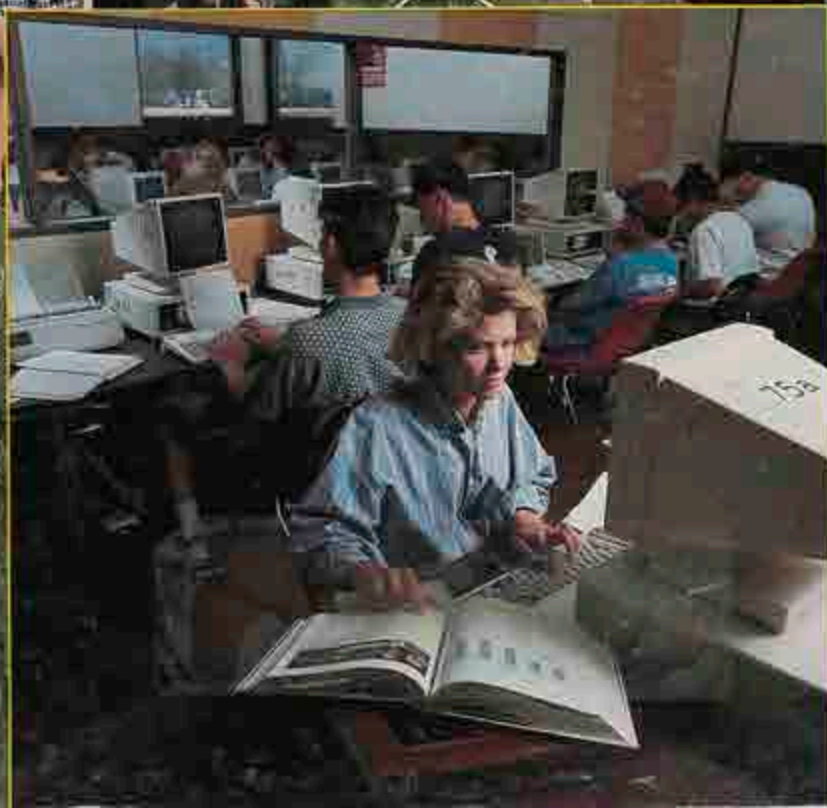


*Fort Lewis College  
Durango, Colorado*



*Catalog  
1993/94*



*Colorado's Campus in the Sky*



# FORT LEWIS COLLEGE

1000 Rim Drive  
Durango, Colorado 81301-3999

## CATALOG FOR THE ACADEMIC YEAR 1993-94

### Student Responsibilities

The catalog outlines in detail the course requirements needed to complete the various degree programs offered by Fort Lewis College. If students follow the prescribed courses for a selected major and complete at least 16 credit hours each trimester, they may reasonably expect to complete the degree program within eight trimesters.

*To do so, however, students must assume the responsibility to read the catalog*, complete a minimum of 128 credits as outlined by the degree program, and maintain a minimum grade point average of 2.0 for those courses accepted to meet the requirements for the major.

Students will be assigned an advisor to help them with the appropriate course selections, but students assume the ultimate responsibility to know and complete all graduation requirements.

#### Right to Alter Course Listings

Course offerings and requirements at all colleges vary with time and demand. The administration of Fort Lewis College reserves the right to alter course listings as necessary without notice.

Fort Lewis College does not discriminate on the basis of race, color, national origin, sex, age or disability in admission or access to, or treatment or employment in, its education programs or activities. Inquiries concerning Title VI, Title IX, and Section 504 may be referred to the Affirmative Action Director, Fort Lewis College, 303-247-7666 or to the Office for Civil Rights, U.S. Department of Education, 1244 Speer Blvd., Suite 300, Denver, Colorado 80204, 303-844-2991.

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## FORT LEWIS COLLEGE 1993-94 ACADEMIC CALENDAR

### FALL TRIMESTER 1993

Fall College Conference	Friday, August 27, 1993
Confirm registration & new student orientation	Monday, August 30
Registration	Tuesday, August 31
*Classes begin	Wednesday, September 1
Convocation	Tuesday, September 14
Deadline for adding classes and dropping without record (census date)	Wednesday, September 15
Mid-term grades due	Friday, October 15
Winter Trimester Registration:	
Advising	Monday-Friday, November 1-5
Registration	Monday-Friday, & Monday, November 8-12 & 15
Thanksgiving Break	Monday-Friday, November 22-26
Last day of classes	Friday, December 10
Final exams	Monday-Thursday, December 13-16
Term ends	Thursday, December 16
Final grades due, 9 a.m.	Monday, December 20

### WINTER TRIMESTER 1994

Confirm registration & new student orientation	Monday, January 10, 1994
Registration	Tuesday, January 11
*Classes begin	Wednesday, January 12
Deadline for adding classes and dropping without record (census date)	Wednesday, January 26
Mid-term grades due	Friday, February 25
Spring Break	Monday-Friday, March 7-11
Classes resume	Monday, March 14
Fall Trimester Registration:	
Advising	Monday-Friday, March 21-25
Registration	Monday-Friday, March 28-31, and Friday & Monday, April 1 & 4
Last day of classes	Friday, April 22
Final exams	Monday-Thursday, April 25-28
Commencement	Saturday, April 30
Final grades due	Monday, May 2

### 1ST FIVE-WEEK SESSION 1994

*Registration and classes begin	Monday, May 2
Deadline for adding classes and dropping without record (census date)	Friday, May 6
Term ends	Friday, June 3
Final grades due	Monday, June 6

### 2ND FIVE-WEEK SESSION 1994

*Registration and classes begin	Monday, June 6
Deadline for adding classes and dropping without record (census date)	Friday, June 10
Term ends	Friday, July 8
Final grades due	Monday, July 11

### 3RD FIVE-WEEK SESSION 1994

*Registration and classes begin	Monday, July 11
Deadline for adding classes and dropping without record (census date)	Friday, July 15
Term ends	Friday, August 12
Final grades due	Monday, August 15

The first day of classes is also the deadline for consideration for any changes in tuition classification for the term indicated.

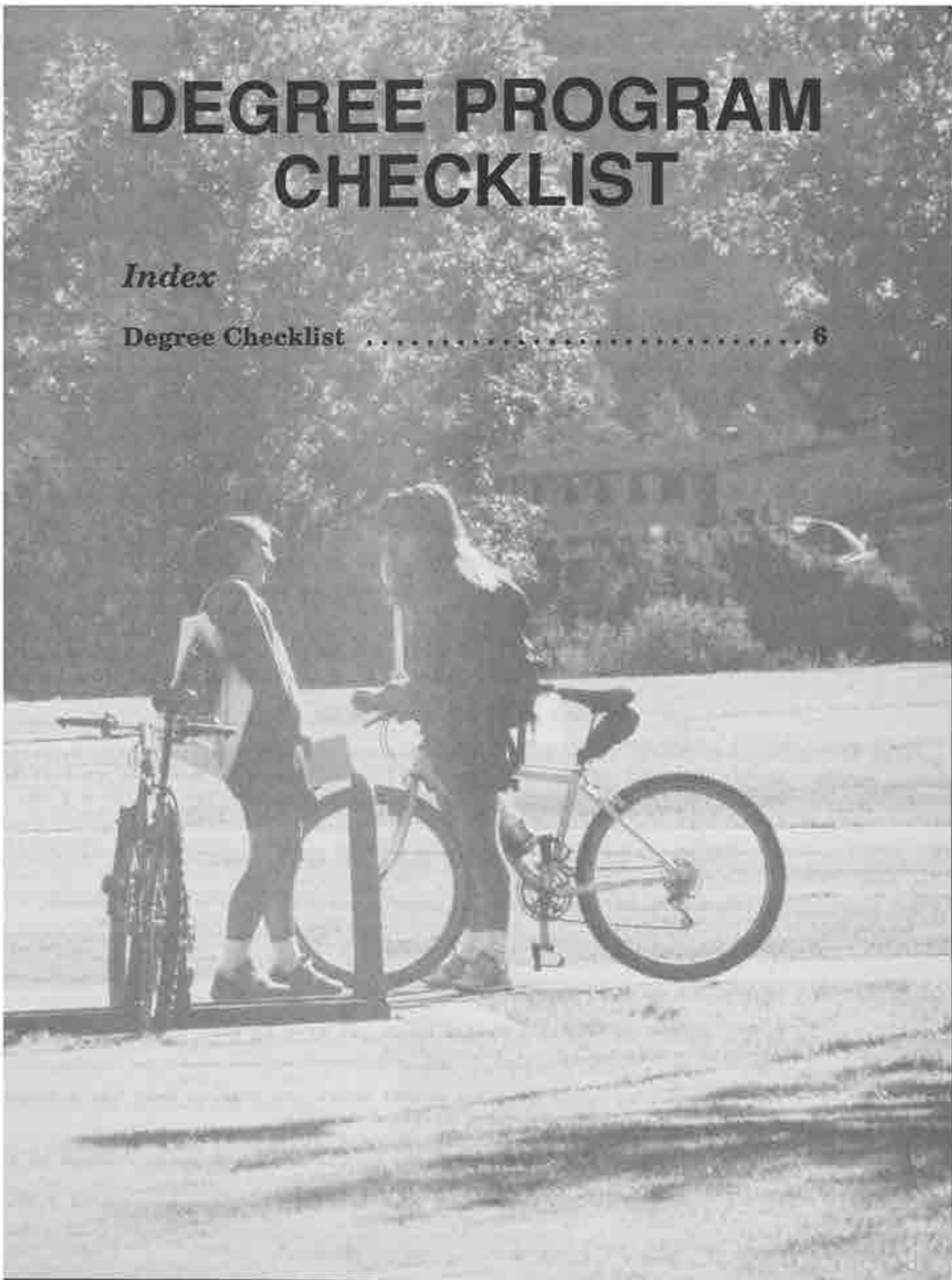
**THIS IS A PLANNING CALENDAR ONLY, SUBJECT TO ANNUAL REVISION AND APPROPRIATE CHANGES.**



# DEGREE PROGRAM CHECKLIST

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**Degree Checklist** ..... **6**



FORT LEWIS COLLEGE DEGREE CHECKLIST

RECORDS OFFICE

303-247-7350

NAME \_\_\_\_\_ ID# \_\_\_\_\_ CATALOG YEAR \_\_\_\_\_

MAJOR 1 \_\_\_\_\_ OPTION \_\_\_\_\_ CONCENTRATION(S) \_\_\_\_\_

MAJOR 2 \_\_\_\_\_ OPTION \_\_\_\_\_ CONCENTRATION(S) \_\_\_\_\_

MINOR \_\_\_\_\_ ADVISOR \_\_\_\_\_ GRADUATION DATE \_\_\_\_\_

THIS DEGREE CHECKLIST INCLUDES COURSES COMPLETED THROUGH THE \_\_\_\_\_ TERM.

CURRENT DATE \_\_\_\_\_ CHECKLIST COMPLETED BY \_\_\_\_\_

This check list is made up of four parts: total hours earned, General Studies Requirements, major requirements and auxiliary requirements. All four parts must be met to complete degree requirements. Also included is a part for minor requirements if you declare a minor. If you declare a minor, all minor requirements must be met at the same time as degree requirements.

\*\*\*\*\*  
Courses and requirements marked with double asterisks (\*\*) show what courses and requirements you have left to complete.  
\*\*\*\*\*

PLEASE NOTE: THIS IS A CHECKLIST ONLY. THE LISTING OF AND EXPLANATION OF REQUIREMENTS FOR ALL AND ALL DEGREE PROGRAMS ARE IN THE FORT LEWIS COLLEGE CATALOG.

PART I -- TOTAL HOURS EARNED

A minimum of 128 semester credit hours are required for the Bachelor of Arts or the Bachelor of Science degree. Within that 128 semester credit hours a minimum of 50 semester credits hours must be upper division credits. The minimum cumulative grade point average must be a 2.00. The minimum grade point average in major courses is a 2.00.

\_\_\_\_\_ is the number of semester credit hours you have earned.

\_\_\_\_\_ is the number of upper division semester credit hours you have earned.

\_\_\_\_\_ is your cumulative grade point average.

\_\_\_\_\_ is your major courses grade point average.

\*\* \_\_\_\_\_ is the number of semester credit hours you need to meet the minimum of 128 semester credit hours.

