5
SW	489	Field Placement II	5
		TOTAL	52

Other Requirements

SOC	101	Intro to Sociology	3
PSYCH	100	General Psychology	3
CS	101	Intro to Chicano Studies	3
A course covering human biology			3
An economics or political science course			3
A course covering women's studies			3
A course in basic statistics			3
		TOTAL	21

Electives:

SW	105	Understanding Human Diversity	3
	490	Special Projects	3
	491	Special Topics	3
	495	Independent Study	3

Outcomes Assessment Activities

- Field placement experience and evaluation, conducted in the senior year, is a major component of student assessment. The evaluation focuses upon the application and demonstration of knowledge and professional skills within the context of a community human service agency setting. Field evaluations are shared with students each semester of field placement and form the final assessment of competency for beginning professional social work practice.
- Periodic assessment of student admissions into graduate programs will be conducted.
- A representative sample of student portfolios, field placement evaluations and other supporting documentation will be maintained for a period of five years to assure the availability of a body of evidence that qualified external examiners might inspect.
- A formal system of surveying BSW graduates and employers is used to inform curriculum development.

SOCIAL WORK (SW)

UNDERGRADUATE COURSES

100 Introduction to Social Work 3(3-0)
Exploration of social welfare as a basic institution in contemporary society. Introduction to the field of social work, the roles, professional skills and philosophy of practice. (*)

105 (POLSC, PSYCH, SOC, WS 105) Understanding Human Diversity 3(3-0)
Americans live in a complex and diverse society. This course examines the nature, impact and strategies for dealing with diversity in personal and social contexts. (*)

201 Human Behavior and Social Environment I 3(3-0)
Focus on the person in the environment, with an examination of the interrelationship of psychological, biological, social, and cultural systems and their impact on social functioning. Introduction to systems theory as an organizing framework. Prerequisites: SOC 101, PSYCH 100 and an approved human biology course. (F)

202 Human Behavior and Social Environment II 3(3-0)
Focus on an understanding and analysis of larger social systems which include the family, groups, communities and organizations. Emphasis on social systems as an organizing theoretical framework for understanding social functioning and change. Prerequisite: SW 201. (S)

205 Social Welfare in the United States 3(3-0)
Examines the historical development of social welfare and social work. Emphasis on social values and structures as they affect inequities and economic security in America. Pre/corequisite: SW 100. (*)

210 (SOC 210) Techniques of Analysis 3(3-0)
Introduction to the methods of scientific investigation in social work. (F,S)

222 Introduction to Social Work Practice 3(2-2)
Presentation of basic elements of generalist practice including professional values, as well as relationship building, communication, and interviewing skills. Volunteer placement in a human services agency. Prerequisite: SW 100; SW 202 prerequisite or corequisite. (S)

290 Special Projects (1-5 VAR)
Prerequisite: permission of instructor. (*)

320 Human Diversity in Practice 3(3-0)
Examines the history and culture, obstacles and resources of ethnic and minority groups in the United States. Identifies skills required for "ethnic competence" in practice. Prerequisite: SW 205, 222 and upper level review. (*)

322 Social Work Intervention I 3(3-0)
Elements of generalist social work practice with a focus on individuals. Assessment, intervention, evaluation, skill development and practice are emphasized. Prerequisite: SW 320 prerequisite or corequisite. (F)

323 Social Work Intervention II 3(3-0)
Elements of generalist social work practice with a focus on groups and families. Assessment, intervention, evaluation, skill development and practice are emphasized. Prerequisite: SW 322 (S)

324 Social Work Intervention III 3(3-0)
Nature and scope of social work intervention at the organizational and community levels; distinctive characteristics of the community as a social system and implications for generalist practice. Prerequisite: SW 322. (S)

340 Social Work Theory 3(3-0)
A comparative approach to explanatory and practice theories relating to social work and the helping professions. Prerequisite: upper level review. (*)

350 Social Welfare Policy 3(3-0)
Nature of social policy; process of policy formulation and analysis; factors influencing choice of social objectives within goals and values of social work profession. Prerequisite: upper level review. (*)

430 Social Work Research 3(3-0)
Introduction and exploration of research designs and methodologies to evaluate practice, including single subject, needs assessment, and program evaluation. Prerequisite: upper level review. (*)

470 (MACOM 470) Non-Profit Organization and Communication 3(3-0)
Introduction to the world view, issues and practical aspects of non-profit organizations. Prerequisite: senior standing or permission of the instructor.

481 Field Seminar I 3(3-0)
Taken in conjunction with agency field placement to integrate practice and theory. Corequisite: SW 488. (F)

482 Field Seminar II 3(3-0)
Taken in conjunction with agency field placement to integrate practice and theory. Corequisite: SW 489. (S)

488 Field Placement I 5(0-16)
Students spend 16 hours per week in practice field assignments in selected social work agencies or settings under the direct supervision of a professional social worker. Prerequisite: approved field application; Corequisite: SW 481. (F)

489 Field Placement II 5(0-16)
Students spend 16 hours per week in practice field assignments in selected social work agencies or settings under the direct supervision of a professional social worker. Prerequisite: approved field application; Corequisite: SW 482. (*)

490 Special Projects (1-5 VAR)
Prerequisites: social work major, prior written permission of instructor of record. (*)

491 Special Topics (1-3 VAR) (*)

495 Independent Study (1-3 VAR)
Prerequisite: permission of instructor. (*)

GRADUATE COURSES

500 Workshop (1-6 VAR) **
Topics identified by subtitles taught. (*)

501 Principles and Philosophy of Social Work 3(3-0) **
Knowledge, values, history, and philosophy of social work. Prerequisite: 18 credits of socio/behavioral sciences. (*)

510 Theoretical Analysis of Small Client Systems 3(3-0)**
The place of human behavior and social environment processes in generalist social work practice. Multi-level, knowledge guided frameworks for preparing interventions with individuals and families. Pre/corequisite: SW 501 and admittance to MSW program. (*)

511 Generalist Practice: Small Client Systems 3(3-0)**
Practice theory and skills related to intervention with individuals and families within a social systems framework. Communication techniques and skills, relationship skills and use of self. Prerequisite: SW 510, Corequisite SW 512. (*)

512 Small Systems Skills Laboratory 1(1-0)**
Practice of social work helping skills related to all facets of the helping process. Emphasis on communication and relationship skills. Corequisite: SW 511 (*)

520 Social Welfare Policy Analysis 3(3-0) **
Historical concepts, analysis, and impact of social welfare policies. Prerequisite: 18 credits of socio/-behavioral sciences. (*)

581 Field Seminar 1(1-0)**
Integrative seminar for the foundation year field placement of the MSW program. Prerequisite: SW 512. Corequisite: SW 588. (*)

588 Field placement 5(0-15)**
Supervised agency practice supported by field seminar. Corequisite: SW 581. (SS) (S/U)

591 Special Topics (1-3 VAR) **
Topics identified by subtitles taught. (*)

600 Methods of Research I 3(3-0) **
Social work research; role of practitioners as consumers and initiators of research. Corequisite: SW 611 or permission of instructor. (*)

601 Methods of Research II 3(3-0) **
Role of social work practitioners as consumers and initiators of research. Data analysis and computer processing in social work research. Prerequisite: SW 600. (*)

610 Theoretical Analysis of Large Client Systems 3(3-0)
Socio-behavioral practice principles relevant to work with large client systems including groups, organizations and communities. Prerequisite: SW 510 (*)

611 Generalist Practice: Large Client Systems 3(3-0)
Practice knowledge and skills related to intervention with large client systems, including task/action groups, organizations, and communities. Prerequisite: SW 511. (*)

620 Advanced Social Welfare Policy Analysis 3(3-0)**
Application of social welfare policy analysis models. Examines normative aspects of policy analysis, program evaluation, and assessment skills. (Course required for the Master of Social Work degree offered by Colorado State University.) Prerequisite: SW 520. (*)

** These are Colorado State University courses offered at the University of Southern Colorado toward a Master of social work degree.

SOCIOLOGY/ANTHROPOLOGY/ SOCIAL SCIENCE DEPARTMENT

Chair: W. Wright

Faculty: Calhoun-Stuber, Forsyth, Gomme, Green, Hughes, Keller, Wells

The programs in sociology, anthropology and social science are intended to increase the student's knowledge of social organization and social relationships, knowledge that can be applied to many career objectives in government and business.

Sociology is the study of human social behavior and is concerned with conditions such as crime and delinquency, family problems, social inequality, and organizations in contemporary industrial society. Sociologists are interested not only in understanding problems and social institutions, but in resolving problems.

As an applied program, the major prepares students to work in a wide variety of occupations, including education, government, business, industry and private human service agencies. They are employed in such areas as health care, youth services, drug rehabilitation, law enforcement, corrections, probation, and counseling. Students may receive a general sociology degree, or they may specialize within the criminology emphasis area and receive a sociology/criminology degree.

The major in sociology leads to the bachelor of arts (BA) and the bachelor of science (BS). The BS is designed for those pursuing an applied, career-oriented program, while the BA requires a foreign language. Both degrees prepare students for graduate studies and applied careers.

The anthropology minor provides students with an informed understanding of the cultural diversity evident in human societies and the concepts by which anthropologists explain cultural dynamics. The program emphasizes a holistic awareness of the relationships of all the parts of social and cultural systems. The program prepares students to understand anthropological methods and theories and to apply them to academic as well as to life experiences.

SOCIOLOGY PROGRAM GOALS

- Graduates will be able to compare and contrast the major theoretical perspectives that inform modern sociological analysis.
- Graduates will be able to apply a range of research methods in conjunction with sociological theory in order to explain and analyze complex social relations and organizations.
- Graduates will be able to apply social analysis to the substantive social area of their emphasis: criminology or general sociology, and will be able to present findings in a clear, understandable and concise manner.
- Graduates will be able to engage in critical thinking about the relationship between social and personal experiences.
- Minors will have an understanding of the significant theories, issues and methodologies of the discipline.
- Minors will have an understanding of the impact of social processes and institution on personal experiences.

Expected Student Outcomes

General Requirements

- Successful completion of the sociology core;
- Successful completion of the general or the criminology emphasis areas;
- No grade below a C in sociology courses is acceptable for the major or the minor; and
- Completion of at least 36 credit hours in approved sociology courses.

Specific Requirements for the Sociology Major

SOC Core Courses		Titles	Credits
SOC	101	Introduction to Sociology	3
	210	Techniques of Analysis	3
	310	Social & Cultural Theory	3
		TOTAL	9

General Emphasis

Students will complete the above core (9 hours) and then will select at least 27 additional credit hours of sociology courses, which may include six hours from anthropology. Courses must be approved by the

adviser. At least 12 hours must be upper-division courses (300- 400 level).

Criminology Emphasis

Required: (9 hours)

SOC	203	Criminal Justice System	3
	303	Criminology	3
	306	Delinquency & Juvenile Justice	3

Electives (18 hours chosen from among):

155	Minority and Ethnic Relations	3
201	Social Problems	3
305	Crime and Women	3
351	Social Deviance	3
353	Penology	3
356	Social Stratification	3
359	Community Corrections	3
404	Poverty	3
405	Law and Society	3*
407	Family Violence	3
409	Victimization	3
410	Structural & Elite Crime	3
411	Police & Society	3
420	Criminological Theory	3*
430	Industrial Organization	3
432	Organizational Theory	3
451	Culture, Deviance, & Psychopathology	3
491	Special Topics	1-3
492	Research Methods	3
494	Field Experience	3-12
Other approved course		3
	TOTAL	27

Specific Requirements for the Sociology Minor

Minors in sociology require a minimum of 20 semester hours, of which six hours must be upper division. SOC 101 is required. No grades below C are accepted toward the minor.

Co-curricular Requirements

Generally there are no co-curricular requirements, although students with an emphasis in criminology are encouraged to complete an internship in a community corrections-type agency or program.

Outcome Assessment Activities

- Completion of all required courses.
- The department believes that grades are one valid indicator of the quality of student work. No grade below C will, therefore, be accepted toward the major or minor.
- Student achievement will be assessed in the outcome areas on the basis of a standardized national achievement test.
- For the sociology minor, grades will provide a valid measure of student performance. The department will examine and maintain records of grades of students minoring in sociology as one means of assessment.

SOCIOLOGY (SOC)

UNDERGRADUATE COURSES

101 Introduction to Sociology 3(3-0)
The scientific study of patterns and processes of human social relations. (F,S)

105 (POLSC/PSYCH/SW/WS 105) Understanding Human Diversity 3(3-0)
Americans live in a complex and diverse society. This course examines the nature, impact and strategies for dealing with diversity in personal and social contexts. (*)

155 Minority and Ethnic Relations 3(3-0)
Sociological theories, studies, and findings concerning group maintenance and interaction in contemporary society. (*)

201 Social Problems 3(3-0)
Sociological perspectives applied to an understanding of global and domestic social problem, including the environment, corporate control, economic and political inequalities, health care, and crime. (*)

203 The Criminal Justice System 3(3-0)
This course examines origin, nature, and utilization of criminal law; policing, court adjudication and sentencing; jails and prisons; community based corrections; criminal justice policy. (*)

206 (WS 206) Gender and Society 3(3-0)
Examination and evolution of relationships between sex roles, culture, and societal institutions and processes. Includes an analysis of sexual stratification. (*)

210 (SW 210) Techniques of Analysis 3(3-0)
Introduction to the methods of scientific investigation in the social sciences. (F,S)

231 (PSYCH 231) (WS 231) Marriage and Family Relationships 3(3-0)
Marriage and family from an institutional and relationship perspective; cross-cultural diversity, mate selection, marital dynamics, parenting, divorce, remarriage, emerging patterns. (F,S,SS)

250 (ANTHR 250) The Sacred in Culture 3(3-0)
Concepts of the supernatural studied cross-culturally and in particular cultures. Consideration of how religion helps individuals adjust to stress and aging. (*)

252 (ANTHR 252) Culture and Personality 3(3-0)
Relationship between group processes and personality factors in a cross-cultural perspective. (*)

291 Special Topics (1-3 VAR) (*)

303 Criminology 3(3-0)
The nature and causes of crime, including property, violent, corporate, and political crimes; politics of crime measurement; current and future crime control techniques. (*)

305 (WS 305) Crime and Women 3(3-0)
Exploration of social, cultural and political variables that create both women victims and women criminals. (*)

306 Delinquency and Juvenile Justice 3(3-0)
Theory and history of delinquency; relationship to family, peer groups, schools, gangs, drugs, young offenders legislation, juvenile courts and police response, youth corrections. (*)

308 Popular Culture 3(3-0)
Advertising, television, music, novels, and the news are among the topics to be investigated for their social significance. (*)

310 (ANTHR 310) Social and Cultural Theory 3(3-0)
Examine from classical to contemporary theory in sociology and anthropology. (F)

351 Social Deviance 3(3-0)
Sociological perspective on behavior defined as deviant, abnormal or socially unacceptable. Prerequisite: SOC 101. (*)

352 (PSYCH 352) Social Psychology 3(3-0)
General and applied psychological principles of the individual's interaction with a group. Prerequisite: PSYCH 100 or permission of instructor. (F/S/SS)

353 Penology 3(3-0)
The history and role of corrections; correctional practice, relationship to law, prison society, working in prisons, special needs of prisoners, capital punishment, administration, privatization. Prerequisites: SOC 101 and 203. (*)

354 Urban Sociology 3(3-0)
Development of urban places; analysis of socio-economic organization, urban social forces and the consequences for individuals, groups and social institutions. (*)

355 Political Sociology 3(3-0)
Analysis of the major sociological variables associated with political decision making and other political processes. (*)

356 Social Stratification 3(3-0)
Inquire into inequalities of wealth, power, and the consequence for individuals and society. Prerequisites: SOC 101 and 310. (*)

358 Film and Society 3(3-0)
An in-depth look at the images of social life and social relationships contained in popular movies. (*)

359 Community Corrections 3(3-0)
The development and practice of probation, parole, diversion, statutory release, electronic monitoring, halfway houses, privatization. (*)

401 (ANTHR 401) Health, Culture and Society 3(3-0)
Analysis of how social, cultural, and psychological factors influence health and health care. (*)

402 (ANTHR 402) Aging, Culture and Society 3(3-0)
Cultural, sociological and psychological dimensions of aging. (*)

403 (WS 403) Human Sexuality and Social Behavior (3-0)
Sexuality and sexual conduct from a sociological and developmental perspective. (*)

404 Poverty 3(3-0)
Poverty in the United States, its measurement and extent, perpetuating conditions, lifestyle and anti-poverty programs. (*)

405 Law and Society 3(3-0)
The origins and functions of law; the social organization of legal institutions and decisions; the relationship of law to morality, justice and social change. (*)

406 Sociology of Small Groups 3(3-0)
Microsociological analysis of group structure, interaction and dynamics in institutional settings in modern society. (*)

407 (WS 407) Family Violence 3(3-0)
The extent, seriousness, and impact of the major forms of domestic violence. (*)

408 Science, Technology, and the Future 3(3-0)
Social and structural implications of science and technology as they affect society. (*)

409 Victimology 3(3-0)
Study of the victims' role in criminal transactions. Examination of individuals and groups as victims of officially defined crime, as well as other social injuries, not officially defined as crime. Prerequisite: SOC 304. (*)

410 Structural and Elite Crime 3(3-0)
Examination of crimes and social injuries perpetrated by organizational structures that do physical or economic harm to the environment, their employees, and their customers. Prerequisite: SOC 304. (*)

411 Police and Society 3(3-0)
The history and role of police; including patrol officers, detectives, specialty units, police discretion, women in policing, community policing, private policing, corruption, brutality, accountability. Prerequisite: SOC 101. (*)

412 Occupations and Professions 3(3-0)
Occupations and professions in modern society, including changing structures of careers, issues of expertise, impact of gender and race, the role of education. Prerequisite: SOC 101. (*)

420 Criminological Theory 3(3-0)
Examination of major theories of crime and their policy implications; focus on sociohistorical factors in theory development. Prerequisites: SOC 304 and 310. (*)

430 Industrial Organizations 3(3-0)
Modern industrial society, emphasis on industry as a type of social organization including roles of management and labor. (*)

431 Working in Modern America 3(3-0)
Exploration of the changing patterns, structure, and attitudes toward work in the United States today. (*)

432 Organization Theory 3(3-0)
Prevailing theoretical model of large organizations and suggested alternatives. (*)

440 Correctional Administration 3(3-0)
Major issues in correctional administration including the history and theories of corrections in the U.S. are analyzed. Prerequisite: Sociology Major. (*)

451 (ANTHR 451) Culture/Deviance/Psychopathology 3(3-0)
Analysis of the relationship between culture and the causes and manifestations of deviance and psychopathology. (*)

490 Special Projects (1-3 VAR)
Projects indentified by each faculty member in concert with his/her interests. Prerequisites: Sociology major, junior/senior. (*)

491 Special Topics (1-3 VAR)
(*)

492 (ANTHR 492) Research 3(3-0)
Qualitative and quantitative methods and designs in sociological research. (*)

493 (ANTHR 493) Seminar (2-4 VAR)
(*)

494 Field Experience (3-12 VAR)
Practical on-the-job experience in an agency setting. Prerequisite: senior standing or permission of instructor. (*)

495 Independent Study (1-10 VAR)
Prerequisites: previous work in sociology and permission of instructor. (*)

GRADUATE COURSES

500 Workshop (1-3 VAR)
Topics to be identified by subtitles taught. Prerequisites: sociology major, graduate standing. (*)

540 Correctional Administration 3(3-0)
Major issues in correctional administration including the history and theories of corrections in the U.S. are analyzed. Prerequisite: graduate standing. (*)

590 Special Projects (1-3 VAR)
Projects identified by each faculty member in concert with his/her interests and expertise. Prerequisites: Sociology major, graduate standing. (*)

591 Special Topics (1-3 VAR)
Topics identified by subtitles taught. Prerequisite: graduate standing. (*)

595 Independent Study (1-10 VAR)
Affords students the opportunity to do independent, creative work. Prerequisite: graduate standing and permission of instructor. (*)

ANTHROPOLOGY PROGRAM GOALS

- Students will be able to deal with intellectual problems and engage in critical thinking in a lucid fashion, reflecting logical inquiry and knowledge of pertinent information.
- Students will possess knowledge and experience of cultural and sub-cultural groups other than their own.
- Students will achieve an understanding of a spectrum of anthropological sub-divisions and will be knowledgeable in at least two areas.

Specific Requirements for the Anthropology Minor
The minor consists of 21 semester hours of anthropology courses; ANTHR 100 is required, and six hours must be upper division. The rest of the courses may be based upon the student's interest. No grades below C are accepted toward the minor.

Co-curricular Requirements
Students are encouraged, although not required, to engage in field-site or off-campus anthropology field experiences.

Outcome Assessment Activities

- The assessment of anthropology students' progress is a continuing process from matriculation to graduation. Progress will be documented in portfolios maintained for selected minor students.
- Portfolios of selected students in the program will be maintained during the course of their program.

ANTHROPOLOGY (ANTHR)

UNDERGRADUATE COURSES

100 Cultural Anthropology 3(3-0)
Introduction to the concepts by which anthropology understands particular lifestyles, and to the constructs by which it accounts for similarities and differences among lifestyles. (F,S)

104 Physical Anthropology 3(3-0)
Biological nature of humans; emphasis on how forces of evolution have shaped human nature in the past and present. (F,S)

105 Introduction to Archaeology 3(3-0)
Evolution of culture as explained through archaeological methods and theories; emphasis on the preservation and protection of the cultural environment. (*)

106 (ENG 106) Language, Thought and Culture 3(3-0)
Crosscultural introduction to language processes in human society. (*)

211 Laboratory and Field Techniques (1-10 VAR)
Training in field and/or laboratory techniques by participation in anthropological project. Prerequisites: permission of instructor; previous work in anthropology recommended. (*)

250 (SOC 250) The Sacred in Culture 3(3-0)
Concepts of the supernatural studied cross-culturally and in particular cultures. Analysis of the role of religion in helping individuals adjust to stress and aging. (*)

251 World Archaeology 3(3-0)
Awareness and appreciation of cultural evolution and heritage through descriptions and interpretations of archaeological remains throughout the world. (S)

252 (SOC 252) Culture and Personality 3(3-0)
Relationship between group processes and personality factors in a cross-cultural perspective. (*)

291 Special Topics (1-3 VAR) (*)

301 Peoples and Cultures of the Southwest 3(3-0)
Examination of the region's multiethnic and pluralistic society; emphasis on adverse adaptations to distinctive nature and cultural environments. (*)

310 (SOC 310) Social and Cultural Theory 3(3-0)
From classical to contemporary theory in sociology and anthropology. (*)

401 (SOC 401) Health, Culture and Society 3(3-0)
Analysis of cultural, social, and psychological factors influencing health and health-care. (*)

402 (SOC 402) Aging, Culture and Society 3(3-0)
Cultural, sociological, and psychological dimensions of aging. (*)

451 (SOC 451) Culture/Deviance/Psychopathology 3(3-0)
Analysis of the relationship between culture and the causes and manifestations of deviance and psychopathology. (*)

453 Southwestern Archaeology 3(3-0)
Investigations of the prehistories of diverse peoples and cultures of the Southwest. (*)

491 Special Topics (1-3 VAR) (*)

492 (SOC 492) Research 3(3-0)
Qualitative and quantitative methods and designs in sociological research. (*)

493 Seminar (2-4 VAR)
(*)

494 Field Experience (3,4,5,6,12 VAR)
Practical experience in an agency setting. Prerequisite: permission of instructor. (*)

495 Independent Study (1-10 VAR)
Directed study for students interested in specific areas of anthropological concern. Prerequisites: previous work in anthropology and permission of instructor. (*)

SOCIAL SCIENCE PROGRAM

The interdisciplinary major in social science leads to the degrees of bachelor of arts (BA) and bachelor of science (BS).

Social scientists study people and social institutions, especially the relationships and impacts they have with and on each other. Research in the social sciences provides insights that help in understanding the ways in which individuals and groups make decisions, exercise power or respond to change. Social scientists gather and analyze data, interpret it and make it meaningful and useful for application in dealing with human problems.

Employment has traditionally been in the academic area; however, as the economy continually changes from an industrial to a service-oriented system, a greater need for "people-oriented" specialists is developing. Job opportunities in applied fields include areas such as program management and administration, residential counseling, service supervision, human services and sales and related work -- in both the public and private sectors. Related careers are: teaching, social work, corrections/criminology, social and educational administration, law and mass communications.

Program Goals

- Prepare students to function as knowledgeable and responsible individual citizens in society;
- Prepare students for leadership roles within the broader society;
- Instill in students a broad understanding of the major disciplinary approaches to the study of social life, including economics, history, sociology, geography, and political science;
- Prepare students for participation in modern social institutions, as well as for the coming changes and conflicts within those institutions;
- Instill in students an awareness of and appreciation for the cultural and ethnic diversity of modern society.

Expected Student Outcomes

General Requirements

- No grade below C is acceptable in the major or minor.
- A prerequisite of a 2.5000 cumulative GPA in the major is required for student teaching.

* General education requirements K3, K4, K5, and K6, are met by the social science core requirements. However, the elementary education minor requires

some grades higher than the institutional minimum in the Skills Component, and some specific coursework within the Knowledge Component for completion of the minor. Since the Colorado Department of Education changes its Rules governing the licensing of teachers within the state from time to time, students seeking licensure should maintain close contact with their Center for Teaching, Learning and Research advisor as well as their major advisor.

Specific Requirements for the Social Science Major

General Track Credits

Social Science Core 25
Specialty Core 24

Elementary -- Middle Childhood Track

Social Science Core 48

International Relations Track

Social Science Core 25
Specialty Core 24

Public Administration Track

Social Science Core 19
Specialty Core 27

Secondary -- Early Adolescence and Young Adult Track

For secondary accreditation, a student must major in a discipline (history or political science), not in social science. The student must also complete an additional 33 hours in approved Social Science courses.

Major (history or political science) 36
Social science accreditation 33

Specific Requirements for the Social Science Minor

- Completion of 24 semester hours of credit in courses falling under the definition of "social sciences." See your social science advisor for a description of the current list and associate denotations.

Developments

In an effort to comply with the Educator Licensing Act of 1991 as revised December 13, 1996 and adopted by the Colorado State Board of Education on September 11, 1997, the College of Humanities and Social Science, through its affected Departments, is in the process of making the necessary changes in the preparation programs requiring adjustments. The primary level affected by these changes is the social studies education endorsement for early adolescence/young adult (secondary). In an effort to meet the new Rules requirements, the history and political science departments have made curricular adjustments to enable prospective teachers affected under the new Rules to meet the new standards. The changes incorporated to date are illustrated under this section.

Students anticipating teaching social studies at the "secondary" level need to keep in close contact with their academic major advisor as well as their advisor in the Center for Teaching, Learning and Research. By doing so, they can keep abreast of the evolving structural changes taking place.

SOCIAL SCIENCE (SOCSC)

UNDERGRADUATE COURSES

111 Career Orientation 1(1-0)
Current trends and developments in professional career fields. Provides students with a knowledge of job opportunities in modern occupational categories. (F,S)

151 Society and Technology 3(3-0)
Role of technology as a prime factor in changing social and political institutions. Addresses technology as the systematic application of organized knowledge and material tools to the extension of human faculties. (S)

208 Afro-American Heritage 3(3-0)
Analysis of black cultural experiences from African origins and civilization to the present. (F)

209 Blacks in America Today 2(2-0)
Analysis of blacks in today's milieu including problem areas and contemporary issues. (S)

231 Contemporary Affairs 2(2-0)
Current problems in world and national affairs for the purpose of developing habits in and perspectives on current events. (*)

416 Revolutions 2(2-0)
General historic development of revolutions; emphasis on one major revolutionary movement in world history. (*)

493 Seminar 2(2-0)
Various problems within the realm of social science utilizing an integrated approach. For majors in broad area social science disciplines. (*)

GRADUATE COURSES

501 Technology Assessment 3(3-0)
An evaluation of the impact of technology on society and the implications of technological development on individuals, groups, societies, countries and governments. Prerequisite: graduate standing. (*)

502 Technology Forecasting 3(3-0)
Study of processes involved with forecasting technological growth and need. Quantitative and qualitative procedures and processes. Assumptive reasoning and logical pitfalls. Study of case histories. Term project. Prerequisite: graduate standing. (*)

516 Revolutions 2(2-0)
General historic development of revolutions; emphasis on one major revolutionary movement in world history. Prerequisite: graduate standing. (*)

591 Special Topics 2(2-0)
Topics identified by subtitles taught. Prerequisite: graduate standing. (*)

593 Seminar 2(2-0)
Various problems within the realm of social science, utilizing an integrated approach. For majors in broad area social science disciplines. Prerequisite: graduate standing. (*)

SPEECH COMMUNICATION DEPARTMENT

Chair: Sherman
Faculty: O'Leary

The department of speech communication aims to enhance students' knowledge and skills of verbal expression: to acquaint students with significant works of rhetoric; to cultivate their aesthetic appreciation for discourse; and to develop skill in analyzing, composing, expressing, interpreting, and evaluating discourse. Teaching and speech pathology are two careers that normally grow out of the major, which also is suitable for employment emphasizing communication skills.

The major in speech communication leads to the degrees of bachelor of arts (BA) or bachelor of science (BS). Students completing an emphasis in communication disorders will receive the BS degree. Students completing the emphasis area in general speech communication will receive the BA degree.

Students in speech communication participate actively in co-curricular activities closely integrated with the academic curriculum. Communication disorder students complete required observation and clinical clock-hour assignments, under qualified supervisors, in schools, hospitals and clinics in southern Colorado.

Department Goals

- Prepare students for a career in communication disorders.
- Provide students with a liberal arts approach to speech communication.

Expected Student Outcomes

General Requirements

- All majors must complete a set of required courses (the core), and declare an emphasis area from the following list: general speech communication or communication disorders.
- No grade lower than C will count toward the major.
- All majors must successfully complete a minor.
- Successful majors will be capable of analyzing, synthesizing, interpreting, evaluating, and communicating ideas in public.
- Successful majors will be able to engage in problem analysis, present a well-reasoned solution to a problem, and know the tests for evidence and reasoning.
- The graduate in speech communication will possess an understanding of the principles underlying the discipline generally and the respective emphasis areas. Such understanding would include knowledge of specific aesthetic and ethical values as they apply to the speech act, and factual knowledge about human speech.

Specific Requirements for the Speech Major

SPCOM 103, Speaking and Listening, or its equivalent, is a prerequisite for all courses above the 100-level.

Core Courses		Title	Credits
SPCOM	211	Public Speaking	3
	231	Oral Interpretation	3
	261	Voice and Diction	3
	493	Seminar	3
		TOTAL	12

General Speech Emphasis

SPCOM Electives in general speech 20
(A minimum of eight semester hours must be upper division.)

Communication Disorders Emphasis

Courses		Title	Credits
SPCOM	250	Intro to Communication Disorders	2
	260	Language Acquisition & Linguistics	3
	324/324L	Anatomy of the Head, Neck & Chest/Lab	3
	351	Articulation Disorders	2
	352	Voice Disorders	2
	353	Stuttering	2
	361	Phonetics	2
	365	Basic Audiology	3
	451	Aural Rehabilitation	3
	452	Diag & Methods in Speech Pathology	2
	462	Organic Disorders of Speech	3
	463	Language Disorders in Children	2
	469	Clinical Exper in Comm Disorders	1
SPCOM Electives			6
PSYCH	100	General Psychology I	3
	251	Infancy, Childhood & Preadolescence	3
	252	Pre-Adol & Adol Psychology	3
	351	Psych of the Exceptional Individual	3
	362	Intro to Psychopathology	3
PSYCH Electives--Minors			5
PHYS	361	Physics of Sound	3
		TOTAL	59

Specific Requirements for the Speech Communication Minor

The minor in speech communication consists of 20 semester hours of curriculum offerings, six of which must be upper division. A minor is designed to meet the specific needs of the student and must be planned with the assistance of an adviser and approved by the department chair.

Co-curricular Requirements

The speech faculty believe that speech communication graduates must have co-curricular experiences that complement and reinforce the curricular experiences; therefore, graduates must document evidence of successful participation in student organizations, clubs, jobs, or other activities related to the program of study in speech.

Outcomes Assessment Activities

- All majors and transfer students will be pre-tested as follows:
  1) The speaking ability of all USC students declaring a speech communication major will be evaluated in one of the speech courses they are enrolled in at the time they declare the major. The evaluation will be based upon a classroom presentation.
  2) The speaking ability of all transfer students declaring a major will be evaluated in the same way. Additionally, the final grade earned in an introductory speech course at the student's previous school will be considered.
- The speech communication faculty believe that grades are a valid record of students' progress. All majors and minors are therefore required to complete work in the major or minor at a grade level of C or better; no lower grades will count toward the major or minor.
- A central file of syllabi, assignments, and exams, revealing how they are adapted to program objectives, will be retained in the departmental office for inspection by qualified persons.
- Each student's major adviser will keep a record of the student's work in a folder. The record will include a list of completed course work, and a sample of the student's writing prepared for a freshman, sophomore, junior, and senior level course, preferably distributed over four academic years. Folders of all majors and minors will be retained for a minimum of two years to enable qualified persons to assess student performance in meeting program goals.
- In SPCOM 493, Seminar, all majors will demonstrate their ability to complete a scholarly paper in correct English, and to present and defend its findings orally.
- Graduating seniors will complete a rating form that will indicate their reactions to department courses they have taken. They will also complete relevant essay questions indicating their satisfaction with the overall department operations and procedures.

SPEECH COMMUNICATION (SPCOM)

UNDERGRADUATE COURSES

103 Speaking and Listening 3(3-0)
Introduces principles of speaking and listening with emphasis on exposition and its application to public speaking.(F,S,SS)

115 Speech Activity I 1(0-4)
On- and off-campus activities including intercollegiate forensic competition, programs for students and public. Communication skill and experience development. May repeat twice for credit. (F,S)

116 Beginning Sign Language 2(-2-0)
Introduction to the fundamentals of communicative interaction with and among the deaf by means of hand symbolization. (F)

211 Public Speaking (2-3 VAR)
Emphasis is placed upon audience analysis, proof, and speaker credibility in order to persuade audiences. Application made through classroom presentations and analysis of models. (*)

212 Argumentation 2(2-0)
Argumentation focuses on the methods advocates employ to make rational decisions and to win assent to others' statements. Particular emphasis on the nature and skills of reasoned discourse. (*)

216 Intermediate Sign Language 3(3-0)
Study and application of the American Sign Language, including conversational skills, gestures and deaf cultures. Prerequisite: SPCOM 116 or permission of instructor. (S)

221 Interpersonal Communication 3(3-0)
The principles and skills of speaking applied to informal speaking situations. Topics covered include openness, genuineness, and talking appropriately to people. (*)

231 Oral Interpretation (2-3 VAR)
Basic principles and techniques of oral reading, designed to aid the student in discovering and sharing with an audience the meaning and feeling in literature. (*)

250 Introduction to Communication Disorders 2(2-0)
Survey course about major communicating disorders. Emphasis on classification and descriptions. Covers certification requirements, licensure and professional opportunities. (S)

260 Language Acquisition and Linguistics 3(3-0)
Normal processes of development of language in children, growth of language, including structure, comprehension, use of oral and written language, other symbolic behavior. (F)

261 Voice and Diction 3(3-0)
Voice improvement course for teachers, actors, broadcasters, professional speakers. Emphasis on breath support, phonation, resonation, articulation and pronunciation. Individual attention stressed. (F)

291 Special Topics (1-3 VAR) (*)

295 Independent Study (1-3 VAR)
Prerequisite: permission of instructor. (*)

312 Persuasion (2-3 VAR)
Examination of the principles and theories of persuasion and their application to persuasive settings. Emphasis on using language to secure belief and action. Prerequisites: SPCOM 211, 212, or permission of instructor. (*)

315 Speech Activity II 1(0-4)
On- and off-campus activities including intercollegiate forensic competition, programs for students and public. Continuation of SPCOM 115. May be repeated twice for credit. (F,S)

324 (BIOL 324) Anatomy of the Head, Neck and Chest 2(2-0)
Anatomical structures of the head, neck and chest with analysis of development and function. Prerequisite: BIOL 221 or BIOL 223. Corequisite: SPCOM 324L. (F)

324L (BIOL 324L) Anatomy of the Head, Neck and Chest, Dissection 1(0-2)
Dissection and examination of the anatomical structure of the head, neck and chest. Corequisite: SPCOM 324. (F)

351 Articulation Disorders 2(2-0)
Causation, diagnosis and clinical management of articulation disorders. Prerequisite: SPCOM 250 or permission of instructor. (F)

352 Voice Disorders 2(2-0)
Causation, diagnosis and clinical management of voice disorders. Prerequisite: SPCOM 250 or permission of instructor. (F)

353 Stuttering 2(2-0)
Nature and theories of stuttering with an introduction to therapeutic and counseling procedures utilized in clinical management. Prerequisite: SPCOM 250 or permission of instructor. (F)

361 Phonetics 2(2-0)
Designed to teach the student to identify speech sounds and to transcribe them according to the International Phonetic Alphabet (IPA). Prerequisite: SPCOM 261 or permission of instructor. (S)

365 Basic Audiology 3(3-0)
Introduction to the field of audiology: the ears and hearing. Emphasis on initial battery testing and interpretation of test results. Overview of selected clinical diagnostic tests. Practice in hearing testing is required. Prerequisite: SPCOM 250 or permission of instructor. (F)

376 Directing Speech Activities 2(2-0)
Methods of coaching competitive and non-competitive speech activities, management of speech tournaments, administration of secondary school forensic programs and recreational speech activities program. Prerequisite: junior or senior standing. (*)

377 Speech Education Methods 2(2-0)
Provides instruction and practice in the principles of teaching speech. Geared to foster a thoroughly professional teacher. Prerequisite: junior standing and permission of instructor. (*)

401 The Nature of Discourse 3(3-0)
Theory course; stresses the process of articulate sequential thought, verbally manifested in human life. Focuses on the human capability of replying in kind. Prerequisite: SPCOM 360. (*)

451 Aural Rehabilitation 3(3-0)
Detailed study of auditory training procedures and speech reading methods. Discussion of hearing aids included. Prerequisite: SPCOM 365 or permission of instructor. (S)

452 Diagnosis and Methods in Speech Pathology 2(2-0)
Clinical principles and methods with emphasis on diagnosis and evaluation. Discussion of Federal Law PL 94-142 and the Individualized Education Program (IEP) for the communicatively handicapped in the public schools. Experience with clinical tests, therapy materials and diagnostic equipment. Prerequisite: six semester hours in speech pathology or permission of instructor. (S)

462 Organic Disorders of Speech 3(3-0)
Nature and causes of aphasia, cerebral palsy, cleft palate, and neurological disabilities. Introduction to clinical management of these disorders. Prerequisite: six semester hours in speech pathology or permission of instructor. (S)

463 Language Disorders in Children 2(2-0)
Study of the cause, nature, and diagnosis of language disorders in children. Introduction to clinical management. Prerequisite: SPCOM 360 or permission of instructor. (S)

469 Clinical Experience in Communication Disorders 1(0-1)
Supervised clinical practice. Fifty clock hours must be completed to earn one semester hour of credit. May be repeated three times for credit. (S/U grades) Prerequisite: permission of instructor. (F,S,SS)

491 Special Topics (1-3 VAR) (When appropriate)
Prerequisite: permission of instructor. (*)

493 Seminar (1-3 VAR)
Class activity supervised by the department, centering on an advanced level of some aspect of discourse. Credit value assigned according to course objectives. Prerequisites: junior or senior standing and permission of instructor. (S)

495 Independent Study (1-3 VAR)
Prerequisite: permission of instructor. (*)

496 Cooperative Education Placement (1-4 VAR)
Arrangement between employers and faculty members to provide students with an opportunity to earn academic credit and monetary reimbursement for on-the-job training in their field of study. Two placements must occur in academic semesters and one in a summer session for the equivalent of at least 12 months employment. The student must re-enroll each placement term. Twelve credits maximum allowed toward graduation. Prerequisite: permission of instructor. (*)

GRADUATE COURSES

591 Special Topics (1-3 VAR)
Prerequisite: graduate standing. (*)

595 Independent Study (1-3 VAR)
Prerequisite: graduate standing. (*)

THEATRE (TH)

UNDERGRADUATE COURSES

111 Theatre Appreciation 3(3-0)
A course emphasizing the understanding of theatre art from the audience's point of view. (*)

112 Film Appreciation 3(3-0)
Helps the student understand movies. The nature of film art, its component parts, and its values are the major topics of the course. (*)

370 Creative Dramatics 1(1-0)
Classroom techniques in dramatics for the teacher. (F,SS)

WOMEN'S STUDIES

The women's studies minor is designed to acquaint students with the current scholarship on women. The minor is interdisciplinary and multicultural, encompassing classroom and experiential learning, encouraging students to examine relevant questions and issues from a range of perspectives.

Specific Requirements for the Women's Studies Minor

Courses		Titles	Credits
WS	101	Introduction Women's Studies	3
	205		3
		OR	
	401		3
	301	Feminist Frameworks	3
	494	Senior Seminar	3
Women's Studies Electives			9
		TOTAL	21

WS Electives:

WS/CS	205	La Chicana	3
WS/CS	240	Chicana Writers	3
WS/CS	401	Third World Feminisms	3
WS/ENG	260	Women and Literature	3
WS/HIST	291/491	Special Topics	3
WS/MACOM	235	Women and Media	3
WS/MACOM	330	Gender and Film	3
WS/PSYCH/SW	105	Human Diversity	3
WS/PSYCH	211	Women and Society	3

WOMEN'S STUDIES (WS)

UNDERGRADUATE COURSES

100 Introduction to Women's Studies 3(3-0)
The course serves two purposes: (1) to train students in feminist perspective-taking, and (2) to introduce them to issues affecting women's lives using an interdisciplinary framework. (*)

105 (POLSC/PSYCH/SOC/SW105) Understanding Human Diversity 3(3-0)
Americans live in a complex and diverse society. This course examines the nature, impact and strategies for dealing with diversity in personal and social contexts. (*)

205 La Chicana (CS 205) 3(3-0)
A social, cultural and historical overview of the Chicana experience and contributions. (S)

206 (SOC 206) Gender and Society 3(3-0)
Examination and evolution of relationships between sex roles, culture, and societal institutions and processes, including an analysis of sexual stratification. (*)

211 (PSYCH 211) Women and Society 3(3-0)
Statistical overview of the current status of women, followed by examination of theories concerning equality of the sexes. (F)

212 (PSYCH 212) Sexism and Racism in America 3(3-0)
Dynamics of prejudice and discrimination in terms of sex and race; special attention to analysis of strategies for improving relations. (S)

230 (NSG 230) Women, Health and Society 3(3-0)
Introduction to women's health issues and a basic understanding of how women's health has been influenced historically, culturally and by socio-economic factors. (F,S)

231 (PSYCH/SOC 231) Marriage, Family and Relationships 3(3-0)
Marriage and family from an institutional and relationship perspective; cross-cultural diversity, mate selection, marital dynamics, parenting, divorce, remarriage, emerging patterns. (F,S,SS)

235 (MACOM 235) Women and Media 3(3-0)
The historical and cultural implications of the mass media's portrayal of women and the extent of their media participation from colonial to contemporary times. (*)

240 (CS240) Chicana Writers 3(3-0)
Survey of Chicana writers from the early 1900's to the present. Along with the literature, aspects of history, sociology and politics will be incorporated. (*)

260 (ENG 260) Women and Literature 3(3-0)
Examines female stereotypes deeply carved in literature and developments towards breaking up these stereotypes; opens the study of literature to feminist thinking, treats both male and female authors. (*)

291 Special Topics (1-3 VAR) (*)

301 Feminist Frameworks 3(3-0)
Theory and research methods. (*)

305 (SOC 305) Crime and Women 3(3-0)
Exploration of social, cultural and political variables that create both women victims and women criminals. (*)

330 (MACOM 330) Gender and Film 3(3-0)
A discussion course which examines gender roles in theatrical and documentary film while considering the perspective of producers, actors and spectators and salient film theories. Prerequisite: upper division standing in MACOM or Women's Studies. (*)

335 Gender and Communication 3(3-0)
This course examines the ways that gender affects communication behaviors and helps develop an awareness of the processes that affect gender socialization and stereotyping. (F)

401 (CS 401) Third Worl Feminisms 3(3-0)
This course focuses on Third World women's challenging views of global feminism and feminist representations of "other" women.

403 (SOC 403) Human Sexuality and Social Behavior 3(3-0)
Sexuality and sexual conduct from a sociological and developmental perspective. (*)

407 (SOC 407) Family Violence 3(3-0)
The extent, seriousness, and impact of the major forms of domestic violence. (*)

427 (HIST 427) Women in Industrializing Europe 3(3-0)
Changes and continuities for European women from the sixteenth century to the present, including work, family, sexuality, and movements for social and political change. Prerequisite: HIST 103 or permission of instructor. (*)

491 Special Topics (1-3 VAR)
Prerequisite: junior or senior standing with adequate preparation or permission of instructor. (*)

493 Seminar 3(3-0)
Integrate classroom and experiential learning, applying theories and methods to a supervised field experience and weekly seminars on women's issues. Prerequisite: WS 100 (*)

495 Independent Study (1-3 VAR)
Prerequisite: permission of instructor. (*)

THE COLLEGE OF SCIENCE AND MATHEMATICS

Dr. Jack A. Seilheimer, dean

Academic Department	Majors	Minors
Biology	Biology (BS)	Biology
Chemistry	Chemistry (BS)	Chemistry
Exercise Science, Health Promotion and Recreation	Exercise Science, (BS) Health Promotion	Exercise Science, Health Promotion
	Recreation (BS)	Recreation Physical Education Coaching
Mathematics	Mathematics (BA, BS)	Mathematics
Nursing	Nursing (BSN)	
Physics	Physics (BS)	Physics Physical Science
	Master of Science in Applied Natural Science (MSANS)	

USC offers strong majors in science, mathematics, nursing, exercise science, health promotion and recreation with several options designed to accommodate the varied professional goals of students. Teacher certification is available in biology, chemistry, physical education, mathematics and physics as well as school nurse certification in nursing.

The college's six academic departments and master's degree program are housed in four buildings of contemporary design which feature modern, air-conditioned classrooms and laboratories equipped with state-of-the-art instrumentation for instruction and research. Ninety-seven percent of the science and mathematics regular faculty hold the doctoral degree.

In addition to offering curricula for students majoring and minoring in their disciplines, science and mathematics courses are offered which provide a foundation for many other degree programs. The programs provide students with learning opportunities to prepare themselves to live effectively in an increasingly complex science-oriented society.

BIOLOGY DEPARTMENT

Chair: Dorsch
Faculty: D. Caprioglio, H. Caprioglio, Diawara, Gonzales, Herrmann, Martínez, Osborn, Thomas

The major in biology leads to a bachelor of science (BS) degree. The biology major is sufficiently flexible for students to prepare for a wide variety of professional careers and carefully supervised career planning is a fundamental concern of the program.

The student majoring in biology may plan to enter the workplace or continue study in graduate school as a professional biologist, or may elect to follow any of the following pre-professional programs: pre-chiropractic, pre-forestry, pre-optometry, pre-physical therapy, pre-occupational therapy, pre-pharmacy, pre-physician assistant, pre-podiatric medicine, pre-veterinary medicine, pre-dentistry, pre-medicine or pre-osteopathic medicine. Frequently, a pre-professional program involves a combination of majors or a major and minor. For example, many pre-medical students choose a double major in biology and chemistry. Each of the pre-professional programs has an adviser who can provide detailed and current information about the undergraduate work which the student should pursue to provide the foundation necessary for later entry into a professional school. The student should contact the specialized adviser as early as possible. A list of advisers is available in the departmental office.

The university has a guaranteed transfer agreement with the College of Forestry and Natural Resources at Colorado State University (CSU) in pre-forestry and pre-wildlife management. A student who successfully completes the two-year program at USC with a minimum 2.5000 grade-point average is guaranteed transfer to the baccalaureate program at CSU. Grades of D and F do not transfer.

Biology majors also may seek teacher certification at either the elementary or secondary level. Each student should obtain a written description of specific degree requirements from the appropriate adviser. Biology students who are considering attending graduate school should take one year of a foreign language and should plan to take the Graduate Record Examination during the senior year.

The biology department also offers several emphasis areas. A few are described below.

The specialization in environmental health is designed to meet the curriculum recommended by the Accreditation Council of the National Environmental Health Association. Satisfactory completion of the curriculum leads to a BS degree in biology.

The emphasis in cell and molecular biology is available to students interested in professions and/or graduate schools which require specialization in molecular biology, cell biology or genetics.

The emphasis in medical technology is available to students majoring in biology and stresses microbiology, immunology, and chemistry. In the senior year, students apply for admission to a hospital school of medical technology, and after receiving the degree from USC, spend a one-year internship in hospital clinical laboratory practice. At the completion of the internship the student sits for a certifying exam and is registered as medical technologist.

Department Goals

- To prepare students to become productive, accountable and responsible employees upon entering the work force.
- To prepare students to enter graduate or professional schools.
- To develop in students a broad-based theoretical foundation supplemented by laboratory and field exercises that allow individual observations, inferences and hands-on experience.
- To allow those students seeking a minor in biology to supplement and reinforce the major field of study.

Expected Student Outcomes

General Requirements

- Students graduating with a BS in biology must have at least a cumulative GPA of 2.0000 in the major area. A cumulative GPA of 2.5000 in the major area is required for admission to the teacher education program.
- Graduates are required to demonstrate intellectual skills and knowledge in math and supporting sciences.
- Graduates are required to complete an approved minor outside the biology department.
- Biology majors are expected to demonstrate a knowledge of basic laboratory tools used in biology for observation and analysis, phylogenetic relationships, relationships between form and function, and population/ecological dynamics.

Biology graduates are expected to:

1) read critically, think about, and review historical and current literature in the biological sciences;
2) apply basic knowledge of the related fields of chemistry, mathematics and physics to problem-solving in biology;
3) formulate logical hypotheses;
4) design and carry out well-designed, well-controlled tests on scientific hypotheses;
5) have a knowledge of basic biology terminology;
6) have a broad-based background in molecular, cellular and organismic biology; and
7) find information and present it in oral and written reports.

Specific Requirements for the Biology Major

BIOL Courses		Titles	Credits
BIOL	171	Career Planning I	1
	100/100L	Principles of Biology/Lab	4
	201/201L	Botany/Lab	5
	202/202L	Zoology/Lab	5
	301/301L	General Microbiology/Lab	5
	351/351L	Genetics/Lab	4
	341/341L	Vertebrate Physiology/Lab OR	
	412/412L	Cellular Biology/Lab	4
	447	Career Planning IV	1
	493	Seminar	1
Approved Electives			15
		TOTAL	45

Other Required Courses

CHEM	121/121L	General Chemistry I/Lab I	5
	122/122L	General Chemistry II/Lab II	5
	301/301L	Organic Chemistry I/Lab I	5
	302/302L	Organic Chemistry II/Lab II	5
PHYS	201/201L	Principles of Physics I/Lab I	4
	202/202L	Principles of Physics II/Lab II	4
MATH	121	College Algebra	4
	221	Applied Calculus	4
Statistics (MATH 156 or BUSAD 260 or PSYCH 201)			3
		TOTAL	39

In addition to the biology major, the following emphasis areas are available. Complete course listings for each of these emphasis areas may be obtained from the biology department office, Life Sciences building 207.

Biology Emphasis Area	Adviser
Biology, Ecology	Martinez
Biology, Genetics	D. Caprioglio
Biology, Microbiology	H. Caprioglio
Biology, Molecular & Cellular	D. Caprioglio
Biology/Chemistry	H. Caprioglio/Herrmann
Environmental Health	Thomas
Medical Technology Program	D. Caprioglio
Pre-Chiropractic	Gonzales
Dental	Dorsch
Forestry & Wildlife	Osborn
Medical & Osteopathic	Gonzales, Dorsch
Occupational	H. Caprioglio
Optometric	H. Caprioglio
Physician Assistant	Gonzales
Physical Therapy	H. Caprioglio
Podiatric	H. Caprioglio
Veterinary	Martinez

Teaching

Elementary/Biology	Diawara
Secondary/Biology	Diawara
Elementary/Physical Science	Osborn
Secondary /Physical Science	Osborn

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual department's curriculum sheet.

Specific Requirements for the Professional Biology Minor

BIOL 100/100L	Principals of Biology/Lab	4
201/201L	Botany/Lab	5
202/202L	Zoology/Lab	5
Approved Upper-division Electives		9
	TOTAL	23

Specific Requirements for the General Biology Minor

Approved Electives	15
Approved Upper-division Electives	8
TOTAL	23

Co-curricular Requirements

There are many opportunities to participate in experiences that will complement and reinforce a student's academic experience. The activities may be either on- or off-campus and may be used to develop leadership and interpersonal skills. The faculty of the biology department actively encourages student participation in such activities.

Outcomes Assessment Activities

Biology Majors

Assessment of students' improvement in intellectual skills, knowledge and capacities from entrance to graduation will be accomplished through the use of several tools. Exams will be used as one measure of the student's proficiency in writing skills, acquisition of knowledge, problem solving and laboratory skills. All majors will take a Senior Seminar that requires oral and written presentations. Seniors will also take the Biology Field Achievement Test which measures USC students against the national norm. In addition, each biology major will develop a portfolio, the responsibility of which will be shared by the student and the adviser. The portfolio will be completed as part of the senior-level career planning course and then reviewed by the student's adviser or another faculty member.

Examples of material that may be included in a portfolio are:

- ACT scores, high school transcripts and college transcripts;
- samples of homework, quizzes, examinations, research reports and lists of developed skills;
- examples of writing, both from the required English courses as well as reports required by courses in life sciences;
- certificates, awards, honors and evidences of co-curricular activities; and
- scores from appropriate examinations such as the GRE, MCAT, DAT, ETS, College Base.

Biology Minors

- The faculty of the biology department believe that the course grade would be a measure of the student's grasp of the basics of the course material.
- A written paper will be required in an upper-division class.

BIOLOGY (BIOL)

UNDERGRADUATE COURSES

100 Principles of Biology 3(3-0)
Introduction to basic principles common to all facets of biology. Topics include a brief history of biology, the scientific method, the diversity of life, cell structure and reproduction, and metabolism. (F,S)

100L Principles of Biology Lab 1(0-2)
To expose the student to problem-solving skills emphasizing the importance of observation and data accumulation. Corequisite: BIOL 100. (F,S)

112 Nutrition 3(3-0)
Analysis of personal dietary habits and behavior in relation to basic human nutritional needs and food composition. (CE,F,S)

121 Environmental Conservation 3(3-0)
Historical review of humankind's interrelationship with and impact on the natural environment. Basic principles of ecology and current issues relating to the use of natural resources and environmental problems. (F,S,SS)

121L Environmental Conservation Lab 1(0-2)
Optional field studies to augment BIOL 121. Corequisite: BIOL 121. (F,S,SS)

160 (CHEM 160) Elementary Concepts in Science I 3(2-2)
Hands-on, standards-based approach to understanding basic concepts of chemistry and life sciences, including science technology and ethics. Integrated lecture, lab discussion periods. (F,S,SS)

162 (EXHP 162) Personal Health 3(3-0)
The development of knowledge and the scientific basis for the analysis, evaluation and promotion of personal health and wellness. (F,S)

171 Career Planning I 1(1-0)
Identifying career options and creating a personalized educational program. (F,S)

201 Botany 3(3-0)
Morphology, anatomy, physiology, phylogeny and ecology of the major plant groups. Prerequisite: BIOL 100 or permission of instructor. Corequisite: BIOL 201L. (CE,F,S)

201L Botany Lab 2(0-4)
Corequisite: BIOL 201. (CE,F,S)

202 Zoology 3(3-0)
Anatomy, physiology, ecology and phylogeny of major and minor invertebrate and vertebrate taxa. Prerequisite: BIOL 100 or permission of instructor. Corequisite: BIOL 202L. (CE,F,S)

202L Zoology Lab 2(0-4)
Corequisite: BIOL 202. (CE,F,S)

206 Introduction to Microbiology 3(3-0)
For students of nursing and allied health. Applied aspects of medical microbiology. Corequisite: BIOL 206L. (CE,F)

206L Introduction to Microbiology Lab 1(0-3)
Corequisite: BIOL 206. (CE,F)

220 Medical Terminology 2(2-0)
Basic prefixes, word roots, combining forms and suffixes of medical terminology and human anatomy are covered, including pronunciation and patient charting. (S)

223 Human Physiology and Anatomy I 3(3-0)
Study of human physiology and anatomy designed for students who require or desire a thorough understanding of the functional and structural aspect of the human body. Not for the majority of biology majors. Topics include physiologically important molecules and compounds, the cell, tissues, integument, skeleton, muscle, nervous system, and special senses. Corequisite: BIOL 223L. (CE,F)

223L Human Physiology and Anatomy Lab I 1(0-2)
Corequisite: BIOL 223. (CE,F)

224 Human Physiology and Anatomy II 3(3-0)
A continuation of BIOL 223. Topics include the vascular system, respiration, digestion, endocrines, metabolism, excretion, fluid balance, and reproduction. Corequisite: BIOL 224L. (CE,S)

224L Human Physiology and Anatomy Lab II 1(0-2)
Corequisite: BIOL 224. (CE,S)

230 Emergency Medical Technician (EMT) Training 6(4-6)
Meets the U.S. D.O.T. 1998 Revised EMT-Basic National Standard Curriculum. Clinical time in hospital emergency departments and on ambulances. Hepatitis B vaccination required first week of class. Eligible to take Colorado certification written examination. See instructor prior to registering for the class. Prerequisite: CPR for health care providers. (F,S)

280 Introduction to Biotechnology 3(3-0)
Introduction and current developments in the use of biological organisms for research and for commercial and industrial processes. (CE,S)

291 Special Topics (1-4 VAR) (F,S,SS)

294 Field Experience (1-4 VAR)
Volunteer work experience under program director, department coordinator and faculty supervisor. (S/U grades) (F,S,SS)

301 General Microbiology 3(3-0)
Introduction to the bacteria and viruses, including microbial genetics and physiology. Prerequisites: BIOL 201, 202 and CHEM 211 and 211L or CHEM 301 and CHEM 301L. Corequisite: BIOL 301L. (CE,F)

301L General Microbiology Lab 2(0-4)
Corequisite: BIOL 301. (CE,F)

302 Medical Microbiology 2(2-0)
Survey of pathogenic bacteria, viruses and fungi. Prerequisite: BIOL 301 or permission of the instructor. Corequisite: BIOL 302L. (CE,S)

302L Medical Microbiology Lab 2(0-4)
Corequisite: BIOL 302. (CE,S)

311 (CHEM 311) Survey of Biochemistry 3(3-0)
Survey of biochemistry. For pre-health professional students. Intermediary metabolism is taught at an intermediate level and in the context of human nutrition and clinical applications. Prerequisites: CHEM 211 or 201. (F)

321 Comparative Vertebrate Anatomy 3(3-0)
Comparative study of developmental and functional anatomy of vertebrate animals. Prerequisite: BIOL 202 or permission of instructor. Corequisite: BIOL 321. (CE,S)

321L Comparative Vertebrate Anatomy Lab 2(0-4)
Corequisite: BIOL 321. (CE,S)

324 (SPCOM 324) Anatomy of the Head, Neck and Chest 2(2-0)
Anatomical structures of the head, neck, and chest with analysis of development and function. Prerequisites: BIOL 221 or BIOL 321 or permission of instructor. Co-requisite: BIOL 324L. (CE,F)

324L (SPCOM 324L) Anatomy of the Head, Neck, and Chest Lab 1(0-2)
Corequisite: BIOL 324. (CE,F)

341 Vertebrate Physiology 3(3-0)
Basic general physiology and the functions of animal and human body systems. Prerequisites: BIOL 202, CHEM 211 and 211L or 301 and 301L. Corequisite: BIOL 341L. (CE,F)

341L Vertebrate Physiology Lab 1(0-2)
Corequisite: BIOL 341. (CE,F)

351 Genetics 3(3-0)
Mendelian, molecular and population genetics with laboratory using yeast as model. Prerequisites: BIOL 201 and 202 or permission of instructor. Corequisite: BIOL 351L. (CE,F,S)

351L Genetics Lab 1(0-2)
Corequisite: BIOL 351. (CE,F,S)

352 Evolution 2(2-0)
Historical view of the theory of evolution with emphasis upon man's place in nature and the forces which have produced evolution. (CE,S)

353 Ecology 4(4-0)
Interaction and interdependencies between organisms and their environment. Prerequisites: BIOL 201 and 202 or permission of instructor. Corequisite: BIOL 353L. (CE,F)

353L Ecology Field Studies 1(0-2)
Corequisite: BIOL 353. (CE,F)

394 Field Experience (1-4 VAR)
Volunteer work experience under program director, program coordinator, and faculty supervisor (S/U grades) (F,S,SS)

402 Immunology 3(3-0)
Humoral and cell-mediated immunity including immune disorders and theories of immunological techniques. (S)

411 (CHEM 411) Biochemistry I 3(3-0)
Chemistry of constituents of living matter, including proteins, carbohydrates, nucleic acids and lipids. An introduction to enzymes and coenzymes. Prerequisite: CHEM 302, or permission of instructor. (F)

412 Cellular Biology 3(3-0)
Structural and functional organization of the cell, life cycles of cells, intracellular digestion, protein synthesis and cell death. Prerequisites: BIOL 201 and 202, CHEM 211 and 211L or CHEM 301 and 301L. Corequisite: BIOL 412L. (CE,S)

412L Cellular Biology Lab 1(0-3)
Corequisite: BIOL 412. (CE,S)

421 Histology 2(2-0)
A microscopic study of vertebrate tissues and organs. Prerequisites: BIOL 202 and 202L or BIOL 223 and 223L or BIOL 321 and 321L. Corequisite: BIOL 421L. (CE,F)

421L Histology Lab 2(0-4)
Corequisite: BIOL 421. (CE,F)

426 Plant Morphology 2(2-0)
Forms, basic structures, relationships, life histories and evolutionary trends of representatives of the major autotrophic plant groups. Prerequisite: BIOL 201 or permission of instructor. Corequisite: BIOL 426L. (CE,S)

426L Plant Morphology Lab 1(0-2)
Corequisite: BIOL 426. (CE,S)

432 Embryology 2(2-0)
Development of representative vertebrate and invertebrate animals with particular emphasis on the early embryology of Branchiostoma, frog, chick, and mammal. Prerequisite: BIOL 202 or permission of instructor. Corequisite: 432L. (CE,F)

432L Embryology Lab 2(0-4)
Corequisite: BIOL 432. (CE,F)

440 Molecular Genetics 2(0-4)
Molecular and Biochemical basis of heredity. Regulation of gene expression. Corequisite: BIOL 351 and 351L. (F)

440L Molecular Genetics Lab 1(0-2)
Corequisite: BIOL 440 (F)

441 Freshwater Invertebrate Zoology 2(2-0)
Classification, phylogeny, systematics, morphology, physiology, and natural history of freshwater invertebrates inclusive of insects. Prerequisites: BIOL 202, or permission of instructor. Corequisite: BIOL 441L. (CE,S,E)

441L Freshwater Invertebrate Zoology Lab 2(0-4)
Corequisite: BIOL 441. (CE,S,E)

443 Limnology 2(2-0)
Biology, chemistry and physics of lakes and rivers. Prerequisites: BIOL 201 and 202 or permission of instructor. Corequisite: BIOL 443L. (CE,S,O)

443L Limnology Lab 2(0-4)
Corequisite: BIOL 443 (CE,S,O)

452 Theory and Application of Electron Microscopy 2(2-0)
Theory of electron optics, image analysis and specimen preparation in biological and physical sciences. Preparation of cells and tissues for examination by transmission electron microscopy (TEM) and scanning electron microscopy (SEM). Prerequisite: permission of instructor. Corequisite: BIOL 452L (CE,S)

452L Theory and Application of Electron Microscopy Lab 2(0-4)
Corequisite: BIOL 452. (CE,S)

471 Career Planning IV 1(1-0)
Creating and securing graduate school and employment opportunities. (F,S)

473 Med. Tech. Clinical Rotation I 12(5-14)
Coursework and clinical training in an affiliated medical laboratory sciences facility. Specific course of study determined by facility. Prerequisite: consent of instructor. (F)

474 Med. Tech. Clinical Rotation II 12(5-14)
Coursework and clinical training in an affiliated medical laboratory sciences facility. Specific course of study determined by facility. Prerequisite: BIOL 473 and consent of instructor. (S)

475 Med. Tech. Clinical Rotation III 6(3-6)
Coursework and clinical training in an affiliated medical laboratory sciences facility. Specific course of study determined by facility. Prerequisite: BIOL 474 and consent of instructor. (SS)

479 Ichthyology 2(2-0)
The morphology, taxonomy and ecology of fishes; an introduction to fishery biology and aquaculture. Field trips are an integral part of the course. Prerequisites: BIOL 202 and 202L. Corequisite: BIOL 479L. (CE,F)

479L Ichthyology Lab 1(0-2)
Corequisite: BIOL 479. (CE,F)

481 Entomology 2(2-0)
Structure, classification, behavior, ecology and control of insects. Prerequisite: BIOL 202 or permission of instructor. Corequisite: BIOL 481L. (CE,F)

481L Entomology Lab 1(0-2)
Corequisite: BIOL 481. (CE,F)

483 Mammalogy 2(2-0)
Evolution, classification and biology of mammals; practice in identifying and preparing specimens. Prerequisite: BIOL 202. Corequisite: BIOL 483L. (CE,S)

483L Mammalogy Lab 1(0-2)
Corequisite: BIOL 483. (CE,S)

484 Ornithology 2(2-0)
Classification, life history, laboratory and field identification of birds. Prerequisite: BIOL 202. Corequisite: BIOL 484L. (CE,S)

484L Ornithology Lab 1(0-2)
Corequisite: BIOL 484. (CE,S)

485 Plant Taxonomy 2(2-0)
Identification of the common vascular plant families of Colorado with an emphasis on the flowering plants; study of their systematic relationships. Prerequisite: BIOL 201 or permission of instructor. Corequisite: BIOL 485L. (CE,F)

485L Plant Taxonomy Lab 2(0-4)
Corequisite: BIOL 485. (CE,F)

489 Medical and Veterinary Entomology 3(3-0)
Role of insects and other arthropods in the causation of human and animal diseases. Principles of epidemiology. Parasitological aspect of arthropod-vectored diseases. Prerequisites: BIOL 100 and 202. (S)

491 Special Topics (1-4 VAR)
(F,S,SS)

493 Seminar 1(1-0)
Seminar for majors and minors concerning unique, current, or unusual topics in biology. Speakers may include guests, faculty, or students. Required of majors. Prerequisite: permission of program chairman. (F,S)

494 Field Experience (1-4 VAR)
Volunteer work experience under program director, program coordinator and faculty supervisor. (S/U grades). (F,S,SS)

495 Independent Study (1-4 VAR)
Prerequisite: junior standing, biology major, permission of instructor and department. (F,S,SS)

498 Internship (5-15 VAR)
1. Measurement and control of air pollution
2. Noise and the environment
3. Industrial hygiene and accident prevention
4. Milk and food sanitation
5. Water and waste-water sanitation
6. Housing and institutional environmental health
7. Solid waste management (S/U grades) Prerequisite: permission of department. (F,S,SS)

GRADUATE COURSES

Admission to graduate courses requires approval of the adviser for the graduate program.

502 Immunology (3(3-0)
Humoral and cell-mediated immunity including immune disorders and theories of immunological techniques. (S)

511 (CHEM 511) Biochemistry I 3(3-0)
Chemistry of constituents of living matter, including proteins, carbohydrates, nucleic acid and lipids. An introduction to enzymes and coenzymes. Prerequisite: one year undergraduate Organic Chemistry. (F)

512 Cellular Biology 3(3-0)
Structural and functional organization of the cell, life cycles of cells, intracellular digestion, protein synthesis and cell death. Prerequisite: BIOL 201, 202, CHEM 301. Corequisite: BIOL 512L. (S)

512L Cellular Biology Lab 1(0-3)
Corequisite: BIOL 512 (S)

521 Histology 2(2-0)
A microscopic study of vertebrate tissues and organs. Prerequisites: BIOL 202, 202L, 223, 223L 321 and 321L. Corequisite: BIOL 521L. (F)

521L Histology Lab 2(0-4)
Corequisite: BIOL 521. (F)

526 Plant Morphology 2(2-0)
Forms, basic structures, relationships, life histories and evolutionary trends of representatives of the major autotrophic plant groups. Corequisite: BIOL 526L. (S)

526L Plant Morphology Lab 1(0-2)
Corequisite: BIOL 526. (S)

532 Embryology 2(2-0)
Development of representative vertebrate and invertebrate animals with particular emphasis on the early embryology of Branchiostoma, frog, chick and mammal. Corequisite: BIOL 532L. (F)

532L Embryology Lab 2(0-4)
Corequisite: BIOL 532. (F)

540 Molecular Genetics 2(2-0)
Molecular and biochemical basis of heredity. Regulation of gene expression. Prerequisite: BIOL 351 and 351L or permission of instructor. Corequisite: BIOL 540L. (F)

540L Molecular Genetics Lab 1(0-2)
Corequisite: BIOL 540. (F)

541 Freshwater Invertebrate Zoology 2-(2-0)
Classification, phylogeny, systematics, morphology, physiology, and natural history of freshwater invertebrates inclusive of insects. Corequisite: BIOL 541L. (S/E)

541L Freshwater Invertebrate Zoology Lab 2(0-4)
Corequisite: BIOL 541. (S/E)

543 Limnology 2(2-0)
Biology, chemistry, and physics of lakes and rivers. Corequisite: BIOL 543L. (S/O)

543L Limnology Lab 2(0-4)
Corequisite: BIOL 543. (S/O)

552 Theory and Application of Electron Microscopy 2(1-0)
Theory of specimen preparation, electron optics and image analysis in biological and physical sciences. Preparation of cells and tissues for examination by transmission and scanning electron microscopy. (S)

552L Electron Microscopy Lab 2(0-4)
Corequisite: BIOL 552. (S)

579 Ichthyology 2(2-0)
The morphology, taxonomy and ecology of fishes; an introduction to fishery biology and aquaculture. Field trips are an integral part of the course. Corequisite: BIOL 579. (F)

570 Ichthyology Lab 1(0-2)
Corequisite: BIOL 579. (F)

581 Entomology 2(2-0)
Structure, classification, behavior, ecology and control of insects. Prerequisite: BIOL 202 or permission of instructor. Corequisite: BIOL 581L. (CE,F)

581L Entomology Lab 1(0-2)
Corequisite: BIOL 581. (CE,F)

583 Mammalogy 2(2-0)
Evolution, classification and biology of mammals; practice in identifying and preparing specimens. Corequisite: BIOL 583L. (S)

583 Mammalogy Lab 1(0-2)
Corequisite: BIOL 583 (S)

584 Ornithology 2(2-0)
Classification, life history, laboratory and field identification of birds. Corequisite: BIOL 584L. (S)

584L Ornithology Lab 1(0-2)
Corequisite: BIOL 584. (S)

585 Plant Taxonomy 2(2-0)
Identification of common vascular plant families of Colorado with an emphasis on the flowering plants; study of their sytematic relationships. Corequisite: BIOL 585L. (F)

585L Plant Taxonomy Lab 2(0-4)
Corequisite: BIOL 585. (F)

589 Medical and Veterinary Entomology 3(3-0)
Role of insects and other arthropods in the causation of human and animal diseases. Principles of epidemiology. Parasitological aspect of arthropod-vectored diseases. Prerequisites: BIOL 100 and 202. (S)

591 Special Topics (1-4 VAR)
(F,S,SS)

595 Independent Study (1-4 VAR)
Prerequisite: graduate standing, biology major, permission of instructor and department. (F,S,SS)

598 Graduate Internship (1-4 VAR)
Volunteer or paid work experience under the combined supervision of the selected organization and a faculty member. Prerequisite: graduate students only. (F,S,SS)

599 Thesis Research (1-6 VAR)
(IP and S/U grading). (F,S,SS)

CHEMISTRY DEPARTMENT

Chair: Proctor
Faculty: Bonetti, Druelinger, Saul, Vorndam, Wilkes

The major in chemistry leads to a bachelor of science (BS) degree and the chemistry curriculum is approved by the American Chemical Society.

Chemistry is a foundation science for many professions and graduates with degrees in chemistry find employment in such diverse areas as biotechnology, health sciences, agricultural and environmental fields, transportation industries, the semi-conductor industry, teaching and research. Consequently, the chemistry department provides students with a number of diverse program options to assure each student a sound education in the fundamental areas of modern chemistry as well as valuable educational versatility.

In addition to curricula for students who wish to pursue chemistry as a profession, programs can be designed for pre-professional areas including pre-pharmacy, pre-medicine, pre-dentistry and pre-veterinary medicine.

A core curriculum for the major exists and many options are open to students to combine other interests with a major in chemistry. For example, while medical schools do not mandate any particular major for entering students, biology and chemistry have been

the leading majors of students entering medical school. The requirements for a pre-medicine/chemistry major are the same as for the chemistry major option. Additionally, the student must complete specific courses required by the medical schools to which they are applying. It is recommended that pre-medical and other pre-professional students coordinate the program with the appropriate pre-professional adviser, as well as the chemistry adviser, to assure that specific course requirements are completed.

The chemistry department strives to provide intellectual and professional training for students in the field of chemistry and in support of the American Chemical Society charter "to encourage in the broadest and most liberal manner the advancement of chemistry in all its branches; the promotion of research in chemical science and industry, the improvement of the qualifications and usefulness of chemists through high standards of education to promote scientific interests and inquiry..."

Program Goals

- To prepare graduates in the discipline of chemistry to become productive members of the profession whether they go into industry, post-graduate education or other areas.
- To prepare students in the verbal, written and quantitative skills that are prerequisite to advanced study or careers in chemistry.
- To prepare students in the theoretical principals of chemistry as well as in the laboratory approach to problem solving.
- To maintain approval of the chemistry curriculum as defined by the American Chemical Society, Committee on Professional Training.
- To provide the opportunity for a variety of educational programs through the following options:
  1) basic chemistry
  2) ACS certified curriculum
  3) biochemistry
  4) double major
  5) engineering/chemistry
  6) chemistry/teacher certification
  7) chemistry minor

Expected Student Outcomes

General Requirements

- Students majoring or minoring in chemistry are required to have a cumulative GPA of 2.0000 or better in their chemistry courses.
- Proficiency in physics, math and computer science is essential for understanding and applying chemical principles; therefore, graduates must complete approved math, physics and computer science courses with an overall GPA of 2.0000 or better.
- The ability to think across disciplines contributes significantly to the educational experience as well as the application of chemistry as a profession; therefore, graduates must successfully complete an approved minor or area of concentration such that the overall GPA is 2.0000 or better.
- Transfer students are required to earn a minimum of 20 semester credit hours in approved chemistry courses from USC for graduation with a BS degree in chemistry. Transfer students wishing to minor in chemistry must earn a minimum of 10 of the 20 credit hours required at USC.
- Students will be required to successfully complete American Chemical Society exams in general chemistry, organic chemistry, analytical chemistry, physical chemistry and instrumental methods during the course of the chemistry degree curriculum.
- Students will be required to take an exit examination during the senior year, covering the undergraduate chemistry curriculum.
- Chemistry graduates are expected to:
  1) understand the concept of and be able to apply the scientific method to problem solution;
  2) understand classifications of chemical compounds, general reaction types and quantitative aspects of stoichiometry as applied to chemical reactions;
  3) apply basic knowledge of related fields such as mathematics and physics to problem solving, methods of analysis and use of numerical data in the chemical sciences;
  4) demonstrate a knowledge of basic laboratory skills, methods and equipment used in chemistry for observation and analysis of chemical systems;
  5) read, think and write critically and review current literature in the chemical sciences; and
  6) exhibit a comprehensive knowledge of the fundamental theories, concepts and skills necessary in the chemical sciences.