\*\* \_\_\_\_\_ is the number of upper division credit hours you need to meet the minimum of 50 semester credit hours upper division credits.

\*\* \_\_\_\_\_ This is checked if you must raise your cumulative grade point average to 2.00.

\*\* \_\_\_\_\_ This is checked if you must raise your major grade point average to 2.00.







A black and white photograph of a student in a graduation cap and gown rowing a boat on a lake. The student is smiling and holding a double-bladed oar. The background shows a calm body of water and a rocky shoreline in the distance.

# GENERAL INFORMATION

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## GENERAL INFORMATION

### THE COLLEGE

Fort Lewis College is a four-year, state-assisted undergraduate institution that offers quality baccalaureate degree programs in the arts and sciences and in the professional areas of education

and business. Fort Lewis has an enduring commitment to develop and maintain its programs at a level equal to those of other outstanding undergraduate institutions in the nation.

### MISSION

The following mission statement has been adopted by the State Board of Agriculture, the governing body of Fort Lewis College.

The mission of Fort Lewis College is to open minds and kindle thought and action by instilling in students knowledge, a desire to acquire knowledge, the tools for doing so, and an understanding of how knowledge can be put to use or a common good. The experiences students have here should help them learn to live wisely and should make a significant difference in their futures by enabling them to pursue their own educational goals throughout their lives. They should be able to demonstrate thoughtful scholarship in pursuing and weighing knowledge. They should be able to communicate and cooperate with others. The College should also play an active role in the community and the region as a multifaceted learning resource.

Fort Lewis College has chosen to pursue its mission via its historic role as an undergraduate, public, four-year liberal arts college. Because of the liberal arts focus, we require common general studies courses which include the fine arts, humanities, social sciences, mathematics, and the natural sciences in addition to more specialized junior and senior courses offered through the various majors. Our curriculum is designed both to ensure that students understand the values and assumptions implicit in their major fields of study and to prepare them for a rapidly changing world.

The College's first obligation is to create a personalized learning environment in which faculty and staff are accessible to all of its students. Therefore excellence in classroom teaching is our first priority. We are committed to hiring experienced faculty and professional staff dedicated to teaching and to working directly with students. The College also supports and encourages research, scholarly inquiry and creative performance by its faculty in order to enhance their work with students and the students' own work. We will continue to acquire the resources necessary to fulfill our primary mission.

It is essential to Fort Lewis College's mission that we contribute to the cultural diversity and economic development of the Four Corners region. To play an active role in the community, state and region, we must ensure that our programs fulfill the needs of our student population and the residents of our area. Our ethnic and regional heritage must be reflected in the make-up of our student body, in our special programs, and in our curriculum. Because of terms established in the original charter of the College, we have an honored tradition of providing tuition-free education for American Indian students. The College will continue to enhance educational opportunities for other minority groups, especially those originating in the Southwest. While a large percentage of our students should continue to come from Colorado, the College will encourage enrollment of students from other regions and from abroad in order to provide a diversified student body.

## **EDUCATIONAL GOALS**

The various curricula are designed to provide a broad cultural background that includes a critical awareness of the human heritage, an understanding of the requirements and opportunities of present and future, and an appreciation of the complexities and resources of the human mind and personality. From this, the College believes that students will best learn how to identify and make use of their unique abilities and training.

In this context, the College recognizes the primary importance of, and provides wide opportunities for, preparation for a career -- whether it be in the arts, in business, in education, in the sciences, or in any of the many ways a student may desire to serve mankind and self.

One of the goals of the liberal arts at Fort Lewis College is scholarly attainment through creative work, performance and research, communicated by written papers and public presentations. Encouraging skillful oral, written or artistic expression is the responsibility of all faculty.

The goals are broadly the same, although individual results are often quite different for each student, whether he or she represents the majority or minority sector of our culture. Philosophically, historically and by virtue of its location, Fort Lewis College has, therefore, a clear responsibility to develop the best possible undergraduate education for all students, including those of American Indian and Spanish-American background.

## **ENROLLMENT**

Fort Lewis' commitment to providing students with a quality undergraduate education has been acknowledged through the College's steady growth during the past 30 years. In 1962, about 720 students were enrolled at the College. In 1992-93, enrollment was 4,096. The College continues to maintain the personal, quality educational experience that only a small undergraduate school like Fort Lewis can provide.

## **HISTORY**

Fort Lewis College is named for Fort Lewis, a U.S. Army Post established in 1878 at Pagosa Springs, Colorado. Two years later, the military post moved to Hesperus, Colorado, a location more central to Indian settlements and pioneer communities. The

U.S. government abandoned the site as a military post in 1891, and in its stead, established Fort Lewis as a school offering free education to Native American students.

By 1911, Congress had deeded the Hesperus site to the State of Colorado, which then established a high school of agriculture under the supervision of the State Board of Agriculture. The school began to offer some college-level courses in 1925, and in 1933, Fort Lewis began to offer college courses exclusively. In 1948, Fort Lewis was officially designated a junior college with its own president.

Fort Lewis moved to the Durango campus in 1956. The first baccalaureate degrees were granted in 1964. And in 1986, Fort Lewis joined the Colorado State University System under the governance of the State Board of Agriculture. Colorado State University in Fort Collins and the University of Southern Colorado in Pueblo are sister institutions in the system.

Fort Lewis continues to honor its historic commitment to Native Americans by offering tuition scholarships to all qualified American Indians who meet admission requirements. It is the only college in Colorado to do so, as it has for more than 100 years.

## **LOCATION**

Fort Lewis College sits on a mesa-like terrace overlooking Durango and the 13,000-foot peaks of the La Plata Mountains. With a population of 12,700, Durango is the largest community in Southwest Colorado and serves as a hub of commercial activity for a regional population of about 50,000. Durango's elevation is 6,500 feet; it's surrounded by the Rocky Mountains, yet it's only 50 miles away from the deserts of the Southwest. Durango is about 350 miles from Denver, 200 miles from Albuquerque and 450 miles from Phoenix.

## **THE CAMPUS**

The distinctive architecture of custom stonework found on the Fort Lewis campus reflects the heritage of Southwest Colorado's Anasazi Indians, whose ancient pueblo ruins can be found throughout the region. The architecture is set off by the backdrop of the rugged San Juan Mountains, creating a learning environment of incomparable natural beauty.

Academic activities are centered in Hesperus Hall, the Fine Arts Building, the John F. Reed Library, the Theatre Building, Dan Noble Hall and the academic

wing of Berndt Hall. The College Union Building houses a cafeteria, snack bar, post office, bookstore, lounge and meeting rooms, as well as Student Government offices, the student newspaper, public radio station, and the Hispanic Student Center.

The on-campus Housing Office, Financial Aid Office and the Intercultural Center are in Miller Student Center.

About 1,580 students live on campus in 14 residence halls and two apartment complexes. Physical education and recreation facilities include a large gymnasium, indoor swimming pool, football stadium, tennis courts, softball fields, track, nature trails, and, nearby, cross-country ski tracks in winter and golf course in summer.

### TRIMESTER CALENDAR

Fort Lewis College operates on a modified trimester plan. The fall and winter trimesters are each approximately 15 weeks long. The third trimester also is 15 weeks long but is divided into three five-week sessions.

The fall trimester generally begins in early September and ends in mid-December; the winter trimester begins in January and ends in late April. The three five-week summer sessions extend from about the first of May through early August.

Students who choose to attend all three trimesters can graduate in as few as two and two-thirds calendar years. Those who attend only during the winter and fall trimesters graduate in the traditional four years and often find the long summer a valuable time for employment as well as for a pleasant vacation period.

### THE FACULTY

Fort Lewis recruits its faculty from the best colleges and universities in the country. Of the 176 faculty members on campus, 87 percent hold the highest degree attainable (doctorates, masters of fine arts) in their disciplines. Many of the Fort Lewis faculty have developed national reputations for excellence in teaching, research and curriculum development.

Because Fort Lewis offers only undergraduate programs, faculty members have the time to concentrate on their teaching and to give their students one-on-one attention when needed.

### SCHOLASTIC HONOR SOCIETIES

Scholastic honor societies maintain chapters at the College to recognize outstanding academic achievement by Fort Lewis students. Among them are the following:

**Beta Beta Beta** - The Tri-Beta Biological Honor Society was established in 1922 with the goal of encouraging scholarly activity in undergraduate biology education. The Fort Lewis College Chapter, Epsilon Upsilon is among the many chapters that are established nationwide. Membership in the society offers students opportunities to conduct undergraduate research, present findings at local and national meetings, and publish in the Tri-Beta scholarly journal. Tri-Beta activities include trips to scientific laboratories and natural field sites, and well as volunteer work in conservation biology.

**Beta Gamma Sigma** - The National Honor Society in Business and Management. Founded in 1913, Beta Gamma Sigma encourages and rewards scholarship, promotes advancement of education in business and fosters integrity in the conduct of business operations.

**Kappa Mu Epsilon** - Mathematics Honor Society. Kappa Mu Epsilon was founded in 1931 to further the interests of mathematics in schools which place their primary interests in undergraduate programs; to educate the undergraduate on the importance mathematics has played in western civilization; to develop an appreciation for mathematics' demand for logical and rigorous thought; to recognize outstanding achievement in mathematics; and to educate members on advances made in the field.

**Native American Honor Society** - The Fort Lewis College Native American Honor Society was established in 1982 to promote and recognize outstanding scholarship among Native American students on campus. All activities are directed toward public service. Membership is open to junior and senior Native American students with cumulative grade point averages of 3.0 or better.

**Phi Alpha Theta** - The national history honor society recognizes outstanding scholarship among history students. The Fort Lewis chapter was established in 1964-65 and is the college's oldest, continuously active honor society.

**Phi Kappa Phi** - This honor society is the oldest and largest national honor society which recognizes and encourages superior scholarship in all academic

disciplines. Established in 1897, Phi Kappa Phi selects members who meet high academic standards from throughout the college community. Students who have grade point averages in the upper 5 percent during their junior year and the upper 10 percent during their senior year are invited to join the society.

Fort Lewis College was awarded a chapter of Phi Kappa Phi in 1992, thus recognizing the quality of the college's faculty, students and academic programs.

**Phi Sigma Iota (Chapter Chi)** - This honor society for foreign language students recognizes outstanding scholarship for those who have at least a 3.0 cumulative grade point average, who have completed at least one junior-level course and who rank in the highest 35 percent of their class in general scholarship.

**Psi Chi** - The Psychology Honor Society recognizes outstanding scholarship for students majoring in psychology. The society encourages the advancement of psychology through observation, logical thinking and critical - yet tolerant - openmindedness and to continue the effort of understanding human nature.

**Sigma Delta Pi (Chapter Kappa Tau)** - The Hispanic Honor Society. Sigma Delta Pi honors students who seek and attain excellence in the study of Spanish, the language, literature and culture of Spanish-speaking peoples, and who make the Hispanic contribution to modern culture better known to English-speaking peoples. The honor society also encourages better understanding of the Hispanic culture among college students and fosters friendly relations and mutual respect between Hispanic- and English-speaking nations.

**Sigma Pi Sigma** - Sigma Pi Sigma was founded in 1921 and is the only national physics honor society. It is a fully recognized honor society within the Society of Physics Students, a member of the Association of College Honor Societies, and is an affiliated Society of the American Institute of Physics. Sigma Pi Sigma exists to foster interest in physics at the undergraduate and graduate levels.

**Sigma Tau Delta (Chapter Kappa Psi)** - The English Honor Society. Its purpose is to honor undergraduates, graduates and scholars in academia, as well as professional writers who have realized accomplishments in linguistics or literary realms of the English language. Fort Lewis College students who are eligible for membership are those who have successfully completed at least 45 hours of course work with a cumulative grade point of at least 3.25.

**Sigma Xi** - Sigma Xi was founded in 1886 at Cornell University as an honor society for scientists, engineers and mathematicians. It rewards excellence in scientific research and encourages a sense of companionship and cooperation among scientists in all fields.

## ACCREDITATION

The College is accredited by the North Central Association of Colleges and Schools. In addition, the School of Business Administration is accredited by the American Assembly of Collegiate Schools of Business. The Chemistry Department offers a bachelor of science degree which is accredited by the American Chemical Society; and the Music Department is accredited by the National Association of Schools of Music. Fort Lewis College also recently joined by invitation the American Council of Learned Societies.