Specific Requirements

The following common core is required for all of the chemistry options for the bachelor of science degree:

CHEM Courses	Titles	Credits
CHEM 121/121L	General Chemistry I/Lab I	5
122/122L	General Chemistry II/Lab II	5
301/301L	Organic Chemistry I/Lab I	5
302/302L	Organic Chemistry II/Lab II	5
317/317L	Quantitative Analysis/Lab	5

321	Physical Chemistry I	3
322	Physical Chemistry II	3
419/419L	Instrumental Analysis/Lab	5
493	Seminar	1
	TOTAL	37

All options for the chemistry major also require completion of the following institutional and general education requirements:

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual department's curriculum sheet.

Requirements for the Specific Options

• *Basic Chemistry Option*

Required Chemistry Core			37
CHEM	323	Experimental Physical Chemistry	2
	421	Advanced Inorganic Chemistry	
		OR	
	221/221L	Inorganic Chemistry/Lab	3
		TOTAL	42

Other Required Courses

MATH	126	Calculus and Analytic Geom I	5
	224	Calculus and Analytic Geom II	5
PHYS	221/221L	General Physics I/Lab I	5
	222/222L	General Physics II/Lab II	5
CIS	102	Programming with BASIC	
		OR	
EN	105	FORTRAN	3
		TOTAL	23

Institutional and General Education Courses	30
Approved Minor	20
Free Electives	13
TOTAL	63
Total credit hours	**128**

• *ACS Certified Option*

Required Chemistry Core			37
CHEM	221/221L	Inorganic Chemistry/Lab	3
	323	Experimental Physical Chemistry	2
	411	Biochemistry I	3
	421	Advanced Inorganic Chemistry	3
	495	Independent Study	1
Chemistry Electives			3
		TOTAL	52

Other Required Courses

MATH	126	Calculus and Analytic Geom I	5
	224	Calculus and Analytic Geom II	5
PHYS	221/221L	General Physics I/Lab I	5
	222/222L	General Physics II/Lab II	5
EN	105	FORTRAN	3
		TOTAL	23

Institutional and General Education	30
Free Electives	3
Approved Minor	20
TOTAL	53
Total credit hours	**128**

• *Biochemistry Option*

Required Chemistry Core			37
CHEM	411	Biochemistry I	3
	412/412L	Biochemistry II/Lab II	5
		TOTAL	45

Other Required Courses

MATH	126	Calculus and Analytic Geom I	5
	224	Calculus and Analytic Geom II	5
PHYS	221/221L	General Physics I/Lab I	5
	222/222L	General Physics II/Lab II	5
EN	105	FORTRAN	3
		TOTAL	23

Institutional and General Education	27
Biology Minor	23
Approved Electives	10
TOTAL	60
Total credit hours	**128**

• *Double Major Option*

Required Chemistry Core	37
Chemistry Electives	3
TOTAL	40

Other Required Courses

MATH	126	Calculus and Analytic Geometry I	5
PHYS	201/201L	Principles of Physics I/Lab I	4
	OR		
PHYS	221/221L	General Physics I/Lab I	5
PHYS	202/202L	Principles of Physics II/Lab II	4
	OR		
PHYS	222/222L	General Physics II/Lab II	5
		TOTAL	13-15

Institutional and General Education	27
Approved Second Major Minimum	44
Free Electives	2
TOTAL	73

Total credit hours 126-128

- ***Engineering/Chemistry Option***

Required chemistry core 37

Other Required Courses

MATH	126	Calculus and Analytic Geometry I	5
	224	Calculus and Analytic Geometry II	5
PHYS	221/221L	General Physics I/Lab I	5
	222/222L	General Physics II/Lab II	5
EN	103	Introduction to Engineering	
		OR	
CIS	101		2
EN	105	FORTRAN	3
	107	Engineering Graphics	2
EN	343	Engineering Economy	3
Approved Engineering Electives (choose from EN 315, 340, 342, 440, 471, 473, 475, 477)			12-15
		TOTAL	79-82

Institutional and General Education	30
Free Electives (recommended EN 211, 212, 321)	16-19

Total Credit Hours 128

- ***Chemistry/Teacher Certification Option***

Required Chemistry Core			37
CHEM	221/221L	Inorganic Chemistry/Lab	3
	425	Environmental Chemistry	3
		TOTAL	43

Other Required Courses

BIOL	121/121L	Environmental Conservation	4
	162	Personal Health	3
	100/100L	Principles of Biology I/Lab I	4
GEOL	101/101L	Earth Science I/Lab I	4
PHYS	110	Astronomy	3
PHYS	201/201L	Principles of Physics I/Lab I	4
		OR	
PHYS	221/221L	General Physics I/Lab I	5
PHYS	202/202L	Principles of Physics II/Lab II	4
		OR	
PHYS	222/222L	General Physics II/Lab II	5
MATH	222	Applied Calculus	5
		OR	
MATH	126	Calculus and Analytic Geom I	5
PSYCH	100	General Psychology	3
	151	Human Development	3
ED	202	Foundation of Education	3
	435	Classroom Management	3
	440	Methods of Teaching	3
	441	Methods of Teaching	3
	460	Educational Media & Technology	3
	461	Atypical Students in the Secondary School	3
	488	Student Teaching Secondary	15
IST	345	Career Education	2
RDG	425	Teaching Reading in Content Areas	2
		TOTAL	74-76

Institutional and General Education	24

Total credit hours ..... 141 - 143

Chemistry Minor

CHEM	121/121L	General Chemistry I/Lab I	5
	122/122L	General Chemistry II/Lab II	5
Upper-division Electives			10
		TOTAL	20

Co-curricular Requirements

Students should experience co-curricular activities which enhance, broaden and reinforce the academic experience; therefore, the faculty support and encourage students to participate in science-related, as well as in general activities such as:

1) science or chemistry clubs
2) student government
3) scientific meetings, seminars, symposia, field trips, tours, etc.

Outcomes Assessment Methods

- Assessment of chemistry majors occurs through examination of GPA in required courses. Majors are required to maintain a 2.0000 GPA in major and minor courses as well as in other required courses.
- Students are required to complete American Chemical Society national standard exams in general chemistry, organic chemistry, analytical chemistry and physical chemistry during the course of the chemistry degree curriculum. Scores are compared to national averages to determine if students exhibit a comprehensive knowledge of the fundamental theories and concepts necessary in the chemical sciences disciplinary areas.
- Students are required to take an exit examination during the senior year. The ETS Major Field Examination, covers the undergraduate chemistry curriculum. Scores are compared to national averages to determine if students exhibit a comprehensive knowledge of the fundamental theories and concepts necessary in the chemical sciences overall.
- Faculty advisers maintain complete files on each student. The files contain specific examples of work completed and are reviewed at the end of the sophomore year and during the year of graduation for the purposes of advisement and evaluation of appropriate progress through the curriculum. Upon graduation, the contents of the file revert to the student. However, a copy of the file is maintained in the department for a period of five years in order to track the careers of graduates.
- The file evaluations provide an analysis of how well student outcomes are being met.
- The file evaluations provide an advisement tool for faculty advisers to facilitate proper sequencing of courses and to check for any deficiencies in the student's program.
- The files can be used by the student for the purpose of generating a resume and by the adviser for the purpose of providing reference letters for the student.

CHEMISTRY (CHEM)

UNDERGRADUATE COURSES

101 Chemistry and Society 3(3-0)
Chemistry related to the everyday world. Drugs, food, pollution, pesticides, consumer products, energy, and home health. Principally for nonscience majors. (*)

101L Chemistry and Society Lab 1(0-2)
Laboratory is optional. Experiments to exemplify the logical steps of problem solving and explore the physical and chemical world. Corequisite: CHEM 101. (*)

111 Principles of Chemistry 3(3-0)
Fundamental laws, theories and principles of chemical reactions. Credit not applicable for chemistry majors or minors. Corequisite: CHEM 111L. (F,S)

111L Principles of Chemistry Lab 1(0-2)
Experiments using common chemical equipment and techniques to aid the student in learning what occurs in the chemical laboratory. Corequisite: CHEM 111. (F,S)

121 General Chemistry I 4(4-0)
For science, engineering and pre-professional curricula. Atomic theory, chemical bonding, periodic properties, states of matter, oxidation-reduction, stoichiometry, thermochemistry, inorganic nomenclature. Prerequisites: one year of high school algebra or equivalent, and one year high school chemistry or equivalent. Corequisite: CHEM 121L. (F,S)

121L General Chemistry Lab I 1(0-2)
Corequisite: CHEM 121. (F,S)

122 General Chemistry II 4(4-0)
Continuation of CHEM 121. Thermodynamics, kinetics, equilibria, nuclear chemistry, electrochemistry, acids and bases, solutions, descriptive inorganic chemistry. Prerequisite: CHEM 121. Corequisite: CHEM 122L. (F,S)

122L General Chemistry Lab II 1(0-2)
Laboratory component to CHEM 122 including qualitative analysis. Corequisite: CHEM 122. (F,S)

160 (BIOL 160) Elementary Concepts in Science I 3(2-2)
Hands-on, standards-based approach to understanding basic concepts of chemistry and life sciences, including science technology and ethics. Integrated lecture, lab, discussion periods. (F,S,SS)

211 Introduction to Organic Chemistry 3(3-0)
Survey of organic chemistry chemical structure, reactivity and functional groups are presented in context of relevance to society. Prerequisite:CHEM 111. Corequisite: CHEM 211L (S)

211L Introduction to Organic Chemistry Lab 1(0-2)
Survey of organic chemistry laboratory course. Basic organic laboratory techniques and skills, both micro and macro scale are presented. Prerequiste: CHEM 111. Corequisite: CHEM 211. (S)

221 Inorganic Chemistry 2(2-0)
Basic principles of inorganic chemistry. The main properties, reaction chemistry, and descriptive chemistry of inorganic elements and compounds. Prerequisite: CHEM 122. Corequisite: CHEM 221L. (*)

221L Inorganic Chemistry Lab 1(0-3)
Inorganic laboratory techniques, inorganic qualitative analysis, synthesis and characterization. Corequisite: CHEM 221. (*)

291 Special Topics (1-5 VAR) Prerequisite: permission of instructor. (*)

301 Organic Chemistry I 3(3-0)
For majors and pre-professional students requiring a strong background in organic chemistry. Organic reactions and mechanisms are related to molecular structure. Prerequisite: CHEM 22. Corequisite: CHEM 301L. (F,S)

301L Organic Chemistry Lab I 2(0-6) Corequisite: CHEM 301. (F,S)

302 Organic Chemistry II 3(3-0)
Continuation of CHEM 301. Prerequisite: CHEM 301. Corequisite: CHEM 302L. (F,S)

302L Organic Chemistry Lab II 2(0-6)
Prerequisite: CHEM 301L. Corequisite: CHEM 302. (F,S)

311 (BIOL 311) Survey of Biochemistry 3(3-0)
Survey of biochemistry. For pre-health professional students. Intermediary metabolism is taught at an intermediate level and in the context of human nutrition and clinical applications. Prerequisite: CHEM 211 or CHEM 301. (F)

317 Quantitative Analysis 3(3-0)
Volumetric and gravimetric analysis integrated with instrumental analysis, both optical and electrometric methods. Prerequisite: CHEM 122. Corequisite: CHEM 317L. (F)

317L Quantitative Analysis Lab 2(0-6)
Corequisite: CHEM 317. (F)

321 Physical Chemistry I 3(3-0)
Chemical thermodynamics, chemical dynamics, quantum chemistry, chemical structure and spectroscopy. Prerequisite: CHEM 122. Corequisites: MATH 224 and PHYS 201 or 221. (F)

322 Physical Chemistry II 3(3-0)
Continuation of CHEM 321. Prerequisite: CHEM 122. Corequisites: MATH 224 and PHYS 201 or 221. (S)

323 Experimental Physical Chemistry 2(0-4)
Laboratory techniques in thermodynamics, chemical equilibria, phase phenomena, kinetics, spectroscopy. Prerequisite: CHEM 321 or permission of instructor. (S)

378 Practicum in Laboratory Instruction 1(0-2)
Laboratory preparation, instruction and methods under the guidance and supervision of an instructor. May be repeated for a maximum of two credits. Prerequisite: Approval of instructor. (F,S)

401 Advanced Organic Chemistry 3(3-0)
Topics of advanced organic chemistry, including organic reactions, mechanisms, natural products, and spectroscopy. Prerequisite: CHEM 302, or permission of instructor. Corequisite: CHEM 401L. (*)

401L Advanced Organic Chemistry Lab 1(0-3)
Laboratory course to accompany CHEM 401. Molecular structure determination by chemical and instrumental methods. Corequisite: CHEM 401. (*)

403 Polymer Chemistry 3(3-0)
Study of synthetic polymers including synthesis, mechanisms of formation, structure of elucidation, reactivity, properties, and industrial application. Biopolymers also will be considered. Prerequisites: CHEM 302/302L. (*)

411 Biochemistry I 3(3-0)
Chemistry of constituents of living matter, including proteins, carbohydrates, nucleic acids and lipids. An introduction to enzymes and coenzymes. Prerequisite: CHEM 302, or permission of instructor. (F)

412 Biochemistry II 3(3-0)
Continuation of CHEM 411. Intermediary metabolism of carbohydrates, lipids, and amino acids. Bioenergetics. Prerequisite: CHEM 411. Corequisite: CHEM 412L. (S)

412L Biochemistry Lab II 2(0-6)
Prerequisite: CHEM 302. Corequisite: CHEM 412. (S)

419 Instrumental Analysis 3(3-0)
Instrumental techniques in chemical separations, electrochemistry, atomic, and molecular spectroscopy. Prerequisites: CHEM 317 and 321, or permission of instructor. Corequisite: CHEM 419L. (S)

419L Instrumental Analysis Lab 2(0-6)
Prerequisites: CHEM 317 and 321 or permission of instructor. Corequisite: CHEM 419L. (S)

421 Advanced Inorganic Chemistry 3(3-0)
Structure and bonding, coordination theory, periodic relations, equilibrium, kinetics, thermodynamics, descriptive chemistry. Prerequisite: CHEM 321, or permission of instructor. (F)

425 Environmental Chemistry 3(3-0)
Chemical process in air, water and soil. Air, water analysis and treatment, pollution. Prerequisite: CHEM 321, or permission of instructor. (*)

431 Radiochemistry 2(2-0)
Nuclear properties, interaction and detection of radiation, application to chemistry. Prerequisite: CHEM 322, or permission of instructor. (*)

491 Special Topics (1-5 VAR)
Prerequisite: permission of instructor. (*)

493 Seminar 1(1-0)
May be repeated once (S/U grades). Prerequisite: permission of department chair. (S)

495 Independent Study (1-7 VAR)
Prerequisite: permission of instructor. (*)

498 Internship (1-6 VAR)
Work experience in the chemistry discipline under the combined supervision of the selected organization and a faculty member. Prerequisite: permission of department chair. (F,S,SS)

GRADUATE COURSES

501 Advanced Organic Chemistry 3(3-0)
Topics of advanced organic chemistry including organic reactions, mechanisms, natural products, spectroscopy, and industrial applications. Prerequisite: CHEM 302, or permission of instructor. (*)

501L Advanced Organic Chemistry Lab 1(0-3)
Molecular structure determination by chemical and instrumental methods. Advanced synthetic techniques. Corequisite or Prerequisite: CHEM 501. (*)

503 Polymer Chemistry 3(3-0)
Study of synthetic polymers including synthesis, mechanisms of formation, structure elucidation, reactivity, properties, and industrial application. Biopolymers also will be considered. Prerequisite: CHEM 302, or permission of instructor. (*)

511 Biochemistry I 3(3-0)
Chemistry of constituents of living matter, including proteins, carbohydrates, nucleic acid and lipids. An introduction to enzymes and coenzymes. Prerequisite: one year undergraduate Organic Chemistry. (F)

512 Biochemistry II 3(3-0)
Intermediary metabolism of carbohydrates, lipids and amino acids. Bioenergetics. Prerequisite: CHEM 411 or 511. (S)

512L Biochemistry II Lab 2(0-6)
Prerequisite: CHEM 302. Corequisite: CHEM 512. (S)

519 Instrumental Analysis 3(3-0)
Instrumental techniques in chemical separations, electrochemistry, atomic, and molecular spectroscopy. Prerequisite: CHEM 317 and 321, or permission of instructor. Corequisite: CHEM 519L. (S)

519L Instrumental Analysis Lab 2(0-6)
Prerequisite: CHEM 317 and 321, or permission of instructor. Corequisite: CHEM 519. (S)

521 Advanced Inorganic Chemistry 3(3-0)
Structure and bonding, coordination theory, periodic relations, equilibrium, kinetics, thermodynamics, descriptive chemistry, industrial applications. Prerequisite: CHEM 321, or permission of instructor. (F)

525 Environmental Chemistry 3(3-0)
Chemical processes in the air, water and soil. Air, water soil analysis and treatment. Special emphasis upon the problems and effects of industrial and other pollution. Prerequisite: CHEM 321, or permission of instructor. (*)

529 Advanced Instrumentation 2(2-0)
Emphasizes latest developments in the design and application of instrumentation for spectrochemical analysis, electrochemical analysis and separations. Prerequisite: graduate standing. (*)

531 Radiochemistry 2(2-0)
Nuclear properties, interaction and detection of radiation, kinetics of decay, application of chemistry in industry. Prerequisite: CHEM 322, or permission of instructor. (*)

550 Industrial Chemistry 2(2-0)
The economic importance and special characteristics of the chemical industry. Feedstocks, intermediates and products of the chemical industry including thermoplastics, thermosetting plastics, paints and coatings, elastomers, fibers, surfactants, pharmaceuticals, agricultural chemicals, paper, acids, etc. Market demands, price and cost factors, scale, research, process chemistry and process control, product development. Case studies illustrating above topics. (S)

591 Special Topics (1-4 VAR)
Prerequisite: permission of instructor. (*)

595 Independent Study (1-4 VAR) (*)

598 Grauduate Internship 4(4-0)
Volunteer or paid work experience under the combined supervision of the selected organization and a faculty member. Prerequisite: graduate students only. S/U grades. (F,S,SS)

599 Thesis Research (1-6 VAR)
(IP and S/U grading). (*)

EXERCISE SCIENCE, HEALTH PROMOTION, AND RECREATION DEPARTMENT

Chair: Hooper

Faculty: Aguilar, Paul, Pino-Graziano, Zarr

The mission of the Department of Exercise Science, Health Promotion, and Recreation is to provide students with a strong academic background that includes hands-on, real-world experiential opportunities, which emphasize a student-centered approach to learning.

The Department offers a B.S. Exercise Science and Health Promotion and a B.S. Recreation degree as well as four minors.

The B.S. Exercise Science and Health Promotion (EXHP) program currently includes three options of study: Athletic Training, Health Promotion/Wellness and K-12 Physical Education Teacher Preparation. Common to all options of study is a core of exercise science and health promotion courses. Upon completion of these courses, a student will be eligible to sit for a variety of nationally recognized certification exams including those offered by the American College of Sports Medicine ("Health/Fitness Instructor", "Personal Trainer", and "Exercise Leader"), the American Council on Exercise ("Personal Trainer", and "Aerobics Instructor"), the Aerobics and Fitness Association of America ("Personal Trainer", and "Aerobics Instructor"), and the National Strength and Conditioning Association ("Certified Strength and Conditioning Specialist"). Completion of core courses and obtainment of any of the aforementioned certifications prepares program graduates for jobs in worksite, clinical, fitness center, and YMCA/YWCA settings.

Completion of coursework in an EXHP option of study further increases a student's marketability. With completion of coursework in the Athletic Training option and a 1500 clinical hour internship, a student can sit for the National Athletic Trainers' Association exam to become a certified Athletic Trainer. Athletic Trainers may find employment in high school, university/college, clinical, corporate, and pro-sport settings.

Students completing the Health Promotion/Wellness option will be eligible to sit for the entry-level Health Promotion Specialist certification being developed by the Association for Worksite Health Promotion. Health promotion/wellness graduates can find employment in employee wellness, community health, clinical and managed care settings.

Completion of the K-12 Physical Education Teacher Preparation option coursework, acceptance into the Teacher Preparation program, completion of a 37-hour minor in Education, and receipt of a passing score on a battery of Colorado Department of Education tests enables a student to receive Teacher Licensure in the State of Colorado. Licensed teachers can find physical education teaching positions in both the public and private school settings.

Three minors are available in Exercise Science and Health Promotion. The Exercise Science minor is available to non-EXHP majors. This minor is ideal for Biology majors in the pre-physical therapy, pre-medicine, or pre-chiropractic options of study. The Athletic Training minor is available to all students and is especially well suited for EXHP or Biology majors. The Coaching minor also is available to all students and is ideal for EXHP K-12 Physical Education Teacher Preparation majors as well as any other student aspiring to coach on a part-time basis.

The B.S. Recreation program consists of two options of study: a Generalist and an Outdoor Adventure Education area of emphasis. Completion of both options of study prepares graduates to work in positions of leadership in a variety of recreational service agencies. Prospective employers include parks and recreation departments at the city, county, district, and state levels as well as voluntary youth agencies such as the YWCA/YMCA, boys' and girls' clubs and scouting.

Other areas of employment include recreation programs in the military, hospital, commercial, and worksite settings. In addition, students completing the Outdoor Adventure option are eligible to sit for the Wilderness Education Association Outdoor Leader certification.

A minor in Recreation is available to all students. The minor is ideal for EXHP, social work, sociology, EXHP, and Biology majors as well as students aspiring to be a public/private school teacher.

EXERCISE SCIENCE AND HEALTH PROMOTION GOALS

- To prepare students to be life-long learners and to be vital members of the community they dwell in.
- To prepare students to become productive, accountable and responsible employees upon entry into the workforce.
- To prepare students to enter graduate or professional schools.
- To provide students with a broad-based theoretical foundation supported by laboratory and field experiences that allow individual observations, inferences, and hands-on mastery of skills.

Expected Student Outcomes

General Requirements:

All departmental Majors are required to:

- Complete an option of study with a cumulative GPA of 2.50 or higher;
- Earn a minimum grade of a "C" in all prerequisite and major courses;
- Repeat prerequisite and major courses with a grade of "D" or lower until a grade of "C" or higher is achieved;

- Complete a minor or approved area of concentration with a cumulative GPA of 2.0 or higher;
- Earn a cumulative GPA of 2.0 or higher in required English/speech communication courses;
- Complete, with a grade of "C" or higher, a minimum of three research or professional papers that reflect competency in paper-writing in courses in the EXHP major;
- Provide evidence of involvement in on- or off-campus interpersonal or leadership skill building co-curricular experiences; and
- Create a professional resume for use in application for internship and employment opportunities.

Exercise Science and Health Promotion graduates are expected to:

- Demonstrate understanding of the philosophy and historical basis of the disciplines of exercise science and health promotion;
- Exhibit the ability to read and interpret scientific journal articles in exercise science and health promotion with an understanding of the scientific methods, statistics, and design of the studies;
- Exhibit knowledge of the structure and function of the human organism both at rest and during movement;
- Display knowledge and skill related to first aid and the care/prevention of injuries occurring during physical activity;
- Demonstrate skills and knowledge germane to exercise assessment, programming and leadership;
- Exhibit knowledge in the basic principles of nutrition with emphasis on heart-healthy and sport-related dietary recommendations;
- Demonstrate an understanding of the models and process of health behavior change; and
- Exhibit knowledge of lifestyle-associated disease risk factor reduction and the components of a health-promoting lifestyle.

Specific Requirements for the B.S. Exercise Science degree:

Core Course Requirements

EXHP	101	Introduction to Exercise Science and Health Promotion	3
EXHP	112	Nutrition	3
EXHP	162	Personal Health	3
EXHP	222	Behavior Facilitation	3
EXHP	343	Measurement and Evaluation	3
EXHP	344	Exercise Physiology	3
EXHP	344L	Exercise Physiology Lab	1
EXHP	364	Kinesiology	3
EXHP	444	Exercise Assessment and Programming	3
EXHP	445	Exercise Leadership	3
		TOTAL	28

Option Course Requirements

Athletic Training

EXHP	232	First Aid	3
EXHP	260	Care and Prevention of Athletic Injuries	2
EXHP	289	Practicum in Athletic Training I	1
EXHP	360	Therapeutic Modalities and Rehabilitation	4
EXHP	389	Practicum in Athletic Training II	1
EXHP	442	Advanced Training Room Methods	3
EXHP	450	Evaluation of Athletic Injuries	3
EXHP	489	Practicum in Athletic Training III	1
EXHP	498	Internship	12
		TOTAL	30

Health Promotion/Wellness

EXHP	232	First Aid	3
EXHP	288	Health Promotion Practicum	3
MGMT	310	Principles of Management	3
MKTG	340	Principles of Marketing	3
EXHP	382	Lifestyle Disease Risk Reduction	3
EXHP	485	Health Promotion Programs	3
EXHP	487	HP Program Planning/Evaluation	4
EXHP	498	Internship	12
		TOTAL	34

K-12 Physical Education Teacher Preparation

EXHP	232	First Aid	3
EXHP	233	History and Principles of PE	3
EXHP	242	Motor Learning	3
EXHP	243	Methods of Rhythmic Activities	2
EXHP	260	Care and Prevention of Athletic Injuries	2
EXHP	322	Methods of Elementary School PE	2
EXHP	345	Methods of Team Sports I	2
EXHP	346	Methods of Team Sport II	2
EXHP	348	Methods of Individual/Dual Sports	3
EXHP	461	Program Administration of PER	3
EXHP	465	Adapted PE	3
EXHP	470	Methods of Coaching and Officiating	3
EXHP	478	Methods of Teaching Secondary PE	3
		TOTAL	34

For teaching endorsement requirements, see the Center for Teaching, Learning and Research section of this catalog.

Outcomes Assessment Activities

In addition to assessment, which is inherent in the core/option requirements, prior to receiving clearance for graduation, each EXHP major must complete a Departmental exit survey and prepare a portfolio which includes:

A current copy of academic transcripts and resume; samples of research/term papers, projects, etc. from EXHP and other relevant courses; evidence of participation in on- and/or off-campus interpersonal and leadership skill building co-curricular activities; and letters of recommendation from professionals on- and-off campus.

RECREATION PROGRAM GOALS

- To prepare students to be life-long learners and to be vital members of the community they dwell in.
- To prepare students to become productive, accountable and responsible employees upon entry into the workforce.
- To prepare students to enter graduate or professional schools.
- To provide students with a broad-based theoretical foundation supported by field experiences that allow individual observations, inferences, and hands-on mastery of skills.

Expected Student Outcomes

General Requirements:

Majors are required to:

- Complete an option of study with a cumulative GPA of 2.50 or higher;
- Earn a minimum grade of a "C" in all prerequisite and major courses;
- Repeat prerequisite and major courses with a grade of "D" or lower until a grade of "C" or higher is achieved;
- Complete a minor or approved area of concentration with a cumulative GPA of 2.0 or higher;
- Earn a cumulative GPA of 2.0 or higher in required English/speech communication courses;
- Complete, with a grade of "C" or higher, a minimum of three research or professional papers that reflect competency in paper-writing in courses in the recreation major;
- Provide evidence of involvement in on- or off-campus interpersonal or leadership skill building co-curricular experiences; and
- Create a professional resume for use in application for internship and employment opportunities.

Recreation graduates are expected to:

- Demonstrate knowledge of the history and philosophy of leisure, recreation, and parks in western society;
- Exhibit awareness of the scope of the leisure services delivery spectrum, including public, private, and non-profit sector service providers in major specializations of leisure, recreation, and parks;
- Demonstrate an understanding of and ability to conduct various recreation program planning phases including client assessment, goal setting, activity analysis/selection, program management and evaluation;
- Demonstrate knowledge and the skills involved in a recreation leadership function including interpersonal communication, trust building, power and influence, interpersonal conflict and its resolution, teaching and transference, and decision making;
- Exhibit an awareness of the special populations that recreation programs and resources must accommodate, the implications of programming for each population, and specific agencies/legislation currently providing services for each population;
- Demonstrate knowledge of the principal federal and state agencies providing parks and resource-based recreation opportunities in the United States including the primary management policies and challenges;
- Demonstrate competencies in applying principles of management to recreation services and resources, including the organization of agencies, personnel, fiscal/risk management, and marketing;
- Exhibit an understanding of philosophies, history, curricular elements, and settings for outdoor education in the United States;
- Exhibit an awareness of key professional organizations and current trends/issues in the field of recreation; and
- Demonstrate the ability to read and interpret professional journal articles relevant to recreation.

Specific Requirements for the B.S. Recreation degree:

Core Course Requirements

REC	101	Introduction to Recreation	3
REC	340	Recreation Program Planning	3
REC	350	Leadership and Supervision in Recreation	3
REC	360	Outdoor Education	3
REC	389	Practicum in Recreation	3
REC	480	Recreation for Special Populations	3
REC	481	Outdoor Recreation Resources	3
REC	482	Recreation Management	3
REC	493	Seminar	2
REC	498	Internship	9
		TOTAL	35

Selection of courses from an approved list in the following areas:

Allied coursework	9
Methods coursework	10-11
	19-20

Outcomes Assessment Activities

In addition to assessment, which is inherent in the core/allied/methods coursework requirements, prior to receiving clearance for graduation, each Recreation major must complete a Departmental exit survey and prepare a portfolio which includes:

- A current copy of academic transcripts and resume;
- Samples of research/term papers, projects, etc. from Recreation and other relevant courses;
- Evidence of participation in on- and/or off-campus interpersonal and leadership skill building co-curricular activities; and
- Letters of recommendation from professionals on-and-off campus.

Exercise Science and Health Promotion Minor Program Goals

- To provide coursework that complements a major course of study.
- To enhance the student's employment marketability and acceptance into graduate/professional school.

Expected Student Outcomes

Exercise Science and Health Promotion minors will:

- Complete the credit hour requirement of the minor;
- Complete all required coursework with a cumulative GPA of 2.5 or higher;
- Earn a minimum grade of a "C" in all minor courses;
- Repeat minor courses with a grade of "D" or lower until a grade of "C" or higher is achieved;

Specific Requirements for Exercise Science and Health Promotion minors:

Athletic Training Minor

EXHP	112	Nutrition	3
EXHP	162	Personal Health	3
EXHP	232	First Aid	3
EXHP	260	Care and Prevention of Athletic Injuries	2
EXHP	289	Practicum in Athletic Training I	1
EXHP	344	Exercise Physiology	3
EXHP	344L	Exercise Physiology Lab	1
EXHP	360	Therapeutic Modalities and Rehabilitation	4
EXHP	364	Kinesiology	3
EXHP	389	Practicum in Athletic Training II	1
EXHP	442	Advanced Training Room Methods	3
EXHP	450	Evaluation of Athletic Injuries	3
EXHP	489	Practicum in Athletic Training III	1
		TOTAL	31

Coaching

EXHP	232	First Aid	3
BIOL	223	Human Anatomy and Physiology I	3
BIOL	223L	Human Anatomy and Physiology I/ Lab	1
BIOL	224	Human Anatomy and Physiology I	3
BIOL	224L	Human Anatomy and Physiology I Lab	1
EXHP	260	Care and Prevention of Athletic Injuries	2
EXHP	364	Kinesiology	3
EXHP	470	Methods of Coaching & Officiating	3
		Methods of coaching courses	4
		and/OR	
EXHP	494	Field Experience	
		TOTAL	23

Exercise Science for Non-Exercise Science and Health Promotion Majors

EXHP	101	Introduction to Exercise Science and Health Promotion	3
EXHP	112	Nutrition	3
EXHP	162	Personal Health	3
EXHP	222	Behavior Facilitation	3
EXHP	343	Measurement and Evaluation	3
EXHP	344	Exercise Physiology	3
EXHP	344L	Exercise Physiology Lab	1
EXHP	364	Kinesiology	3
EXHP	444	Exercise Assessment and Programming	3
EXHP	445	Exercise Leadership	3
		TOTAL	28

Recreation Minor Program Goals

- To provide coursework that complements a major course of study.
- To enhance the student's employment marketability and acceptance into graduate/professional school.

Expected Student Outcomes

Recreation minors will:

- Complete the credit hour requirement of the minor;
- Complete all required coursework with a cumulative GPA of 2.5 or higher;
- Earn a minimum grade of a "C" in all minor courses;
- Repeat minor courses with a grade of "D" or lower until a grade of "C" or higher is achieved;

Recreation Minor: Specific Requirements

REC	101 Introduction to Recreation	3
REC	340 Recreation Program Planning	3
REC	350 Leadership and Supervision in Recreation	3
REC	389 Practicum in Recreation	3
REC	481 Outdoor Recreation Resources	3
REC	482 Recreation Management	3
	Approved courses in the management, outdoor, or therapeutic emphasis area.	6
	TOTAL	24

EXERCISE SCIENCE, HEALTH PROMOTION, AND RECREATION (EXHP)

UNDERGRADUATE COURSES

101 Introduction to Exercise Science & Health Promotion 3(3-0)
Fundamentals of exercise and health promotion-related professions as a health science discipline. Overview of health promotion, fitness, athletic training and school-based programs and career opportunities. (F)

104L Personal Fitness 1(0-2) (*)

107L Scuba Diving 1(0-2) (*)

108L Windsurfing 1(0-2) (*)

109L Volleyball 1(0-2) (F,S)

110L Weight Training 1(0-2) (F,S)

112 (BIOL 112) Nutrition 3(3-0)
Analysis of personal dietary habits and behavior in relation to basic human nutritional needs and food composition. (F,S)

113L Whitewater Boating 1(0-2) (*)

114L Basic Mountaineering Techniques 1(0-2) (*)

115L Skiing 1(0-2) (*)

116L Camping 1(0-2) (F)

117L Backpacking 1(0-2) (F)

118L Jogging 1(0-2) (*)

120L Aerobics 1(0-2) (*)

143L Folk, Square, and Ballroom Dance 1(0-2)

162 (BIOL 162) Personal Health 3(3-0)
The development of knowledge and the scientific basis for the analysis, evaluation and promotion of personal health and wellness. (F,S)

174L Tennis 1(0-2) (*)

175L Racquetball 1(0-2) (*)

176L Life Guard Training 1(0-2)
Prerequisite: swimming pre-test. (*)

187L Intercollegiate Sports I 2(0-4)

188L Elementary Physical Conditioning 2(0-4) (F,S,)

201 Drugs and Healthy Lifestyles 3(3-0)
An overview of the impact of drug abuse in today's society along with prevention information and treatment programs available. (F,S,SS)

222 Behavior Facilitation 3(3-0)
Study the influence of social and behavioral systems on health. Emphasis on the fundamentals of self-directed behavior change, health dysfunctions, and stress management. Prerequisite: EXHP 162. (F)

231 Cardiopulmonary Resuscitation 1(1-0)
Technique of applying a combination of artificial respiration and artificial circulation in the event cardiac arrest occurs. (S/U grades) (*)

232 First Aid 3(3-0)
Knowledge and skills in the latest approved first-aid and cardiopulmonary resuscitation procedures. Red Cross certification (F,S,SS)

233 History and Principles of Physical Education and Recreation 3(3-0)
Study of the history, philosophy and contemporary problems and trends of physical education and recreation, and their influence upon contemporary American society. (F)

242 Motor Learning 3(3-0)
Techniques of teaching low organized games and enrichment activities at the elementary school level with emphasis on the development of perceptual-motor learning. (F)

243 Methods of Rhythmic Activities 2(2-0)
Fundamentals of folk, square and social dance; emphasis on the teaching techniques involved in basic dance styles and rhythms. (S)

249 Methods of Ropes Course Leadership 2(2-0)
Basic Skills and techniques of instructing ropes courses. Includes technical skills and group facilitation. (F,S)

260 Care and Prevention of Athletic Injuries 2(2-0)
Procedures utilized in prevention, care and treatment of athletic injuries. Prerequisites: EXHP 232, BIOL 223, 223L, 224, 224L. (F)

276L Water Safety Instructor Certification 2(0-2)
Water safety instruction certification may be earned in this course. Prerequisite: EXHP 176L. (*)

287L Intercollegiate Sports II 2(0-4)

288 Health Promotion Practicum 3(1-4)
Observation and limited participation as a paraprofessional in local health management programs. Prerequisite: EXHP 101. (F)

288L Advanced Physical Conditioning 2(0-4) (F,S)

289 Practicum in Athletic Training I 1(0-2)
Introduction to the clinical application of the NATA competency check-list. Emergency medicine; basic taping/wrapping; protective/supportive padding and splinting. Prerequisite: EXHP 260. (S)

289L Student Assistant 1(0-2) (F,S)

291 Special Topics (1-5 VAR) (F,S)

322 Methods of Elementary School Physical Education 2(2-0)
Mental, emotional, social and physical needs of elementary school age children; planning programs, selecting materials and methods of teaching physical education at this level. (F,S)

343 Measurement and Evaluation 3(3-0)
Modern testing programs in physical education; emphasis on preparation and administration of both written and skills tests. Prerequisite: MATH 121. (F)

344 Exercise Physiology 3(3-0)
Physiologic control of the human body during acute exercise, and adaptations to regular exercise stress. Emphasis on relationships among health, fitness, and exercise. Prerequisites: BIOL 223, 223L, 224, 224L, CHEM 111, MATH 121

344L Exercise Physiology Lab 1(0-2)
Extension of course lecture which provides practical experience in laboratory experiments which address exercise and exercise theory. Corequisite: EXHP344. Prerequisites: BIOL 223, 223L, 224, 224L, CHEM 111, 111L, MATH 121. (F)

345 Methods of Team Sports I 2(2-0)
Basic skills and techniques of soccer and volleyball; emphasis on teaching procedure. Prerequisite: EXHP 242. (F)

346 Methods of Team Sports II 2(2-0)
Basic skills and techniques of track and field, basketball and softball; emphasis on organization and teaching procedures. Prerequisite: EXHP 345. (S)

348 Methods of Individual and Dual Sports 3(3-0)
Basic skills and techniques of tennis, racquetball, badminton and golf; emphasis on teaching procedures in these activities. (S)

360 Therapeutic Modalities and Rehabilitation 4(3-2)
Focus on and practical application of rehabilitation theories, techniques, and protocol. Prerequisite: EXHP 289 (F)

364 Kinesiology 3(3-0)
Integration of fundamentals of anatomical and structural components of human movement with the study of fundamental body movements and the primary muscles involved in those movements. Prerequisites: BIOL 223, 224, 224L. (S)

382 Lifestyle Disease Risk Reduction 3(3-0)
Overview of principles of epidemiology and lifestyle-disease pathophysiology; examination of use of epidemiologic research to identify risk factors for disease. Prerequisites: EXHP 289, BIOL 223, 223L, 224, 224L. (S)

389 Practicum in Athletic Training II 1(0-2)
Specialty taping/wrapping; athletic/orthopedic equipment fitting; therapeutic and modality application. Prerequisite: EXHP 360. (F)

389L Student Assistant 1(0-2)
Prerequisite: EXHP 289L. (F,S)

400 Workshop (1-5VAR)
Learning experience in physical education offered in large blocks of time not corresponding to the weekly meeting times of the regular course offerings. Prerequisite: approval of program chair. (*)

442 Advanced Training Room Methods 3(3-0)
Preparation of pre-sports medicine majors to successfully complete the National Athletic Trainers Certification test. Prerequisite: EXHP 389. (S)

444 Exercise Assessment and Programming 3(2-2)
Methods used in assessing physical fitness and in developing exercise programs for apparently healthy people in order to achieve optimal health. Prerequisite: EXHP 343, 344. (S)

445 Exercise Leadership 3(3-0)
Basic skills and techniques of a total fitness program including weight training, stretching, rhythmic aerobics, water aerobics, circuit training, body composition and assessing fitness levels. Prerequisites: EXHP 222, EXHP 444. (F)

450 Evaluation of Athletic Injuries 3(3-0)
In depth study of assessment techniques and protocols applicable to specific athletic injuries. Prerequisites: KIN 254 and EXHP 442.

461 Program Administration in Physical Education and Recreation 3(3-0)
Organizational and administrative process necessary for the responsible conduct of physical education, recreational activities and interscholastic athletics. Corequisite: senior standing. (S)

465 Adapted Physical Education 3(3-0)
Remedial and corrective programs in physical education; emphasis on diseases and injuries which cause individuals to require special attention above and beyond the regular physical education program. Prerequisites: BIOL 223, 223L, 224, 224L. (S)

470 Methods of Coaching and Officiating 3(3-0)
Skills and methods of coaching and officiating sports. Corequisite: senior standing. (F)

471 Coaching and Officiating Football 2(2-0)
Techniques and strategy of coaching and officiating football. Prerequisite: junior standing. (*)

472 Coaching and Officiating Basketball 2(2-0)
Techniques and strategy of coaching and officiating basketball. (F)

473 Coaching Certification Clinic 1(1-0)
Overview of principles of coaching, scientific basis of coaching, management and legal issues in coaching, and sports first-aid. Required for American Sports Education Program coaching certification. Prerequisites: EXHP 344, 344L, 364 and 470. (SS)

475 Coaching and Officiating Volleyball 2(2-0)
Techniques and strategy of coaching and officiating volleyball. (F)

478 Methods of Teaching Secondary Physical Education 3(2-2)
Course examines Colorado Physical Education Content Standards. Standards based lessons/units planning, presentation strategies, and assessment will be discussed, emphasized and demonstrated. Field experience required. Prerequisite: acceptance into teacher education department. (S)

482 Coaching and Officiating Wrestling 2(2-0)
Techniques and strategy of coaching and officiating wrestling. (S)

483 Coaching and Officiating Baseball 2(2-0)
Techniques and strategy of coaching and officiating baseball. Prerequisite: junior standing. (S)

484 Coaching and Officiating Soccer 2(2-0)
Techniques and strategies of coaching and officiating soccer. Prerequisite: junior standing. (S)

485 Health Promotion Programs 3 (2-2)
Planning and implementation of health-risk screenings and educational components of health promotion programs. Prerequisite: EXHP 382, EXHP 444. (F)

487 Health Promotion Program Planning/ Evaluation 4(3-2)
Focus on planning, implementing, and evaluating worksite health promotion programs. Prerequisite: EXHP 482. (S)

489 Practicum in Athletic Training III 1(0-2)
Applications of injury recognition/evaluation techniques; advanced taping, wrapping/padding. Prerequisite: EXHP 450. (S)

491 Special Topics (1-5 VAR)
Permission of instructor. (*)

494 Field Experience (1-5 VAR)
Learning experience to be conducted in the actual environment and supervised by the physical education program. (S/U grades) Prerequisite: approval of the department chair. (*)

495 Independent Study (1-5 VAR)
Prerequisite: approval of the department chair. (*)

498 Internship 12(0-36)
Prerequisite: senior standing, completion of degree requirements, 2.5000 GPA, and department chair approval. (*)

GRADUATE COURSES

500 Workshop (1-5 VAR)
Graduate learning experience in physical education offered in large blocks of time not corresponding to the weekly meeting times of the regular course offerings. Prerequisite: approval of program chair. (*)

522 Methods of Elementary Physical Education 2(2-0)
Advanced course of mental, emotional, social and physical needs of elementary school-age children; emphasis on planning programs, selecting materials and methods of teaching physical education at this level. Prerequisite: graduate standing. (*)

591 Special Topics (1-5 VAR)
Graduate level study or activity designed to increase understanding in areas not covered by regular offerings of the department. Prerequisite: approval of program chair. (*)

RECREATION (REC)

UNDERGRADUATE COURSES

101 Introduction to Recreation 3(3-0)
Overview of the historical, philosophical, and behavioral basis of recreation. Assessment of individual values and recreation utilization patterns. Description of trends and employment opportunities in recreation. (F)

102 Mountain Orientation 2(1-2)
An intensive one-week field experience in the Colorado mountains. Clothing and equipment selection, nutrition and rations planning, back country conservation and sanitation, navigation, and trail techniques. (*)

103 Winter Orientation 2(1-2)
An intensive one-week ski tour experience in the Colorado mountains. Group dynamics, leadership, and expedition behavior. Travels hut to hut with some winter camping. Prerequisite: HP 115L or consent. (*)

104 Desert Orientation 2(1-2)
An intensive one-week desert camping and backpacking experience, accompanied by nine lectures in preparation for the trip. Natural and cultural history, desert conservation, group dynamics. (*)

270 Outdoor Leadership I 2(1-2)
Introduction to outdoor leadership. One week intensive practicum including supervised leadership and teaching experience in basic camping, backpacking, skiing, equipment maintenance and navigation. Prerequisite: REC 102 or consent. (*)

340 Recreation Program Planning 3(3-0)
Rationale supporting and methods of conducting recreation programs in a wide variety of public, private, voluntary and commercial recreation agencies. (S)

350 Leadership and Supervision in Recreation 3(3-0)
Leadership and supervisory functions in professional recreation service. Addresses program leadership techniques and styles, leadership theory, personnel supervision, and group dynamics. Prerequisite: permission of instructor. (S)

360 Outdoor Education 3(3-0)
Concepts and methods of outdoor education and interpretation. Students learn to teach outdoor living skills and natural history using experiential methods in an outdoor setting. Prerequisite: permission of instructor. (S)

380 Outdoor Leadership II 2(1-2)
One-week advanced practicum in outdoor leadership. Includes responsibilities in trip planning and management, evaluation, group facilitation and processing, and natural resource agency relations. Prerequisite: REC 370 or consent of instructor. (*)

381 Environmental Interpretation 3(3-0)
History, philosophy, and techniques of interpreting our natural and cultural heritage to visitors in natural resource-based parks. Addresses public, private, and non-profit agencies. (F)

389 Practicum in Recreation 3(0-3)
Minimum of 150 hours of practical experience in a selected recreation agency. Prerequisite: permission of director of recreation program. (F,S,SS)

480 Recreation for Special Populations 3(3-0)
Community and clinical recreation services for the mentally retarded, law offenders, psychologically impaired, sensory impaired, physically disabled, disadvantaged or aging. Prerequisite: permission of instructor. (F)

481 Outdoor Recreation Resources 3(3-0)
Examination of the outdoor recreation experience, the organization of resource-based recreation management and key outdoor recreation policy issues. Prerequisite: permission of instructor. (F)

482 Recreation Management 3(3-0)
Administration and management considerations in public and voluntary recreation and leisure-oriented agencies. Contemporary issues in budget and personnel management, employee relations, management style and theory, public relations and government legislation affecting the leisure field. Prerequisite: permission of instructor. (F)

483 Sustainable Practices 3(3-0)
Sustainable, long-term strategies for ecological survival and environmental stabilization, discussed from the perspectives of ethics, economics and political processes. Includes community research and service projects. Prerequisite: BIOL 121/121L (S)

491 Special Topics (1-5 VAR) (*)

493 Seminar 2(2-0)
Advanced in-depth examinations of contemporary issues in leisure/recreation. Includes student-led discussions, in-depth term projects and comprehensive examinations. Interview and resumé preparation are emphasized. Prerequisite: REC 340. (S)

495 Independent Study (1-5 VAR) (*)

498 Internship 9(0-9)
480 hours of full-time, supervised experience with approved professionals in select athletic training or health promotion settings.. (S/U grades) Prerequisite: permission of department chair. (F,S,SS)

MATHEMATICS DEPARTMENT

CHAIR: Chacon
FACULTY: Allen, Barnett, Bronn, Derr, Gill, Johnson, Jones, Louisell, Lundberg, Nichols, Orr, Soto-Johnson

The major in mathematics leads to the degrees of bachelor of arts (BA) or bachelor of science (BS). A flexible curriculum allows students to prepare for graduate school, for teaching careers, or for employment in areas that require mathematics (such as actuarial science, computer science, engineering, and statistics). Faculty advisers work individually with mathematics majors and minors to design the programs of study. A list of advisers is available in the departmental office.

Students need to be aware that many mathematics courses have prerequisites. Thus, certain courses within each program must be taken in a particular order.

Department Goals

- To provide students with high-level problem-solving skills of a quantitative and statistical nature based on logical reasoning.

- To provide students with an understanding of the applications of mathematics in other areas such as computer science, economics and management, engineering, physical and life sciences.
- To prepare students for further study in graduate school.
- To prepare students for productive careers in the business world or in teaching.

Expected Student Outcomes

General Requirements

- All mathematics majors must complete the mathematics core curriculum: MATH 126, 207, 224, 307, 320, 325, 327, 350 or 356, and 421. Majors are expected to complete courses at USC in the core numbered above MATH 325.
- All majors must complete a physics course numbered 200 or above.
- Mathematics majors and minors must complete the mathematics courses in their program with grades of C or better.
- MATH 337 is a required elective for all mathematics majors not pursuing secondary education endorsement.
- All majors are required to complete an approved two-semester sequence in a laboratory science (CHEM 121/121L and 122/122L, or PHYS 221/221L and 222/222L).
- Mathematics majors must demonstrate proficiency in a computer language.

Specific Requirements for the Mathematics Major

MATH Courses		Titles	Credits
MATH	126	Calculus and Analytic Geo I	5
	207	Matrix & Vector Alg with Appl	2
	224	Calculus & Analytic Geo II	5
	307	Intro to Linear Algebra	3
	320	Intro to Mathematical Thought	3
	325	Intermediate Calculus	3
	327	Intro to Algebraic Systems	3
either	350	Probability	3
or	256	Probability for Engineers and Scientists	3
and	356	Stats for Engineers & Scientists	3
	421	Advanced Calculus I	3
Upper-division Electives (Excluding MATH 360, 361, 377)			9
		TOTAL	42/45

Other Requirements

Laboratory Science Sequence	8
Computer Programming	3
TOTAL	11

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to the individual department's curriculum sheet.

Specific Requirements for the Mathematics Major/Secondary Education Endorsement

MATH	126	Calculus & Analytic Geom I	5
	207	Matrix & Vector Alg with Appl	2
	224	Calculus & Analytic Geom II	5
	307	Intro to Linear Algebra	3
	320	Intro to Mathematical Thought	3
	325	Intermediate Calculus	3
	327	Intro to Algebraic Systems	3
	330	Intro to Higher Geometry	3
	256	Probability for Engineers & Scientists OR	
	350	Probability	3
	356	Stats for Engineers & Scientists	3
	377	Math & Tech of Teaching Secondary School Math	3
	419	Number Theory	3
	421	Advanced Calculus I	3
	463	History of Mathematics	3
		TOTAL	45

Other Requirements

PSYCH	100	General Psychology I	3
	151	Intro to Human Development	3
ED	102	Teaching as a Career (recommended)	1
	202	Foundations of Education	3
	435	Classroom Management	3
	460	Educational Media & Technology	3
	461	Atypical Student in the Secondary School	3
	488	Student Teaching Secondary	15
IST	345	Career Education	2
RDG	425	Teaching Reading in Content Areas	2
		TOTAL	38
Laboratory Science Sequence			8
Computer Programming			3
		TOTAL	11

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual department's curriculum sheet.

Specific Requirements for the Minor in Mathematics

MATH	126	Calculus and Analytic Geometry I	5
MATH	224	Calculus and Analytic Geometry II	5
An approved elective plus three upper-division electives*			
(Excluding MATH 360, 361 & 377)			10
		TOTAL	20

* Two of these must be taken at USC.

Specific Requirements for the Math/Physics Double Major

MATH	126	Calculus & Analytic Geom I	5
	207	Matrix & Vector Alg with Appl	2
	224	Calculus & Analytic Geom II	5
	307	Intro to Linear Algebra	3
	320	Intro to Mathematical Thought	3
	325	Intermediate Calculus	3
	327	Intro to Algebraic Systems	3
	337	Differential Equations I	3
	338	Differential Equations II	3
either	350	Probability	3
or	256	Probability for Engineers and Scientists	3
and	356	Stats for Engineers and Scientists	3
	421	Advanced Calculus	3
		TOTAL	35-39

PHYS	221/221L	General Physics I/Lab I	5
	222/222L	General PhysicsII/Lab II	5
	301	Theoretical Mechanics	4
	323/323L	General Physics III/Lab III	5
	331/332L	Thermodynamics	4
	431/432L	Electricity and Magnetism	5
	441	Quantum Mechanics	4
	480	Practicum in Lab Instruction	5
	493	Seminar	1
		TOTAL	39

Other Requirements

either			
MATH	425	Complex Variables	3
or			
PHYS	341/342L	Optics	4
CHEM	121/121L	General Chemistry I/Lab I	5
CHEM	122/122L	General Chemistry II/Lab II	5
Computer Programming			3
		TOTAL	16/17

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to the individual department's curriculum sheet.

Co-curricular Requirements

Students have the opportunity to broaden and reinforce the academic experience through participation in a variety of co-curricular activities. All students are encouraged to join the USC Math Club. Many students serve as tutors in the Math Learning Center.

Outcomes Assessment Activities

- Faculty advisers meet individually with students on a regular basis to help with schedule planning and to discuss the student's progress toward educational and career goals. Advisers maintain a record of each student's performance in his/her program of study.
- During the senior year, each major takes the Mathematics Field Achievement Test, the results of which give some measure of a student's achievement level in comparison with students at other schools throughout the country.

MATHEMATICS (MATH) UNDERGRADUATE COURSES

A grade of C or better is required for prerequisite courses.

098 Introductory Algebra 3(3-0)
Review of elementary algebraic operations including factoring and operations with fractions. Introduction to graphing, including graphs of lines. Solutions to linear and quadratic equations. This course does not count toward graduation. (S/U grading). (F,S,SS)

099 Intermediate Algebra 4(4-0)
A course designed to broaden and deepen algebraic problem-solving skills. Topics include systems of equations, exponents, radicals, complex numbers, quadratic equations, factoring polynomials, function notation and graphs (S/U grading). This course does not count toward graduation. Prerequisite: one year of high school algebra. (F,S,SS)

109 Mathematical Explorations 3(3-0)
Emphasis on quantitative reasoning and connections between mathematics and society. Topics chosen from management science, social decision making, statistics, probability, growth models and geometry. Prerequisites: Satisfactory placement exam score. Math 099 or one year of high school algebra or equivalent. (F,S,SS)

120 A Survey of Mathematics 4(4-0)
This course focuses on quantitative reasoning and problem solving. Topics will be selected from logic, sets, algebra, probability, statistics, number theory, mathematics systems, geometry, and counting techniques. Prerequisites: Satisfactory placement exam score. Math 099 or one year of high school algebra or equivalent. (*)

121 College Algebra 4(4-0)
Solutions of algebraic equations, graphs of rational functions, exponential and logarithmic functions, systems of equations, matrices, and determinants. Prerequisites: Satisfactory placement exam score. Math 099 or one year of high school algebra or equivalent. (F,S,SS)

122 College Trigonometry 3(3-0)
Trigonometric and circular functions, identities, inverse functions, vectors, complex numbers. Prerequisites: MATH 121 or equivalent. (S)

124 Precalculus Math 5(5-0)
Polynomial, rational, exponential and logarithmic functions; solution of systems of equations; trigonometric, circular and certain special functions. Prerequisites: Satisfactory placement exam score. Two years of high school algebra or equivalent. (F,S)

126 Calculus and Analytic Geometry I 5(5-0)
Introduction to limits, continuity, differentiation and integration with selected applications. Prerequisite: MATH 124 or equivalent. (F,S)

131 Algebra/Trigonometry for Engineering Technology I 4(4-0)
Integrated sequence (131-132) covering topics in algebra, trigonometry, and analytic geometry, with engineering applications. Prerequisites: Satisfactory placement exam score. Two years of high school algebra or equivalent. (F,S)

132 Algebra/Trigonometry for Engineering Technology II 4(4-0)
Continuation of MATH 131. Prerequisite: MATH 131. (F,S)

156 Introduction to Statistics 3(3-0)
Introduction to data analysis. Binomial and normal models. Sample statistics, confidence intervals, hypothesis tests, linear regression and correlation, and chi-square tests. Prerequisites: Satisfactory placement exam score. Math 099 or one year of high school algebra or equivalent. (F,S,SS)

207 Matrix and Vector Algebra with Applications 2(2-0) Systems of equations, matrix representation of systems, solution of systems, inverses, determinants, and Cramer's Rule. Vectors, scalar and cross-products, applications to two- and three- dimensional geometry. Prerequisite: MATH 124 or equivalent. Corequisite: Majors and minors should take this course concurrently with MATH 224. (F,S)

209 Symmetry 3(3-0)
Liberal arts course exploring the mathematical world of symmetry. Topics include isometries, Euclidean geometry, tiling theory, group theory, and fractals. Prerequisite: Satisfactory placement exam score. One year of high school geometry or permission of instructor. (F,S,SS)

220 Quantitative Analysis for Business 4(4-0)
An introduction to quantitative methods required for business studies, includes a brief introduction to the Calculus. Prerequisite: Math 121 or equivalent. (F,S,SS)

221 Applied Calculus: An Intuitive Approach 4(4-0)
Non-rigorous introduction to calculus with emphasis on applications and modeling in the life sciences, social and behavioral sciences and business. Prerequisite: MATH 121 (F)

222 Applied Calculus I 3(3-0)
Introduction to differential calculus, including loga-rithmic and exponential functions. Emphasis on applications and modeling in the life sciences, social and behavioral sciences, and business. Prerequisite: MATH 121 or equivalent. (F,S)

223 Applied Calculus II 3(3-0)
Introduction to integral calculus, including the trigonometric functions. Emphasis on applications and modeling in the life sciences, social and behavioral sciences, and businesses. Prerequiste: MATH 222. (F,S)

224 Calculus and Analytic Geometry II 5(5-0)
Differentiation and integration of trigonometric, logarithmic, and other transcendental functions. Infinite sequences and series, parametric representation of curves, and selected applications. Prerequisite: MATH 126. Corequisite: Majors and minors should take this course concurrently with MATH 207. (F,S)

231 Calculus for Engineering Technology I 3(3-0)
Integrated sequence (231-232) covering topics in differential and integral calculus with emphasis on engineering applications. Prerequisite: MATH 132, 124, or equivalent. (F,S)

232 Calculus for Engineering Technology II 3(3-0)
Continuation of MATH 231. Prerequisite: MATH 231. (F,S)

245 Introduction to Discrete Mathematics 3(3-0)
Logic, algebra of sets, permutations and combinations, relations and functions, graph theory, trees, recurrence relations and induction. Prerequisite: MATH 121 or equivalent. (F)

256 Probability for Engineers and Scientists 3(3-0)
A calculus-based introduction to applied probability and stochastic processes. An intuitive study of random variables, special distributions, expectations, and limit theorems. Prerequisite: MATH 224 or permission of instructor. (S)

291 Special Topics (1-3 VAR)
Prerequisites: permission of instructor and approval of the department chair. (F,S)

307 Introduction to Linear Algebra 3(3-0)
A rigorous development of vector spaces and linear transformations. Prerequisites: MATH 207 and 224 or equivalent. (F,S)

320 Introduction to Mathematical Thought 3(3-0)
A rigorous introduction to sets, logic, mathematical proof, functions, and equivalence relations. Prerequisite: MATH 224. MATH 307 or MATH 325 recommended. (F,S)

325 Intermediate Calculus 3(3-0)
Continuation of MATH 224. Vector valued functions and multivariable calculus. Prerequisites: MATH 207 and 224. (F)

327 Introduction to Algebraic Systems 3(3-0)
Introduction to groups, rings, and fields and their elementary properties. Prerequisite: MATH 320 or permission of instructor. (S)

330 Introduction to Higher Geometry 3(3-0)
Euclidean, hyperbolic, finite, and transformation geometries, models, and constructions. Prerequisite: MATH 224 or permission of instructor. (S)

337 Differential Equations I 3(3-0)
First order differential equations, homogeneous and non-homogenous linear differential equations, introduction to the Laplace transform, applications. Prerequisite: MATH 224 or equivalent. (S)

338 Differential Equations II 3(3-0)
Linear systems, existence and uniqueness of solutions, non-linear equations, series solutions, orthogonal sets of functions. Fourier series, boundary value problems, partial differential equations and applications. Prerequisite: recommend MATH 325. (*)

342 Introduction to Numerical Analysis 3(3-0)
Numerical solutions of polynomial, differential, integral, and other equations using the computer. Prerequisites: MATH 207 and a programming language, or permission of instructor. (*)

348 Numerical Methods 3(3-0)
Linear and non-linear systems of equations, systems of differential equations and boundary value problems, rational function approximations. Prerequisites: MATH 307 and a programming language. (*)

350 Probability 3(3-0)
Introduction to probability theory and stochastic processes. Probability spaces, random variables and their distributions, exponential and Poisson processes, limit theorems and applications. Prerequisite: MATH 325. (S)

356 Statistics for Engineers and Scientists 3(3-0)
Calculus-based introduction to statistical methods. Sampling distributions, hypothesis testing, linear regression, design of experiments using ANOVA. Data analysis with Minitab. Prerequisite: MATH 256 or MATH 350. (F)

360 Elementary Concepts of Mathematics I 3(3-0)
Sets, numeration systems, whole numbers, algorithms, number theory, integers and intuitive geometry. Prerequisite: C or better in any 100 level math course. Recommend MATH 121. (F,S)

361 Elementary Concepts of Mathematics II 3(3-0)
Metric geometry, rational numbers, real numbers, logic, mathematical systems, metric system, probability and statistics. Prerequisite: MATH 360. (F,S)

377 Materials and Techniques of Teaching Secondary School Mathematics 4(3-2)
Topics and current issues in secondary mathematics education, including materials development, learning theories, instructional and assessment strategies, curriculum, planning and standards. Field experience required. Prerequisites: Acceptance into Teacher Education Program and Math 307 or Math 320. (F)

411 Introduction to Topology 3(3-0)
An introduction to topological spaces, homeomorphisms, topological properties, and separation axioms. Prerequisite: MATH 320. (*)

419 Number Theory 3(3-0)
Divisibility, prime numbers, linear congruences, multiplicative functions, cryptology, primitive roots, and quadratic residues. Prerequisite: MATH 307 or MATH 320. (F)

421 Advanced Calculus I 3(3-0)
An introductory course in real analysis providing a rigorous development of the concepts of elementary calculus. Prerequisites: MATH 320 and 325. (F)

422 Advanced Calculus II 3(3-0)
Additional topics from elementary real analysis, theory of multivariable calculus, Stieltjes and line integrals. Prerequisite MATH 421. (*)

425 Complex Variables 3(3-0)
An introduction to complex function theory. Complex numbers, sequences and series, the calculus of complex functions, analytic functions, and conformal mappings. Prerequisite: MATH 325. (*)

443 Optimization Techniques 3(3-0)
Linear programming and its derivatives, network optimization and their applications to practical problems. Prerequisites: MATH 307 and knowledge of a programming language. (*)

445 Discrete Mathematics 3(3-0)
Topics selected from mathematical reasoning, combinatorial techniques, set theory, binary relations, functions and sequences, algorithm analysis, and discrete analysis. Prerequisites: MATH 224, 307 and knowledge of a programming language. (*)

456 Design and Analysis of Experiments 3(3-0)
Foundations of experimental design, outline efficient methods to implement experiments, develop statistical methods to sort signal from noise, analysis of variance and response surface models. (SS,*)

463 History of Mathematics 3(3-0)
Survey of the origins of important mathematical concepts and of the mathematicians responsible for these discoveries. Prerequisite: MATH 320. (F)

491 Special Topics (1-3 VAR)
Prerequisite: permission of instructor. (F,S)

492 Research (1-3 VAR)
Research project selected by student and supervised by a regular mathematics faculty member. Prerequisite: department approval. (F/S)

493 Seminar (1-3 VAR)
Prerequisites: senior standing and permission of instructor. (F,S)

495 Independent Study (1-3 VAR)
Prerequisites: senior standing and permission of instructor. (F,S)

GRADUATE COURSES

501 Foundations of Mathematics 3(3-0)
Sets, logic, axiomatics, mappings and the various subsystems of the reals for beginning graduate students. Prerequisite: permission of instructor. (*)

507 Linear Algebra 3(3-0)
Vector spaces, linear transformations, matrix representation, canonical form. Prerequisite: permission of instructor. (*)

521 Intermediate Analysis 3(3-0)
Point set theory, including the Bolzano-Weierstrass and the Heine-Borel theorems, theory of differentiation and Riemann integration, and sequences and series of functions. Prerequisite: permission of instructor. (*)

527 Abstract Algebra 3(3-0)
Groups, rings, integral domains, quotient rings, ideals, fields, homomorphisms and related topics. Prerequisite: permission of instructor. (*)

530 Advanced Geometry 3(3-0)
Foundations of geometry, geometric transformations, and applications. Prerequisite: permission of instructor. (*)

541 Computers 3(3-0)
The use of the computer in mathematical investigations, including sophisticated comprehensive computer programs such as Mathematica. Prerequisite: permission of instructor. (*)

544 Mathematical Methods of Applied Science 3(3-0)
Topics in applied mathematics, including deterministic and stochastic models, programming, optimization, networks, and simulation. Prerequisite: permission of instructor. (F)

550 Elementary Statistical Methods 3(3-0)
Sampling techniques, testing of hypotheses, experimental design, analysis of variance, and regression as an aid to research in behavior, education and science. Prerequisite: permission of instructor. (S)

556 (EN 556) Design and Analysis of Experiments 3(3-0)
Foundations of experimental design, outline efficient methods to implement experiments, develop statistical methods to sort signal from noise, analysis of variance and response surface models. Prerequisite: permission of instructor. (SS,*)

560 Concepts in Elementary School Mathematics (1-3 VAR)
Problems of the curriculum, methods of teaching and evaluation in the elementary school. Prerequisite: permission of instructor. (SS)

577 Concepts in Secondary School Mathematics (1-3 VAR)
Problems of teaching secondary school mathematics; the slow learner, methods, gifted students, evaluation. Prerequisite: permission of instructor. (*)

591 Special Topics (1-3 VAR) (*)

595 Independent Study (1-2 VAR) (*)

598 Graduate Internship 4(4-0)
Volunteer or paid work experience under the combined supervision of the selected organization and a faculty member. Prerequisite: graduate student status. (F,S,SS)

599 Thesis Research (1-6 VAR)
Prerequisite: graduate student status. (IP and SU grading) (F,S,SS)

NURSING DEPARTMENT

CHAIR: Steen
FACULTY: Brown, DePalma, Janos, Johnston, Miller, Sabo, Williams

The major in nursing leads to a bachelor of science in nursing (BSN) degree and prepares the graduate for the NCLEX licensing examination. Success in passing the NCLEX qualifies the graduate for entry into professional nursing practice as a generalist in a variety of health care settings. The educational program is fully approved by the Colorado Board of Nursing and is accredited by the National League for Nursing (NLN), 350 Hudson, New York, NY 10014.

The curriculum is designed with prerequisite foundation courses at the lower division. Students enter the nursing sequence in the second semester of the sophomore year and must complete courses in a specified sequence. Course work in nursing focuses on the preparation of entry-level professional nurses who are able to provide caring and competent nursing care to clients based on the utilization of the nursing process in facilitating fulfillment of health-related human needs. Learning experiences are grounded in multi-theoretical perspectives which integrate diverse nursing roles and emphasize professional, ethical accountability.

All required courses in nursing, general education, and the academic minor or area of concentration must be completed with a grade of C or above. Failure to maintain required grades will result in the student being ineligible to continue in the nursing program. Nursing courses must be repeated within one academic year from the date of unsatisfactory grades. Students who are not in continuous enrollment in nursing courses need to contact an adviser in the nursing department to formulate a plan to continue.

Admission to the university does not imply acceptance to the nursing major. Applications to the nursing program may be obtained in the nursing department or the Office of Admissions. Students are admitted to the nursing major based on grade-point average and successful completion of prerequisite courses. Nursing majors are assigned to a nursing faculty member for academic advisement. Requests for advanced placement through transfer or equivalent credit of nursing courses must be submitted in writing to the nursing department.

Registered Nurses with an associate degree or a diploma in nursing from a Colorado school or an NLN-accredited school may articulate to the baccalaureate nursing program without testing in nursing content areas. To earn the BSN degree, students complete non-nursing requirements and the equivalent of one year of full-time nursing course work.

Department Goals

- To provide quality learning experiences for nursing students which prepare graduates for practice as competent, caring, ethical and accountable entry-level professional nurses.
- To maintain the program curricula congruent with the expectations of health professional employers, accreditation bodies, needs of students and the resources of the university as evidenced by program adaptations based upon review of evaluation data and recommendations of the Nursing Department Advisory Board.
- To prepare associate degree and diploma RNs for baccalaureate nursing practice consistent with the Colorado Nursing Articulation Model.
- To collaborate with local and regional health care agencies in joint projects related to education of professional nurses.
- To maintain approval of the Colorado State Board of Nursing and National League for Nursing accreditation.

Expected Student Outcomes

- Practice nursing, using a human needs framework incorporating multi-disciplinary theories.
- Demonstrate entry level competence in providing nursing care to individuals, families, groups and communities.
- Employ critical thinking utilizing the nursing process and results of research to manage client care.
- Incorporate caring (commitment, compassion, conscience, competence, confidence) into professional nursing practice.
- Integrate nursing roles for professional nurses as defined in the Colorado Nursing Articulation Model.
- Facilitate effective, purposeful communication between self and others (peers, clients and other professionals) to promote common goals in diverse health care settings.
- Evaluate the influence of the complex interactions of multiple environmental factors on the formulation of health care plans to meet the health and safety needs of individuals, families and communities.
- Demonstrate behaviors which reflect professional ethics and accountability congruent with the American Nurses' Association (ANA) Code of Ethics and the ANA Social Policy Statement and State Nurse Practice Acts in the provision of non-discriminatory nursing care to clients.

Specific Requirements for the Nursing Major

General Education and Prerequisite Courses

NSG Courses		Titles	Credits
NSG	231	Intro to Professional Nursing	2
	232/232L	Fundamentals of Nursing/Lab	6
	270	Pathophysiology	3
	302/302L	Health Assessment/Lab	4
	312/312L	Nursing Care of Childbearing Families/Lab	6
	322/322L	Nursing Care of the Adult I/Lab I	7
	332/332L	Nursing Care of Children & Adolescents	6
	351	Research in Nursing	3
	382/382L	Psychiatric Nursing/Lab	6
	420/420L	Nursing Care of the Adult II/Lab II	7
	442/442L	Community and Family Nursing/Lab	6
	451	Nursing Management	3
	452/452L	Nursing Process: Synthesis/Lab	6
	461	Health Issues and Trends	3
		TOTAL	68

Registered Nurse Articulation

NSG	302/302L	Health Assessment/Lab	4
	307	Health and Disease Systems (pathophysiology)	3
	309	Professional Nursing Practice	4
	311	Advanced Concepts in Nursing	3
	351	Research in Nursing	3
	442/442L	Community and Family Nursing/Lab	6
	451	Nursing Management	3
	452/452L	Nursing Process: Synthesis/Lab	6
	461	Health Issues and Trends	3
		TOTAL	35

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual department's curriculum sheet.

Co-curricular Requirements

Nursing majors are expected to:

- conduct themselves in a manner that reflects the values of the profession. The guidelines for professional behavior are derived from two major sources: 1) the Colorado Nurse Practice Act, and 2) the ANA Code of Ethics, a statement of standards and ideals for nursing;
- participate in clinical practicums in various health care facilities and work with individuals and families with a variety of health conditions. Most of the clinical practicums are off-campus. Students are responsible for personal transportation to and from health care facilities for clinical experience; and
- function within health facility policies for patient care. Students must meet institutional health requirements.

Outcomes Assessment Activities

- Assessment of clinical competencies and evaluation tools;
- Individual and class scores in the NLN Comprehensive Nursing Achievement Examination;
- An End-of-Program Evaluation survey and a graduate follow-up survey of nursing graduates and their employers one year after graduation;
- State Board Results (NCLEX) required of graduates prior to professional nursing practice as a registered nurse; and
- Student portfolios consisting of course and clinical projects, clinical evaluations tools, research proposals and scholarly papers.

NURSING (NSG)

UNDERGRADUATE COURSES

230 (WS 230) Women, Health and Society 3(3-0)
Introduction to women's health issues and a basic understanding of how women's health has been influenced historically, culturally and by socio-economic factors. (F,S)

231 Introduction to Professional Nursing 2(2-0)
Historical and theoretical basis for professional nursing practice. Introduction to the health care system, philosophy of the nursing program, the nursing process and human needs. Prerequisite: admission to BSN program or approval of instructor. (S)

232 Fundamentals of Nursing 2(2-0)
Theory for utilization of the nursing process in meeting primary health needs of individuals. Basic nursing interventions and therapeutic communications are emphasized. Prerequisite: admission to BSN program or completion of LPN program. Corequisite: NSG 232L. Pre/Corequisite: NSG 231. (S)

232L Fundamentals of Nursing Lab 4(0-8)
Application of NSG 232. Laboratory practice assists students in developing fundamental competencies for providing basic nursing care to individual clients. Corequisite: NSG 232. (S)

270 Nursing Pathophysiology 3(3-0)
Introduction to the basic disease processes of individual body systems. Incorporates nursing assessment/ diagnosis with associated intersystem diseases. Prerequisites: BIOL 206/206L, 223/223L, 224/224L, CHEM 111/111L, 112/112L. (S)

291 Special Topics (1-4 VAR)
Topics and/or nursing skills, for enrichment of required nursing courses, and which serve the interest of 10 or more students will be considered. Prerequisite: permission of instructor. (*)

302 Health Assessment 3(3-0)
Systematic assessment of individuals across the life span. Provides principles necessary to determine potential deviations from normal in evaluating the health status of individuals across the lifespan. Prerequisites: NSG 231, 232/232L, 270 or RN. Corequisite: NSG 302L. (CE,F)

302L Health Assessment Lab 1(0-2)
Application of NSG 302. Provides the student with the opportunity to collect and record complete health histories and practice skills of physical assessment of individuals throughout the lifespan. Corequisite: NSG 302. (CE,F)

305 Ethical Issues in Health Care 3(3-0)
Selected theories which influence ethical choice in nursing are presented. Areas of the law and legal systems which affect the public health are included. Current ethical issues related to nursing practice. Prerequisite: permission of instructor. (F,S)

307 Health and Disease Systems 3(3-0)
Alterations and adaptations of individual body systems to disease processes. Prerequisites: BIOL 223/223L, 224/224L, CHEM 111/111L, 112/112L, Registered Nurse License, and/or permission of instructor. (CE,F,S)

309 Professional Nursing Practice 4(4-0)
Introduction to the philosophy of the USC nursing program. The professionalization of nursing, professional nursing practice and personal growth as a professional are included. Prerequisite: Registered Nurse license. (F,S)

311 Concepts for Professional Nursing 3(3-0)
Concepts including group process and teaching-learning are examined in relation to nursing practice across the lifespan. Prequisite: Registered Nurse status. (S)

312 Nursing Care of Childbearing Families 3(3-0)
Theory for nursing care of the neonate and procreative family during the perinatal period. Includes health promotion, family theory and human sexuality. Prerequisites: NSG 231, 232/232L, 270. Corequisite: NSG 312L. Pre-/Corequisite: NSG 302/302L (F)

312L Nursing Care of Childbearing Families Lab 3(0-6)
Application of NSG 312. Clinical experiences emphasize use of the nursing process in meeting needs of the neonate and family during the perinatal period. Co-requisite: NSG 312. (F)

322 Nursing Care of the Adult I 3(3-0)
Nursing process directed toward principles of therapeutic nursing care of adults health promotion and with common health problems. Prerequisites: NSG 231, 232/232L, 270. Corequisites: NSG 302/302L, 322L. (F)

322L Nursing Care of the Adult I Lab 4(0-8)
Application of NSG 322. Clinical experiences emphasize use of the nursing process in meeting selected needs of adult clients. Corequisite: NSG 322. (F)

332 Nursing Care of Children and Adolescents 3(3-0)
Theory for nursing care of children and adolescents. Emphasizes the nursing process related to health promotion, maintenance and restoration for the child, adolescent and family. Prerequisites: NSG 231, 232/232L, 270, 302/302L, 312/312L. Corequisite: NSG 332L. (S)

332L Nursing Care of Children and Adolescents Lab 3(0-6)
Application of NSG 332. Clinical experiences emphasize use of the nursing process in meeting health related needs of children and adolescents. Corequisite: NSG 332. (S)

351 Research in Nursing 3(3-0)
Introduction to the steps of research methodology. Analysis of research studies provides the basis for determining integration of appropriate research into nursing practice. Prerequisites: MATH 156, NSG 231, 270, 302/302L, 322/322L. (S)

372 Clinical Practicum 3(0-9)
An elective course which provides an opportunity for a concentrated clinical practicum in a variety of patient care settings. Prerequisite: completion of all junior level nursing courses. (*)

382 Psychiatric Nursing 3(3-0)
Nursing process directed toward care of individuals and families experiencing mental illness. Includes concepts of mental health, group process and group leadership. Prerequisites: NSG 322/322L, 302/302L, 312/312L. Corequisite: NSG 382L. (CE,S)

382L Psychiatric Nursing Lab 3(0-6)
Application of NSG 382. Clinical experiences emphasize all components of the nursing process in meeting the needs of individuals and families experiencing mental illness. Corequisite: NSG 382. (S)

391 Special Topics (1-5 VAR)
Prerequisite: permission of instructor. (*)

420 Nursing Care of the Adult II 3(3-0)
Builds on content in NSG 322. Includes complex, acute and chronic health problems of individuals and continuity of care within the health care system. Prerequisite: completion of all junior nursing courses. Corequisite: NSG 420L. (F)

420L Nursing Care of the Adult II Lab 4(0-8)
Application of 420. Students utilize expanded data base and action strategies to meet complex health needs of individuals. Includes technological skills for nursing interventions. Corequisite: NSG 420. (F)

431 Gerontological Nursing 3(3-0)
An elective theory course which focuses on nursing interventions for older adults. Prerequisite: completion of all junior level nursing courses. (F,S)

442 Community and Family Nursing 3(3-0)
Theory in application of the nursing process, public health principles and concepts related to families and communities. Prerequisite: completion of all junior level nursing courses. Prerequisite: completion of all junior level nursing courses. Corequisite: 442L. (F)

442L Community and Family Nursing Lab 3(0-6)
Application of NSG 442. Selected experiences in community health settings. Health education and health promotion are emphasized. Corequisite: NSG 442. (F)

451 Nursing Management 3(3-0)
Theories and skills which enhance the nurse's role as leader and manager in health care and community systems. Prerequisites: Completion of junior level courses. (F)

452 Nursing Process: Synthesis 3(0-9)
Synthesis of previous course work with integration of theories, research and the nursing process in meeting complex health needs of clients from diverse cultural backgrounds. Prerequisites: NSG 420/420L, 442/442L, NSG 451. Corequisite: 451L. (S)

452L Nursing Process: Synthesis Lab 3(0-9)
Application of NSG 452. Synthesis of process and content of nursing in managing client groups in acute and rehabilitation settings. Corequisite: NSG 452. (S)

461 Health Care Issues and Trends 3(3-0)
Issues and trends related to health care including professional, ethical and legal issues. Prerequisite: completion of all junior level nursing courses. (S)

472 Clinical Practicum II 3(0-9)
Concentrated practicum course consisting of intermediate application of the nursing process in patient care settings with clients of all age groups in complex care settings. Prerequisite: permission of instructor. (F,S,SS)

492 Research 2(2-0)
Major nursing theories are examined in relation to nursing functions they imply, kinds of hypotheses they would generate, and kinds of research they would stimulate. There is examination of research process, design, methods of collecting and analyzing data, and interpretation of data. Prerequisite: NSG 351. (*)

495 Independent Study (1-6 VAR) (*)

GRADUATE COURSES

521 Advanced Health and Disease Systems 4(4-0)
Examination of advanced pathophysiology and accompanying data assessment of the adult that lead to differential nursing diagnosis and subsequent interventions. Prerequisite: BSN or senior honors. (*)

551 Health Systems Management 3(3-0)
Examination of public policy and trends in management, budget and staffing within state and federal guidelines as it relates to nursing. Prerequisite: BSN or senior honors. (*)

PHYSICS/PHYSICAL SCIENCE DEPARTMENT

CHAIR: Graham
FACULTY: Spenny, Wallin

The major in physics leads to a bachelor of science (BS) degree. In addition, supporting courses and general education courses in physics and physical science are available for students with a wide spectrum of interests, backgrounds and needs. Physics majors must consult with a departmental adviser as early as possible and must file a departmentally approved plan of study by the beginning of the junior year.