## ASSESSMENT EFFORTS TO ENSURE QUALITY EDUCATION FOR STUDENTS

In order to improve instruction and prove that it meets its educational goals, the College regularly assesses students' progress. The College assesses the results of college-wide and departmental programs by using surveys, term papers, senior theses, its own instruments, and nationally standardized tests such as Graduate Record Exams to measure the quality and success of its programs. The College requires all freshmen and seniors to participate in assessments to help the College improve its academic programs and teaching methods. Many departments require their seniors to demonstrate their writing, thinking and values as well as expertise in their major.

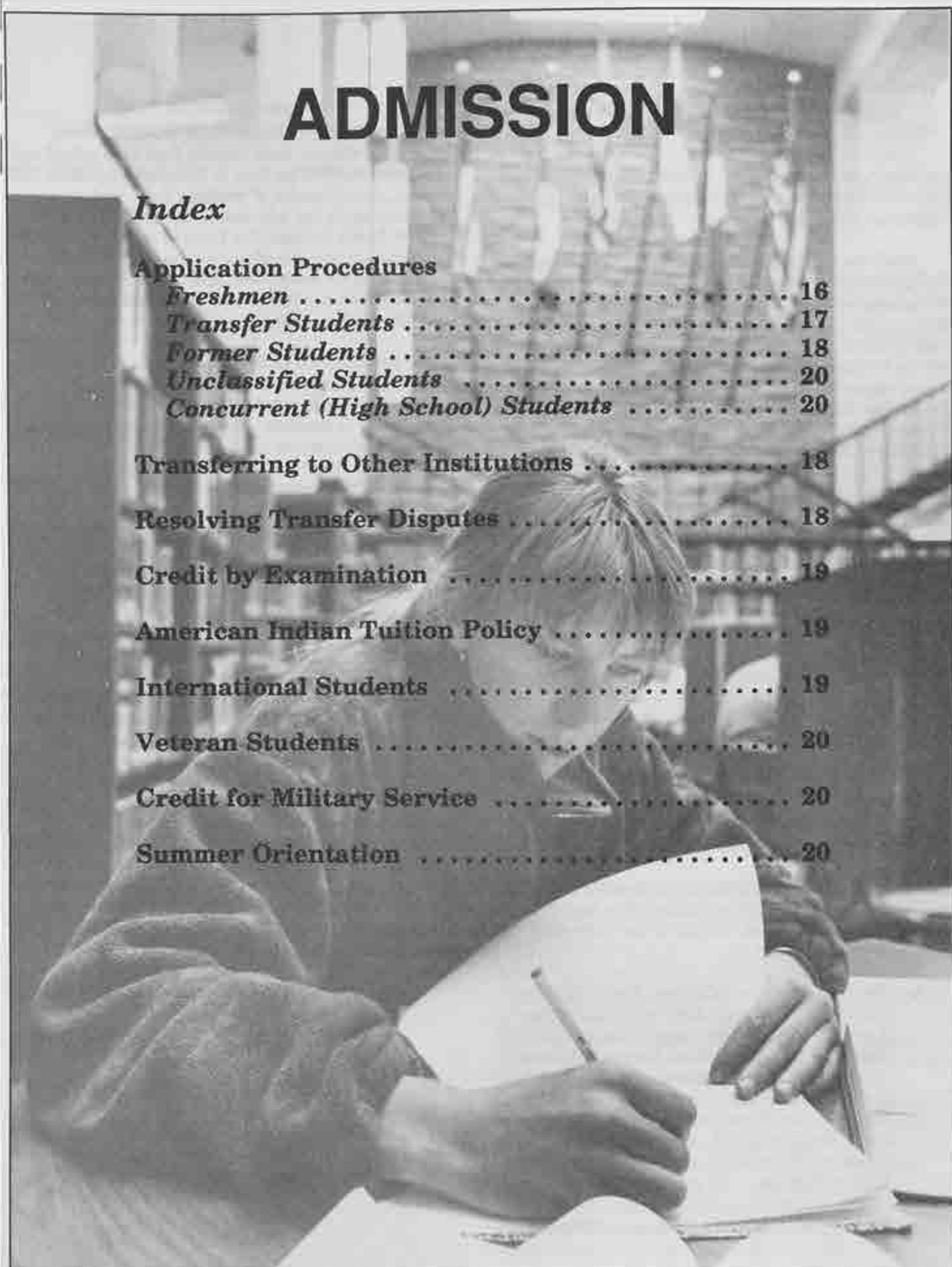




# ADMISSION

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## APPLICATION

Fort Lewis College adheres to the standards established by the Colorado Commission on Higher Education (CCHE).

Students may apply for admission to Fort Lewis College any time after completion of their junior year of high school. An application should be submitted as early as possible and **at least one month prior to registration**. The required application form usually will be available at the office of any Colorado high school counselor. It can always be obtained from the Admission and Development Office, Fort Lewis College. To request an application, call 1-303-247-7184. The FAX number is 303-247-7179.

Students desiring on-campus housing should apply early and must be accepted by the College before applying for on-campus housing.

## STUDENT CLASSIFICATIONS

### FRESHMEN

High school students should:

1. Obtain an application blank from their high school counselor or from Fort Lewis College.
2. Fill out the application for admission and mail it with the \$20 non-refundable application fee to the Admission and Development Office **at least one month prior to registration**.
3. Request an official transcript from their high school principal or counselor. (This transcript is to be forwarded directly to the College by the high school.)
4. Take the **American College Test (ACT)** or **Scholastic Aptitude Test (SAT)** and have the results sent to Fort Lewis College. It is suggested that one of these tests be taken in the spring of the junior year of high school. Complete information regarding these tests may be secured from the student's high school counselor or principal, or by writing to: Registration Department, American College Testing Program, P.O. Box 414, Iowa City, IA 52240, or Registration Department, Scholastic Aptitude Test, Box 592, Princeton, NJ 08541.

The entering freshman class is selected from applicants who, by their records from high school and the American College Test or Scholastic Aptitude Test results, show promise of profiting from, and contributing to, the educational opportunities offered by Fort Lewis College. The Dean of Admission and Development and his advisors base their judgment on the high school record, the rank in class, and the ACT/SAT test results, as well as recommendations and other pertinent information.

Those admitted to Fort Lewis College should be high school graduates who have completed 15 acceptable secondary school units with preference being given to students who have followed a **strong college preparatory** program.

The College recognizes the importance of advising high school students, their counselors and instructors sufficiently early so that potential college students can prepare adequately for a successful college career. Therefore, the College has determined high school coursework most useful to college-bound students. Students should understand, however, that the more nearly their curricula meet the recommendations, the better prepared they will be for college.

The annotated chart on the next page presents **RECOMMENDED** coursework for admission to Fort Lewis College. Both prospective students and their counselors should realize that, while specific courses are important for college preparation, of perhaps even greater importance is the manner in which the courses are presented. Studies indicate that even students who take appropriate college preparatory courses often are unprepared for the quality and quantity of reading and writing expected of them in college. **The well-prepared student will be able to read, write and calculate reasonably well before entering college.**

### RECOMMENDED Coursework for Prospective Students

ACADEMIC AREA	NUMBER OF UNITS
English (including Speech)	4
Mathematics	2
Natural Science	2
Social Science	2
Modern Language	Encouraged
Computer Science	Encouraged
Academic Units <sup>3</sup>	11
Total Units <sup>3</sup>	15

These recommendations are based on four years of high school.

<sup>1</sup> The work in English should emphasize both reading and writing. Past experience indicates that college freshmen are unprepared for the quantity of both expected of them.

<sup>2</sup> College preparatory math should include algebra and geometry and, when a third year is taken, Algebra II.

<sup>3</sup> A unit is accrued when a student takes a course five days a week for one academic year. An academic unit is a unit earned in English, modern languages, mathematics, natural science or social science.

Students who have not graduated from high school but who have satisfactorily completed a GED program with a minimum score of 45 overall and no less than 35 in each subject area may be admitted as degree-pursuing students if appropriate ACT or SAT scores are attained.

#### Transfer Students

College students wishing to transfer to Fort Lewis College should:

1. Request an application form from the Admission and Development Office.
2. Complete the application and send it to the Admission and Development Office **at least one month prior to registration** with a \$15 non-refundable application fee. Students applying late may be assessed a late application fee.

3. Request an official transcript from each college or university attended be forwarded to Fort Lewis College to the attention of the Admission and Development Office. Generally, ACT/SAT test results are not required of transfer students who have earned more than 12 semester college credits.

4. If less than twelve semester college credits have been completed, students should also have a high school transcript and ACT or SAT results forwarded to the Admission and Development Office.

Applicants with a cumulative scholastic average of C and honorable separation from other colleges and universities may be admitted at the beginning of any term. College course credits that fulfill the requirements for a degree program at Fort Lewis College ordinarily will be acceptable for transfer if grades are C or better. A student with less than 30 semester credits may be reviewed on the high school record if deemed appropriate.

Normally, a maximum of 72 semester credits or equivalent from a junior college may be applied toward a degree. Credit in courses from junior colleges will not be accepted as upper-division work at Fort Lewis College. Also, if a student attends a junior college after attending a senior college or university, a maximum of only 72 semester hours from all schools may be applied toward a degree. Efforts are made to bring college transfer students into Fort Lewis without loss of previously earned credits.

#### COOPERATION WITH OTHER INSTITUTIONS

##### Transferring to Fort Lewis College from Other Institutions:

Fort Lewis College has an articulation agreement with the Colorado Community College and Occupational Education System which includes the 15 community and junior colleges in Colorado. Fort Lewis accepts the community/junior college general education common core curriculum toward the general studies requirements at Fort Lewis College if the student is a core completer from one of the Colorado two-year colleges. Specific transfer guides are in place with these colleges. Copies of these guides are available in the Reference Section of the Fort Lewis library and at the various two-year colleges in Colorado. Fort Lewis also has articulation agreements and transfer guides with San Juan College and Navajo Community College in New Mexico.

The transfer grade point average is incorporated into the Fort Lewis College cumulative grade point average. All transfer hours attempted will be included in the cumulative grade point average. Transferable academic courses completed with grades of C- or better are generally accepted in transfer. Grades of D or lower will not be transferred.

Fort Lewis College accepts transfer students in geology from the University of Southern Colorado. By following the prescribed curriculum for two years, students are assured that they can transfer to Fort Lewis as junior geology majors.

#### **Transferring from Fort Lewis College to Other Institutions:**

In cooperation with Colorado State University, Fort Lewis College offers programs in agriculture, forestry, and engineering. In forestry and engineering, a student may take two years of work at Fort Lewis. If the student follows the prescribed program and maintains a 2.5 average, the work will be transferred as a block to Colorado State University at the beginning of the junior year. A grade point average of 2.0 is required for students planning to transfer to CSU under the Guaranteed Transfer Program in agriculture. For more information about the above programs, see the "Programs of Study" section beginning on Page 55 of this catalog.

A transfer agreement in forestry between Fort Lewis College and Northern Arizona University is also in effect.

Engineering agreements also have been established in cooperation with the Colorado School of Mines, the University of New Mexico, the University of Southern Colorado and the University of Colorado at Boulder. By taking a prescribed block of courses at Fort Lewis College in the first two years, a student can transfer to either of these institutions with junior standing if all requirements are met. These programs are, of course, transferable to other schools as well, on the basis of a course-by-course evaluation.

In engineering, Fort Lewis also offers a 3-2 cooperative program in which the student spends three years at Fort Lewis followed by two years at Colorado State University. At the conclusion of the program, the student receives a Fort Lewis College degree in mathematics and a degree from Colorado State University in engineering.

#### **Procedure for Resolution of Student Disputes Regarding Student Transfer Between Colorado Public Institutions:**

Student transfer disputes will be resolved using the following appeals process:

- A. Students must file a complaint within 15 days of receiving their transcript evaluation by writing the Records Office at Fort Lewis College. The decisions made in the transcript evaluation will be binding if the student fails to file a complaint within this time frame.
- B. If the issue cannot be resolved between the student and the institutional staff, the student may appeal in writing to the sending institution. The campus presidents from the sending and receiving institutions will attempt to resolve the issue within 30 days from receipt of the student appeal. Agreement between the sending and receiving institutions will constitute a final and binding decision which the receiving institution will communicate to the student.

An ongoing registration period during the summer is available to allow transfer students an opportunity to register early for fall classes. Information regarding this special program is mailed to all accepted transfer students in the spring.

#### **Former Students**

A former student is one who registered for classes at Fort Lewis College at any time in the past but has withdrawn and/or has not been registered during the last two consecutive trimesters. Students in this category must petition to resume studies. Students who have been under academic suspension must also petition to resume studies. If the student has attended other collegiate institutions in the interim, complete transcripts of all work taken must be submitted from each institution attended. Petitions should be submitted to the Office of Admission and Development, at least **one month** prior to the term a student wants to enroll. Students who apply late may be assessed a late application fee.

## Credit By Examination

Credit for some courses may be earned through special examination. This procedure is limited to regular catalog courses, and may not apply to such courses, as Special Topics or Independent Study.

The student should apply to the appropriate department chair, who may assign a faculty member to administer the exam. The chair will assure that the reasons for the course challenge are legitimate, and, if the course is an advanced one, that the student has the necessary prerequisites.

A student may not take a special exam for a course which he or she has already taken in the regular fashion, regardless of the grade earned previously.

The fee for credit by examination is listed in the current year Tuition and Fee Schedule, and must be paid before the exam is given.

College credit also is awarded for exceptional performance on tests administered by three external testing agencies.

1. Fort Lewis College participates in the Advanced Placement Program of the College Entrance Examination Board. Under this program, outstanding secondary school students may take certain college-level courses in their own high schools. Satisfactory scores on an examination administered and graded by the College Board are forwarded to Fort Lewis and may serve as a basis for credit and/or advanced placement. For additional information students should consult their high school counselor or write to the College Entrance Examination Board, Box 592, Princeton, NJ 08550.
2. Superior scores on the ACT Assessment Battery also serve as a basis for credit and/or advanced placement. The decision of the College is final in awarding credit by examination. For further information, contact the Admission and Development Office at (303) 247-7184.
3. Fort Lewis College has adopted a policy whereby up to a maximum of 24 credits may be granted on the basis of appropriate scores on the General Examinations of the College Level Examination Program. Students who obtain at least a standard score of 500 or the

50th percentile in natural sciences, humanities, social sciences, history and mathematics will receive 6 semester credits for each examination provided the following stipulations are met:

- The examinations must be taken prior to the end of the student's first year at college.
- No credit will be granted if college coursework has been taken that covers much of the area covered by the examinations.

Fort Lewis College also grants additional credits on the basis of appropriate results of the Subject Matter Examinations of the College Level Examination Program. Further information may be obtained from the Learning Assistance Center or from C.L.E.P., Box 1821, Princeton, NJ 08540.

## American Indian Students

Fort Lewis College, offers as a matter of policy and in compliance with state law, Indian students, as defined below, full-tuition scholarships to attend the institution.

Fort Lewis College adheres to the following definition: "The term Indian shall include all persons of Indian descent who are members of any recognized Indian tribe now under federal jurisdiction, and all persons who are descendants of such members who were, on June 1, 1934, residing within the present boundaries of any Indian reservation, and shall further include all persons of one-half or more Indian blood. Eskimos and other aboriginal people of Alaska shall be considered Indians." (United States Code, 1964 Edition, Vol. 6, Title 25, Chapter 14, Section 479, Page 4, 897.)

The College will review all applications from American Indian students to determine if they qualify for the full-tuition scholarship. If an American Indian qualifies according to an appropriate tribal certification and admission standards, such student will be offered the full-tuition scholarship.

## International Students

Fort Lewis College is authorized under federal law to enroll non-immigrant alien students. In general, the same qualifications for admission are required for international students as for American applicants. A brief statement concerning the admission policies for foreign applicants may be obtained from the Admission and Development Office.

### **Unclassified Students**

Under special circumstances students are permitted to register without having been admitted formally to the College. Usually these are adults whose objectives may be realized by taking a few courses rather than by pursuing a degree. The privilege of continuing may be withdrawn at any time when the accomplishments of a student are not deemed satisfactory. Satisfactory performance as an unclassified student may qualify such a student to apply for regular admission. Unclassified students seeking regular admission must contact the Admission and Development Office **at least one month prior to the term they want to enroll**, as to the procedure for establishing regular status. Unclassified students may need to seek permission from professors to enroll in classes.

### **Veteran Students**

Fort Lewis College is authorized by the state approving agency according to federal law to educate students receiving benefits through the Veterans Administration.

### **Credit for Military Service**

Veterans often are allowed credit for previous education. Credit for military experience also may be allowed according to the American Council on Education recommendations. The D.D. 214 form and other relevant information should be submitted to the Records Office at the College.

### **Concurrent Students**

Superior high school seniors who attend a high school within commuting distance of the campus may be admitted as part-time freshmen in order to take one or two courses. Concurrent students who wish to be considered for regular admission to the College must meet the same criteria and submit the same application as first-time freshmen students.

Students wishing to participate in this program should obtain further information from the Admission and Development Office or their high school counselor.

### **Summer Orientation Programs**

During the summer months, Fort Lewis College conducts several freshman orientation programs for new freshmen and their parents. The orientations provide an opportunity to register early, make new friends, and meet faculty and staff. Information regarding these special programs is mailed to all accepted freshmen during the spring.

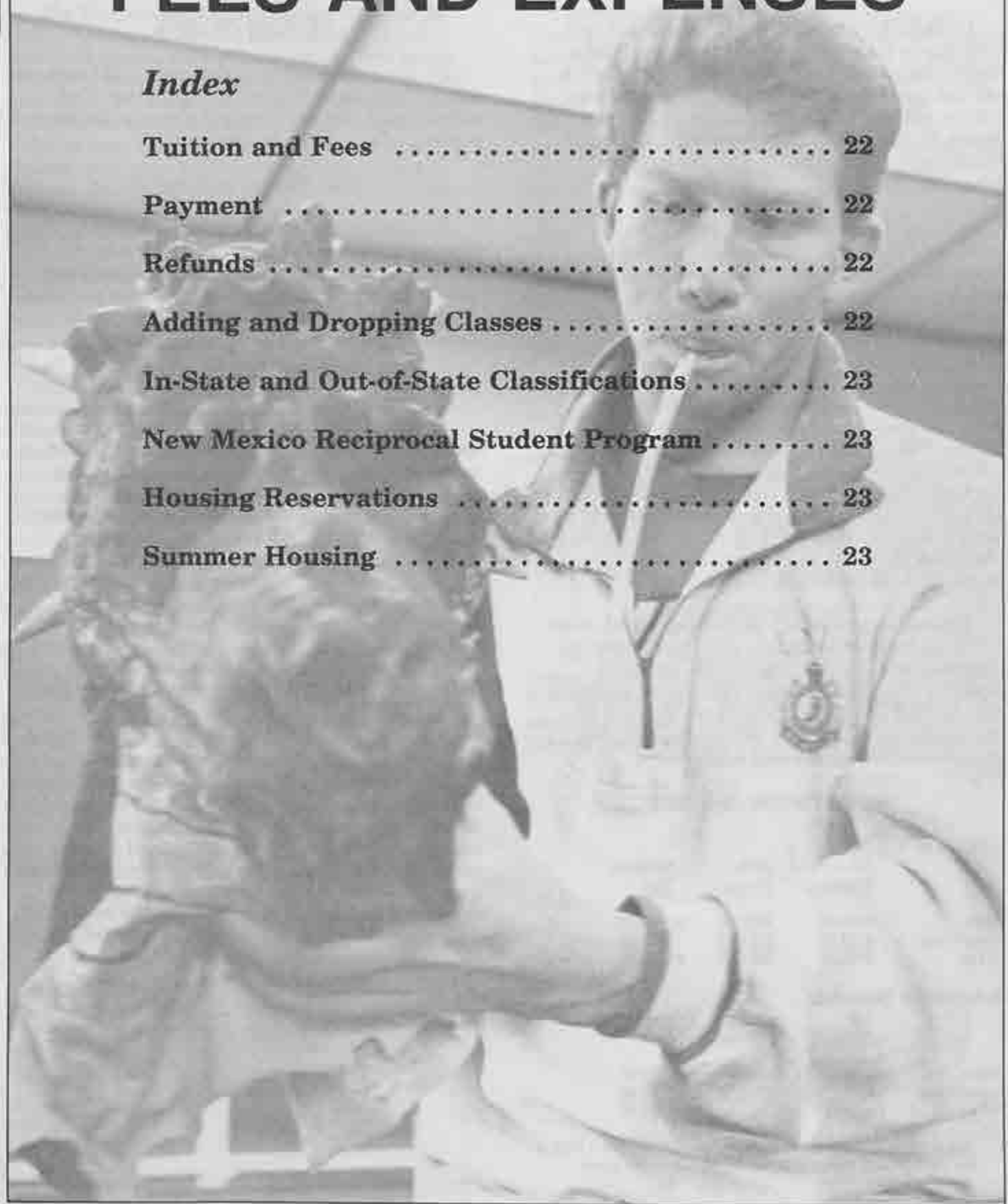
**ANY QUESTIONS ABOUT ADMISSION  
NOT ANSWERED HERE SHOULD BE  
ADDRESSED TO:**

**OFFICE OF ADMISSION AND DEVELOPMENT  
FORT LEWIS COLLEGE  
1000 RIM DRIVE  
DURANGO, COLORADO 81301-3999  
Phone 303-247-7184  
FAX # 303-247-7179**

# FEES AND EXPENSES

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## FEES AND EXPENSES

Costs for Fort Lewis College students will vary according to the number of trimesters they attend. Specific costs are published annually in the Tuition and Fee Schedule for the academic year and in the Tuition and Fee Schedule for the spring trimester. For details, please consult the appropriate Tuition and Fee Schedule, which may be obtained from the Admission Office.

The Fort Lewis College Foundation has established a monthly Prepayment Budget Installment Program for payment of tuition, fees and on-campus room and board. For additional information, call and ask for Student Alternative Financing at 303-247-7184.

A student, by the act of registration, automatically incurs a financial obligation to the College. This obligation must be satisfied by payment to the College. Those students registering for 8 credits or less will be charged on a per-credit-hour basis. Students who take over 8 credits, up to and including 18, during either the fall or winter trimester will be charged full tuition and fees. Students registering for more than 18 credits will be assessed an additional charge on a per-credit-hour basis.

Personal expenses such as clothing, travel, social activities, books and supplies, will depend upon the individual and are in addition to the scheduled expenses. The State Board of Agriculture, governing body for Fort Lewis College, reserves the right to change any fee at any time without formal notice whenever conditions warrant such change.

### 1993-94 TUITION AND FEES\*

#### In-State Students:

	Fall Trimester	Winter Trimester	Academic Year
Tuition	\$725.00	\$725.00	\$1,450.00
College Fees	<u>\$163.50</u>	<u>\$163.50</u>	<u>\$327.00</u>
<b>TOTAL</b>	<b>\$888.50</b>	<b>\$888.50</b>	<b>\$1,777.00</b>

#### Out-of-State Students:

	Fall Trimester	Winter Trimester	Academic Year
Tuition	\$3,099.00	\$3,099.00	\$6,198.00
College Fees	<u>\$163.50</u>	<u>\$163.50</u>	<u>\$327.00</u>
<b>TOTAL</b>	<b>\$3,262.50</b>	<b>\$3,262.50</b>	<b>\$6,525.00</b>

\* The tuition and fees listed here are approximate. Obtain a copy of the 1993-94 FLC Tuition and Fee Brochure for exact prices.

### PAYMENT OF FEES

All charges, including tuition, room and board, are due and payable at the time of registration. Only under special circumstances will a request for delayed payment of any charge be considered.

### DELINQUENT ACCOUNTS

It is College policy that students who fail to pay financial obligations when due are subject to termination of student status at Fort Lewis College. The College will not register a student, nor provide a transcript to any student or former student, with a past-due financial obligation to the College.

### REFUND OF TUITION AND FEES

A student withdrawing from college by the specified withdrawal date may obtain a 90 percent refund of tuition and refundable student fees only. (See Schedule of Courses for each term for the appropriate withdrawal date.) No refund will be made after the specified withdrawal date. A student dismissed or suspended from college as a result of official college action will automatically forfeit all tuition and fees. The Facilities Use fee is non-refundable.