The bachelor of science degree in physics is offered with several options:

Physics Option:

Primarily for students planning graduate study toward a professional career in physics, astronomy or other related fields.

Physics/Engineering Option or Electronics Engineering Technology Option:

For students planning to enter positions in industry upon graduation. Courses in engineering and technology enhance the utility of the graduate to potential employers.

Physics Options in Chemical Physics, Biophysics, or Mathematical Physics:

These options are designed to meet specific career objectives for an individual.

Physics/Teaching Option:

Provides students with the knowledge and skills necessary to obtain Colorado Department of Education certification as science teachers.

Under all of the above options, the recommended sequences of courses presume that the student is ready to begin MATH 126 in the first semester of the freshman year. If not, MATH 124 should be taken in the fall and MATH 126 in the spring of the freshman year concurrently with PHYS 221. Otherwise it may not be possible to complete the requirements for a physics degree within four years. Students, especially transfers, who do not strictly adhere to the plan of study may find that the term of attendance at USC will be extended beyond four years.

Physics/Physical Science Teaching Option:

This is a teacher certification program. Secondary teaching requirements include courses in the physical sciences and supporting areas. In addition to the basic requirements, 14 additional credits are required in one of the physical sciences along with appropriate courses in education. Students preparing to teach at the elementary level may use their broad-area subject matter preparation to meet the 14-hour requirement.

Minors also are available in physics and physical science for students who need a specialized science minor in these fields.

Department Goals

- To supply students with the necessary background to successfully pursue graduate study towards a professional career in physics, astronomy or a related field.
- To prepare students upon graduation to enter technical positions in government or industry.
- To provide students with the knowledge and skills necessary to obtain Colorado Department of Education Certification as science teachers of physics or physical science.

Expected Student Outcomes

General Requirements

- Students graduating with a BS in physics must have at least a 2.0000 grade-point average in physics courses and no more than four credits in physics with grades of D.
- Students graduating with a minor in physics must have at least a 2.0000 grade-point average in physics.
- A 2.5000 grade-point average in the major area is required for admission to the teacher education program.

- At least 12 physics credits applied to the major (seven for minor) must be earned at USC with a C or better average.
- Students must have earned a C or better grade in lower-division prerequisite courses before being admitted to upper-division courses in physics.
- Students must demonstrate a knowledge of computer programming.
- In all but the teaching options, majors are required to take the senior research course in which students become involved in a theoretical or experimental research problem relating to physics under the supervision of a department faculty member; and
- A fundamental understanding of chemistry and its lab techniques also is required of all majors in all options.

Specific Requirements for the Physics Option

PHYS Course		Titles	Credits
PHYS	221/221L	General Physics I/Lab I	5
	222/222L	General Physics II/Lab II	5
	301	Theoretical Mechanics	4
	321	Thermodynamics	3
	322	Advanced Laboratory – Heat	1
	323/323L	General Physics III/Lab III	5
	341	Optics	3
	342	Advanced Laboratory – Optics	1
	431	Electricity and Magnetism	4
	432	Adv Lab Electricity & Magnetism	1
	441	Quantum Mechanics	4
	480	Practicum in Lab Instruction	1
	492	Research	1
	493	Seminar	1
	499	Thesis Research	1
		TOTAL	40

Other Required Courses

MATH	126	Calculus and Analytic Geometry I	5
	207	Matrix & Vector Algebra with Appl	2
	224	Calculus and Analytic Geometry II	5
	325	Intermediate Calculus	3
	337	Differential Equations I	3
	338	Differential Equations II	3
Approved Math Elective			3
CHEM	121/121L	General Chemistry I/Lab I	5
	122/122L	General Chemistry II/Lab II	5
EN	105	Fortran	3
		TOTAL	37

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual department's curriculum sheet.

Specific Requirements for the Physics/ Electronics Engineering Technology Option

PHYS Courses		Titles	Credits
PHYS	221/221L	General Physics I/Lab I	5
	222/222L	General Physics II/Lab II	5
	301	Theoretical Mechanics	4
	321	Thermodynamics	3
	322	Advanced Laboratory – Heat	1
	323/323L	General Physics III/Lab III	5
	341	Optics	3
	342	Advanced Laboratory – Optics	1
	431	Electricity and Magnetism	4
	492	Research	1
		TOTAL	32

Other Required Courses

Course		Titles	Credits
MATH	126	Calculus and Analytic Geometry I	5
	207	Matrix & Vector Algebra with Appl	2
	224	Calculus and Analytic Geometry II	5
	325	Intermediate Calculus	3
	337	Differential Equations I	3
CHEM	121/121L	General Chemistry I/Lab I	5
	122/122L	General Chemistry II/Lab II	5
CIS	102	Programming w/Basic	3
CENT	110	Computer Applications	3
EET	211	Electronics I	4
	212	Electronics II	4
	250	Electrical Fundamentals	4
	254	Introduction to Digital Systems	4
CENT	255	Intro duction to Microprocessors	4
CENT	225	Introduction to C Language	3
CENT	355	Microcomputer Assembly Language	4
		TOTAL	61

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual department's curriculum sheet.

Specific Requirements for the Physics/ Engineering Option

PHYS Courses		Titles	Credits
PHYS	221/221L	General Physics I/Lab I	5
	222/222L	General Physics II/Lab II	5
	301	Theoretical Mechanics	4
	321	Thermodynamics	3
	322	Advanced Laboratory – Heat	1
	323/323L	General Physics III/Lab III	5
	341	Optics	3
	342	Advanced Laboratory – Optics	1
	431	Electricity and Magnetism	
	492	Research	1
		TOTAL	32

Other Required Courses

MATH	126	Calculus & Analytic Geom I	5
	207	Matrix & Vector Algebra w/Appl	2
	224	Calculus & Analytic Geom II	5
	325	Intermediate Calculus	3
	337	Differential Equations I	3
CHEM	121/121L	General Chemistry I/Lab I	5
	122/122L	General Chemistry II/Lab II	5
EN	105	FORTRAN	3
EN	103	Introduction to Engineering	2
	107	Engineering Graphics	2
	211	Engineering Mechanics I	3
	212	Engineering Mechanics II	3
	231/231L	Circuit Analysis I/Lab I	5
	321	Thermodynamics I	3
	324/324L	Mechanics of Materials/Lab	4
	342	Engineering of Manufacturing Processes	4
	443	Quality Control and Reliability	3
	471	Operations Research	3
		TOTAL	63

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual department's curriculum sheet.

Specific Requirements for the Biophysics, Chemical Physics, or Mathematical Physics Options*

PHYS Courses	Titles	Credits
PHYS 221/221L	General Physics I/Lab I	5
222/222L	General Physics II/Lab II	5
301	Theoretical Mechanics	4
321	Thermodynamics	3
322	Advanced Laboratory – Heat	1
323/323L	General Physics III/Lab III	5
341/342	Optics/Adv. Laboratory Optics OR	
431	Electricity and Magnetism	4
441	Quantum Mechanics	4
492	Research	1
	TOTAL	32

Other Required Courses

MATH	126	Calculus & Analytic Geom I	5
	207	Matrix & Vector Algebra w/Appl	2
	224	Calculus & Analytic Geom II	5
	325	Intermediate Calculus	3
	337	Differential Equations I	3
CHEM	121/121L	General Chemistry I/Lab I	5
	122/122L	General Chemistry II/Lab II	5
CIS	102	Programming w/BASIC OR	
EN	105	FORTRAN	3
Approved electives in biology			32
OR			
Approved electives in chemistry			22
OR			
Approved electives in mathematics			14
		TOTAL	45-63

*A MATH/PHYSICS double major is also available in the department. (See MATH department requirements.)

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual department's curriculum sheet.

Specific Requirements for the Physics Teacher Certification Option

PHYS Courses	Titles	Credits
PHYS 161	Elementary Concepts in Science II	4
	OR	
PHYS 110	Astronomy	3
221/221L	General Physics I/Lab I	5
222/222L	General Physics II/Lab II	5
301	Theoretical Mechanics	4
321	Thermodynamics	3
323/323L	General Physics III/Lab III	5
341	Optics	3
342	Advanced Laboratory – Optics	1
431	Electricity and Magnetism	4
432	Advanced Lab-Elec & Magnetism	1
493	Seminar	1
	TOTAL	35 - 36

Other Required Courses

MATH	126	Calculus & Analytic Geom I	5
	207	Matrix & Vector Algebra w/Appl	2
	224	Calculus & Analytic Geom II	5
	325	Intermediate Calculus	3
	337	Differential Equations I	3
CHEM	121/121L	General Chemistry I/Lab I	5
	122/122L	General Chemistry II/Lab II	5
GEOL	101/101L	Earth Science/Lab	4
BIOL	121	Environmental Conservation	4
	162	Personal Health	3
	100/100L	Principles of Biology/Lab	4
CIS	101	Computers and You	2
PSYCH	100	General Psychology	3
PSYCH	151	Intro to Human Development OR	
ED	210	Human Growth & Development for Educators	3
	202	Foundation of Education	3
	435	Classroom Management	3
	460	Educational Media & Technology	3
	461	Atypical Students in the Secondary School	3

	488	Student Teaching Secondary	15
IST	345	Career Education	2
RDG	425	Teaching Rdg in Content Areas	2
		TOTAL	82

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual department's curriculum sheet.

Specific Requirements for the Physics/ Physical Science Teacher Certification Option

PHYS Courses		Titles	Credits
PHYS	161	Elementary Concepts in Science II	4
		OR	
PHYS	110	Astronomy	3
	201/201L	Principles of Physics I/Lab I	4
	202/202L	Principles of Physics II/Lab II	4
		TOTAL	11 - 12

Other Required Courses

BIOL	121	Environmental Conservation	4
	162	Personal Health	3
	100/100L	Principles of Biology/Lab	4
CHEM	121/121L	General Chemistry I/Lab I	5
	122/122L	General Chemistry II/Lab II	5
GEOL	101/101L	Earth Science/Lab	4
CIS	101	Computers and You	2
MATH	221	Applied Calculus: Intuitive Approach	5
Approved electives in chemistry or geology or physics			21-22
PSYCH	100	General Psychology	3
PSYCH	151	Introduction to Human Dev	
		OR	
ED	210	Human Growth & Development for Educators	3
	202	Foundation of Education	3
	435	Classroom Management	3
	460	Educational Media & Technology	3
	461	Atypical Students in the Secondary School	3
	488	Student Teaching Secondary	15
IST	345	Career Education	2
RDG	425	Teaching Rdg in Content Areas	2
		TOTAL	90-91

Institutional and General Education

Please refer to the General Education Requirements in the Undergraduate Programs section of this catalog or refer to your individual department's curriculum sheet.

Specific Requirements for the Minor in Physics

PHYS Courses		Titles	Credits
PHYS	221/221L	General Physics I/Lab I	5
	222/222L	General Physics II/Lab II	5
	323/323L	General Physics III/Lab III	5
Approved Upper-division Electives in Physics			5
		TOTAL	20

Specific Requirements for the Minor in Physical Science

A minimum of 24 credits must be selected from the courses listed below:

PHYS	161	Elementary Concepts in Science II	3
	110	Astronomy	3
	201/201L	Principles of Physics I/Lab I	4
	202/202L	Principles of Physics II/Lab II	4
	361	Physics of Sound	3
CHEM	111/111L	Principles of Chemistry/Lab	4
	112/112L	Intro to Organic & Biochem/Lab	4
GEOL	101/101L	Earth Science/Lab	4
	123/123L	Historical Geology/Lab	4
CIS	102	Programming w/BASIC	3
		OR	
EN	105	FORTRAN	3

Co-curricular Requirements

The department faculty believes that students should have co-curricular experiences that complement and reinforce their academic experiences. Therefore, the faculty encourages students to join and participate in events sponsored by the department and the Society of Physics Students (SPS), Sigma Pi Sigma initiations, physics expositions, picnics, graduation breakfast, potluck dinners, etc. to foster a spirit of camaraderie.

Outcomes Assessment Activities

The faculty of the physics/physical science department will assess the skills, capacities, and knowledge of its majors as follows:

- The student must complete a senior research project including a formal presentation of results both in writing and orally to at least two members of the department (except for those in the teaching options).
- The student must take the Physics Major Field Achievement Test offered by The Educational Testing Services (ETS) or another departmentally approved exam covering the sub-fields in physics at some point during his/her senior year (except for those in the physical science option).
- By maintaining a portfolio for each student which contains college grades, records of special skills acquired, senior research project results, Field Achievement Test results and a record of co-

curricular activities. The portfolio will remain on file in the department and added to as additional information is obtained from student or employer.

The department faculty believes that improvement in the skills, capacities, and knowledge of its minors can be assessed through required course work. The course grade will be a measure of the student's grasp of the basics in each discipline.

PHYSICS/PHYSICAL SCIENCE (PHYS)

UNDERGRADUATE COURSES

110 Astronomy 3(3-0)
Solar system, including motions of the planets, eclipses, and satellite exploration; classification and evolution of stars; clusters, nebulae, galaxies and the expanding universe. (F,S)

140 Light, Energy, and the Atom 3(3-0)
A non-mathematical approach to light, energy sources, conservation, atoms, nuclei and nuclear radiation. Emphasis on phenomena encountered in everyday life or that affect public policy. (F,S)

140L Light, Energy and the Atom Lab 1(0-2)
Optional laboratory to accompany PHYS 140. Experiments in light, solar energy, atomic and nuclear physics with emphasis on qualitative understanding of observations. Corequisite: PHYS 140. (F)

161 Elementary Concepts in Science II 4(3-2)
Hands-on, standards-based approach to understanding basic concepts of physical, earth and space sciences, including selected topics in technology. Integrated lecture, lab, discussion periods. (F,S,SS)

201 Principles of Physics I 3(3-0)
Motion, forces, conservation of energy and momentum, wave motion, sound and heat. For engineering technology, life sciences, and other interested students. Prerequisite: two years high school algebra. Corequisite: PHYS 201L. (F,S)

201L Principles of Physics I Lab 1(0-2)
Corequisite: PHYS 201. (F,S)

202 Principles of Physics II 3(3-0)
Electrostatics, electromagnetism, light, atomic and nuclear physics. Prerequisite: PHYS 201. Corequisite: PHYS 202L. (F,S)

202L Principles of Physics II Lab 1(0-2)
Corequisite: PHYS 202. (F,S)

221 General Physics I 4(4-0)
Newtonian mechanics, including linear and rotational dynamics, momentum, energy, gravitation, fluid mechanics, wave motion and thermodynamics. Uses the calculus and vector notation. For majors in physics, mathematics, geoscience, engineering and chemistry. Prerequisite: high school physics or PHYS 201, or permission of instructor. Prerequisite or Corequisite: MATH 126. Corequisite: PHYS 221L. (S)

221L General Physics I Lab 1(0-2)
Corequisite: PHYS 221. (S)

222 General Physics II 4(4-0)
Electrostatics, electromagnetism, elementary circuits, electrical oscillations, geometrical optics and the wave aspects of light. Prerequisite: PHYS 221. Corequisites: PHYS 221 and 222L. (F)

222L General Physics II Lab 1(0-2)
Corequisite: PHYS 222. (F)

291 Special Topics (1-4 VAR) (*)

301 Theoretical Mechanics 4(4-0)
Statics and dynamics of particles and rigid bodies. Conservation principles, minimum principles, accelerated coordinate systems, Lagrangian and Hamiltonian methods, vector and matrix methods. Prerequisites: PHYS 221, MATH 325 and MATH 337. (F/E)

321 Thermodynamics 3(3-0)
Introduction to thermodynamic laws and principles, entropy, kinetic theory and statistical mechanics. Prerequisite: PHYS 221. (F/E)

322 Advanced Laboratory- Heat 1(0-2)
Experiments in heat of combustion, heat transfer, thermal electromotive force, viscosity, and specific heat measurements. Prerequisite or corequisite: PHYS 321. (F/E)

323 General Physics III 4(4-0)
Introduction to special relativity, kinetic theory, quantization, wave mechanics, atomic structure, nuclear physics and spectroscopy. Prerequisites: PHYS 222/222L and MATH 224. Corequisite: PHYS 323L. (S)

323L General Physics III Lab 1(0-2)
Corequisite: PHYS 323. (S)

341 Optics 3(3-0)
Geometrical optics, interference, diffraction, polarization of light, optical properties of materials, optical sources including lasers, and holography. Prerequisites: PHYS 222/222L and MATH 325. (F, O)

342 Advanced Laboratory-Optics 1(0-2)
Experiments in interference, diffraction, absorption, spectral characteristics and polarization of light. Prerequisite or Corequisite: PHYS 341. (F, O)

361 Physics of Sound 3(3-0)
Sound waves, sources of sound, physics of hearing, acoustical measurements. For speech correction majors and other interested students. Prerequisite: MATH 120 or equivalent. (F, O)

431 Electricity and Magnetism 4(4-0)
Mathematical treatment of electrostatics, currents, magnetism, electromagnetic induction, Maxwell's equations and electrodynamics. Prerequisites: PHYS 222/222L, MATH 325 and 337. (S, E)

432 Advanced Laboratory-Electricity and Magnetism 1(0-2)
Experiments in electrostatic constants, magnetic effects, capacitance, thermoelectric effects, magnetic properties, inductance, mutual inductance, and production, propagation and diffraction of microwaves. Prerequisite or Corequisite: PHYS 431. (S, E)

441 Quantum Mechanics 4(4-0)
Wave packets, operators, the Schroedinger equation, eigenstates, angular momentum, spin, magnetic moments, Heisenberg formulation. Prerequisites: PHYS 323/323L, MATH 325 and 337. (S, O)

480 Practicum in Laboratory Instruction 1(0-2)
Participation in laboratory instruction under the guidance of a staff member. May be repeated for a maximum of two credits. (F,S)

491 Special Topics (1-4 VAR) (*)

492 Research 1(0-2)
Prerequisite: eight credits in upper-division physics courses. (F,S)

493 Seminar 1(1-0)
Class members report on recently published work or on their own research in physics or applied physics. May be repeated for a maximum of two credits. Prerequisite: advanced standing with a major or minor in physics. (S, O)

495 Independent Study (1-2 VAR)
Prerequisite: junior or senior standing; permission of department chair. (*)

499 Thesis Research 1(1-0)
Students write a research paper describing their own research. Prerequisite: senior standing in the department. (F,S)

GEOLOGY (GEOL)

UNDERGRADUATE COURSES

101 Earth Science 3(3-0)
Four earth spheres: the hydrosphere (oceanography, hydrologic cycle); the atmosphere (meteorology and climatology); the lithosphere (geology; internal and external processes); and space are emphasized. Corequiste: GEOL 101L. (F,S)

101L Earth Science Lab 1(0-2)
Lab to accompany GEOL 101 lecture. Corequisite: GEOL 101. (F,S)

APPLIED NATURAL SCIENCE (ANS)

GRADUATE COURSES

510 Scientific Information Systems 1(1-0)
Techniques of the effective and efficient use of scientific literature including the general content and organization of Chemical Abstracts, Biological Abstracts, Beilstein, Current Contents, and primary literature sources; use of computerized data bases for the location of literature and patent information. *Students in the biological and chemical sciences emphasis are strongly advised to take this course in the fall semester of their first year in the program. Prerequisite: graduate standing. (F)

520 Health and Safety in the Laboratory 1(1-0)
Review of standard potential hazards encountered in the scientific laboratory including fire, chemical, biological and radiation hazards. Applicable regulations associated with the handling and disposal of hazardous materials and wastes (OSHA, EPA, RCRA, state, "Right to Know," etc.). Sources of information regarding hazards (Material Safety Data Sheets, etc.). Control and prevention of spills and fires. Prerequisite: graduate standing. (F)

593 Seminar 1(1-0)
Two sections of the graduate seminar are required. *Section I* 1(1-0) is an interdisciplinary seminar on topics appropriate to the application of natural sciences. Prerequisite: graduate standing and ANS 510. (S only). *Section II* 1(1-0) is the oral defense of thesis research for the thesis option of comprehensive examination for the non-thesis option. Prerequisite: graduate standing , and all other program requirements must have been fulfilled. (F,S,SS).

THE HASAN SCHOOL OF BUSINESS

Dr. Bart H. Ward, dean

Academic Departments	*Majors:*	*Minors:*
Accounting	Accounting (BSBA)	Accounting
Business Administration/ Economics	Business/ Management (BSBA) • Management • Marketing • Operations and Materials Management • Finance	Business Administration
	Economics (BSBA)	Economics Marketing Supervisory Management
	Master of Business Administration (MBA) Joint BSBA/MBA	

Goals of the School

The mission of the Hasan School of Business is to provide quality business education for culturally diverse, traditional and non-traditional undergraduate and graduate students. The school places its priority on educational outcomes, and supports those outcomes with faculty participation in intellectual and service activities. Our curriculum and related activities provide business education and meet the needs of employers. The foundation of our educational programs includes contemporary business practices, management and leadership skills, lifelong learning capabilities, and global business awareness. The Hasan School of Business, in partnership with the community, seeks to enhance the economic well-being of southeastern Colorado.

Program Goals

Wherever possible the Hasan School of Business encourages graduates to obtain professional certification.

The Hasan School of Business graduates will be able to successfully compete for management training positions in large private firms or government units. They will have the business tools needed to be entrepreneurs. The knowledge and skills acquired with the major in management can be used in human resource and production operations management. A finance degree prepares the graduate for positions in banking, real estate and insurance. Marketing majors will be able to successfully promote and sell goods and services. The accounting degree will prepare graduates for immediate entry into business, government and as Certified Public Accountants. Economics majors are particularly well prepared to enter graduate programs in business in addition to becoming management trainees.

The graduate should have a broad-based general education which accounts for at least 50 percent of the four-year business degree. The graduate should be able to communicate and to think logically and critically in a technological society.

The Hasan School of Business also offers a graduate program leading to a master's degree in business administration. The degree of master of business administration is granted for the completion of a graduate program which 1) includes knowledge of the various functions of the business organization, and 2) synthesizes that knowledge into the practice of management. Students are expected to achieve an advanced understanding of the function of the executive and to develop a high degree of competence in transferring that knowledge to the actual work situation. See the Graduate Studies section of this catalog for more information.

Program Goals for the Hasan School of Business Minors

The purpose of the business administration minor is to provide students with an understanding of the fundamentals of accounting, economic and financial principles, and the basics of managing a business and marketing a product or service.

The economics minor is designed to provide students with an understanding of micro and macro economic principles, income distribution, and to apply such principles to current economic problems.

The goal of the minor in accounting is to provide financial and managerial accounting.

The goal of the marketing minor is to provide students with an understanding of how marketing activities, using a customer focus, can be used to sell products, services and ideas successfully.

The goal of the minor in supervisory management is to provide a basic understanding of the complexity of managing people in organizations.

A cumulative GPA of 2.0000 is required in the minor courses.

Course Waiver

The Hasan School of Business offers a "test out" course waiver for some business core courses, but does not offer credit for life experience.

Expected Student Outcomes

General Requirements

A pre-business core (cumulative GPA of 2.0000 and cumulative GPA of 2.0000 in the pre-business core courses) is required to continue to the business core.

All business students take the pre-business core. The core prepares students who are declaring a business major for general business knowledge and skills. The core also provides students with an understanding and appreciation for the intellectual discipline needed for the business program.

Pre-Business Core

Courses		Titles	Credits
ACCTG	201	Principles of Financial Accounting	3
ACCTG	202	Principles of Managerial Accounting	3
BUSAD	101	Career Opportunities in Business	1
BUSAD	160	Computers and Information	3
BUSAD	260	Business Statistics I	3
BUSAD	270	Business Communications	3
ECON	201	Principles of Macroeconomics	3
ECON	202	Principles of Microeconomics	3
		TOTAL	22

Business Core (cumulative GPA of 2.0000 required in the business core courses)

All business students take the business core. The business core provides students with the common body of knowledge needed for imaginative and responsible citizenship and leadership roles in business and society -- domestic and worldwide. The business core also is designed to provide students with the opportunity to integrate their educational experience in business within a specific discipline and across disciplines.

Courses		Titles	Credits
BUSAD	302	Ethical Issues & Legal Env of Bus	3
ECON	410	Managerial Economics	3
FIN	330	Corporate Financial Management	3
MGMT	310	Principles of Management	3
MGMT	311	Production and Operations Management	3
MGMT	320	Organizational Behavior	3
MKTG	340	Principles of Marketing	3
BUSAD	475	International Business	3
*	480	Small Business Studies OR	
*	484	Senior Studies	3
MGMT	485	Managerial Strategies and Policies	3
		TOTAL	30

*appropriate prefix

Area Requirements

- A cumulative GPA of 2.0000 is required to graduate, except in accounting, where a minimum grade of C in each accounting course is required (except for ACCTG 201 and ACCTG 202).
- All business students take a major core.
- Business/management students choose from one of four emphasis areas, each requiring a total of 24 hours. In economics, area requirements total 24 hours. In accounting, area requirements total 26 hours.

Minor Requirements

Business students who have chosen majors in business management, economics or accounting automatically satisfy business administration minor. However, students are encouraged to pursue a second minor outside the Hasan School of Business.

Specific Curricular Requirements

Students also must satisfy the university general education requirements, general institutional requirements, and have at least 128 total credit hours with a cumulative GPA of 2.0000 to graduate. The coursework over and above that necessary for the business degree requirements must be non-business courses. Non-business courses plus three hours of business statistics plus up to nine hours of economics must total at least 50 percent of the total hours required for the BSBA degree. In addition, at least 50 percent of the total business credit hours must be taken in the Hasan School of Business. A second minor is recommended.

Co-curricular Requirements

Co-curricular activities are encouraged for all business students. Included are internships, student clubs, and seminar programs. Student clubs include:

- Student chapter of the Institute of Management Accountants
- Student chapter of the Society for Human Resource Management
- Marketing Club
- Omicron Delta Epsilon (Economics Club)
- Finance Club
- APICS (American Production and Inventory Control Society)
- Phi Beta Lambda
- Toastmasters

Outcomes Assessment Activities

Student Portfolio

The Hasan School of Business curriculum offerings are designed to help track each student's progress at various checkpoints through the establishment of a portfolio. The portfolios are kept in a central file in the Hasan School of Business, accessible to the administration, the student, the student's adviser, and the faculty of the school.

Each portfolio will contain items such as:

- the Hasan School of Business advising form;
- ACT or SAT test scores, with date;
- high school GPA and class standing, date of graduation, school, and location;
- records of club and organizational membership;
- Project reports from MGMT 485, Management Strategies and Policies, the designated discipline area 484, Senior Studies and/or 480 Small Business Studies; and
- national standardized test results, if applicable.

Advising

Generally, students enter the business program during the sophomore year. The pre-business core is completed sometime in the junior year, and the business core is completed generally by the end of the junior year. Advisers assess the student's progress at each checkpoint, using the Hasan School of Business advising form.

Department Files

- The Hasan School of Business faculty measure achievement annually in each major and area of emphasis by administering (whenever one is available) a nationally standardized test. Results of such measurements are kept in a central file in the Hasan School of Business office.

- The Hasan School of Business compiles information to assess the success of graduates. Information is Obtained from the USC alumni office, the Career Information Center, and other sources.

ACCOUNTANCY DEPARTMENT

Chair: Watkins
Faculty: Bridges, Dicino, Regassa, Stratton, Ward

The department offers two plans leading to the award of the baccalaureate degree: The 130-hour BSBA and the 154-hour joint degrees BSBA/MBA.

The major in accounting leads to the bachelor of science in business administration (BSBA) degree. The primary objective is to provide an academic program that covers the conceptual basis of accounting as well as the application of accounting doctrine in current accounting practice. The programs of study are functional in that they provide the broad base of knowledge required by the accounting profession.

The 130-hour BSBA Plan

This plan is designed to prepare students for professional careers in accounting. The program is accredited by the Colorado State Board of Accountancy. Students completing the program qualify to sit for the CPA examination under the requirements of Colorado law.

The Joint Degrees BSBA/MBA Plan

The BSBA with a major in accounting can also be earned through the joint BSBA/MBA program. Students qualifying for this rigorous program begin taking graduate level courses during their senior year and complete from 42-48 credit hours of graduate study. The program is designed for students interested in augmenting a rigorous study of accounting with the development of managerial leadership skills in preparation for high-level management careers. This program integrates the undergraduate accounting degree program with the masters in business administration program. Students are awarded both the BSBA and the MBA upon completion of both degree program requirements. Students graduating from the joint degrees program are qualified to sit for the CPA examination under the new 150-hour requirements enacted by most states and recommended by the American Institute of Certified Public Accountants.

Admission and Special Requirements for the Joint Degrees BSBA/MBA Plan for Accounting Majors

Students are required to take the Graduate Management Admissions Test (GMAT). An admission formula of 200 times the undergraduate GPA (4.0000 system) plus the GMAT score is used as an admission score. The undergraduate GPA must be based on a minimum of 75 semester hours of course work including ACCTG 301 and either ACCTG 311 or ACCTG 320. An admission score of 1,050 is used as a guide for admission to the plan. Students must also complete MGMT 310, FIN 330, and MKTG 340 prior to taking any 500-level MBA courses.

Departmental Goals

Students must demonstrate the knowledge or skills of:

- financial accounting and theory and practice, including revenue and expense recognition, valuation approaches, preparation and analysis of financial statements;

- cost and managerial accounting, including cost accounting, planning, evaluation, allocation, and budgeting processes;

- auditing, including the auditor's report, audit evidence, internal controls and procedures; and

- accounting standard setting and the role of professional accounting organizations, government entities, and the various codes of ethics in the accounting profession.

Students following the joint degree plan will also demonstrate:

- in-depth knowledge of financial accounting, tax research and planning, and cost management;

- knowledge of management operations;

- an appreciation of the interrelationships among functional areas of a business;

- an understanding of the economic, political and social environment in which businesses function; and

- behavioral skills essential to the manager's role in implementing business decisions.

Expected Student Outcomes BSBA Plan

General Requirements for BSBA Plan:

- Completion of the pre-business core (see Hasan School of Business general requirements).

- Completion of the business core (see Hasan School of Business general requirements).
- Completion of the math requirement (see Specific Curriculum Requirements section).
- Completion of the specific requirements for the major in accounting.

Specific Requirements for the Major in Accounting:

Courses		Titles	Credits
ACCTG	301	Intermediate Accounting I	3
	301L	Financial Accounting Lab	1
	302	Intermediate Accounting II	3
	311	Federal Income Tax	3
	320	Cost Accounting	3
	320L	Managerial Accounting Lab	1
	401	Advanced Financial Accounting	3
	404	CPA Law	3
	410	Auditing	3
Electives: Three hours from Accounting 300 or 400 level			3
		TOTAL	26

General Requirements for the Joint Degrees BSBA/MBA Plan:

- Completion of the pre-business core (see Hasan School of Business general requirements).
- Completion of the math requirement (see Specific Curriculum Requirements section).
- Completion of the specific requirements for the major in accounting under the joint degrees BSBA/MBA plan.

Specific Requirements for the Major in Accounting and the MBA Under the Joint Degrees Plan:

Courses		Titles	Credits
ACCTG	301	Intermediate Accounting I	3
	301L	Financial Accounting Lab	1
	302	Intermediate Accounting II	3
	311	Federal Income Tax	3
	320	Cost Accounting	3
	320L	Cost Accounting Lab	1
	401	Advanced Financial Accounting	3
	403	IntermediateAccounting III	3
	404	CPA Law	3
	410	Auditing	3
	430	Accounting Information Systems	3
	511	Tax Planning and Research	3
	520*	Advanced Cost Management Systems	3
	561*	Current Issues in Auditing	3
	571*	Current Issues II	3
	598**	Internship	3
		TOTAL	44

*One 400-level accounting elective (ACCTG 411 or ACCTG 440) may be taken in lieu of one of the following courses: ACCTG 520 or 561 or 571

** ACCTG 480 or ACCTG 484 may be taken in lieu of this course.

BUSAD	502	Business Ethics and Environment	3
	575	International Business	3
FIN	330	Corporate Financial Management	3
	530	Financial Management	3
MKTG	340	Principles of Marketing	3
	540	Marketing Management Strategies	3
ECON	510	Managerial Economics	3
MGMT	310	Principles of Management	3
	511	Production/Operations Management	3
	520	Management of Organizational Behavior	3
	565	Management Information Systems	3
	585	Management Policy and Strategy	3
		TOTAL	36

Graduate-level non-business electives: any two 500-level courses taken outside the Hasan School of Business (beyond the University requirement) 6

Non-business electives (beyond the university requirement) 12

In summary, the joint degrees program has the following requirements:

Non-Business
(Including 6 hours at the graduate level) 58

Business Education
(Including 27 hours at the graduate level) 46

Accounting Education
(Including 9-15 hours at the graduate level) 50

TOTAL 154

Students who have completed part of the joint degree plan and who opt out of the MBA program but who wish to continue towards earning the BSBA are granted credit towards the BSBA (130-hour plan) for 500-level courses taken according to the following schedule:

500-Level Course Taken	300-and 400-Level Course Credit
BUSAD 502	BUSAD 302
BUSAD 575	BUSAD 475
MGMT 511	MGMT 311
MGMT 520	MGMT 320
MGMT 585	MGMT 485
ACCTG 598	ACCTG 480/484
ECON 510	ECON 410

Students who opt out of the joint degrees plan, and subsequently receive the BSBA, and who want to reenter the MBA program must reenter the joint degrees plan, completing all MBA requirements and one additional non-business course for each business core course for which a 500-level MBA course was substituted per the schedule above.

Specific Requirements for the Minor in Accounting (non-business students)

ACCTG	201	Principles of Financial Accounting	3
	202	Principles of Managerial Accounting	3
	301	Intermediate Accounting I	3
	302	Intermediate Accounting II	3
Electives: Nine hours from Accounting 300- or 400-level			9
		TOTAL	21

Co-curricular Requirements
See the Hasan School of Business requirements.

Outcomes Assessment Activities
See the Hasan School of Business outcomes.