### TUITION ADJUSTMENT: ADDING AND DROPPING CLASSES

A student is permitted to change course loads by adding or dropping courses with no grade record during a designated period of time at the beginning of each trimester. A student's tuition and fees will be adjusted according to the net number of credits for which he or she is registered on the final date for adding courses. If an exception is made which allows a student to add or drop classes subsequent to the designated period, tuition and fees will be assessed for the net credits added, but will not be adjusted for the net credits dropped. The class-drop process may not be used to withdraw from college.



## **CLASSIFICATION FOR TUITION PURPOSES**

The Tuition Classification Statute (Chapter 23, Article 7, Colorado Revised Statutes of 1973, as amended) governs the tuition decisions. Two factors must be present to establish domicile. One is physical presence in the state of Colorado for 12 consecutive months prior to the first day of class for the term for which in-state status is desired. Another is the student must prove intent to make Colorado his or her true, fixed, permanent home. Both requirements must be met to establish domicile and begin the 12-month consecutive period.

The tuition classification of new students is determined from information supplied on the application for admission to the College. The student may petition this decision.

Petitions for In-State Tuition Classification and additional information are available at the Records Office or the Admission Office. Petitions must be submitted to the Records Office by the first day of classes for the term for which the student seeks reclassification. Late petitions will not be considered until the next term. For a timely review of the petition it should be submitted at least one month but not more than three months before the beginning of the term in order to be classified in-state before registration and payment of fees.

### **New Mexico Reciprocal Student Program**

The Colorado Commission on Higher Education and the New Mexico Board of Educational Finance have signed an agreement allowing a limited number of selected New Mexico resident students, normally from San Juan County, to enroll at Fort Lewis College at the in-state rates. Each year a fixed number of students will be allocated to Fort Lewis College under this program. For details, consult the Admission and Development Office or the Records Office.

## **HOUSING RESERVATIONS**

Rooms in residence halls and apartments are reserved, if space is available, upon receipt of a signed contract and a \$100 security deposit. This deposit and contract will reserve accommodations for the fall and winter trimesters of each academic year (eight months), or the remaining portion thereof if the entering date occurs after the opening date of the fall trimester. The \$100 deposit, less any damages or obligations owed the College, will be returned approximately sixty (60) days after the close of the winter trimester unless the student has applied for the following trimester, in which case the security deposit will be carried over and no additional deposit will be required. For details of the refund policy for room and board charges, consult the On-Campus Housing Office.

Residents living in the apartment complexes will be permitted to remain in their units during official college vacation periods provided they will be continuing residence during the eight-month contract period. College residence halls are closed during official vacation periods. Residents withdrawing from school and terminating occupancy at the end of the fall or winter trimester must vacate residency prior to the last calendar date of the particular trimester.

## **SUMMER HOUSING**

The College provides on-campus housing in residence halls and apartments during the summer. A \$100 security deposit is required when making a housing application for the summer months. For more information, contact the On-Campus Housing Office.



# STUDENT FINANCIAL AID

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## FINANCIAL AID PROGRAMS

Fort Lewis College offers a complete student financial aid program of scholarships, grants, loans and student employment.

### Federally Funded Programs:

1. Pell Grant
2. Perkins Loans
3. Supplemental Educational Opportunity Grant (SEOG)
4. College Work-Study (CWS)
5. Stafford Loan (subsidized and unsubsidized)
6. PLUS Loan (Parent Loan)
7. Supplemental Loan to Students (SLS)

### State-Funded Programs:

1. Colorado Student Grant (CSG)
2. Colorado Scholars Program
  - a. Presidential Scholarship (entering freshmen only)
  - b. Continuing Student Scholarship (continuing FLC students only)
3. Athletic Award (men and women)
4. Colorado Work-Study Program
5. Colorado Student Incentive Grant (CSIG)
6. Paul Douglas Teacher Scholarship Program
7. Colorado Diversity Grant Program
8. Colorado Part-Time Student Grant

### Institutionally Funded Programs:

1. Fort Lewis College Foundation Scholarships and Awards
2. First-Generation College Student Award Program

All financial aid awards, with the exception of Athletic Awards, Presidential Scholarships, Continuing Student Scholarships, the unsubsidized Stafford Loan, the PLUS loan, the SLS Loan and some FLC Foundation scholarships/awards, are based on financial need.

Every effort is made to provide the best type of aid or combination of aid to assist students in completing a college education. All financial aid awards, however, are contingent upon availability of funds.

A number of other scholarships are available. Eligibility and selection criteria vary depending on donor instructions. Additional information may be obtained from the Office of Financial Aid.

## APPLICATION PROCEDURE

Students wishing to be considered for all programs of need-based student financial aid are urged to complete and submit the preferred Free Application For Federal Student Aid (FAFSA) application for financial aid.

The appropriate financial aid application may be obtained from the student's high school counselor or by request from the Office of Financial Aid, Fort Lewis College, Durango, Colorado 81301-3999.

The student's financial aid application for the 1994-95 school year (Summer 1994, Fall 1994, Winter 1995 and Summer 1995 Trimesters) should be completed and mailed as soon as possible after January 1, 1994, because most of the need-based aid programs are awarded on a highest need, first-come, first-served basis. Once the financial aid application file is complete in all respects, the determination of eligibility for various awards is made. Awards are offered from the various aid programs until all funds have been awarded. In order to allow adequate time for completion of the aid application file, it is strongly advised that the student mail the FAFSA **no later** than February 15, 1994. Students who complete their application later may still qualify for some need-based financial aid programs (Pell Grant and/or Stafford Loan), but limited campus-based aid, including work-study, will likely not be available.

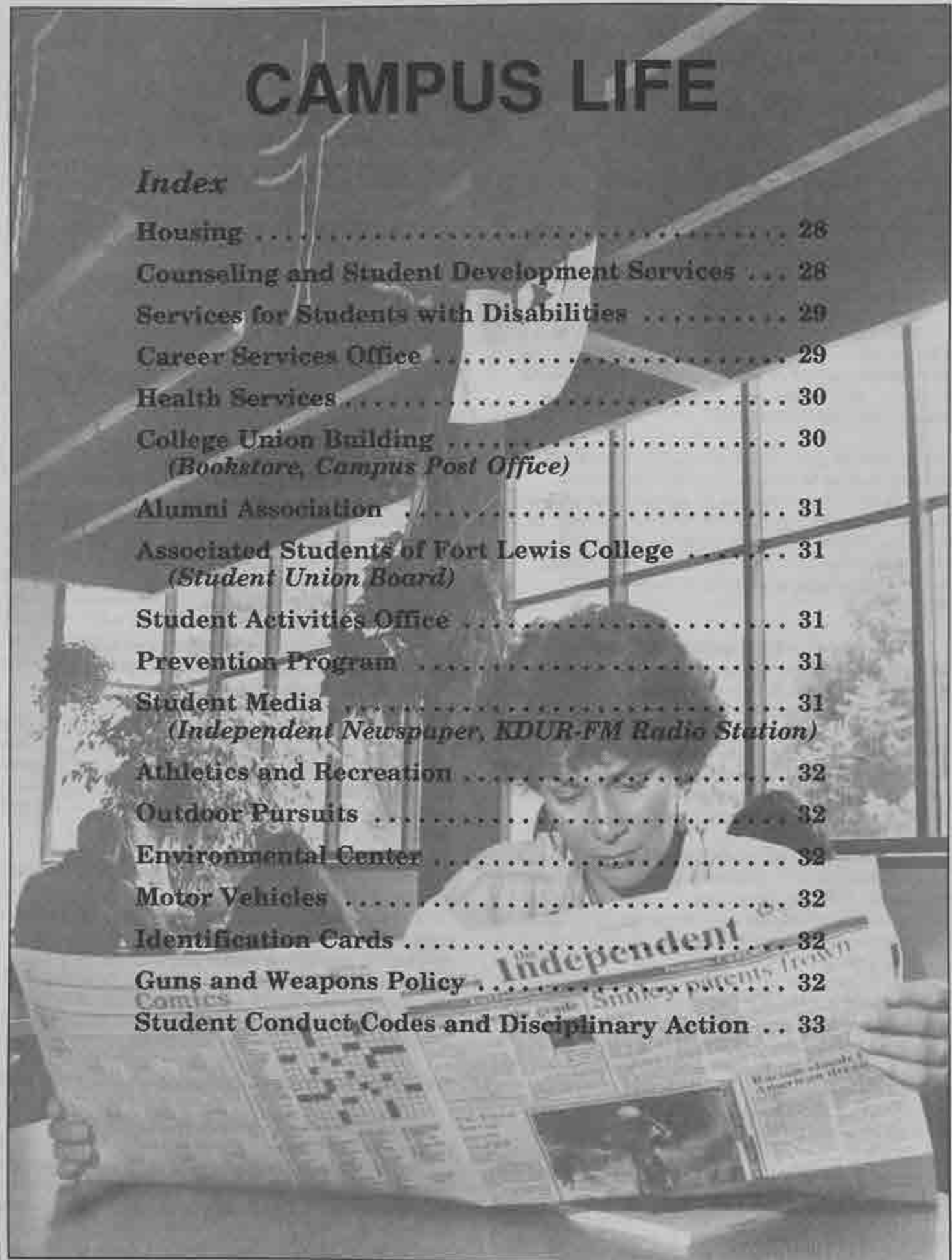
Application for the Stafford Loan (subsidized or unsubsidized) may be obtained from a participating lender (bank, credit union or savings and loan association). The loan application must then be completed by the student and submitted to the Office of Financial Aid for certification.

Complete consumer information relevant to all student services programs is available upon request. Requests for information should be directed to the appropriate office.

# CAMPUS LIFE

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## STUDENT SERVICES

Fort Lewis College provides the best possible social and physical environment to foster the academic, cultural and personal development of each student. The Office of the Dean of Student Affairs is responsible for the coordination of various student-services programs.

### Housing

About one-third of the student population at the College lives on-campus in one of 14 residence halls, the Centennial and Anasazi Apartments, and North Complex, all of which provide a pleasant physical environment for student life.

Important goals of the campus Residence Life System include to provide environments which support the values inherent in academic achievement, as well as gender, ethnic, and cultural diversity. In addition, to provide opportunities for social and recreational needs is also important, coupled with teaching developmental skills to promote good citizenship.

In keeping with these goals and tenants of student development theory, the College requires first-time freshmen, men and women, to live in campus residence halls for two academic year trimesters. Freshmen who are married/divorced, 21 years of age or older, veterans, or who will live with parents or relatives in the four corners area, may petition the Housing/Residence Life Office for exemption to the residency requirement.

New applicants for campus housing are assigned to a residence hall or apartment according to date of application (with required deposit). Students who cannot be accommodated on-campus can be assisted in finding off-campus housing through the Off-Campus Housing Office.

Students who wish to continue living on-campus the next academic year must reapply for housing. Spaces will be assigned on a first-come, first-served basis. Students may request roommates and room location from those available. Detailed information regarding this procedure is available in the On-Campus Housing Office.

When students receive their Permit to Register or acceptance by the College, they should then apply for housing. A \$100 deposit is required with the appropriate application. If space is available, the

student will be sent a notice of assignment or Housing Agreement. The Housing Agreement must be signed and returned to the Housing Office within the time specified on the agreement to ensure on-campus accommodations. The Housing Agreement covers both Fall and Winter Trimesters of an academic year.

Fort Lewis College has a traditional approach to residence-hall living. Resident students receive keys that permit them entrance to their halls and rooms. Residents are expected to live by the rules and regulations as outlined in the Housing Agreement, the Guide to Residence Living and the FLC Student Conduct Code.

The residence hall/apartments are staffed by Residence Directors and Resident Assistants (RAs), who are there to promote a pleasant home environment conducive to study. They are an added resource for students as they adjust to college living. The Student Services staff also provides social and educational activities on and off campus to foster personal growth and development.

All campus living is a learning experience, and the Fort Lewis College Residence Hall program is predicated on this principle. Our mission is carried out in an educationally responsible manner and is dedicated to providing healthy and relaxed places for all resident students. Fort Lewis College does not believe that such principles are best served through completely non-directive, open residence facilities.

### Off-Campus Housing

Off-Campus housing locator assistance is available through the Student Activities Office in the CUB. This service maintains a bulletin board in the CUB Lobby with up to date listings of rooms, houses, apartments and mobile homes available for rent and lists of persons looking for roommates. In addition, the office provides information pertinent to off-campus housing - maps, sample lease agreements, housing codes, zoning ordinances and roommate selection tips.

### Counseling and Student Development

Counseling services at Fort Lewis College are based on the philosophy that a student's personal/emotional development is an integral part of his/her intellectual development. The Counseling Center has a professional staff of counselors

committed to implementing this philosophy. The primary goals of the Counseling Center are: an academic support system to help students overcome obstacles in their academic programs; a counseling service to help students cope with crises or other immediate needs in their lives; an educational service to promote positive personal development; and finally, a support and information/referral service.

Personal counseling is confidential and is offered through individual and small group counseling. It is intended to be supportive to assist students in solving their problems of a short-term nature. The Center does not offer long-term or intensive psychological treatment. If needed, students can be referred to the Health Center, appropriate mental health agencies or practicing professionals in the community.

### Services for Students With Disabilities

Fort Lewis College provides a variety of services for students with disabilities. The Learning Assistance Center is the primary source for assistance for students with disabilities. In addition to providing tutoring assistance and academic support, the Director of the Center and the Coordinator of Services for Students with Disabilities act as liaisons to faculty and other college departments.

According to assessed needs, students may be given untimed tests, have tests read to them, use a spelling dictionary or word processor during essay tests, or be given other considerations as needed. Should a class be inaccessible, students may request to have the class location changed.

Wheelchair-accessible housing is available on campus. Students with disabilities should notify the Housing/Residence Life Office if they need special consideration for on-campus housing.

To ensure that their needs are met, students with disabilities are encouraged to notify Fort Lewis College of their disabilities by indicating any handicaps on their admission application forms, or by writing a letter to the Admission Office. Any relevant diagnostic information should be forwarded to the Learning Assistance Center and is kept confidential.

The Admission and Development Office is located in the former residence of the College President which was built in 1957. The following procedures will ensure accessibility for all students to the Admission and Development Office.

1. A door bell (labeled for handicapped use) was placed on the downstairs door which is located by handicapped parking spaces. If a person in a wheelchair or with another physical disability rings that bell, they are met and assistance is provided for them to gain access into the Admission and Development building. Additionally, our telephone number of 303-247-7184 is posted near the bell.
2. A representative from the Admission and Development Office will meet an individual in other offices and/or building (i.e., Miller Student Center, College Union Building, etc.).
3. We have worked with our volunteer tour guides to map out the best possible routes to take individuals with special needs to requests on a tour of the campus.
4. Since the Admission and Development Office has a home visit program, if requested, we would gladly take information to an individual's home (locally) or if we know we will be doing high school visits in other communities besides Durango we are receptive to visiting a person's home.

For more information about services for students with disabilities, contact the Learning Assistance Center or the Office of Services for Students with Disabilities.

### Career Services

The Career Services Office at Fort Lewis College offers many services to students. Even freshmen and sophomores can obtain assistance with career planning concerns such as selecting a major, finding a career field to pursue, or learning how values, interests and skills impact their choice.

Vocational assessments are available to help the student learn about occupations as they are related to the student's interests, values and skills. Included is the computer guidance system, SIGI PLUS. This system allows students to work on self-assessment and learn about careers.

Juniors and seniors can gain help with job-search-related topics such as résumé writing or interview techniques. These skills are helpful to the student who is seeking a full-time permanent job or one who is looking for a part-time job or an internship.

Seniors can also participate in the on-campus recruiting program. A computerized matching system allows the Career Services Office to pair students with employer position requests, but seniors must be registered in the Career Services Office to be included in the system.

Housed in the Career Services Office is a Career Resource Center. Information on careers, salaries, trends, occupations, graduate schools, and vacancies is available to all students on a walk-in basis.

Students can access the services by scheduling an appointment with a trained career counselor, by attending workshops, or by exploring the resources on their own.

### Health Services

The Student Health Center, an outpatient treatment center, is located in the North Complex. A physician's assistant and/or nurse is on duty during daytime hours. A college physician is on the premises during hours posted at the Center. One of the college physicians is on call evenings, weekends and holidays.

The Student Health Center provides general medical/nursing care and minor surgical procedures. All medical records are confidential. No release of information is possible without the written authorization of the individual involved. An exception to this policy is required under Public Health Law which requires all contagions to be reported to a state health agency.

In addition to college-provided services, accident and sickness (hospitalization) insurance is available to students and dependents through an independent carrier. Student group health insurance may be purchased during registration at the beginning of each trimester. Students are encouraged to have some type of accident-medical coverage, either through the Fort Lewis insurance program or a private program.

In an effort to eliminate measles and rubella outbreaks on campus, Fort Lewis College requires all students to provide proof of immunization as a prerequisite to registration. An exception to this requirement may be made for *bona fide* medical or religious reasons.

No pre-entrance physical examination is required. A complete physical evaluation will be performed by the physician's assistant or physician for participation in intercollegiate athletic programs.

Students with medical problems or chronic illnesses are asked to submit a detailed statement (obtained from their personal physician) to the Student Health Center, Fort Lewis College.

### College Union Building (CUB)

The College Union Building (CUB) located on the southeast corner of the campus is the central meeting area for students offering lounges, meeting rooms, food services and student services offices. The CUB is more than just a place, it is the central location for co-curricular learning, socializing and just relaxing. Student Activities, ASFLC (student government), Prevention Program, KDUR radio, *Independent* newspaper, Outdoor Pursuits, Post Office, Bookstore, Environmental Center, ARA Food Services and the Student Union Board all have office in the CUB.

### Bookstore

The Campus Bookstore is located in the basement of the College Union Building. In addition to textbooks and supplies for all classes, the bookstore sells candies, greeting cards, stationery, Fort Lewis jackets and shirts, magazines and non-course books, toiletries and various other sundries. The bookstore is designed to serve the students' needs, especially those who live on campus. The hours are 7:30 a.m. to 4:30 p.m., Monday through Friday.

### Postal Service

A full-service post office is maintained in the College Union Building for the convenience of students. Students living on campus have their mail delivered to postal boxes at the post office. FAX sending and receiving is available to students. P.O. BOXES ARE AVAILABLE FOR STUDENTS LIVING OFF CAMPUS AT A MINIMAL FEE.



## Alumni Association

The Alumni Association of Fort Lewis College is becoming increasingly more active both as a service organization and as a means of helping former students enjoy memories of their college days. The Association supports the College in many areas, such as providing scholarships, funding special programs, and assisting with graduate placement.

Regularly published newsletters contain information about former classmates, activities and projects that help the College. Among these are sponsorship of admission activities, social-functions and athletic events; placement assistance; and financial support.

## STUDENT LIFE

### Associated Students of Fort Lewis College (ASFLC)

The ASFLC was established to assure Fort Lewis students a representative system to help meet their social, political and economic needs. By representing the students of FLC, the ASFLC Senate and Executive Branch assist with issues of an administrative, academic, legislative, cultural and social nature. The ASFLC Senate also advocates the autonomy of student organizations, promotes education through constructive dialogue, and allocates student fees in the most responsible and effective manner possible.

ASFLC Executive Officers, Senators and Court Justices are elected by the student body. In addition to general elections, numerous appointments are made by ASFLC to campus committees. The ASFLC Senate allocates the student activity fee money to support the following programs and activities: Outdoor Pursuits, Student Union Board, Environmental Center, *Independent*, KDUR, Clubs & Organizations, Intramurals, Graduation, and more!

### Student Union Board

The Student Union Board (SUB) is a group of students that determines what films, lectures, concerts, comedians, and special events will be brought to campus with the student fee allocation they are given by ASFLC. The SUB is advised by the Assistant Director of Student Activities and therefore works with clubs & organizations and campus departments to provide an interesting calendar of events.

### Student Activities Office

The Student Activities Office provides assistance and information to the ASFLC (student government), the Student Union Board, and all student clubs & organizations regarding the development of co-curricular programs. Our goal is to empower students and to provide a liaison between them and the administration. By helping students coordinate lectures, concerts, films, special events, fundraisers, theme weeks, and much more, the Student Activities Office strives to maintain close contact with students and to help them achieve their goals. The office is also involved with several campus-wide events, such as Orientation, Right Start, Parents Weekend, Homecoming, and Graduation.

### Prevention Program

The goal of the Prevention Program is to provide students with healthy lifestyle options revolving around the Wellness Model. Students interested in volunteering in the community, being a peer educator, or organizing programs such as dances, Coffeeshouses, lectures, etc., should get involved with the Prevention Program. The coordinator is located in the Student Activities Office in the College Union Building.

### Student Newspaper

The Fort Lewis College *Independent* is the student newspaper, edited and staffed by students. A committee composed of students and faculty members serves the newspaper in an advisory capacity. It is published once a week on Friday mornings during the fall and winter trimesters.

Any student is welcome to work on the "Indy." Writers, photographers, cartoonists, layout persons, ad salespersons, bookkeepers, editors and artists are always in demand.

### Campus Radio Station

KDUR is a non-commercial, educational radio station run by Fort Lewis students in conjunction with a full-time professional manager. The station is governed by a Board of Directors. KDUR began broadcasting in the spring of 1975 and has become one of the school's fastest growing sources of communication. KDUR has a primary mission to broadcast diverse and alternative music and programming to the Fort Lewis College community. All students are encouraged to participate in station activities, as numerous broadcasting opportunities are available.

## **Athletics and Recreation**

Fort Lewis College has a comprehensive intercollegiate athletic program. The College sponsors men's programs in football, basketball, wrestling, soccer, cross-country and golf. The women's intercollegiate program includes volleyball, basketball, cross-country and softball. All Raider teams compete against four-year colleges in Colorado and the Colorado region. Facilities include 12 tennis courts, softball fields, gymnasium, football stadium, track, weight room, volleyball courts and swimming pool. Located adjacent to the campus are the municipal golf course and a ski hill. Fort Lewis is a member of the Colorado Athletic Conference, the National Collegiate Athletics Association (Div. II), and the Rocky Mountain Athletic Conference (football, wrestling and softball).

Club sports that compete intercollegiately include skiing and lacrosse.

An excellent intramural and recreation program is also offered. There are opportunities for competition in basketball, volleyball, softball, wrestling, soccer, tennis, swimming and many other selected activities.

The athletics facilities are also available to students during the evenings and on weekends for informal recreation activities such as swimming, basketball, weight training, volleyball, archery and gymnastics.

## **Outdoor Pursuits**

The Outdoor Pursuits program provides students with the opportunity to experience the mountain and desert lands adjacent to Durango. The program offers trips nearly every weekend with activities ranging from hiking or rock climbing to cross-country skiing or river rafting and much more. In addition, students may check out equipment free of charge, use the program's library of maps, books and magazines, and benefit from workshops sponsored by the program. Outdoor Pursuits is an excellent way to meet people and enjoy the College's unique geographical location.

## **Environmental Center**

The Fort Lewis College Environmental Center (FLCEC) is a student-based outreach facility promoting social and ecological awareness, practices, and dialogue in the college community and surrounding region.

The Center was established in 1991 by the

students and is operated by volunteer and work-study students under the direction of a full-time professional manager and faculty advisors.

The Center manages product recycling activities on campus and is a coordination center for environmental education, research, and activities on the entire campus. The Center is linked to computerized information networks with other college and public environmental centers and organizations.

## **Motor Vehicles**

Students are permitted to have their cars on campus; however, freshmen often find that the ready availability of a car is a contributing factor to a poor academic record. The Dean of Student Affairs may have the use of an automobile restricted if there is persistent or flagrant violations of parking rules and regulations.

Students and all Fort Lewis College personnel must register their vehicles and pay the scheduled fees during the official registration period. Campus traffic and parking regulations are distributed at the time of registration.

Students using campus parking lots are assessed an automobile registration fee to pay for the construction and maintenance of parking areas, since it is the policy of the State of Colorado not to build parking lots with state funds. All parking sticker permits are prorated monthly. Special decals may be issued to students or college personnel who have disabling handicaps.