ACCOUNTING (ACCTG)

UNDERGRADUATE COURSES

201 Principles of Financial Accounting 3(3-0)
Introduction to accounting as the language of business. Emphasis on reasoning and logic of external reporting model. May include computer-based applications. Prerequisite: MATH 121. (F,S,SS)

202 Principles of Managerial Accounting 3(3-0)
Managerial uses of accounting information, including cost-based, decision making, differential accounting, and responsibility accounting. May include computer-based applications. Prerequisite: ACCTG 201, (F, S, SS)

301 Intermediate Accounting I 3(3-0)
Financial accounting functions, conceptual framework, accounting process and financial statements-income statement, balance sheet, cash flow; revenue recognition. Prerequisite: ACCTG 202. Corequisite: ACCTG 301L (S/U grading) (F,S,SS)

301L Financial Accounting Lab 1(0-2)
Applications of financial accounting theory covered in ACCTG 301, computer-based problems, cases, practice sets. Prerequisite: ACCTG 201. Corequisite: ACCTG 301. (F,S,SS)

302 Intermediate Accounting II 3(3-0)
Asset accounting and reporting—receivables, monetary items, inventory, operational assets, accounting for financial instruments—equity securities, debt securities. Prerequisite: ACCTG 301. (F,S)

311 Federal Income Tax 3(3-0)
Federal income tax as applied to income recognition, exclusions from income and property transactions of individuals. Introduction to tax researach resources and techniques. Prerequisite: ACCTG 202. (F)

320 Cost Accounting 3(3-0)
Accounting procedures applicable to industries with emphasis on job order process costs, standard cost and profit planning including differential costs, internal profit and price policies, and capital budgeting. Prerequisite: ACCTG 202. (F)

320L Managerial Accounting Lab 1(0-2)
Applications of managerial accounting theory, computer-based problems, cases, practice sets. Prerequisites: ACCTG 202 and 320. (F)

401 Advanced Financial Accounting 3(3-0)
Application of fundamental theory to partnerships, international operations, consolidated statements, and business combinations; introduction to government. Prerequisites: ACCTG 302 and senior standing, accounting majors. (F)

403 Intermediate Accounting III 3(3-0)
Revenue recognition, leases, pensions, income taxes, contributed capital, retained earnings, earnings per share, code of professional ethics, statement of changes in cash flow, current issues in accounting theory. Prerequisite: ACCTG 302. (F)

404 CPA Law 3(3-0)
Business law as found in the Business Law section of the Uniform CPA examination. Prerequisite: senior standing, accounting major. (F)

410 Auditing 3(3-0)
A study of the systematic process by which external financial statements and other management assertions are verified and reported upon by independent, internal, and governmental auditors. Prerequisite: ACCTG 302. (F,S)

411 Corporate, Estate and Gift Tax 3(3-0)
Taxation of corporations, partnerships, estates/trusts. Analysis of mergers and dissolution of corporations. Introduction to estate/gift taxes and international taxation. Prerequisite: ACCTG 311. (S)

430 Accounting Information Systems 3(3-0)
The study of design and implementation of accounting information systems. Attention directed to the traditional accounting model and its relationship to computerized accounting information systems. Prerequisite: ACCTG 320L. (F)

440 Fund Accounting 3(3-0)
A study of advanced accounting topics especially as concerns not-for-profit entities with emphasis on governmental accounting. Prerequisite: ACCTG 302. (*)

480 Small Business Studies 3(3-0)
Integrating prior studies in business into a realistic approach to assist in solving problems faced by selected firms in the community. Prerequisites: senior standing and permission of instructor. (F,S, SS)

484 Senior Studies 3(3-0)
A discipline-oriented integration of prior course work into a special project, research paper and/or activity that demonstrates proficiency in the major. Prerequisite: senior standing in School of Business and completion of all core courses. (F,S,SS)

490 Special Projects (1-6 VAR)
(F,S,SS)

491 Special Topics (1-3 VAR)
(F,S,SS)

495 Independent Study (1-3 VAR)
Prerequisites: senior standing, accounting major and adviser permission. (F,S,SS)

498 Internship (1-6 VAR)
Supervised field work in selected business, social and governmental organizations; supplemented by written reports. (S/U grades.) Prerequisites: junior or senior standing in School of Business and permission of internship coordinator. (F,S,SS)

GRADUATE COURSES

510 Managerial Accounting 3(3-0)
Accounting concepts and methods utilized in managerial planning, budgeting, controlling, and evaluating to optimize decision making. Prerequisite: graduate standing. (F,S,SS)

511 Tax Planning and Research 3(3-0)
Advanced study of tax research methodology, IRS and professional guidelines on tax positions, appreciation of research skills, planning techniques to individual, corporate, partnership cases. Prerequisite: ACCTG 311. (F)

520 Advanced Cost Management Systems 3(3-0)
Cost systems supporting new management philosophies—JIT, total quality management, continuous improvement, process reengineering. Activity-based costing, target costs, cost of quality. Prerequisites: ACCTG 320 and graduate standing. (F)

561 Current Issues in Auditing 3(3-0)
Current issues related to evolving auditing models–internal or external. Prerequisite: graduate standing. (S)

571 Current Issues in Accounting 3(3-0)
In-depth discussion of various problems in accounting. Prerequisite: graduate standing. (S)

591 Special Topics 3(3-0)
Critical review and discussion of relevant accounting topics. (F,S,SS)

592 Research (1-6 VAR)
The student will work under the close supervision of a graduate faculty member in basic or applied research resulting in a thesis or report of high academic quality. (I/P and S/U grading) (F,S,SS)

595 Independent Study (1-3 VAR)
Individual study of a subject determined by the instructor and student with permission of the director. Prerequisite: graduate tanding. (F,S,SS)

598 Internship 3(3-0)
Supervised field work in selected public, private, government organizations, supplemented by written reports. Prerequiste: graduate standing. (F,S,SS)

599 Thesis Research (1-6 VAR)
(F,S,SS)

BUSINESS ADMINISTRATION AND ECONOMICS AREA

Chair: Watkins
Faculty: Ahmadian, Billington, Browne, Chandler, Dhatt, Duncan, Eisenbeis, Hanks, Noreiko, Shah, Shirley, Warfield, Warnock, Zeis

The major in business management leads to the bachelor of science in business administration (BSBA) degree, and provides students with the theoretical and conceptual basis of business as well as application skills to assume leadership roles in industry, government and education.

The undergraduate business management degree permits students to select one emphasis as a specialty area. Emphasis areas within the major are available in management, operations and materials management, finance and marketing. Courses in management, finance and marketing are listed under separate prefixes in this catalog.

The major in economics leads to the bachelor of science in business administration (BSBA) degree, and provides students with the theoretical and conceptual basis of economics and an excellent preparation for graduate and professional training in economics,

management, banking and law. The finance emphasis area prepares students for careers in financial institutions, insurance, real estate, investments and financial management.

Department Goals

Students must demonstrate core business knowledge or skills in:

- economics, quantitative decision making, marketing, financial control and analysis and accounting;
- management principles used in strategic and tactical planning, setting and integrating goals and objectives, managing change, and effective operations;
- organization concepts including various design arrangements;
- the legal environment of business especially in the areas of Equal Employment Opportunity (EEO)/Affirmative Action, and the Occupational Safety and Health Administration (OSHA);
- using computers, including spreadsheets, word processors, and data management programs;
- written and oral communication, analyses and reports in appropriate business format with high quality;
- the financing, marketing, cultural and operational aspects of international business relations;
- identifying management problems and applying appropriate problem solving and decision-making techniques that include appropriate ethical considerations;
- human resource management to include effective practices of recruitment, training and development, appraisal, compensation, and motivation;
- interpersonal relationships and effective small group project management;
- the ability to conduct an independent research paper where the project requires the use of the knowledge and skills developed in the required courses of the emphasis area. The paper should demonstrate the student's ability to: (a) think independently, (b) synthesize ideas, and (c) think and analyze critically; and
- the ability to develop a career plan including short- and long-term career goals, a resume and letter of application suitable for sending to prospective employers.

Students must also demonstrate knowledge or skills that are specific to their selected emphasis area (finance, marketing, management, or operations and materials management) and:

- understand and use appropriate emphasis area terminology, principles, and concepts;
- use the scientific problem-solving method, analyze critical case situations specific to the emphasis area; provide reasonable recommendations and support recommendations adequately; apply relevant emphasis area theories, concepts, and techniques; and integrate the primary functional disciplines of business; and
- understand the role or the appropriate emphasis area in corporate policy and strategy development.

Students majoring in economics also must demonstrate knowledge or skills that are specific to the economics area and:

- understand the central economic theories, both macro and micro, and the policy implications of the theories;
- understand the macroeconomic role of fiscal and monetary policy; and
- understand market structure and the pricing and output behavior of the firm.

Expected Student Outcomes: Business Management Major

General Requirements

- Completion of the pre-business core (see the Hasan School of Business general requirements).
- Completion of the business core (see the Hasan School of Business general requirements).
- Completion of the math requirement (see *Specific Curriculum Requirements section).*
- Completion of one of the four emphasis areas.

Specific Requirements for the Emphasis Area in Finance

Courses		Titles	Credits
ACCTG	301	Intermediate Accounting	3
FIN	331	Managerial Finance	3
	333	Investment Analysis	3
	335	Real Estate	3
	337	Insurance	3
	431	Financial Policy Analysis	3
Electives: Six hours from selected 300 - 400 level courses			6
		TOTAL	24

Specific Requirements for the Emphasis Area in Marketing

Courses		Titles	Credits
MKTG	341	Sales Force Management	3
	342	Promotional Strategy	3

	348	Consumer Behavior	3
	350	International Marketing	3
	440	Marketing Research	3
	441	Marketing Strategies	3
Electives: Six hours from selected 300 - 400 level courses			6
		TOTAL	24

Specific requirements for the Emphasis Area in Management

Courses		Titles	Credits
ECON	402	Economics of Labor	3
MGMT	318	Personnel Management	3
	365	Management Information Systems	3
	410	Industrial Relations	3
	468	Total Quality Management	3
Electives: Nine hours from selected 300 - 400 level courses			9
		TOTAL	24

Specific Requirements for the Emphasis Area in Operations and Materials Management

Courses		Titles	Credits
MGMT	362	Purchasing and Materials Mgmt	3
	365	Management Information Systems	3
	370	Operations Planning & Control	3
	375	Management Science	3
	460	Operations Strategy	3
	468	Total Quality Management	3
Electives: Six hours in selected 300 - 400 level courses			6
		TOTAL	24

Specific Requirements for the Minor in Business Administration

(Non-business students)

Courses		Titles	Credits
ACCTG	201	Principles of Financial Acctg	3
	202	Principles of Managerial Acctg	3
ECON	201	Principles of Macroeconomics	3
	202	Principles of Microeconomics	3
FIN	330	Corporate Financial Management	3
MGMT	310	Principles of Management	3
MKTG	340	Principles of Marketing	3
		TOTAL	21

Specific Requirements for the Minor in Marketing

(Non-business students)

Courses		Titles	Credits
ACCTG	201	Principles of Financial Acctg	3
ECON	202	Principles of Microeconomics	3
MKTG	340	Principles of Marketing	3
MKTG	341	Sales Force Management	3
MKTG	342	Promotional Strategy	3
MKTG	348	Consumer Behavior	3
MKTG	350	International Marketing	3
		TOTAL	21

300 and 400 level courses require junior and senior standing or permission of instructor.

Specific Requirements for the Minor in Supervisory Management

(Non-business students)

Courses		Titles	Credits
ACCTG	201	Principles of Financial Accounting	3
ECON	202	Principles of Microeconomics	3
MGMT	310	Principles of Management	3
MGMT	318	Personnel Management	3
MGMT	320	Organizational Behavior	3
MGMT	365	Management Information Systems	3
MGMT	410	Industrial Relations	3
		TOTAL	21

300 and 400 level courses require junior or senior standing or permission of instructor.

Co-curricular Requirements

See Hasan School of Business outcomes.

Expected Student Outcomes: Economics Major

General Requirements

- Completion of the pre-business core (see Hasan School of Business general requirements).
- Completion of the business core (see Hasan School of Business general requirements).
- Completion of the math requirement (see Specific Curriculum Requirements section).
- Completion of the economics core (see below).

Specific Requirements for the Economics Major

Courses		Titles	Credits
ECON	301	Intermediate Macroeconomics	3
	302	Intermediate Microeconomics	3
	320	International Economics	3
	330	Public Finance	3
	402	Economics of Labor	3
	420	Urban and Regional Economics	3
Electives: Six hours in selected 300 - 400 level courses			6
		TOTAL	24

Specific Requirements for the Economics Minor

(Non-business students)

Courses		Titles	Credits
ECON	201	Principles of Macroeconomics	3
	202	Principles of Microeconomics	3
	301	Intermediate Macroeconomics	3
	302	Intermediate Microeconomics	3
Electives: Nine hours from 300 - 400 level Economics			9
		TOTAL	21

Co-curricular Requirements

See Hasan School of Business requirements.

Outcomes Assessment Activities

See Hasan School of Business outcomes.

BUSINESS ADMINISTRATION (BUSAD)

UNDERGRADUATE COURSES

101 Career Opportunities in Business 1(1-0)
Identifying career opportunities in business with emphasis on educational and career planning. Required of freshmen students majoring in business. Open to all students. (F,S)

160 Introduction to Computers and Information Processing 3(3-0)
Concepts and applications of computers as used by business and management. Emphasis is given to computer productivity software with hands-on exercises. (F,S,SS)

220 Principles of Business Law 3(3-0)
Law as it relates to business, including contracts, sales, bailments, and personal property. (F,S)

260 Business Statistics I 3(3-0)
Statistical methods in business, including descriptive statistics, probability distributions, sampling, parameter estimation and hypothesis testing, correlation and simple linear regression, and chi square tests. Prerequisite: MATH 220. (F,S,SS)

261 Business Statistics II 3(3-0)
More advanced statistical methods for business, including analysis of variance, multiple regression, time series analysis, nonparametric methods, sample survey methods, and basic decision analysis. Prerequisite: BUSAD 260. (S)

270 Business Communications 3(3-0)
Means of extending management capabilities through effective internal and external communications, including data organization and presentation. Prerequisites: ENG 101 and 102. (F,S)

302 Ethical Issues and the Legal Environment of Business 3(3-0)
Examination of issues addressing ethical, legal, social and environmental responsibilities of businesses toward government, customers, employees, and the general public. Prerequisite: junior standing. (F,S)

475 International Business 3(3-0)
Opportunities and problems of multinational firms including environmental factors and formulation of strategies and policies for all functional areas of business. Prerequisites: FIN 330, MGMT 310 and MKTG 340. (F,S,SS)

490 Special Projects (1-6 VAR) (*)

491 Special Topics (1-3 VAR)
Prerequisite: permission of instructor. (*)

495 Independent Study (1-3 VAR)
Prerequisites: senior standing and permission of department chair. (F,S,SS)

498 Internship (1-6 VAR)
Supervised field work in selected business, social and governmental organizations; supplemented by written reports (S/U grades). Prerequisites: junior or senior standing in the School of Business and permission of internship coordinator. (F,S,SS)

GRADUATE COURSES

502 Business Ethics and Environment 3(3-0)
The impact of continued social, political, economic, technological, and legal pressures upon ethical business issues and managerial decision making. Prerequisite: graduate standing. (*)

575 International Business 3(3-0)
Familiarize students with the differences in management operations domestically and internationally (the scope, activities, managerial problems and decisions) and challenges facing multinational managers/organizations. Prerequisite: graduate standing. (F)

580 Business Research Methodology 3(3-0)
Fundamentals of qualitative and quantitative research design including development of hypothesis and assessment techniques in preparation for undertaking research projects. Prerequisite: graduate standing. (S)

591 Special Topics 3(3-0)
Prerequisite: graduate standing (*)

592 Research (1-6 VAR)
The student will work under the close supervision of a graduate faculty member in basic or applied research resulting in a thesis or report of high academic quality (IP and S/U grading). (F,S,SS)

595 Independent Study (1-3 VAR)
Individual study of a subject determined by the instructor and student with permission of the director. Prerequisite: graduate standing. (F,S,SS)

599 Thesis Research (1-6 VAR)
(F,S,SS)

ECONOMICS (ECON)

UNDERGRADUATE COURSES

102 Economics and Society 3(3-0)
An examination of current United States and world political and social problems from an economic perspective. Not open to pre-business or business majors. (F,S)

201 Principles of Macroeconomics 3(3-0)
Study of fundamental principles with emphasis on macroeconomics. (F,S,SS)

202 Principles of Microeconomics 3(3-0)
Study of fundamental principles with emphasis on microeconomics. (F,S,SS)

301 Intermediate Macroeconomics 3(3-0)
Economic theory and policy using the national income approach to explain income, employment and growth. Prerequisite: ECON 201 and 202. (F)

302 Intermediate Microeconomics 3(3-0)
Study of price system and theory of the firm under varying market structures. Prerequisite: ECON 201 and 202. (S)

310 Money and Banking 3(3-0)
Study of monetary economics and its application in macroeconomic theory. Prerequisite: ECON 201 and 202. (F,S,SS)

320 International Economics 3(3-0)
International trade and finance theory, current and past trade issues, history and impact of international economic organizations and agreements, international payments system, and international debt. Prerequisites: ECON 201 and 202. (F,S)

330 Public Finance 3(3-0)
Principles and issues of government revenue and expenditure policies. Prerequisite: ECON 201 and 202. (S)

402 Economics of Labor 3(3-0)
The study of labor supply and demand, impact of unions, wage determinators, distribution of income and productivity. Prerequisite: ECON 201 and 202. (F)

410 Managerial Economics 3(3-0)
Practical application of micro-economic principles to managerial decision making. Prerequisites: ECON 201 and 202 and senior standing. (F,S,SS)

420 Urban and Regional Economics 3(3-0)
Analysis of urban and regional economies, survey methodologies, urban issues as population growth, poverty, housing, transportation, etc. Emphasis on Pueblo metropolitan area and Southern Colorado. Prerequisites: ECON 201 and 202. (F,S)

480 Small Business Studies 3(3-0)
Integrating prior studies in business into a realistic approach to assist in solving problems faced by selected firms in the community. Prerequisites: senior standing and permission of instructor. (F,S,SS)

484 Senior Studies 3(3-0)
A discipline-oriented integration of prior course work into a special project, research paper and/or activity that demonstrates proficiency in the major. Prerequisites: senior standing in the School of Business and completion of all core courses. (F,S,SS)

490 Special Projects (1-6 VAR) (*)

491 Special Topics (1-3 VAR)
Prerequisite: permission of instructor. (*)

495 Independent Study (1-3 VAR)
Prerequisites: senior standing in School of Business and permission of department chair. (F,S,SS)

498 Internship (1-6 VAR)
Supervised field work in selected business, social, and governmental organizations; supplemented by written reports (S/U grades). Prerequisites: junior or senior standing in School of Business and permission of internship coordinator. (F,S,SS)

GRADUATE COURSES

510 Managerial Economics 3(3-0)
The application of analytical economic decision-making methods to managerial problems involving productivity, supply and demand, cost, price, profit and volume. Prerequisite: graduate standing. (F)

591 Special Topics 3(3-0)
Prerequisite: graduate standing. (*)

592 Research (1-6 VAR)
The student will work under the close supervision of graduate faculty member in basic or applied research resulting in a report of high academic quality (IP and S/U grading). (F,S,SS)

595 Independent Study (1-3 VAR)
Individual study of a subject determined by the instructor and student with permission of the director. Prerequisite: graduate standing. (F,S,SS)

598 Internship 3(3-0)
Supervised field work in selected public, private, government organizations, supplemented by written reports. Prerequisite: Graduate standing. (S/U grading) (*)

FINANCE (FIN)

UNDERGRADUATE COURSES

330 Corporate Financial Management 3(3-0)
Principles of finance involved in problems confronting business organizations. Prerequisites: ACCTG 202, ECON 201 and 202. (F,S,SS)

331 Managerial Finance: Policy, Planning and Control 3(3-0)
Financial management, planning, policy formulation and financial decision making. Prerequisite: FIN 330 and BUSAD 260. (F)

333 Investment Analysis 3(3-0)
Analysis and forecasting of security markets, industry and company studios, portfolio selection and management. Prerequisite: FIN 330 and BUSAD 260. (S)

335 Real Estate 3(3-0)
Principles of real estate with emphasis on residential markets, including economics, governmental and location factors, appraising, financing, and real estate transactions. Prerequisite: FIN 330. (F)

337 Insurance 3(3-0)
Principles of insurance with emphasis on the operation and contributions of the insurance industry. Prerequisite: FIN 330. (S)

430 Financial Institutions and Markets 3(3-0)
Structure, operations and portfolio compositions of financial intermediaries, including commercial banks, savings and loans, life insurance companies, pension fund management, mortgage banking and credit agencies. Prerequisite: FIN 330. (F)

431 Financial Policy Analysis 3(3-0)
Analysis of financial policies in various organizations. Emphasis on managerial problems in long-range planning, decision making under uncertainty, risk measurement and applications of capital markets. Prerequisites: FIN 331 and 333. (S)

480 Small Business Studies 3(3-0)
Integrating prior studies in business into a realistic approach to assist in solving problems faced by selected firms in the community. Prerequisites: senior standing and permission of instructor. (F,S,SS)

484 Senior Studies 3(3-0)
A discipline-oriented integration of prior course work into a special project, research paper and/or activity that demonstrates proficiency in the major. Prerequisites: senior standing in the School of Business and completion of all core courses. (F,S,SS)

490 Special Projects (1-6 VAR) (*)

491 Special Topics (1-3 VAR)
Prerequisite: permission of instructor. (*)

495 Independent Study (1-3 VAR)
Prerequisites: senior standing in School of Business and permission of the department chair. (F,S,SS)

498 Internship (1-6 VAR)
Supervised field work in selected business, social and governmental organizations; supplemented by written reports. (S/U grades). Prerequisites: junior or senior standing in School of Business and permission of internship coordinator. (F,S,SS)

GRADUATE COURSES

530 Financial Management 3(3-0)
Theory and application of investment, financing and dividend decisions to maximize stockholder wealth. Use of analytical cases to solve financial problems facing business firms. Prerequisite: graduate standing. (*)

531 International Financial Management 3(3-0)
Financial theory and practice as applied to the financial management of multinational corporations. Prerequisite: graduate standing. (*)

591 Special Topics 3(3-0)
Prerequisite: graduate standing (*)

592 Research (1-6 VAR)
The student will work under the close supervision of a graduate faculty member in basic or applied research resulting in a report of high academic quality. (IP and S/U grading). (F,S,SS)

595 Independent Study (1-3 VAR)
Individual study of a subject determined by the instructor and student with permission of the director. Prerequisite: graduate standing. (F,S,SS)

598 Internship 3(3-0)
Supervised field work in selected public, private, government organizations, supplemented by written reports. Prerequisite: Graduate standing. (S/U grading) (*)

599 Thesis Research (1-6 VAR)

Joint BSBA/MBA Management Major

Students in the joint degree program are required to take the Graduate Management Admissions Test (GMAT). An admission formula of 200 times the undergraduate GPA (4.0000 system) plus the GMAT score constitutes a scaled admission score. The undergraduate GPA must be based on a minimum of 75 semester hours of course work. Students must also complete MGMT 310, FIN 330, and MKTG 340 prior to taking any 500-level MBA courses.

General Requirements

- Completion of the pre-business core (see Hasan School of Business general requirements).
- Completion of the joint degree business core (see below).
- Completion of the math requirement (see Specific Curriculum Requirements section).
- Completion of one of the five emphasis areas in the Hasan School of Business.
- Completion of the MBA core and 6 hours of graduate electives.

- Completion of a non-business minor with a minimum of 21 hours.

Joint Degree Business Core (cumulative GPA of 2.0000 required)

All students take the business core. The core provides students with the common body of knowledge needed for imaginative and responsible citizenship and leadership roles in business and society - domestic and worldwide. The business core also is designed to provide the opportunity to integrate their educational experience in business both within a specific discipline and across disciplines.

The graduate courses below count toward the BSBA for students who decide not to complete the MBA portion of the joint degree program.

Courses		Titles	Credits
BUSAD	502	Business Ethics and Env	3
ECON	510	Managerial Economics	3
FIN	330	Corporate Financial Management	3
MGMT	310	Principles of Management	3
MGMT	511	Production and Operations Management	3
MGMT	520	Management of Organizational Behavior	3
MKTG	340	Principles of Marketing	3
BUSAD	575	International Business	3
*	480	Small Business Studies	
		OR	
	484	Senior Studies	3
MGMT	585	Management Policy & Strategy	3
		TOTAL	30

*appropriate prefix

Specific Requirements for the Emphasis Are in Marketing

Courses		Titles	Credits
MKTG	341	Sales Force Management	3
	342	Promotional Strategy	3
	348	Consumer Behavior	3
	350	International Marketing	3
	440	Marketing Research	3
	540	Marketing Management Strategies	3
Electives: Six hours from selected			
300 - 400 level courses			6
		TOTAL	24

Specific Requirements for the Emphasis Area in Management

Courses		Titles	Credits
ECON	402	Economics of Labor	3
MGMT	318	Personnel Management	3
	410	Industrial Relations	3
	468	Total Quality Management	3
	565	Management Information Systems	3
Electives: Nine hours from selected			
300 - 400 level courses			9
		TOTAL	24

Specific Requirements for the Emphasis Area in Operations and Materials Management

Courses		Titles	Credits
MGMT	362	Purchasing and Materials Mgmt	3
	370	Operations Planning & Control	3
	375	Management Science	3
	460	Operations Strategy	3
	468	Total Quality Management	3
	565	Management Information Systems	3
Electives: Six hours in selected			
300 - 400 level courses			6
		TOTAL	24

JOINT BSBA/MBA Economics Major

Specific Requirements for the Economics Major

Courses		Titles	Credits
ECON	301	Intermediate Macroeconomics	3
	302	Intermediate Microeconomics	3
	320	International Economics	3
	330	Public Finance	3
	402	Economics of Labor	3
	420	Urban and Regional Economics	3
Electives:Six hours in selected			
300 - 400 level courses			6
		TOTAL	24

MBA core (cumulative GPA of 3.0000 required)

All students in the joint program take the entire MBA core and electives. The core includes the following courses that are included in the joint degree business core:

Courses		Titles	Credits
BUSAD	502	Business Ethics and Env	3
ECON	510	Managerial Economics	3
MGMT	511	Prod/Operations Mgmt	3
MGMT	520	Mgmt of Org Behavior	3
BUSAD	575	International Business	3
MGMT	585	Mgmt Policy and Strategy	3

In addition, the following courses must be completed:

Courses		Titles	Credits
ACCTG	510	Managerial Accounting	3
FIN	530	Financial Management	3

MGMT	565	Management Info Sys	3
MKTG	540	Marketing Mgt Strat	3
Approved Graduate Electives			6
		TOTAL GRADUATE	36

In summary, the joint degree plan has the following requirements:

Non-Business Education	43
Non-Business Minor	21
Business Education	82 - 85
TOTAL	146 - 149

Students who have completed part of the joint degree plan and who opt out of the MBA program but who wish to continue towards earning the BSBA are granted credit towards the BSBA for 500-level courses taken according to the following schedule:

500-Level	300-and 400-Level
Course Taken	Course Credit
BUSAD 502	BUSAD 302
BUSAD 575	BUSAD 475
MGMT 511	MGMT 311
MGMT 520	MGMT 320
MGMT 585	MGMT 485
ECON 510	ECON 410
MKTG 540	MKTG 441
MGMT 565	MGMT 365

If a student opts out of the joint plan and receives the BSBA degree and subsequently plans to complete the MBA degree, the student must reenter the joint program for completion of the MBA degree.

MANAGEMENT (MGMT)

UNDERGRADUATE COURSES

310 Principles of Management 3(3-0)
Decision-making communication and leadership principles in business and not-for-profit organizations. (F,S,SS)

311 Production/Operations Management 3(3-0)
Techniques and procedures for efficient operations and problem solving. Prerequisites: BUSAD 260 AND MGMT 310 (F,S,SS)

318 Personnel Management 3(3-0)
Recruiting, testing, interviewing, training and evaluating workers; planning for personnel needs; establishing personnel functions; employment laws; establishing pay plans. Prerequisite: MGMT 310 (F,S,SS)

320 Organizational Behavior 3(3-0)
Behavior of individuals and small groups in organizational settings. Managerial style, social system analysis, motivation and communication. Prerequisite: MGMT 310 (F,S)

362 Purchasing and Materials Management 3(3-0)
Strategies and tactical methods, opportunities and problems associated with the flow of materials in an organization will be covered. Prerequisite: MGMT 311 (F)

365 Management Information Systems 3(3-0)
Analysis and design of computer-based management information systems to satisfy needs of functional areas of organizations such as finance, marketing, accounting, engineering, production and operations management. Prerequisite: MGMT 310 (F,S)

370 Operations Planning and Control 3(3-0)
Basic concepts and techniques of planning, executing and controlling of production rates and inventory levels to achieve customer satisfaction at minimum cost. Prerequisite: MGMT 311. (F)

375 Management Science 3(3-0)
Examination of deterministic tools in managerial problem solving; mathematical programming methods, linear, nonlinear, network, and inventory problems. Computer solutions of structured business problems. Prerequisite: MGMT 311 (F)

410 Industrial Relations 3(3-0)
Federal and state legislation and execution and executive orders governing the employer-employee relationship; legal rights of organizations and collective bargaining. Prerequisite: MGMT 318 (F,S)

414 Entrepreneurship 3(3-0)
The environment, management, marketing, accounting and legal considerations facing the small business manager and owner. Prerequisites: ACCTG 202, MGMT 310 and MKTG 340, or permission of instructor. (S)

460 Operations Strategy 3(3-0)
Examination of recent developments in the strategy of operations in the manufacturing and service sectors involving technological policy, new process development, and new product introduction. Prerequisite: MGMT 311. (S)

468 Total Quality Management 3(3-0)
Concepts and techniques of quality improvement processes. Defining quality in customer satisfaction terms and improving quality of products and service through modern techniques. Prerequisite: MGMT 311. (S)

480 Small Business Studies 3(3-0)
Integrating prior studies in business into a realistic approach to assist in solving problems faced by selected firms in the community. Prerequisites: senior standing and permission of instructor. (F,S,SS)

484 Senior Studies 3(3-0)
A discipline-oriented integration of prior course work into a special project, research paper and/or activity that demonstrates proficiency in the major. Prerequisites: senior standing in the School of Business and completion of all core courses. (F,S,SS)

485 Management Policy and Strategy 3(3-0)
Integration of the business core disciplines to explore ways that strategy is formed in contemporary business organizations. Case method used extensively. Prerequisites: senior standing in the School of Business and completion of all core courses. (F,S,SS)

490 Special Projects (1-6 VAR) (*)

491 Special Topics (1-3 VAR)
Prerequisite: permission of instructor. (*)

495 Independent Study (1-3 VAR)
Prerequisites: senior standing in School of Business and permission of department chair. (F,S,SS)

498 Internship (1-6 VAR)
Supervised field work in selected business, social and governmental organizations; supplemented by written reports. (S/U grades) Prerequisites: junior or senior standing in School of Business and permission of internship coordinator. (F,S,SS)

GRADUATE COURSES

511 Production/Operations Management 3(3-0)
Managerial perspective of operations functions, understanding of analytical tools to solve operations problems, applied operations issues, and develop decision-making skills. Prerequisite: graduate standing. (S)

520 Management of Organizational Behavior 3(3-0)
Ideas and concepts for increasing effectiveness in organizations. Major topics include personality, motivation, leadership, communication, group dynamics, change and conflict, and contingencies of work unit design. Prerequisite: graduate standing. (F)

521 Theories of Organizational Design 3(3-0)
Identification of external environments faced by organizations and theories of organizational design that enable organizations to operate more effectively within their respective environments. Prerequisite: graduate standing. (*)

523 Management of Non-Profit Organizations 3(3-0)
Examines differences among public, charitable, and private organizations regarding their external environments, goals, strategies, administrative procedures, operations, and human resource management. Prerequisite: graduate standing. (*)

565 Management Information Systems 3(3-0)
The development of a framework for understanding and analyzing use of information by organizations through computer-based systems and this framework's potential for enhancing effectiveness of managerial decision making. Prerequisite: graduate standing. (F)

585 Management Policy and Strategy 3(3-0)
Critical analysis of the policy/strategy field. This course integrates the business core disciplines to explore ways that strategy is formed in contemporary business organizations. Case Method used extensively. Prerequisite: graduate standing and completion of core courses. (*)

591 Special Topics 3(3-0) (*)

592 Research (1-6 VAR)
The student will work under the close supervision of a graduate faculty member in basic or applied research resulting in a report of high academic quality. (IP and S/U grading) (F,S,SS)

595 Independent Study (1-3 VAR)
Individual study of a subject determined by the instructor and student with permission of the director. Prerequisite: graduate standing. (F,S,SS)

598 Internship 3(3-0)
Supervised field work in selected public, private, government organizations, supplemented by written reports. Prerequisite; Graduate standing. (*)

599 Thesis Research (1-6 VAR) (*)

MARKETING (MKTG)

UNDERGRADUATE COURSES

340 Principles of Marketing 3(3-0)
Analytical survey of problems encountered in distributing goods and services from a marketing-management approach with emphasis on the role of the consumer and the social responsibility of the marketer. (F,S,SS)

341 Sales Force Management 3(3-0)
Managing a sales force including recruiting, selection, training, compensation, supervision, stimulation and sales planning. Computer simulation used to do forecasting, budgeting, territory allocation, sales analysis and control. Prerequisite: MKTG 340. (F)

342 Promotional Strategy 3(3-0)
Principles, concepts and problems involved in development and management of advertising, personal selling, public relations and sales promotion programs, activities in the global economy. Prerequisite: MKTG 340. (S)

345 Retail Management 3(3-0)
Issues in buying, maintaining inventory, displaying, designing store layouts, promoting, providing services and general merchandising of products for improving retail profitability. Prerequisite: MKTG 340. (S)

348 Consumer Behavior 3(3-0)
Survey of contributions of behavioral sciences to understanding and prediction of consumer behavior in the decision-making process. Prerequisite: MKTG 340. (F)

350 International Marketing 3(3-0)
Effects of culture, political and legal structures on marketing. Planning for international products, services, promotion, pricing, distribution and impact of trade groups. Prerequisite: MKTG 340. (F)

440 Marketing Research 3(3-0)
Fundamental techniques. Practical experience in research methodology: planning an investigation, questionnaires, sampling, interpretation of results, report preparation. Prerequisites: MKTG 340 and BUSAD 260. (S)

441 Marketing Strategies 3(3-0)
Detailed consideration of process of formulating and implementing strategies in marketing. Major emphasis on markets, channels of distribution, and product analysis. Prerequisites: MKTG 340, 440, second semester seniors. (S)

480 Small Business Studies 3(3-0)
Integrating prior studies in business into a realistic approach to assist in solving problems faced by selected firms in the community. Prerequisite: senior standing and permission of instructor. (F,S,SS)

484 Senior Studies 3(3-0)
A discipline-oriented integration of prior course work into a special project, research paper and/or activity that demonstrates proficiency in the major. Prerequisites: senior standing in School of Business and completion of all core courses. (F,S,SS)

490 Special Projects (1-6 VAR) (*)

491 Special Topics (1-3 VAR)
Prerequisite: permission of instructor. (*)

495 Independent Study (1-3 VAR)
Prerequisites: senior standing in School of Business and permission of department chair. (F,S,SS)

498 Internship (1-6 VAR)
Supervised field work in selected business, social and governmental organizations; supplemented by written reports. (S/U grades) Prerequisites: junior or senior standing in School of Business and permission of internship coordinator. (F,S,SS)

GRADUATE COURSES

540 Marketing Management 3(3-0)
Emphasizes an understanding of market behavior, coordination and implementation of the marketing mix with other managerial decisions, and the integration of theory through use of cases. Prerequisite: graduate standing. (S)

541 Strategic Marketing 3(3-0)
A thorough analysis of decision making in strategic marketing, in product and service industries, profit and non-profit institutions, using case analysis and readings. Prerequisite: graduate standing. (F)

591 Special Topices 3(3-0) (*)

592 Research (1-6 VAR)
The student will work under the close supervision of a graduate faculty member in basic or applied research resulting in a thesis or report of high academic quality. (IP and S/U grading) (F,S,SS)

595 Independent Study (1-3 VAR)
Individual study of a subject determined by the instructor and student with permission of the director. Prerequisite: graduate standing. (F,S,SS)

598 Internship 3(3-0)
Supervised field work in selected public, private government organizations, supplemented by written reports. Prerequisite: Graduate standing. (S/U grading) (*)

599 Thesis Research (1-6 VAR) (*)

THE CENTER FOR TEACHING, LEARNING AND RESEARCH

Dr. Joyce Bales, dean

FACULTY: Gutierrez, Opitz, Piazza, Ryan, Valerio, Weinhouse

The primary mission of the Center for Teaching, Learning and Research is to prepare teachers of quality and distinction. The center is an integral component of a formal alliance between the university and Pueblo School District No. 60. The faculty complement is the first distinguishing feature of the center. Faculty include teacher education and academic discipline specialists as well as public school teachers who serve the center in a variety of roles, i.e., participation in professional development activities, school-based applied research, teacher induction programs, faculty exchanges, student mentor projects, professional development schools, and future teacher organizations.

The second distinguishing feature is the center's commitment to an integrated model of learning that combines theory, professional practice, critical thinking and human behavior. Attention is focused on educational experiences in a variety of settings, including homes, community agencies and schools. Clear outcomes include the collaboration of faculty members, students, parents, teachers, administrators, and human service specialists to improve the quality of teaching and learning pre K-16.

Program Goals

- Prepare teachers of quality and distinction with a broad-based general education, an academic specialty, and the ability to skillfully translate theory into licensure.
- Prepare students to teach effectively in the chosen area of endorsement and to obtain a Colorado teacher license.
- Offer a curriculum which provides a scope and sequence of educational experiences designed to achieve program goals and expected student outcomes.

Expected Student Outcomes

Students will demonstrate:

- a knowledge of subject matter, theories and principles of teaching and learning, and human development;
- the ability to plan and organize for teaching, to implement effective teaching strategies, and to evaluate strategies in terms of student progress towards learning outcomes;
- the ability to make ethical decisions;
- effective communication in a variety of cultural settings;
- critical thinking about what is said, written, and accomplished in the name of education and schooling;
- continuous professional development; and
- that they are educated persons.

Teaching Endorsement Areas

The Center for Teaching and Learning collaborates with other academic units to offer programs leading to Colorado teacher licensure in the following endorsement areas:

Mathematics (7-12)	Elementary Education (K-6)
Music (K-12)	English (7-12)
Physical Education (K-12)	Foreign Languages (7-12)
Science (7-12)	Spanish
Social Studies (7-12)	Industrial Education (7-12)

Elementary Education (MA), Adams State College/ USC Consortium Program

The University of Southern Colorado cooperates with Adams State College in the delivery of a master of arts in elementary education degree. See the Graduate Programs section of this catalog for details.