## **Identification Cards**

An FLC identification card is required of all students. This card is necessary for access to the library and dining facilities and is important in helping a student establish identification for all financial transactions and for admission to many campus events and facilities. It should be carried at all times and presented when requested by college officials.

## **Guns and Weapons**

Unlawful or unauthorized use, possession or storage of guns, ammunition, other lethal or dangerous weapons, explosive substances or chemicals is expressly prohibited on the Fort Lewis College campus. Students are reminded that it is also against school policy to store guns in their cars.

### **Student Conduct Code and Disciplinary Action**

All students at all times are expected to behave in accordance with the Student Conduct Code which calls for a high standard of personal behavior governed by good taste and personal maturity. This code warns that any student behavior which threatens the individual, the educational environment, the community or property will not be tolerated.

Violation of the Student Conduct Code will result in disciplinary action. One possible consequence of disciplinary action is dismissal from Fort Lewis College.

The Student Conduct Code is published annually in the Fort Lewis College Student Handbook. It is the responsibility of the student to be familiar with and abide by the Student Conduct Code.





# ACADEMIC PROGRAMS AND POLICIES

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## ACADEMIC PROGRAMS

The academic programs at Fort Lewis College are offered through the Schools of Arts and Sciences, Business Administration, and Education.

### Degrees Offered

Fort Lewis College offers a number of programs leading to the bachelor's degree. The Bachelor of Science degree is offered in biology, chemistry, geology, general science and physics; the Bachelor of Arts degree is granted in all other four-year programs. In addition, the College offers a program leading to the Associate of Arts degree in agricultural science.

The Fort Lewis College teacher education programs have been approved by the Colorado State Board of Education. Certification is offered in elementary, secondary, middle school and early childhood education.

### School of Arts and Sciences

Courses in agriculture, anthropology, art, biology, chemistry, computer science, engineering, English, forestry, French, geology, German, history, Japanese, Latin, mathematics, music, philosophy, physics, political science, sociology, Spanish, and theatre, as well as interdisciplinary work in a number of areas, are offered in the School of Arts and Sciences.

### School of Business Administration

The School of Business Administration is a professional school offering instruction in accounting, agricultural business, business administration, engineering management, finance, international business, management, marketing, tourism and resort management, and economics.

### School of Education

The School of Education prepares students for teacher certification at the elementary, secondary, middle school and early childhood levels; it also offers major programs of study in exercise science and psychology.

### Student-Constructed Major

The College has established the student-constructed major, which the student designs to meet specific purposes. These frequently are interdisciplinary and designed to meet the special needs and talents of individual students. Among recent student-constructed majors have been those in criminal justice, international studies, agricultural economics, commercial art and southwestern peoples. The major may be related to any school or include course offerings from more than one school. Student-constructed major contract forms and requirements are available in the Office of Academic Affairs.



## REQUIREMENTS FOR GRADUATION

### General Requirements

Each candidate for graduation must complete a minimum of 128 credits, with at least a minimum cumulative grade point average of 2.0 and a minimum grade point average of 2.0 for those courses accepted to meet the requirements for the major course of study. Of the 128 credits required for graduation, each student is required to complete a minimum of 50 credits outside the discipline in which he or she is majoring. It is the responsibility of the student to know and complete all graduation requirements.

Candidates for bachelor's degrees must complete three elements in their academic programs: general studies, a major and electives. Each candidate must complete a minimum of 44 credits in the general studies program to be chosen as outlined below and a minimum of 30 credits in a field of specialization, called the major. The balance of the 128 credits required for graduation are called electives. The student has wide latitude in selecting these, although some of them may be specified in certain programs as auxiliary to the major or for teacher certification. Many students choose to use electives to complete the requirements for a minor.

A student must complete his or her final 28 credits in residence. Exceptions to this requirement include such programs as medical technology and engineering (3-2 program). Other exceptions may be made in unusual circumstances by the Vice President for Academic Affairs on recommendation of the appropriate school dean.

Among the 128 credits required for the degree, 50 credits must be upper-division courses. No more than 28 credits will be accepted for work completed by correspondence, extension or educational television.

A course offered in substitution for a required course or the request that a requirement be waived must have the approval of the student's faculty advisor, the school dean, and the Vice President for Academic Affairs or his designee.

### Majors

Each student seeking a baccalaureate degree must select a major area of study for specialization. The

College now offers majors in Accounting, Anthropology, Art, Biology, Business Administration, Chemistry, Computer Science Information Systems, Economics, English, Exercise Science, General Science, Geology, History, Humanities, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Sociology/Human Services, Southwest Studies and Spanish. In addition to these regular majors, the College has established a procedure whereby a student with a special purpose may construct his/her own major. Ordinarily, this major should be of an interdisciplinary character and be submitted for approval not later than the end of the first term of the junior year. The student-constructed major contract must be approved by the advisor, the appropriate school dean, a representative of the Curriculum Committee and the Vice President for Academic Affairs.

As of January 1, 1989, the Colorado Department of Education no longer recognizes elementary education as a major for candidates seeking elementary teacher certification. Students seeking elementary teacher certification must complete a degree with a subject major as well as the elementary teacher certification program.

Associate of Arts degree is offered in agricultural science.

### Minors

Minors, even though not required for graduation, are offered by most departments. Requirements for a minor are described under the program of study for each department or can be obtained from the department. General Studies requirements and minor requirements may overlap. For additional information regarding a minor, consult the department chair.

### Electives

The third part of a student's program of study consists of additional courses called "electives," selected in accordance with his or her ability, interest and purpose. The courses permit students to become acquainted with other areas of knowledge to broaden their education, to supplement their major areas of concentration, to meet specific requirements of a graduate school, to take professional teacher certification courses, or to add a second teaching field.



## Second Bachelor's Degree

A student who for special reasons desires to secure a second bachelor's degree must complete a minimum of 28 credits in addition to the total number of credits required for the first degree. The student is required to complete all requirements for the second degree, including general graduation requirements and specific requirements for the major selected. No honors are awarded upon the receipt of a second bachelor's degree. If a student receives his first bachelor's degree from another accredited college, the additional 28 credits must be in residence to fulfill the requirements for the second bachelor's degree. The additional credits required for the second degree may be completed concurrently with those credits applying

to the first degree and the two degrees may be granted simultaneously, providing all requirements have been completed for both degrees.

## Petitioning to Graduate

To graduate from Fort Lewis College, each student must submit a signed Petition for Candidacy for a Degree, which can be obtained from the Records Office. The signed petition must be returned to the Records Office within a month after the completion of 80 credits for the bachelor's degree and after the completion of 30 credits for the Associate of Arts degree. Also, the graduation fee must be paid by that date. The student may petition for a minor on this form.

## THE CURRICULUM

### Interpreting the Catalog

The figures after each course [i.e. (3-2) 4] have the following meanings: the first figure in the parentheses refers to hours spent in lecture or seminar sessions and the second number refers to hours in laboratory each week. The figure outside the parentheses refers to semester credits. Disciplines generally appear alphabetically according to school, and the schools themselves are in alphabetical order beginning with the School of Arts and Sciences.

The course numbering system is described in the following table:

Course Number	Intended for:	Open to:	Instructor Permission Required for:
Below 100	Open only to students with demonstrated need.		
100-199	Fr	So	Jr, Sr
200-299	So	Fr, Jr	Sr
300-399	Jr	So, Sr	Fr
400-499	Sr	Jr	So

Entry to all courses is limited to students who have completed published prerequisites or to those with instructor permission. Courses numbered below 100 do not count toward graduation. Courses numbered below 300 are called lower-division courses, while those 300 or above are known as upper-division courses.

### General Studies

Fort Lewis requires a broad background in general studies of all candidates for the bachelor's degree. Students have a variety of choices, but they are specified by general categories in order to assure breadth of education in addition to the specialization required in the major. Each student will be aided by a faculty advisor in choosing a general studies program best suited to his/her own needs and interests.

#### I. Freshman/Sophomore Seminars

Every beginning freshman will take a freshman composition seminar in one of his/her first two trimesters at Fort Lewis. (Freshmen in the intercultural program may postpone their first seminar for one or two trimesters if this is recommended by their advisors.) Sophomores are required to take a seminar in one of the trimesters of the sophomore year. Only two seminars can be counted toward graduation.

#### II. Distribution Requirements

The outline below indicates the number of courses required in each group. Courses taken in the major field will not apply toward groups A, B, C, D or E except for the broad majors of humanities, general science and Southwest Studies. However, courses required for a major that are under "Auxiliary Requirements from Other Departments" may apply toward General Distribution Requirements. Courses identified with more than one group letter can be used to satisfy only one group requirement (e.g. Hist 170CE can satisfy C or E but not both).

Furthermore, courses of less than 3 credits will not meet these requirements, except where there are laboratory activities related to other courses taken at the same time or previously.

**Group A. LANGUAGE AND THE ARTS - 3 Courses**

Purpose: To provide an understanding of human expression through literature, the fine arts and the performing arts, with special emphasis on developing aesthetic sensitivity and creativity. Three courses must be chosen - at least one from each subgroup.

1. Literature or language courses with A1 after the course number (or suffix) will satisfy this requirement. Examples are ED 327A1 Children's Literature, Engl 221A1 Classical Literature, ML 148A1 Elementary French II.
2. Fine arts and performing arts courses with A2 after the course number will satisfy this requirement. Examples are Art 162A2 Art in the Humanities, MU 101A2 The Musical Experience, SW 154A2 Indian Arts and Crafts and Thea 101A2 Introduction to Theatre. Three consecutive trimesters (e.g., fall, winter, fall) in any large music ensemble (Choir MU 105A2/305A2, Band MU 110A2/310A2, Orchestra MU 117A2/317A2) will also equal one course from this subgroup.

**Group B. QUANTITATIVE AND NATURAL SCIENCES -3 Courses**

Purpose: To provide an understanding of the physical world and the formal, theoretical and empirical methods by which it is studied. Three courses required - at least one must be a natural science course with associated laboratory; the three must be chosen from at least two different fields.

Courses with a B after the course number will satisfy this requirement. Many group B courses are available in these fields: Agriculture, Biology, Chemistry, Computer Science Information Systems, General Science, Geography, Geology, Physics and Mathematics. Courses in Business, Philosophy and Psychology with a B after the course number will also satisfy this requirement.

**Group C. FOUNDATIONS OF CULTURE - 2 Courses**

Purpose: To provide an understanding of fundamental values and world views through the study of human society's past, its formative ideas, and its alternative cultural expressions. Courses with a C after the course number will satisfy this

requirement. Courses in this group are available in the fields of Anthropology, Business Administration, Economics, History, Philosophy and Southwest Studies.

**Group D. SOCIAL STRUCTURE AND BEHAVIOR - 2 Courses**

Purpose: To provide an understanding of human beings, both as individuals and as socially, politically and economically related groups. Courses with a D after the course number will satisfy this requirement. Courses in this group are available in the fields of Business Administration, Economics, Geography, Political Science, Psychology and Sociology.

**Group E. NON-WESTERN STUDIES - 1 Course**

Purpose: To provide an understanding of a cultural view quite different from the students' own, which is generally North American and European, in order to broaden their horizons of thought and their understanding of the world's peoples; to promote peace and understanding; and to help students have more objectivity toward and appreciation of their own culture as seen from another perspective.

At least one course must be taken in Non-Western Studies. These courses are culturally rather than geographically defined and focus on Latin America, Asia, Africa, Eastern Europe, the Islamic World, and Native American cultures. Courses meeting this requirement will have an E after the course number.

**III. Physical Education**

Two activity courses of 1 credit each are required; the two must be in different activities or levels.

**Repeatable Courses**

Certain courses are repeatable but have limits on the number of credits that can be counted toward graduation. Art courses may be repeated once for a total of 6 credits in the following: Art 201, 226, 227, 301, 313, 324, 331, 343, 350, 401, 413, 424, 425, 431, 443 and 450. The limit on physical activity courses is 6 credits in different physical activities or levels. Theatre 100, 175, 176, 200, 300, 375, 400 and 401 may each be repeated for a total of 6 credits. Theatre 170 may be repeated for a total of 8 credits. Engl 252 and 452 may be repeated for up to 12 credits each. A maximum of 24 credits are allowable toward graduation for any combination of Engl 250, 251, 252,

350, 351 and 352. Engl 250/251/252 may be repeated for a total of 12 credits. Engl 350/351/352 may be repeated for a total of 12 credits.