Selective Entry and Retention in Teacher Education (SERTE)

Admission

The Center for Teaching and Learning screens completed and signed applications for admission twice during the fall and spring semesters.

Fall semester deadlines:
. . . . . First Friday in March, August 15

Spring semester deadlines:
. . . . . First Friday in October, December 13

Admission to the teacher education program for any endorsement area requires the following:

1) A B average in ENG 101 and 102. Undergraduates must earn a minimum of B in SPCOM 103. If less than a B is earned, they must take and pass the oral proficiency exam. Post-baccalaureate students who take and pass the oral proficiency examination will not be required to take SPCOM 103.
2) A grade of B or better in MATH 109 or C in a higher level mathematics course or an ACT mathematics score of 23 or better.

3) A minimum GPA of 2.5000 for the last 30 semester hours of university course work.
4) Pass the required entry-level basic skills competency tests.
5) File an application for admission to the teacher education program which includes the following items:
   - documented evidence of compliance with requirements 1-5;
   - documentation of successful experiences with children or youth;
   - a writing sample;
   - a completed health clearance form;
   - four written recommendations from faculty members;
   - submission of an advisement sheet for the selected teaching endorsement area(s) listing all courses completed. The sheet should include transfer courses or substitutions (subject to approval by the dean of the Center for Teaching and Learning);
   - submission of an advisement sheet for the chosen academic major;
   - a written recommendation from the Division of Student Life and
   - appropriate signatures on all forms.

* Students may not enroll in any course with the prefix ED (except ED 102 and ED 202) unless they have been fully admitted to the teacher education program.

Further details about the Selective Entry and Retention in the teacher education program are described in the Teacher Education Handbook available in the USC Bookstore.

Retention

Students must pass all professional education courses including reading and bilingual education sequence with a grade of C or better and continue to meet GPA require-meats stipulated in the admission to teacher education criteria. Students also must demonstrate characteristics of teachers of quality and distinction in their field experiences and student teaching.

Student Teaching

Student teaching provides opportunities to integrate theory with practice. Prior to being approved for a student-teaching assignment, the following requirements must be met:

1) Completion of all course work including methods courses.
2) Compliance with all admission to teacher education criteria.
3) A GPA of 2.5000 or higher in the academic major.
4) Grades of C or higher in all professional education sequence courses.
5) Demonstration of the characteristics of teachers of quality and distinction.
6) Applications must be submitted a semester in advance. First Friday in October for a spring semester assignment; last Friday in February for a fall semester assignment.

Teacher Licensure

Applications for licensure are forwarded to the Colorado Department of Education (CDE) with the institutional recommendation only after official transcripts have been received and a final review has been conducted by the Center for Teaching and Learning.

Colorado Education Licensing Act

Rules for the Colorado Educator Licensing Act went into effect July 1, 1994. These rules apply to all students seeking initial Colorado educator licenses after that date.

The Licensing Act requires an assessment program applicable to all candidates for initial educator licenses in Colorado. The assessments include BASIC SKILLS, LIBERAL ARTS AND SCIENCES, ACADEMIC CONTENT FIELDS AND PROFESSIONAL KNOWLEDGE. The series of assessments is called PLACE (Program for Licensing Assessments for Colorado Educators). Beginning Fall 1995 all students must pass the BASIC SKILLS test prior to admission to the teacher education program.

The University of Southern Colorado is a test site for PLACE. For information about the Licensing Act and PLACE, students should see their adviser or visit the Center for Teaching and Learning office in Library Wing 320.

Specific Requirements for the Elementary Teaching Endorsement

CDE requires the student to complete a major in a subject major or broad field interdisciplinary major drawn from the following areas: liberal arts, science, mathematics, humanities, social sciences or health and to acquire background knowledge in the areas of language arts, humanities and fine arts, social sciences, science and health. Such background knowledge may be acquired through courses required for general education and the degree major, additional course work, or by other means determined with an education adviser from alternatives approved by CDE.

Courses		Titles	Credits
PSYCH	100	General Psychology	3
PSYCH	151	Intro to Human Development	3
		OR	
	252	Adolescence, Adulthood & Aging	3
		OR	
	151/252	Human Development/Adolescence, Adulthood & Aging	6
ED	202	Foundations of Education	3
ENG	251	Traditional Grammar Theory	
		OR	
	352	English Syntax	3
ENG	351	Children's Literature	2
MATH	360/361	Elem Concepts in Math I/II	6
HP	322	Elem School Physical Education	3
ART	377	Principles of Elementary Art Education	1
MUS	351	Prin of Music in Elem School	1
TH	370	Creative Dynamics	1
RDG	301	Rdg and Language Arts in Elementary School	3
*RDG	450	Diagnosis & Remediation of Reading Problems	3
*RDG 301 or 425 is a prerequisite for this course.			
BBE	401	Teaching the Limited English Proficient Student	2
ED	412	Teaching the Special Child	3
ED	413	Teaching Social Studies	2
ED	414	Teaching Elementary Science and Health	2
ED	417	Teaching Mathematics in Elementary Schools	2
ED	435	Classroom Management	3
ED	460	Educational Media and Technology	3
ED	487	Student Teaching Elementary School	15
		TOTAL	64-67

Specific Requirements for the Secondary and K- 12 Teaching Endorsements

The student must complete an appropriate major as approved by CDE. In addition, the following supporting courses and professional sequence are required:

PSYCH	100	General Psychology	3
PSYCH	151	Intro to Human Develop ment	3
		OR	
	252	Adolescence, Adulthood & Aging	3
		OR	
	151/152	Human Development/Adolescence, Adulthood & Aging	6
ED	202	Foundations of Education	3
FMT	345	Career Education	2
RDG	425	Teaching Reading in Content Areas (For K-12 endorsements, RDG 301 is required in place of RDG 425).	2
ED	435	Classroom Management	3
ED	460	Educational Media and Technology	3
ED	461	Atypical Students in the Secondary School (For endorsement in physical Education, HP 465, Adapted Physical Education, is required in place of ED 461).	2
ED	488	Student Teaching Secondary	
		OR	
	489	Student Teaching K-12	15
		TOTAL	34-39

Selecting an Academic Major: Elementary Education

The following academic majors are acceptable for the elementary education endorsement program: art, English, foreign language (Spanish), mathematics, music, psychology, social science, sociology, speech, biology, chemistry, and physics.

Selecting an Academic Major: Secondary Education

The following academic majors are acceptable for the secondary education endorsement program: English, industrial science technology, mathematics, social science, foreign language (Spanish), science.

Performance Assessment Activities

In the Center for Teaching, Learning, and Research performance assessment is a process that documents the relationship between its stated mission, goals and objectives, and the actual outcomes of programs and activities. Assessment is multidimensional and comprehensive in that a variety of quantitative and qualitative measures are utilized.

- Student compliance with all teacher education program standards is assessed through the Selective Entry and Retention in Teacher Education (SERTE) process. SERTE requires a GPA of 2.5000 for the most recent 30 semester hours and a GPA of 2.5000 in the major to qualify for a student-teaching assignment. Student teaching requires a full 15 weeks under the supervision of an experienced teacher endorsed in the student's area of preparation. All performance expectations are listed on the "Student Teacher Progress Indicator" rating form.
- Student records are maintained in the office of the Center for Teaching and Learning. Admission and Student Teaching applications are reviewed by faculty advisers, the center screening committee, and the university's Teacher Education Board twice annually. Decisions are made to accept, to accept conditionally, or reject applications. Students have the right to appeal such decisions through the university's due process procedures.

Assessment focuses on the following characteristics of teachers of quality and distinction:

- Knowledge of the academic specially is assessed through qualitative and quantitative measures utilized in all courses.

- Knowledge and understanding of learning principles and theories are assessed through quantitative measures in pedagogy courses, field experiences, and student teaching.
- The ability to plan, organize for teaching, implement and evaluate teaching strategies is assessed by quantitative and qualitative measures in professional education courses, field experiences, and student teaching.
- Personal and professional qualities, including the ability to make ethical decisions, are assessed throughout the program. Both university and school personnel utilize formal and informal rating systems to assess those qualities.
- The ability to think critically about what is said, written, and accomplished in the name of education and schooling is assessed through written assignments, tests, classroom discussion and observation during field experiences and student teaching.

READING PROGRAM

Reading Minor

The reading minor is intended for elementary, secondary, or K-12 teacher certification candidates who wish to have a recognized area of strength in the teaching of reading and other language arts.

Expected Student Outcomes

As a result of successfully completing the reading minor, the student must be able to:

- recognize, describe, diagnose, and teach all the generally accepted concepts, strategies and skills in the areas of oral language, reading readiness, emergent literacy, word recognition, comprehension, interpretation, literary appreciation, reading for information, critical reading and thinking, reference skills, study skills, oral reading, listening, speaking, English language usage, syntax, grammar, punctuation, capitalization, creative and informative writing, spelling and penmanship;
- describe the role and importance of the child's self-concept, experience and culture, home language and dialect, stages of growth and development, and success and familiarity with literature as factors in motivating growth in reading and the language arts;
- plan lessons and teach effectively using a variety of grouping techniques, including whole class, individual, ability, and cooperative;
- locate and use a variety of materials to teach reading and the other language arts. The materials include textbooks, basal readers, trade and library books, teacher-made materials, computer programs, student-generated texts, centers, newspapers, and children's literature;
- diagnose student reading levels and specific strengths and weaknesses, organize instruction to provide for the needs of the class and individual special students, adapt instruction in content areas to promote content learning, and develop reading and writing growth for all students;
- recognize common causes of reading and writing difficulties and administer and interpret the scores of a variety of informal assessment techniques such as reading miscue inventories and norm-referenced standardized tests;
- assess writing samples for diagnosis and prescription in expression, organization, fluency, sentence and paragraph development, theme, spelling, penmanship and fluency in word processing; and
- explain the need to collaborate with parents, librarians, drama and other teachers to provide an effective language arts program.

Specific Requirements

Complete the reading core with a cumulative GPA of 3.0000 or better and complete the reading electives with a cumulative GPA of 2.5000 or better. RDG 301 or 425 are prerequisites for the other reading courses.

Core Courses		Titles	Credits
RDG	301	Teaching Reading and Language Arts in the Elementary School	3
	310	Current Approaches to Reading and Writing Instruction	3
	425	Teaching Reading in Content Areas	2
	450	Diagnosis and Remediation of Reading Problems	3
ENG	351	Children's Literature OR	
	412	Literature for Adolescents	2
		TOTAL	13

Elective Courses

RDG	360	Practicum	1-3
	431	Developing Creative Centers	1
	436	New Directions in Reading Comprehension	2
	437	Teaching with Newspapers as a Resource	1
	442	Reading Across Cultures	2
	491	Topics in Reading	1-2
ED	412	Teaching the Special Child OR	
	461	Atypical Students in the Secondary School	3
Electives chosen in consultation with the education adviser			8
		TOTAL	19-22

Performance Assessment Activities

Since reading minors are generally teacher-licensure candidates, the activities listed above are required. In addition candidates must:

- complete the reading minor core with a GPA of 3.0000 or better. Assessment of expected outcomes 1 through 6 are monitored by the reading director;
- complete the 21-hour requirement with electives listed on the advisement sheet. The overall GPA must be 2.5000 or higher; and
- complete a questionnaire which is filed in the reading minor director's office. The questionnaires are used to plan course offerings, to document the progress of students seeking the minor, and for prospective employment.

BILINGUAL BICULTURAL EDUCATION (BBE)

UNDERGRADUATE COURSES

400 Workshop (1-3 VAR)
Development of classroom materials and curriculum in bilingual education. (*)

401 Teaching the Limited English Proficient Student 2(1.5-1.5)
Methods and techniques of teaching English to children of linguistically and culturally different backgrounds. Prerequisite: admission to teacher education program. (F,S)

403 Teaching Elementary Subjects in Bilingual Education 3(2-3)
Teaching elementary social studies, science, and health in bilingual settings. (F,S)

460 Survey of Language/Cultural Tests in Bilingual Education 2(2-0)
Introduction to current language/cultural instruments for the prospective bilingual education teacher in the elementary school. (F)

487 Student Teaching Bilingual (5,8,10,15 VAR)
For students in elementary bilingual program. Application for student teaching must be submitted on or before March 1 prior to the semester in which student teaching will commence. (S/U grades.) Prerequisite: admission to the teacher education program. (F,S)

495 Independent Study (1-2 VAR)
For the student specializing in bilingual education. (F,S)

GRADUATE COURSES

500 Workshop (1-3 VAR)
Practical in development of classroom materials/ curriculum in bilingual education. Prerequisite: graduate standing. (*)

505 Education across Cultures 2(2-0)
Analysis of multiculturalism in education and adaptation of the educational process to children of diverse cultural backgrounds. Prerequisite: graduate standing. (*)

541 Survey of Research in Bilingual Education 2(2-0)
Prerequisite: graduate standing. (*)

595 Independent Study (1-2 VAR)
For the student specializing in bilingual education. Prerequisite: graduate standing. (*)

EDUCATION (ED)

UNDERGRADUATE COURSES

102 Teaching as a Career 1(1-1)
Orientation to teaching and teacher education. Class sessions and classroom observation required. Not required for teacher certification. (F,S)

110 Teacher Aid Field Experience 1(0-3)
Work in a public school as teacher aid under the supervision of a classroom teacher and an education department instructor. Prerequisite: initial testing in basic competencies. (*)

115 Word Processing Lab 1(0-2)
Development of word processing skills on the Apple Computer. (*)

202 Foundation of Education 3(3-0)
Historical, philosophical and sociological dimensions of education including legal and financial challenges associated with the institution of education. (F,S,SS)

210 Human Growth and Development for Educators 3(3-0)
Physical, mental, social and emotional growth of the individual; provides perspective on the elementary and secondary school student as needed by teachers. Prerequisite: admission to teacher education program. (F,S,SS)

325 Early Field Experience with the Atypical Learner (1-3 VAR)
Development and implementation of principles in teaching atypical learners in a tutorial situation. Prerequisite: admission to teacher education. (*)

400 Workshop (1-3 VAR)
Designed for special activity-oriented experiences to be conducted in short sessions. Each workshop has a subtitle and no subtitle may be repeated for credit. Prerequisite: admission to teacher education program or permission of instructor. (*)

412 Teaching the Special Child 3(2.5-1.5)
Includes history, philosophy and legislation for special education, the nature and definitions of exceptionalities and child abuse; focuses on meeting the instructional and social needs of special children in elementary classrooms. Field experience required. Prerequisite: admission to teacher education program. (F,S)

413 Teaching Social Studies 2(1.5-1.5)
Methods of teaching social studies in the elementary school. Part of elementary field experience block. Prerequisite: admission to teacher education program. (F,S)

414 Teaching Elementary Science and Health 2(1.5-1.5)
Methods of teaching health and science in the elementary school. Part of elementary field experience block. Prerequisite: admission to teacher education program. (F,S)

415 Kindergarten Education 2(1.5-1.5)
Philosophy and methods of teaching kindergarten focusing on established best practices as delineated by the National Association for the Education of Young Children (NAEYC). Prerequisite: Admission to the teacher education program. (*)

417 Teaching Mathematics in Elementary School 2(1.5-1.5)
The scope and sequence of elementary school mathematics are examined. Instructional methods are considered in terms of both the content and the cognitive developmental rates and other individual differences of children. Prerequisites: MATH 361 and admission to teacher education program. (F,S)

420 Microcomputer Applications in Education 2(1-2)
Current microcomputer application in the classroom and principles of educational software. Prerequisite: admission to teacher education program. (*)

435 Classroom Management 3(2-3)
Includes general teaching methods and strategies, learning theories applied to teaching discipline, curriculum educational measurement and evaluation, school organization and school law applicable to classroom teachers. Field experience required. Prerequisite: admission to teacher education program. (F,S)

440 Teaching Secondary Science I 3(2-2)
Familiarization with the Colorado Science Content Standards. Standards based lesson and unit planning strategies and authentic assessment will be discussed, and demonstrated. (*30 hrs/semester field experience required.) Prerequisite: acceptance into the Teacher Education Program. (F,S)

441 Teaching Secondary Science II 3(2-2)
Familiarization with the Colorado Science Content Standards. Standards based lesson and unit planning strategies and authentic assessment will be discussed, and demonstrated. (*30 hrs/semester field experience required.) Prerequisite: acceptance into the Teacher Education Program. (F,S)

442 Teaching Social Studies in Middle School 3(2-2)
Familiarization with the Colorado Content Standards. Standards based lesson and unit planning strategies and authentic assessment will be discussed, and demonstrated. Prerequisite: acceptance into the Teacher Education Program. (*30 hrs/semester field experience required.) (F)

443 Teaching Social Studies in High School 3(2-2)
Familiarization with the Colorado Content Standards. Standards based lesson and unit planning strategies and authentic assessment will be discussed, and demonstrated. Prerequisite: acceptance into the Teacher Education Program. (*30 hrs/semester field experience required.) (S)

447 Teaching English in Secondary Schools 3(2-2)
Familiarization with the Colorado Language Arts (English) Content Standards. Standards based lesson and unit planning strategies and authentic assessment will be discussed, and demonstrated. Prerequisite: Acceptance into the Teacher Education Program. (*30 hours/semester field experience required) (F,S)

448 Teaching Foreign Language (K-12) 3(2-2)
Familiarization with the Colorado Foreign Language Content Standards. Standards based lesson and unit planning strategies and authentic assessment will be discussed, and demonstrated. Prerequisite: Acceptance into the Teacher Education Program. (*30 hrs/semester field experience required) (F,S)

449 Teaching Choral Music (K-12) 3(2-2)
Familiarization with the Colorado Music Content Standards. Standards based lesson and unit planning strategies and authentic assessment will be discussed, and demonstrated. Prerequisite: Acceptance into the Teacher Education Program, MUS 144, 145, 186, 241, 242, and 246. (F,S) (*30 hrs/semester field experience required)

450 Teaching Instrumental Music (K-12) 3(2-2)
Familiarization with the Colorado Music Content Standards. Standards based lesson and unit planning strategies and authentic assessment will be discussed, and demonstrated. Prerequisite: Acceptance into the Teacher Education Program, MUS 144, 145, 186, 241, 242, and 246. (*30 hrs/semester field experience required) (F,S)

460 Educational Media and Technology 3(2-3)
Preparation and use of audiovisual materials, equipment and use of computers in instruction. Field experience required. Prerequisite: admission to teacher education program. (F,S)

461 Atypical Students in the Secondary School 3(2-2)
Individual differences as they affect the learning process. Instructional alternatives for meeting individual needs including handicapped and gifted. Emphasis on main streamed students. Field experience required. Prerequisite: admission to teacher education program. (F,S)

487 Student Teaching Elementary (5,8,10,15 VAR)
Elementary level. Application must be submitted on or before March 1 prior to the semester in which student teaching will commence (S/U grades). Prerequisite: approved application for student teaching. (F,S)

488 Student Teaching Secondary (5,8,10,15 VAR)
Secondary level. Application must be submitted on or before March 1 prior to the semester in which student teaching will commence (S/U grades). Prerequisite: approved application for student teaching. (F,S)

489 Student Teaching K-12 (5,8,10,15 VAR)
K-12 level. Available for art, music and physical education majors. Application must be submitted on or before March 1 prior to the semester in which student teaching will commence (S/U grades). Prerequisite: approved application for student teaching. (F,S)

491 Special Topics (1-3 VAR) (*)

494 Field Experience (1-10 VAR)
Field experience in an educational setting. Not applicable to teacher certification (S/U grades). (*)

495 Independent Study (1-3 VAR) (*)

GRADUATE COURSES

500 Workshop (1-3 VAR)
Designed for activity-oriented experiences to be conducted in short summer sessions. Each workshop has a subtitle and no subtitle may be repeated for credit. Prerequisite: graduate standing. (*)

505 Education Across Cultures 2(2-0)
Analysis of multiculturalism and how the educational process can be adapted to children of diverse cultural backgrounds. Prerequisite: graduate standing. (*)

512 Teaching the Special Child 3(2.5-1.5)
Includes history, philosophy and legislation for special education, the nature of and definitions for exceptionalities and child abuse; focus on meeting the instructional and social needs of special children in elementary classrooms. Special project required. Prerequisites: graduate standing plus PSYCH 351 or ED 555. (F,S)

520 Microcomputer Applications in Education 2(1-2)
Current microcomputer applications in the classroom and principles of evaluating education software. Prerequisite: graduate standing. (F)

522 Issues in Education 2(2-0)
Contemporary problems in education, their historical development and philosophical implications. Prerequisite: graduate standing. (*)

524 Advanced Techniques of Teaching Elementary Social Studies 2(2-0)
Analysis of techniques for conceptual approaches to teaching socialization skills, critical thinking and inquiry skills; and helping children develop healthy attitudes and values. Prerequisite: graduate standing. (*)

525 Advanced Techniques of Teaching Elementary Science and Health 2(2-0)
Emphasis on the newest concepts, techniques and materials for teaching elementary school science and health. Prerequisite: graduate standing. (*)

526 School Health Curriculum 2(2-0)
Training (by grade level) in the use of "Growing Healthy" —the Primary Grades Health Curriculum Project and the School Health Curriculum Project. This is lateral spread training only, by agreement with the Rocky Mountain Regional Training Center. Prerequisite: graduate standing. (*)

530 Instructional Programming 2(2-0)
Principles of curriculum design, educational goals, instructional objectives, and developing long- middle- and short-range plans. For elementary and secondary teachers. Prerequisite: graduate standing. (*)

542 Contemporary Techniques of Classroom Management 2(2-0)
What research and professional practice say about organizing students, space, information, and resources; motivating, goal setting, communicating, and problem solving with student; and handling disruption and behavior problems. (*)

549 Child Advocacy 3(2-3)
Research study of international child advocacy programs, national movement and local adaptations. Requires the analysis of a model operating agency or institution of student's choice. Prerequisite: graduate standing. (*)

555 Foundations of Learning Disorders 3(3-0)
Exceptionalities: emphasis on high-incidence handicaps. Includes recent legislation and identification, referral, staffing and placement procedures. Major intervention strategies examined. Prerequisite: graduate standing. (*)

560 Teacher Effectiveness Training (2-3 VAR)
Stresses skill-building in classroom interaction between teacher and students. Skills include active listening, "I" messages and problem solving. Prerequisite: graduate standing. (*)

561 Atypical Students in the Secondary School 3(2-2)
Individual differences as they affect the learning process. Instructional alternatives for meeting individual needs including handicapped and gifted. Emphasis on mainstreamed students. Graduate project required. Prerequisites: graduate standing plus PSYCH 351 or ED 555. (F,S)

591 Special Topics (1-3)
Prerequisite: graduate standing. (*)

592 Research (1-3 VAR)
Prerequisites: graduate standing and permission of graduate adviser. (*)

593 Seminar 3(3-0)
Prerequisite: graduate standing. (*)

595 Independent Study (1-2 VAR)
Prerequisite: graduate standing and permission of graduate adviser. (*)

599 Thesis Research (1-6 VAR) (*)

READING (RDG)

UNDERGRADUATE COURSES

301 Reading and Language Arts in the Elementary School 3(3-0)
Foundations of reading and language arts including psychology of reading, language development, emergent literacy, word attack, comprehension strategies, vocabulary, handwriting, spelling, written and oral language skills. (F,S)

310 Current Approaches to Reading and Writing Instruction 3(3-0)
Various approaches to teaching reading and writing including research findings and classroom application of the reading and writing process. Prerequisite: RDG 301 or 425. (F)

360 Practicum (1-3 VAR)
Work with small groups and individual pupils in the public school preparing materials and lessons under the supervision of a reading teacher. Applies to both elementary and secondary schools depending upon the instructor's assignment. Prerequisites: RDG 301 or 425 and initial testing in basic competencies. (F,S)

425 Teaching Reading in Content Areas 2(2-0)
Reading skills, strategies and activities to improve comprehension of textual material in various content areas such as mathematics, science, literature, social sciences, and industrial education. (F,S)

431 Developing Creative Centers 1(1-0)
Involves planning, developing and implementing the use of learning centers in the classroom. Prerequisite: RDG 301 or 425. (SS)

436 New Directions in Reading Comprehension 2(2-0)
Exploration of and simulations of research-based strategies to increase students' comprehension of reading in elementary and secondary classes. Prerequisite: RDG 301 or 425. (F,SS)

437 Newspapers as a Teaching Resource 1(1-0)
Strategies and procedures for using the newspaper as a supplementary resource in content area classrooms at all grade levels (K-12). (SS)

442 Reading Across Cultures 2(2-0)
Techniques of adapting reading instruction for the linguistically and culturally different child. Problems of many minority groups are analyzed. Prerequisite: RDG 301. (S)

450 Diagnosis and Remediation of Reading Problems 3(2-3)
Diagnostic and evaluation procedures used in detecting and remediating problems and individualized instruction. Appropriate for elementary and secondary teachers. Field experience required. Admission to teacher program required. Prerequisite: RDG 301 or 425. (F,S)

491 Special Topics (1-2 VAR) (*)

495 Independent Study (1-2 VAR)
Individual projects and problem-solving experiences designed to meet students' special needs. With instructor's permission, certain program requirements may be completed through independent study. (*)

GRADUATE COURSES

510 Foundations of Reading Instruction 3(3-0)
Basic course for other graduate reading courses, including reading skills, sequence, materials, psychology of reading and relationship to other language arts. Prerequisite: graduate standing. (*)

525 Teaching Reading in the Content Area 2(2-0)
Reading skills specifically used in mathematics, science, social studies and literature, including specific techniques for teaching. Prerequisite: graduate standing. (*)

531 Developing Creative Centers 1(1-0)
Students will investigate various types of learning centers and means of successful implementation in the classroom. Development of materials, lesson plans and record-keeping systems which will result in a complete reading center. Investigation into research on effectiveness of learning centers. Prerequisite: graduate standing. (SS)

536 New Directions in Reading Comprehension 2(2-0)
Current research-based theory and practical classroom strategies and procedures for increasing comprehension of reading in elementary and secondary content area. Emphasis on open-ended, higher-order thinking skills. Prerequisite: graduate standing. (*)

537 Newspapers as a Teaching Resource 1(1-0)
Strategies and procedures for using the newspaper as a supplementary resource in content area classrooms at all grade levels (K-12). Prerequisite: graduate standing. (SS)

542 Reading Across Cultures 2(2-0)
Techniques of adapting reading instruction for the linguistically and culturally different child. Prerequisite: graduate standing. (*)

550 Diagnosis and Remediation of Reading Problems 3(2-3)
Formal and informal diagnostic procedures for the classroom teacher including standardized testing, informal inventories, close, criterion-referenced testing and Reading Miscue Inventory. Prescriptions based on diagnosis; remediation strategies applied by students. Prerequisites: a beginning reading course, graduate standing, and teacher certification or initial testing in basic competencies. (*)

552 Psycholinguistic Views of Reading: Process to Practice 2(1-3)
Introduction to psycholinguistic perspectives through analysis of oral reading errors. Reading Miscue Manual as an instrument for investigating reader's strengths and weaknesses. Strategies for remediating poor quality miscues. Prerequisites: beginning course in reading, graduate standing, and teacher certification or initial testing in basic competencies. (*)

560 Practicum 2(0-6)
Work with small groups and individual pupils in the public school preparing materials and lessons under the supervision of a reading teacher. Applied to both elementary and secondary schools depending on the instructor's assignment. Prerequisites: RDG 301 or 425, graduate standing, and teacher certification or initial testing in basic competencies. (*)

591 Special Topics (1-2 VAR)
Prerequisite: graduate standing. (*)

595 Independent Study 1(0-2)
Prerequisite: graduate standing. (*)

UNIVERSITY PERSONNEL 1998-1999

STATE BOARD OF AGRICULTURE

Bliss, Stewart	Denver
Garcia, Patrick	Pueblo
Hock, Delwin D.	Denver
Jones, Janet (1)	Durango
Lamborn, Alan C. (2)	Ft. Collins
Latino, Niki (3)	Pueblo
Mabry, G.C. "Chuck"	Ft. Collins
O'Dorisio, Steve (2)	Ft. Collins
Putnam, Anne	Durango
Ryan, John (3)	Pueblo
Scully, John P.	Denver
Stratton, Michael J.	Littleton
VanHuysen, Heidi (1)	Durango
Warren, William W.	Denver
Washington, Reginald L.	Denver

(1) Representatives from Fort Lewis College
(2) Representatives from Colorado State University
(3) Representatives from the University of Southern Colorado

One faculty member and one student representative from each institution sits on board as "non-voting."

COLORADO STATE UNIVERSITY SYSTEM

Yates, Albert C., chancellor of the CSUS System and president for Colorado State University

Bliss, John vice chancellor for Administrative Affairs, CSUS

Clark, David G., associate vice chancellor for Academic Affairs, CSUS

ADMINISTRATIVE OFFICES

OFFICE OF THE PRESIDENT

Guerrero, Tito III, president

Gutierrez, Gloria executive assistant to the president

Director, (to be announced upon arrival) Information Technology Services

Roudebush, David C., chief business officer for the Alliance

Trujillo-Sánchez, Gloria, director, Personnel/ Affirmative Action

OFFICE OF THE PROVOST

Wong, Leslie, provost

Bales, Joyce Ford, dean, Center for Teaching, Learning and Research

Carrasco, Hector, dean, College of Applied Science and Engineering Technology

Drabier, Renée, director, Information Technology Services

Fultz, Miriam, director, Assessment/Instructional Research

Maldonado, Carlos, director, Center for International Programs

Moore, Beverly, dean, Library Services

Pantleo, Sam J, dean, Pueblo School for Arts and Sciences

Seilheimer, Jack A., dean, College of Science and Mathematics

Stubenrouch, Roger E., director, Continuing Education

Trujillo, David F., director of Community and Special Projects

Ward, Bart H., dean, Hasan School of Business

Withnell, LeeAnn, director, Community Compact

Wright, Edward, interim dean, College of Humanities and Social Sciences

OFFICE OF THE ASSOCIATE PROVOST

Martinez, Rubén, associate provost

Anastassiou, Pamela, registrar

Berardi, Gayle, director, Honors Program

Brewer, Jack, director, Career Center

Hill, Richard, dean, Student Life

Kangas, Christie, director, Admissions

King, Karel, director, Southern Colorado Educational Opportunity Center

Medina, Mike, director, Upward Bound

Morken, Carol, director, Academic Advising Center

Perez, Cynthia, project director, Student Support Services

Stoker, Cheryl, director, Learning Assistance Center

OFFICE OF THE VICE PRESIDENT FOR FINANCE AND PLANNING

Bronn, Stephen D., vice president for Finance and Planning

Alley, Lorna, assistant director of budgets

Borge, Valerie, controller

Ortega, Don, assistant controller, director, Student Financial Services

Zimmerman, Bruce, director, Auxiliary Services

OFFICE OF THE ASSOCIATE VICE PRESIDENT FOR BUSINESS SERVICES

Cumbee, Richard A., associate vice president for Business Services

Elsom, Donna, director, Safety and Environmental Health

Meckley, Priscilla, facilities planner

Smith, Ed, executive director, Facilities Management

Stastny, Everett E., director, Purchasing

OFFICE OF UNIVERSITY RELATIONS

Freeman, Terry, director, Communication Services

King, June, (1975) associate director, Pueblo Symphony and director, Colorado Music Fest

Lundahl, Sandy, assistant director, financial director, University Relations

Sinn, Greg, executive director, University Relations

Sullivan, Wynona, station manager, KTSC-TV

Taibi, Tony, director, Athletics

Ward, William T. III, director, Development and Alumni Relations

ADMINISTRATIVE FACULTY

Bales, Joyce Ford, (1996) dean of Center for Teaching, Learning and Research; BS, University of Tennessee; MA, East Tennessee University; Ed.D., University of Tennessee

Bronn, Stephen D., (1971) professor of mathematics, and Vice President for Finance and Planning; BS, University of Nebraska; MSIA, Purdue University; MS, Ph.D., Northwestern University

Carrasco, Hector R. (1993) dean of Applied Science and Engineering Technology and associate professor of engineering; BSME, MSME, University of Texas at El Paso; Ph.D., Texas A&M University

Guerrero, Tito, III, (1997) president, BS, Texas A&M; M.Ed., University of North Texas; Ed.D., Harvard University

Martinez, Rubén, (1997) associate provost, professor of sociology and Chicano studies; BS, University of Southern Colorado; MA, Arizona State University, Tempe; Ph.D., University of California at Riverside

Moore, Beverly A., (1970) professor of library services, and dean, Library Services; AA, Hutchinson Junior College; BA, University of Northern Colorado; MA, University of Denver

Pantleo, Sam, (1994) dean, Pueblo School for Arts and Sciences; BA, Southern Colorado State College; MA, University of Northern Colorado; Ed.D., Nova University

Seilheimer, Jack A., (1963) professor of biology, and dean, College of Science and Mathematics; BS, Western Michigan University; Ph.D., University of Kentucky, Louisville

Wright, Edward, (1991) interim dean, College of Humanities and Social Sciences; associate professor of political science; BS, MA, University of Southern Mississippi; Ph.D., Georgetown University

Ward, Bart H. , (1996) professor of accounting, and dean, Hasan School of Business; BBA and MA, University of Oklahoma; Ph.D., Northwestern University

Wong, Leslie, (1996) professor of psychology, and provost; BA, Gonzaga University; MA, Eastern Washington University, Ph.D., Washington State University

PROFESSIONAL STAFF

Acosta, Katherine (1995) project coordinator, Upward Bound

Ahlers, Shawn L. (1997) manager of technology support, Technology Services; BS, University of Southern Colorado

Alley, Lorna (1976) assistant director of budgets, office of the Vice President for Finance and Planning; BSBA, University of Southern Colorado

Anastassiou, Pamela (1996) registrar; BA, Pittsburg State University; MA, University of Kansas

Arellano, Shelley M. (1995) business manager, Greenway and Nature Center of Pueblo; AA, Pikes Peak Community College

Blowers, Marsha E. (1996) head softball coach; Athletics; BA, University of Texas, Arlington; MS, Sam Houston State University

Borge, Valerie (1994) controller, Accounting Office; BS, MS, CPA, Colorado State University

Brewer, Jack (1997) director, Career Center; BS, MS, Indiana State University

Brito, Mary (1996) coordinator/adviser, Lamar EOC Office, Southern Colorado Educational Opportunity Center; AS, Lamar Community College; BA, MS, Regis University

Carpio, Eric (1996) admissions counselor, Admissions Office; BS, Colorado State University

Cisneros, Anna (1993) coordinator, Pueblo EOC Office, Southern Colorado Educational Opportunity Center; BS, University of Southern Colorado; MA, Adams State College

Coontz, Mary M. (1991) raptor biologist, program specialist, Greenway and Nature Center of Pueblo; BS, Berea College

Cumbee, Richard (1990) associate vice president, Business Services; BA, The College of William and Mary

Dehn, Ronald E. (1970) associate director, Technology Services; BS, University of Southern Colorado

DiPrince, Linda S. (1970) assistant director, Student Financial Services; BS, University of Southern Colorado

Eberhart, Pat (1996) assistant basketball coach, pool director, Athletics; BA, Adams State, MA, Colorado Christian

Elsom, Donna (1990) safety and environmental health officer, Business Services; BS, University of Southern Colorado

Engel-Aguilera, Tami, (1995) alumni programs coordinator, Development and Alumni Relations; BS, Arizona State University

Fitzgerald, Lynn (1997) assistant women's baseball coach, Athletics; BS, University of Wisconsin; MS, North Eastern State University, Oklahoma

Fluharty, Troy (1995) accounting information manager, Accounting Office; AA, Northeastern Junior College; BA, BS, Colorado State University

Folda, Joseph (1987) head coach, men's basketball, Athletics; BS, University of Northern Colorado; M.Ed., Eastern Washington University

Fritz, Maureen K. (1996) assistant softball coach, Athletics; BA, University of Texas, Arlington; MA, Sam Houston State University

Fultz, Miriam L. (1998) director, Assessment/ Instructional Research; BA, University of California, Irvine; MA, Ph.D.,California School of Professional Psychology - San Diego

Gallegos, Victoria (1991) program counselor, Student Support Services; BA, Adams State College

Gjerde, Michelle B. (1997) employer relations specialist, Career Center; BA, University of Southern Colorado

Gonzales, Walter J. (1997) learning disabilities specialist, Learning Center; University of Southern Colorado; MA, University of Colorado at Colorado Springs

Gotto, Greg (1995) assistant men's basketball coach, director, Rawlings-Athletics, Athletics; BA, MA, University of Northern Colorado

Gradisar, Tina (1989) membership manager, KTSC-TV; BS, University of Southern Colorado

Greene, Samuel T. (1996) TV producer, KTSC-TV; AA, Black Hawk College; BS, Southern Illinois University at Carbondale

Greer, James (1993) program coordinator, Altus Air Force Base, OK, Continuing Education; BA, Southern Illinois University; MA, Webster University

Gutierrez, Gloria (1976) executive assistant to the president, President's Office, CPS

Hargrove, Greg (1996) director, programming and promotions, KTSC-TV

Hatton-Montoya, Sharon (1994) writing center coordinator, Learning Center/English Department; BA, University of Southern Colorado

Herrera, Veronica (1995) coordinator, Colorado Springs EOC, Southern Colorado Educational Opportunity Center; BSW, University of Southern Colorado

Hill, Richard H. (1982) dean, Student Life; BA, University of Northern Colorado; M.Ed., Colorado State University; Ph.D., University of Wyoming

James, Paul (1994) athletic trainer, Athletics, BS, University of Utah

Jensen, Jennifer (1992) associate director, admissions; BS, University of Southern Colorado

Jones, Scott A. (1984) television producer, KTSC-TV; BS, University of Southern Colorado

Kangas, Christie, (1996) director, Admissions; BA, College of St. Scholastica; MA, University of Northern Iowa

Kelly, Todd (1991) sports information director, Athletics; BS, University of Southern Colorado

Kennedy, Robert F. (1995) admissions counselor, Office of Admissions; BA, Creighton University

Kidd, Frederick L. (1992) associate director, Student Financial Services; AA, AAS, BS, University of Southern Colorado; MA, New Mexico Highlands University

King, Karel (1989) director, Southern Colorado Educational Opportunity Center; BS, MS, Bowling Green State University

King, June (1975) director, Colorado Music Fest, associate director of Pueblo Symphony; BS, Southern Colorado State College

Krigel, Belinda (1988) manager, UNIX Systems, Technology Services; BS, MS, Arkansas State University

Laino, Heidi (1997) coordinator, International Recruitment; BA/BS, University of Southern Colorado

Lundahl, Sandra L. (1985) assistant director, University Relations; AAS, University of Southern Colorado

Maldonado, Carlos (1990) director, International Programs; BS, University of New Mexico

Martinez-Martinez, Deborah A. (1985) assistant director, Admissions; BA, University of Southern Colorado; MA, University of Northern Colorado

McCarver, Cynthia (1993) program coordinator, Downtown Center, Colorado Springs, Continuing Education; BS, University of Maryland

McHugh, Kathryn M. (1981) finance manager, USC Foundation; BS, BA, University of Southern Colorado

Meckley, Priscilla (1994) facilities planner, office of Business Services; BS, Pennsylvania State University

Medina, Mike (1988) project director, Upward Bound, AA, Trinidad State Junior College; BA, MA, Adams State College

Medina, Tammie L. (1996) assistant to director, Auxiliary Services; BS, University of Southern Colorado

Melin, Carl (1985) associate director, International Admissions; BA, Adams State College; MS, University of Southern California

Miller, Diana L. (1985) coordinator, Raptor Center, Greenway and Nature Center of Pueblo; BS, Southern Illinois University

Morken, Carol (1992) director, Academic Advising Center; BS, University of Southern Colorado; M.Ed., University of San Diego

Morken, Les (1995) director, marketing/promotions, Athletics; BS, Moorhead State University; MA, University of Northern Colorado

Moses, Douglas J. (1985) head coach, wrestling, Athletics; BA, Adams State College; MA, Colorado State University

Nivens-Aragon, Donna (1993) interim director, learning assistance specialist, Learning Center; BS, University of Southern Colorado; MA, University of Colorado, Colorado Springs

Ortega, M. Donald (1991) assistant controller, Office of Financial Services; BA, College of Santa Fe

Pando-Sanchez, Anita, (1996) academic and project counselor, Upward Bound; BA, University of Colorado and University of Southern Colorado; MA, Adam State College

Perez, Cynthia M. (1977) project director, Student Support Services; BA, University of Southern Colorado; MA, Lesley College

Rasley, Lora (1997) director, Residence Life and Housing; BA, St. Cloud State University; MCoun, Idaho State University

Riccatone-Trujillo, Dana (1995) admissions counselor, Office of Admissions; BS, University of Southern Colorado

Rote, John (1990) coordinator, grounds/facilities, Greenway and Nature Center of Pueblo

Roudebush, David C. (1997) chief business officer for the Alliance; BA, Concordia College; MA, UCCS, Colorado; Ph.D., University of Denver

Rudman, Anita J. (1994) program coordinator, Mc Guire Air Force Base, NJ, Continuing Education; BS, M.Ed., Pennsylania State University

Sanchez, Stan (1994) head baseball coach, Athletics; BS, California State University; MA, Azusa Pacific University

Sajak, Roger (1995) production manager, KTSC-TV; BS, Southern Illinois University

Sandsmark, Timothy B. (1994) director, Greenway and Nature Center of Pueblo; BBA, University of Wisconsin at Eau Claire; MA, University of Northern Colorado, ABD, Colorado State University

Shields, Ronald F. (1994) assistant program coordinator of Continuing Education, Peterson AFB; BS, Regis University

Shoji, Thomas (1994) women's volleyball coach, Athletics; BA, University of California; MA, University of California at Santa Barbara

Silver-Chacon, Loisann (1994) counselor, Upward Bound; BA, George Washington University; MA, Antioch University.

Sissom, Lia (1996) student development specialist, Academic Advising Center; BS, MS, Western Illinois University

Sinn, Gregory B. (1985) executive director, University Relations; BA, University of Arizona

Smith, Bob (1997) coordinator, Interpretive Program, Greenway and Nature Center of Pueblo; BA, Mesa State College

Smith, Ed (1992) executive director, Facilities Management; BS, University of Rhode Island; MA, Central Michigan University

Stanley, Roy (1994) head coach, men and womens' soccer, Athletics; BA, Princeton University; MA, University of Tulsa

Stastny, Everett E. (1988) director, Purchasing; BA, University of Colorado

Stoker, Cheryl L. (1998) director, Learning Assistance Center; BA, University of Idaho; MA, Ed.D., Temple University

Stubenrouch, Roger E. (1983) director, Continuing Education; BS, Troy State University; MS, University of Northern Colorado

Sullivan, Wynona (1989) station manager, KTSC-TV

Taibi, Tony (1977) director of Athletics; BS, BA, University of Southern Colorado

Trujillo, Brenda (1996) program associate, Student Support Services; BA, Regis University; AAS, Pueblo Community College

Trujillo, David F. (1990) director,Community and Special Projects, BA, MA, San Jose State University

Trujillo-Sánchez, Gloria (1994) director of Personnel/ Affirmative Action; BA, Loretto Heights College, MA, Norwich University, Ph.D., Union Institute

Vorndam, Margaret E. (1994) assistant director, Greenway and Nature Center of Pueblo; BS, State University of New York at Cortland; MS, University of Montana

Ward, III, William T. (1993) director, Development and Alumni Relations; BS, Colorado State University

Whatley, Nancy (1988) coordinator/adviser, Educational Opportunity Center; AS, Otero Junior College

Williams, Annie, (1994) student adviser, Center for International Programs; BA, MBA, University of Southern Colorado

Winn, Sherry M. (1997) head women's basketball coach, Athletics; BA, University of Charleston; MS, University of Ohio

Wrage, Jeffery (1991) head coach, men and womens' tennis and director of intramurals, Athletics; BS, Kearney State College; MBA, University of Colorado at Denver

Zarr, Jay (1990) director, Experiential Learning Center; BS, University of Southern Colorado; MS, Mankato State University

Zimmerman, Bruce (1986) director, Auxiliary Services; BS, Rhode Island College; MS, Indiana University

RANKED FACULTY

The following individuals were ranked faculty members in the 1997-98 academic year. The date in parenthesis indicates the initial year of regular appointment to the ranked faculty.

Abrahamson, Gayle (1985) assistant professor of library services; AA, Golden Valley Lutheran College; BA, Concordia College; MAR, Iliff School of Theology; MA, University of Denver

Aguilar, M. Kay (1964) professor of exercise science and health promotion; BS, Lock Haven State University; MA, Adams State College; Ed.D., University of Northern Colorado

Ahmadian, Ahmad (1985) associate professor of management; BA, Tehran University; MBA, Ph.D., North Texas State

Aichele, Ronald G. (1972) associate professor of philosophy; BA, MA, Ph.D., University of Missouri

Allen, Ernest E. (1963) professor of mathematics; BS, Wayne State University; BS, MA, Michigan State University; MATM, University of Detroit; Ed.D., University of Northern Colorado

Anderson, Deyrol E. (1983) professor of mass communications; BA, Washington State University; MA, San Francisco State University; Ph.D., University of Denver

Avina, Maya, (1995) assistant professor of art; BA, Humboldt State University; MFA, University of California at Santa Barbara

Baca, Judy M. (1981) associate professor of social work; BS, University of Southern Colorado; MSW, Arizona State University

Bailey, Wade H. (1993) assistant professor of mechanical engineering technology; BS, West Virginia University; MS, Air Force Institute of Technology

Barber, Margaret (1995) assistant professor of English; BA, MA, Ph.D., Texas Christian University

Barnett, Janet H. (1990) associate professor of mathematics; BS, Colorado State University; MA, Ph.D., University of Colorado

Beck, J. Michael (1970) professor of music; BA, University of Southern Colorado; MA, Western State College; DA, University of Northern Colorado

Berardi, Gayle K. (1994) associate professor of political science; BA, MA, University of Colorado at Colorado Springs; Ph.D., University of Colorado

Billington, Peter J. (1989) professor of management; BS, Worcester Polytechnic Institute; MBA, Northeastern University; Ph.D., Cornell University

Bonetti, Sandra J. (1991) associate professor of chemistry; BS, Ph.D., Georgia Institute of Technology

Borton, John M. (1983) associate professor of computer information systems; BA, Purdue University; MS, University of Northern Colorado; Ph.D., University of Colorado

Bory, Roseanne (1984) associate professor of library services; BA, Drake University; MA, University of Iowa; MA, University of Denver

Bottini, Patrick W. (1968) associate professor of facilities management and technology studies; BS, Southern Colorado State College; MA, Adams State College

Brewer, Paul (1992) instructor of music; BA, MME, Central State University, Oklahoma

Bridges, Gary (1986) assistant professor of accounting; BA, Baylor University; MBA, University of Texas; CPA

Brown, Kathy (1995) assistant professor of nursing; BSN, University of Phoenix; MSN, University of Colorado

Browne, James H. (1991) associate professor of management; BA, MA, Western Illinois University; Ph.D., University of Illinois

Burnett, Ingrid Schierling (1996) assistant professor, assistant reference librarian; MLS, University of Arizona; MA, Kansas State University

Calhoun-Stuber, Susan (1994) assistant professor of sociology; BA, Knox College; MA, Ph.D., University of Denver

Cameron, James T. (1970) professor of psychology; BA, The Colorado College; MA, Ph.D., University of Colorado

Caprioglio, Daniel (1993) assistant professor of biology; BA, University of California at Los Angeles; Ph.D., North Carolina State University

Caprioglio, Helen M. (1995) assistant professor of biology; BS, MS, Oregon State University; Ph.D., North Carolina State University

Carrasco, Hector R. (1993) associate professor of engineering; BSME, MSME, University of Texas at El Paso; Ph.D., Texas A&M University

Carter, Colette (1994) assistant professor of political science; BA, Incarnate Word College; MA, Catholic University; Ph.D., University of Washington

Chacon, Paul R. (1990) associate professor of mathematics; BS, University of British Columbia; Ph.D., University of Washington

Chandler, William D. (1982) associate professor of management, director, Graduate Business Program; BS, Massachusetts Institute of Technology; MBA, University of San Francisco; Ph.D., University of Arkansas

Chen, Frank T. (1982) associate professor of mechanical engineering technology; BSME, Chung Cheng College of Science and Engineering, Taiwan; MSME, Clemson University; Ph.D., North Carolina State University

Cheng, Joseph K. (1973) professor of civil engineering technology; BS, Taiwan Christian College; MS, University of Massachusetts; Ph.D., University of Oklahoma

Chi, Jacob (1997) associate professor of music, conductor of the symphony; BA, Siena Heights College; MA, School of Music, University of Michigan; Ph.D., Michigan State University

Cobian, Dora Luz (1995) assistant professor of Spanish; BA, MA, University of California at San Diego; Ph.D., University of California at Riverside

Cook, Robert N. (1981) professor of computer information systems; BEE, General Motors Institute; MSE, University of Michigan; M.Sc., Ph.D., University of Western Ontario

Covi, Silvio (1986) professor of foreign language; B.Th., Universitas Urbaniana, Rome, Italy; MA, Ph.D., State University of New York at Buffalo

Dalton, Dennis (1993) associate professor of art; BA, University of Toledo; MFA, University of Utah

Darby, Ronald L. (1991) associate professor of automotive parts and service management; AAS, BS, Southern Colorado State College; MA, University of Southern Colorado

DePalma, Jude, (1997) assistant professor of engineering; BSEE, University of Florida; MSEE, Purdue University; Ph.D., Colorado State University

DePalma, Ruth (1995) assistant professor of nursing; BSN, John Hopkins University; MSN, University of Florida

Derr, James B. (1984) professor of mathematics; BA, College of St.Thomas; Ph.D., Michigan State University

Dhatt, Yashwant S. (1983) associate professor of finance; B. COMM., MA, University of Delhi; MBA, McGill University; Ph.D., Georgia State University

Diawara, Moussa (1993) assistant professor of biology; BS, Institut Polytechnique Rural de Katibougeu, Mali, West Africa; MS and Ph.D., University of Georgia

Dorsch, John A. (1965) professor of biology; BA, Willamette University; MS, Ph.D., Oregon State University

Driscoll, Donald J. (1965) professor of philosophy; BA, Sophia University; MA, Ph.D., New School for Social Research

Druelinger, Melvin L. (1984) professor of chemistry; BS, Indiana University; Ph.D., University of Wisconsin

Duncan, James L. (1958) professor of music; BM, Central College; MM, Eastman School of Music

Duncan, Kevin C. (1994) associate professor of economics; BA, University of California; Ph.D., University of Utah

Ebersole, Samuel (1990) associate professor of mass communications; BA, Southern California College; MA, Regent University

Eisenbeis, H. Richard (1988) professor of management; BA, Lafayette College; MS, University of Montana; MS, Ph.D., The University of Arizona

Fogelquist, James D. (1993) associate professor of foreign language; BA, University of California at Los Angeles; MA, Ph.D., Yale University

Forsyth, Dan W. (1983) professor of anthropology; BA, University of California; MA, University of Chicago; Ph.D., University of California at San Diego

Frankmann, Sandra (1993) associate professor of psychology; BA, Simmons College; Ph.D., University of Washington at Seattle

Gill, John P., Jr. (1971) professor of mathematics; BS, University of Georgia; MA, University of Alabama; Ph.D., Colorado State University

Gomme, Ian (1995) associate professor of sociology; BA, University of Waterloo; B.Ed., University of Queens; M.Ed., University of Toronto; MA, Guelph; Ed.D., University of Toronto

Gonzales, David (1995) assistant professor of biology, BS, Metro State, MS, Ph.D., University of Wisconsin

Gonzales, Felix (1992) assistant professor of social work; BA, University of Southern Colorado; MSW, Arizona State University

Graham, Robert E. (1980) associate professor of physics; BS, University of Tulsa; MS, Ph.D., University of Arkansas

Green, Pearl (Penny) (1982) assistant professor of sociology; BA, City College of New York; MA, Ph.D., Southern Illinois University

Griffin, John R. (1963) professor of English; BS, MS, Xavier University; Ph.D., Ottawa University; Ph.D., Trinity College, Dublin, Ireland

Grubbs, Elmer E. (1995) assistant professor of electronic engineering technology; BSEE, University of Arizona; MSE, Arizona State University; Ph.D., University of Arizona

Gutierrez, James M. (1978) assistant professor of education; BA, University of Southern Colorado; MA, New Mexico Highlands University

Hanks, Bettye Sue (1994) assistant professor of business administration; BS, MS, Henderson State University; Ed.D., University of Arkansas

Hansen, Richard (1993) associate professor of art; BA, College of William and Mary; MLA, University of Colorado

Hansen, Victoria (1993) assistant professor of art; BA, College of William and Mary; MFA, Kansas State University

Herrmann, Scott J. (1968) professor of biology; BS, Northern Illinois University; Ph.D., University of Colorado

Hirth, Alan (1976) assistant professor of civil engineering technology; BA, University of Colorado

Hochman, Will (1991) assistant professor of English; BA, Hobart College; MFA, University of Montana; Ph.D., New York University

Holderness, Ward L. (1969) assistant professor of civil engineering technology; AAS, BS, Southern Colorado State College

Hooper, Jacqueline (1996) associate professor of exercise science and health promotion; BS, Portland State University; MS, Washington State University; MPH, Dr. PH, Loma Linda University;

Hoots, Michael L. (1994) assistant professor of facilities management and technology; BS, University of Notre Dame; MS, Rensselaer Polytechnic Institute

Hudock, Sandra, (1997) assistant professor of library services; BA, Gordon College; MSLS, University of Kentucky

Huffine, William B. (1995) assistant professor of electronic engineering technology; BSEE, California State Polytechnic University; MSEE, University of California at Santa Barbara

Hughes, Cornelius G. (1976) professor of sociology; BA, Belmont College; MA, California State University at Northridge; Ph.D., The Pennsylvania State University

Illick, Peter M. (1971) assistant professor of English; BA, University of Vermont; MA, University of Wyoming

Janos, Vicky (1990) assistant professor of nursing; BSN, University of Colorado; MSN, University of Colorado at Denver

Jensen, Carl G. (1970) professor of art; BS, Indiana Central College; MAT, Indiana University; MFA, University of New Mexico

Johnson, Roger W. (1977) professor of mathematics; BS, Fort Lewis College; MS, DA, Idaho State University

Johnston, Rhonda (1993) assistant professor of nursing; BS, University of Phoenix; MSW, University of Colorado

Jones, Sara (1995) assistant professor of mathematics; BA, University of California at Davis; MA, Ph.D. University of California at Santa Barbara

Joyce, Richard (1995) assistant professor of mass communications; BA, University of Scranton, Pennsylvania; BS, University of Southern Colorado; MA, University of Colorado at Boulder

Keller Robert L. (1974) professor of sociology; BA, University of Colorado; MS, Colorado State University; Ph.D., University of Montana

Keyser, Thomas (1995) assistant professor of engineering; BSMET, New Mexico State University; MSSE, University of Southern Colorado; Ph.D., Clemson University

Knight, Douglas W. (1980) professor of computer information systems; BS, MS, Ph.D., Arizona State University

Krinsky, Richard (1968) professor of psychology; BA, MA, Michigan State University; Ph.D., University of Washington

Krinsky, Suzanne G. (1968) professor of psychology; BA, Wayne State University; MA, Michigan State University; Ph.D., University of Washington

Kulkosky, Paul J. (1984) professor of psychology; BA, Columbia College; MA, Columbia University; Ph.D., University of Washington

Kuntzman, Ann (1993) assistant professor of library services; BA, University of Wyoming; MLS, Brigham Young University

Lazzari, Marceline (1996) associate professor of social work and women's studies; BA, Mount Saint Mary's College at Los Angeles; MSW, St. Louis University; Ph.D., University of Denver

Levy, Patricia (1991) assistant professor of psychology; BS, University of Bridgeport; MA, University of Colorado; Ph.D., Oklahoma State University

Loats, Carol (1993) assistant professor of history; BA, College of Wooster; MA, University of Colorado; MA, University of Northern Colorado; Ph.D., University of Colorado

Louisell, James (1989) associate professor of mathematics; BS, Ph.D., University of Minnesota

Lundberg, Bruce (1993) associate professor of mathematics; BS, Grand Canyon University; MA, Arizona State University; MA, Fuller Theological Seminary; Ph.D., Colorado State University

Madrid, L. Dennis (1976) professor of psychology; BA, University of Southern Colorado; MS, New Mexico Highlands University; Ph.D., University of California at Santa Barbara

Marino, Charles J. (1966) associate professor of art; BA, St. John's College; BFA, Pratt Institute; MA, Columbia Teacher's College

Martinez, Lee Anne (1992) assistant professor of biology; BA, University of California at Santa Barbara; MA, University of California at Santa Cruz; Ph.D., Cornell University

Massey, Frank A. (1963) associate professor of engineering; BIE, BBA, MS, University of Minnesota; MFA, University of Colorado; Ph.D., University of Wisconsin

Miller, Glenn W. (1974) assistant professor of mass communications; BA, University of Southern Colorado; MA, University of Denver

Mo, Suchoon S. (1973) professor of psychology; BS, Idaho State College; MA, Indiana University; Ph.D., University of Pennsylvania

Moffeit, Tony A. (1976) professor of library services; BS, Oklahoma State University; MLS, University of Oklahoma

Morales, Heberto (1987) professor of foreign language; seminaries in Las Casas, Montezuma, and Puebla, Mexico; Ph.D., Gregorian University, Rome, Italy

Mullen, Jennifer (1994) assistant professor of mass communications; BA, University of Southern Colorado; MA, University of Northern Colorado

Muller, Doyle K. (1963) associate professor of music; BM, BA, Huron College; MM, University of Colorado

Nicholl, Larimore R. (1968) assistant professor of philosophy; BA, The Colorado College; MA, Claremont Graduate School

Nichols, Janet G. (1977) assistant professor of mathematics; BA, Adelphi University; MS, Lehigh University

Noreiko, Gary (1984) associate professor of finance; BA, MA, California State University at Los Angeles; Ph.D., University of Southern California

O'Leary, Emmett L. (1972) associate professor of speech communication; BA, Adams State College; MA, Central Michigan University; Ph.D., University of Nebraska

Opitz, Michael F. (1990) associate professor of education and director, reading minor; BA, MA, University of Northern Colorado; Ph.D., University of Oregon

Orman, Patricia (1978) associate professor of mass communications; BA, University of New Hampshire; MA, University of Northern Colorado

Orr, Gilbert F. (1977) associate professor of mathematics; BA, St. John's University; MS, Ph.D., University of Miami

Osborn, Neal L. (1965) professor of biology; BA, Baldwin-Wallace College; BA, University of Southern Colorado; MS, Ph.D., University of New Mexico

Otis, Pauletta (1988) associate professor of political science; BA, MA, University of Northern Colorado; MA, Ph.D., University of Denver

Padgett, John J. (1967) associate professor of computer information systems; BS, University of Southern Colorado; MBA, University of Colorado

Pavlik, Richard E. (1963) professor of mass communications; BS, MA, The Ohio State University

Piazza, Jenny (1996) assistant professor of education; BA, Park College; MA, Adams State College; Ed.D., Oklahoma State University

Pino-Graziano, Raquel D. (1995) assistant professor of exercise science and health promotion; BS, University of Southern Colorado; MA, Ph.D., University of Rhode Island

Post-Gorden, Joan C. (1970) professor of psychology; BS, Manchester College; MS, Ph.D., University of Georgia

Proctor, Kristina G. (1989) associate professor of chemistry; BS, University of Southern Colorado; Ph.D., Colorado State University

Regassa, Hailu (1989) associate professor of accounting; BBA, Haile Selassie University, Ethiopa; MBA, Ph.D., University of Oregon

Rodriguez-Arenas, Flor Maria (1995) associate professor of Spanish; Universidad Pedagógica Nacional, Bogotá, Licenciatura; Instituto Caro y Cuervo, Bogotá, Post Graduate Studies; MA, University of Michigan, Ann Arbor; Ph.D., University of Texas at Austin

Ryan, John E. (1980) professor of education, director, Center for Teaching, Learning and Research; BA, University of California at Los Angeles; MA, California State University at Northridge; MA, Ph.D., Claremont Graduate School

Sabo, Barbara J. (1974) associate professor of nursing; RN, St.Mary Corwin Hospital School of Nursing; AA, Pueblo College; BS, MS, Ph.D., University of Colorado

Sandoval, David A. (1980) professor of Chicano studies and history; BS, Eastern New Mexico University; MA, Southern Methodist University; Ph.D., University of Utah

Sarper, Hüseyin (1988) associate professor of engineering; BS, The Pennsylvania State University; MS, Ph.D., Virginia Polytechnic Institute and State University

Saul, Roger E. (1983) associate professor of chemistry; BS, MS, Michigan Technological University; DA, University of Northern Colorado

Sauer, Wolfgang (1993) associate professor of mechanical engineering technology; Diplom Ingenieur, Technische Universität Berlin, Germany; Ph.D., Carnegie-Mellon University

Sefcovic, Paul A. (1989) associate professor of automotive parts and service management; AAS, BS, MA, University of Southern Colorado

Senatore, Margaret L. (1964) assistant professor of English; BA,The Colorado College; MA, University of Colorado

Shah, Abhay (1988) associate professor of marketing; BA, St. Xavier's College (Calcutta University); MBA, University of Evansville; Ph.D., Oklahoma State University

Sheidley, William E. (1994) professor of English; AB, AM and Ph.D., Stanford University

Sherman, John R. (1971) professor of speech communication; BA, Hunter College; MA, Ph.D., Southern Illinois University

Soto-Johnson, Hortensia (1989) assistant professor of mathematics; BS, MS, Chadron State University; Ph.D., University of Northern Colorado

Spade, Beatrice (1993) associate professor of history; BA, University of Colorado; MA, University of Hawaii, MA, National Taiwan University; Ph.D., Harvard University

Spenny, David L. (1980) professor of physics; BS, Wittenberg University; Ph.D., University of Colorado

Steen, Melva (1992) associate professor of nursing; BSN, Northern Michigan University; MA, University of Missouri, Kansas City; Ph.D., University of Texas, Austin

Stratton, William O. (1993) professor of accounting; BS, Florida State University; BS, Pennsylvania University; MSBA, Boston University; Ph.D., Claremont Graduate School

Sullivan, Daniel R. (1970) associate professor of library services; BA, University of Kentucky; MLS, University of Oregon

Sweet, Jerry L. (1976) associate professor of mechanical engineering technology; AAS, Pueblo College; BS, University of Southern Colorado; MS, Ph.D., Colorado State University

Tappen, John B. (1982) associate professor of electronics engineering technology; BA, Wesleyan University; BS, University of Utah; MS, University of Arizona; Ph.D., University of Tennessee

Taylor, Cynthia (1989) assistant professor of English; BA, MA, University of Idaho; Ph.D., University of Minnesota

Taylor, Ted (1990) assistant professor of English; BA, MA, University of Idaho; Ph.D., University of Minnesota

Thomas, Larry G. (1968) associate professor of biology; BS, Oklahoma State University; M.Ed., Ph.D., Colorado State University

Valerio, Luis G. (1975) professor of education; BA, University of Southern Colorado; MA, New Mexico Highlands University; Ph.D., University of Northern Colorado

Vorndam, Paul E. (1994) associate professor of chemistry; BS, Millikin University; MS, Illinois State University; Ph.D., University of Colorado

Wallin, Marta J. (1987) associate professor of physics; MS, Jagiellonian University, Kracow, Poland; Ph.D., University of Wyoming

Warnock, Stuart H. (1991) associate professor of management; BS, Midwestern State University; Ph.D., University of North Texas

Watkins, Donna M. (1988) associate professor of management; BBA, Sul Ross State University; MAT, Angelo State University; Ph.D., New Mexico State University

Weinhouse, Donald S. (1991) professor of education; BA, MA, University of California at Los Angeles; M.Ed., Ph.D., Oregon State University

Wilkes, Linda M. (1983) professor of chemistry; BA, California State University; Ph.D., University of Nevada at Reno

Williams, Euphemia G. (1995) professor of nursing; BS, University of Oklahoma; MS and Ph.D., University of Colorado

Wintermute, Wendy (1991) assistant professor of social work; BA, Swarthmore College; MA, Columbia University; MSW, Ph.D., University of Michigan

Womack, Larry O. (1972) professor of civil engineering technology; AA, University of Southern Colorado; BSCE, Colorado State University; MSCE, University of Missouri

Wright, Edward N. (1991) associate professor of political science; BA, MA, University of Southern Mississippi; Ph.D., Georgetown University

Wright, Will (1986) professor of sociology; BA, University of Oregon; MA, University of Rochester; Ph.D., University of California at Berkeley

Yescavage, Karen (1992) associate professor of psychology; BS, Northwest Missouri State University; MA, Ph.D., University of North Carolina

Zeis, Charles (1987) associate professor of business administration; BA, University of St. Thomas; MS, Ph.D., Texas A & M University

PUEBLO SCHOOL FOR ARTS AND SCIENCE INSTRUCTORS

Annand, Carol, (1995) BA, University of Colorado

Baum, Kenneth, (1997) BA, University of Colorado

Benavidez, Don, (1994) BA, Adams State; MA, Lesley College

Benavidez, Dianne, (1997) BS, University of Southern Colorado; MA, Regis University

Carillo-Smith, Robert, (1995) BA, University of Northern Colorado

Caves, Linda, (1995) BS, Keuka College, NY; MA, Elmira College, NY

Drummond, Tina, (1996) BA, University of Southern Colorado

Fishman, Susan, (1998) BS, MA, University of Wisconsin

Frye, Paulette, (1997) BA, University of Southern Colorado

Hale, Norman, (1996) BA, University of Southern Colorado

Hanks, Andy, (1998) BA, University of Southern Colorado

Hanks, Brooke, (1995) BA, Western State College

Hartgraves, Stephanie, (1994) BA, University of Southern Colorado

Holder, Gary, (1994) BA, Colorado State University; MA, Lesley College

Jones, Georgiann, (1995) BS, Western Connecticut State University; MA, Temple University, PA

Lehmann, Lauren, (1994) BA, University of Maryland; MA, Antioch College

Farmer, Elizabeth, (1997) BS, Colorado State University; MA, Adams State College

Martinez, Charlotte, (1994) BA, University of Northern Colorado

McKinsey, Sara, (1996) BA, University of Southern Colorado

Shue, Julie, (1995) BA, University of Southern Colorado

Sikes, Hali, (1996) BA, University of Southern Colorado

Simmons, Robert, (1997) BA, University of Northern Colorado

Valdez-Hall, Vivian, (1994) BA, University of Southern Colorado; MA, Lesley College

Warren, Harriet, (1994) BA, University of Northern Colorado; MA, Eastern Kentucky University

White, Gala, (1997) BA, MA, Eastern New Mexico University

Wold, Roberta, (1995) BA, University of Southern Colorado

Wood, Allen, (1994) BA, University of Southern Colorado

ARTISTS-IN-RESIDENCE

Birr, Marlene (1996) artist-in-residence; MFA, University of Colorado; BA, University of Toledo

Cedrone, Frank J. (1969) artist-in-residence; artist diploma in piano, Boston Conservatory

Chi, Jacob (1997) artist-in-residence, conductor of the symphony; BA, Siena Heights College; MA, School of Music, University of Michigan; Ph.D., Michigan State University

King, June (1995) artist-in-residence; BS, Southern Colorado State College

Markowski, Victoria (1969) artist-in-residence; BM, Boston Conservatory

Mendoza, Dorothy (1990) artist-in-residence; BA, University of Southern Colorado

Mendoza, John (1990) artist-in-residence; AA, Pueblo Junior College; BA, MA, University of Northern Colorado

EMERITUS FACULTY

Anderson, Norris D. (1965-1984) BA, MA, Ed.D., professor emeritus of education

Askwig, William J. (1962-1994) BSBA, MBA, Ph.D., professor emeritus of economics

Atteberry, Sarah (1975-1992) BS, MS, MSN, professor emerita of nursing

Baldauf, Boyd J. (1964-1988) BS, MA, Ed.D., professor emeritus of computer science technology

Banks, Jessie (1966-1996) BS, MA, professor emerita of human performance and leisure studies

Bartlett, Thomas J. (1967-1977) BS, MA, professor emeritus of mathematics

Bassein, Beth Ann (1966-1991) BA, MA, Ph.D., professor emerita of English

Benton, Johnny (1968-1996) BA, MA, Ph.D., professor emeritus of speech communication

Blandford, Robert D. (1965-1989) BS, MA, DA, professor emeritus of mathematics

Blasing, James A. (1956-1984) AA, BS, MS, professor emeritus of physical education

Bond, John A. (1967-1984) BS, MA, Ph.D., professor emeritus of political science

Boss, Marion L. (1964-1984) BSBA, MSBE, Ed.D., professor emeritus of business administration

Bradley, Lawrence B. (1966 -1988) BA, MA, professor emeritus of speech communication/theatre

Brassill, Joann A. (1967-1987) BA, MA, MFA, professor emerita of art

Bright, A. Leon (1963-1995) BS, MA, Ph.D., professor emeritus of foreign language

Buckles, William G. (1965-1993) BA, MA, Ph.D, professor emeritus of anthropology

Cain, Robert L. (1970-1993) BA, MLS, professor emeritus of library services

Connelly, Jerald (1979-1990) BS, Ph.D., professor emeritus of chemistry

Cotner, Jane (1960-1976) AB, BSLS, professor emerita of library sciences

Croxton, Carol (1978-1994) BA, MA, Ph.D., professor emerita of English

Davison, Earl (1950-1975) BS, professor emeritus of industrial technology

Dille, Ralph (1976-1996) BA, BS, MA, Ph.D., professor emeritus of English

Eagan, William (1962-1995) BA, MA, professor emeritus of history

Ervin, Dwain T. (1964-1984) BA, MA, Ph.D., professor emeritus of history

Farley, Mary (1991-1996) BSN, MS, Ph.D., professor emerita of nursing

Farwell, Hermon W. (1966-1984) AB, MA, professor emeritus of speech communication

Fouts, Kenneth B. (1962-1985) AA, BFA, MA, Ph.D., professor emeritus of speech communication

Hammond, William A. (1957-1987) BSBA, MBA, professor emeritus of accounting

Hammer, Charles R. (1964-1995) BS, Ph.D., professor emeritus of chemistry

Hench, Robert W. (1965-1993) BFA, MA, professor emeritus of art

Hobbs, Harold C. (1966-1984) BA, MA, Ph.D., professor emeritus of psychology

Hostetler, Charles E. (1964-1988) BA, MA, Ed.D., professor emeritus of education

Howard, John R. (1967-1986) BA, MA, professor emeritus of geography

Howard, Maurice L. (1962-1979) Th.B., AB, MA, Ed.D., professor emeritus of psychology

Ihrig, Paul R. (1946-1971) BS, MA, professor emeritus of fine arts

Janes, Donald W. (1963-1993) BA, MA, Ph.D., professor emeritus of biology

Jurie, Carl A. (1956-1980) BA, MA, professor emeritus of geology

Kellogg, William (1969-1990) BA, MS, MM, professor emeritus of music

Kent, (Kahn) Theodore C. (1965-1978) BA, MA, Ph.D., Sc.D., professor emeritus of behavioral science

Kenyon, Gordon R. (1960-1980) BA, MA, Ph.D., professor emeritus of history

Levy, Ralph W. (1957-1981) BA, MA, professor emeritus of music

Li, Hung C. (1969-1990) BA, MS, Ph.D., professor emeritus of mathematics

Linam, Jay (1965-1991) BS, MS, Ph.D., professor emeritus of biology

Mahan, Kent (1969-1997) BS, Ph.D., professor emeritus of chemistry

Martinet, Anthony (1969-1990) BS, M.Ed., professor emeritus of automotive parts and service management

McCanne, Roy (1974-1994) BA, MA, Ed.D., professor emeritus of education

Miller, Margaret (1976-1990) BA, MS, Ph.D., professor emerita of teacher education

Miller, Robert E. (1952-1983) BS, MS, professor emeritus of chemistry

Miller, Wilbur C. (1967-1988) BA, MBS, Ph.D., professor emeritus of mathematics

Milne Donald C. (1965-1993) BA, MA, Ph.D., professor emeritus of English/foreign languages

Murray, Hallard (1969-1997) professor emeritus of biology

Olin, Carol M. (1971-1991) BA, MA, professor emerita of English

Orman, Leonard M. (1970-1982) BS, MA, professor emeritus of mathematics

Perkins, David M. (1978-1995)) BSEE, MSEE, professor emeritus of electronics engineering technology

Peterlin, Edward L. (1963-1995) BS, MA, CPA, professor emeritus of accounting

Phillips, David L. (1971-1995) BS, MS, Ph.D., professor emeritus of mathematics

Plonkey, Kenneth (1968-1998) BA, MA, Ph.D., professor emeritus of theatre

Prater, Joseph C., Jr. (1956-1988) BS, MS, professor emeritus of mathematics

Redman, Ralph J. (1965-1989) BA, MA, MAT, professor emeritus of mathematics

Reiff, Glenn A. (1978-1989) BS, MS, professor emeritus of electronics engineering technology

Reinier, Edward R. (1964-1988) BS, MA, professor emeritus of management

Roach, George F. (1966-1989) AB, MM, professor emeritus of music

Sadler, George (1965-1987) BS, MS, Ph.D., professor emeritus of economics

Sajbel, Edward (1955-1989) AA, BA, MA, professor emeritus of art

Sanderson, James M. (1947-1976) BS, MA, professor emeritus of history

Sarver, P. Merle (1965-1995) AA, BA, MA, Ph.D., professor emeritus of economics

Shih, Tsang Yu (Tom) (1964-1984) BSM, professor emeritus of metallurgical engineering technology

Shirley, Robert C. (1984-1996) BA, MA, Ph.D., president emeritus and professor emeritus of management

Simms, Houston C. (1947-1975) BA, MA, professor emeritus of biology

Sisson, Ray (1960-1996) AA, BSEE, MSEE, Ed.D., professor emeritus of engineering and dean emeritus of the College of Applied Science and Engineering Technology

Smith, John E. (1962-1989) AA, BA, Ph.D., professor emeritus of chemistry

Smith, Robert (1969-1996) BA, MA, professor emeritus of computer infomation systems

Socha, Frances J. (1967-1982) BSN, MA, professor emerita of nursing

Solis, Jose (1963-1996) BS, MSW, professor emeritus of social work

Stjernholm, Kirstine (1967-1995) BA, MA, professor emerita of library services

Strobel, John D. (1960-1993) BME, MM, DMA, professor emeritus of music

Stutters, Donald G., (1960-1992) BA, MA, Ed.D., professor emeritus of human performance and leisure studies

Sublette, James E. (1984-1995) BS, MS, Ph.D., professor emeritus of biology

Taussig, Anna (1960-1977) AB, MA, professor emerita of foreign languages

Taylor, Kenneth B. (1969-1995) BA, MA, professor emeritus of English

Tedrow, Charles E. (1968-1993) AB, MA, professor emeritus of industrial science technology

Tilley, Lewis L. (1965-1983) BFA, MFA, professor emeritus of art

Townley, Rodney D. (1945-1978) M.Mus.Ed., professor emeritus of music

Vunovich, Bogdan (Bob) (1967-1988) AB, MA, professor emeritus of mathematics

Wack, Dunstan J. (1969-1982) BS, MA, Ph.D., professor emeritus of psychology

Wands, Robert (1963-1996) BFA, MA, professor emeritus of art

Warfield, Dale E. (1971-1995) AA, BEE, MSEE, professor emeirtus of electrical engineering technology

Watkins, Sallie A. (1966-1988) BS, MS, Ph.D., professor emerita of physics

Whitmer, Jean J. (1970-1987) BA, MA, Ph.D., professor emerita of education

Whitsitt, Ronald G. (1959-1989) BA, MA, professor emeritus of English

Withnell, Melvin C. (1967-1994) BS, MS, MA, Ph.D., professor emeritus of mathematics

A

B

C

D

E

F

G

H

I

K

L

M

N

O

P

Q

R

S

T

U

V

W