A combined maximum of 12 credits from large ensembles -- Mu 105, 110, 117, 305, 310, 317 -- is allowable toward graduation. A maximum of 2 credits from each small ensemble -- Mu 106/306, 111/311, 112/312, 113/313, 118/318 and 119/319 -- is allowable toward graduation. Each applied music course -- Mu 109, 209, 309, 409 -- may be repeated for a maximum of 4 credits. A maximum of 16 credits in a single applied music area is allowable toward graduation. Mu 100 may be repeated for up to 4 credits allowable toward graduation. Mu 107, 207, 300 and 407 are repeatable with limits.

## Courses Common To All Programs

### FCS - Freshman Composition Seminars

At Fort Lewis College the Freshman Composition Seminar is offered in lieu of what many other colleges and universities call "Freshman English." This course is designed to teach library research methods as well as strengthen written and oral communication skills. To meet these objectives, students become familiar with library resources and write a major research paper which involves collecting, organizing and documenting library material. In addition, students write a number of other papers, each of which is evaluated by the instructor. Oral skills are improved through formal oral presentations and class discussion.

Seminars are taught on a variety of topics by faculty from throughout the College. Motivation for learning these important communication skills is enhanced by allowing students to choose topics of individual interest upon which to focus their written and oral presentation.

The seminar format, limited enrollment and student choice of topics make the Freshman Composition Seminar a particularly effective means of learning basic oral and written communication skills.

### SCS - Sophomore Composition Seminars

In the Sophomore Composition Seminars students continue to strengthen their communication skills. Library, laboratory or field work require more sophisticated research techniques than those required

in the Freshman Composition Seminars. Students use primary resources as well as other kinds of materials in preparation of expository papers and oral presentations. Students also complete a research paper.

The Sophomore Composition Seminar topic is selected by the student from a variety of topics offered in a wide range of disciplines. Students should select a topic in which they are interested, but one which differs from their Freshman Composition Seminar topic. Credit cannot be given for a Sophomore Composition Seminar taught by the same professor who taught the student's Freshman Composition Seminar.

**COOP ED 200 Cooperative Education** 1-10  
A first-time cooperative education work experience by underclassmen.

**COOP ED 300 Cooperative Education** 1-10  
A cooperative education work experience by upperclassmen. A maximum number of credits is allowed toward a degree.

**COOP ED 400 Cooperative Education** 1-10  
An advanced cooperative education work experience by upperclassmen who have completed one or more Co-op terms. A maximum number of credits is allowed toward a degree.

**GENERAL STUDIES 101 and 102**  
**Human Heritage I and II** (3-0) 3  
This two-term course is a study of Western, Chinese and Native American intellectual traditions. The course is designed to help students understand how our cultural traditions influence our ways of looking at the world and how studying cultures other than our own expands and challenges our frame of reference. The course emphasizes intellectual, artistic, political, scientific, religious, and economic aspects of the three cultures from selected periods in history. Human Heritage II is a continuation of Human Heritage I. Students must complete both courses to fulfill designated distribution requirements (A1, C, and E).

**GENERAL STUDIES 200** 2-4  
A lower-division seminar in interdisciplinary studies. Offered on sufficient demand. This course and General Studies 300 may be repeated for a combined maximum of 9 credits.

**GENERAL STUDIES 300** 2-4  
An upper-division seminar in interdisciplinary studies. Offered on sufficient demand. This course and General Studies 200 may be repeated for a combined maximum of 9 credits.

**GENERAL STUDIES 361 Computers and Human Issues** (3-0) 3  
A study of the broad social, political, ethical and philosophical issues raised by the existence and use of the computer. Topics may include artificial intelligence (can computers think?), the impact of enhanced storage and retrieval of information, computer ethics, computer languages vs. natural languages, and the impact of the computer on our concepts of ourselves. CSIS 100 or 120B or experience with computers is recommended but not required of those taking this class.

**SPECIAL TOPICS 190** 1-6  
This is not a fixed course but is a designation to take advantage of special opportunities and topics. It can be offered in any area with the consent of the school dean and the Vice President for Academic Affairs. From 1 to 6 credits may be earned.

**SPECIAL TOPICS 191** 3-6  
This is not a fixed course but is a designation to take advantage of special opportunities and topics which meet the purpose of one of the groups under the General Studies Program. It can be offered in any area with consent of the school dean, the Vice President for Academic Affairs, and curriculum committee. Credit may vary from 3 to 6 credits.

**SPECIAL TOPICS 390** 1-6  
Same as Special Topics 190 except that this course is taught at the upper-division level.

**SPECIAL TOPICS 391** 3-6  
Same as Special Topics 191 except that this course is taught at the upper-division level.

**INDIVIDUALIZED STUDY 299** 1-3  
Independent study for lower-division or non-major students. Available in most disciplines.

**INDEPENDENT STUDY 499** 1-3  
All major fields require either independent study or a seminar at the senior level. Independent study may be undertaken in a field other than the student's major. To do so, the student must have the approval of his or her advisor, department chair, the department chair in whose area the study will be made, and the professor who will supervise the study.

However, independent study in the field outside the student's major cannot be substituted for the requirement of independent study or seminar in his or her major field.

### TRST - Transitional Studies

As the title implies, Transitional Studies courses are designed to assist students in their transition from high school to college. The classes, taught by the staff of the Learning Assistance Center, do not give students credit towards graduation, but do carry credit which can be applied to financial aid and housing requirements. With the exception of the English as a Second Language Classes, students receive a grade of S (Satisfactory) or NC (No Credit).

**TRST 91 The Writing Process** (3-0) 0  
Designed to improve the composition skills of students who have weak backgrounds in writing. The course focuses upon pre-writing, logic, paragraph organization, and essay structure, and includes frequent one-on-one critique sessions with the instructor.

**TRST 92 Intermediate Algebra** (2-1) 0  
Designed to provide review and instruction in college preparatory mathematics for students with deficiencies in or apprehensions about required entrance level mathematics courses. The course will cover such topics as algebraic expressions, manipulation of signed numbers, solving equations and inequalities, algebraic fractions, polynomials, exponents, radical expression and graphing. Students who wish to enroll in this course should have successfully completed at least the equivalent of Algebra I.

**TRST 95 Learning Skills** (2-0) 0  
Designed to develop the thought processes, habits and skills students need in order to succeed in college. Subjects covered include time management, notetaking, concentration, textbook reading, test taking, memory development and college policies.

**TRST 101 ESL Composition** (3-0) 0  
Designed to prepare students for whom English is a second language to write acceptable college essays. Subjects covered include prewriting, thesis development, sentence development, paragraph development, grammar review, punctuation review, logic and vocabulary development.

**TRST 102 ESL Study Skills (3-0) 0**

Designed to be taken in conjunction with TRST 101. The course develops in students for whom English is a second language the thought processes, habits and skills necessary to succeed in college. Subjects covered include notetaking, textbook reading, questioning, test taking and classroom etiquette.

**John F. Reed Honors Program**

For students of outstanding ability, the College offers the John F. Reed Honors Program, named for John F. Reed, President of Fort Lewis College from 1962 to 1969. Students who complete the Honors Program will receive special recognition at graduation and on their transcripts.

The Honors Program offers an enriched educational opportunity to students who enjoy working in small groups. Each Honors course draws on the scholarship and insights of more than one academic discipline and is conducted in the small group, participatory setting of a seminar. Students admitted to the program are automatically accepted into any Honors course; students who are not enrolled in the program may take Honors courses with the consent of the instructors.

Students usually apply to enter the program at the end of the first term of their freshman year or at the beginning of the first term of their sophomore year. Admission to the program is based on an assessment of the student's Fort Lewis College and high school academic achievement, faculty recommendations, ACT or SAT scores, and demonstrated interest. Application for admission to the program should be made to the Honors Coordinator.

Reed Scholars are expected to maintain a minimum cumulative grade point average of 3.2.

The John F. Reed Honors Program consists of the following core courses and additional requirements:

**i. The Honors Core:****Credits****Freshman Year**

2nd Term: Hon 104A1C Honors Seminar in the History of Western Culture . . . . . 4

This course is strongly recommended, but it is not required for admission to the program. Students may take instead, History 160C (Survey of Western Civilization I) or Engl 122A (European Literature to 1400).

**Sophomore Year**

Hon 203CD Honors Seminar in the Social Sciences . . . . . 3

Hon 205AL Honors Seminar in the Humanities . . . . . 3

**Junior Year**

Hon 306B Honors Seminar in Natural Sciences . . . . . 3

**Senior Year**

1st Term: Hon 405C Honors Seminar in Ethics and Science in the 21st Century . . . . . 3

Hon 499 Honors Thesis . . . . . 1

2nd Term: Hon 499 Honors Thesis . . . . . 1-2

**ii. Additional Requirements:**

1. Completion of General Distribution requirements not met by Honors core courses.
2. Modern Language: Students must be able to demonstrate a reading and speaking knowledge of a foreign language equivalent to the second term of the second year of the language.
3. Honors students must graduate with a cumulative grade point average of at least 3.2.

**HONORS 104AC HONORS SEMINAR IN THE HISTORY OF WESTERN CULTURE (4-0) 4**

An examination of selected topics in the history of western culture from Classical Greece through the Renaissance. These topics will be considered in their historical context and with a view to identifying their enduring influence on the course of western civilization.

**HONORS 203CD HONORS SEMINAR IN THE SOCIAL SCIENCES (3-0) 3**

An interdisciplinary approach to understanding the relationships between fundamental human values and the economic, political and social behavior of individuals and groups.

**HONORS 205A HONORS SEMINAR IN THE HUMANITIES (3-0) 3**

An interdisciplinary approach to understanding the nature of human experience through the study of aesthetics and important works of literature, the fine arts and the performing arts.

**HONORS 306B HONORS SEMINAR IN THE  
NATURAL SCIENCES (3-0) 3**

An interdisciplinary exploration of the scientific and technological developments that have shaped our lives and our understanding of our universe and ourselves.

**HONORS 405C HONORS SEMINAR IN ETHICS  
AND SCIENCE IN THE 21ST CENTURY (3-0) 3**

A multi-disciplinary exploration of the complex reciprocal relationship between scientific inquiry and its social and cultural contexts.

**HONORS 499 HONORS THESIS 1-2**

The Honors Thesis is the result of an independent study project undertaken during the senior year. The topic of the thesis must draw significantly on at least two academic disciplines. The student should choose a topic for the thesis in consultation with a faculty advisor, a reader from the second discipline, and the Honors Coordinator. At the end of the first term, the student must submit evidence of substantial work accomplished. During the second term, the student will complete the thesis and make a public presentation of the results.

## SPECIAL ACADEMIC PROGRAMS

### Cooperative Education Program

Cooperative Education is an academic unit of the College that grants elective credit. The Cooperative Education Program (Co-op) is designed to assist students in applying valuable classroom knowledge to practical work and internship experiences. It also provides an opportunity for career exploration. Co-op at Fort Lewis was established in 1970 as the first college-level co-op program in the state of Colorado. More than 200 Fort Lewis students per calendar year participate in the program.

Generally, students are eligible to participate in Co-op after they have completed their freshman year with a minimum 2.5 cumulative grade point average. Plans for enrollment should be initiated with the Co-op Director and the student's advisor in the semester prior to the experience. The Co-op work experience normally corresponds to the academic trimester. No adding of Co-op credits will be permitted after the deadline for adding classes (census date).

The first step involves an interview with the Co-op Director during which a written essay is submitted on the student's learning objectives for the Co-op experience. The decision to admit a student into Co-op and to award final credit reside with the Director of Cooperative Education.

The Director assists students in defining career goals and locating appropriate placements. Student initiative is also supported and encouraged in designing internships and in contacting prospective employers. Students may work with private or public employers throughout the United States.

Cooperative Education credits are counted as general electives. They can be earned under the headings of Co-op 200, 300 or 400. The level and

amount of credit depend on a variety of factors. The nature of the work experience is evaluated in the context of the student's course background, and career and personal goals, before a final determination is made on an individual basis for both the level and amount of Co-op credit.

The general criteria for a 200-level experience are that the student will be undertaking career exploration or is beginning an entry-level position that is related to the major. First-time Co-op experiences are typically 200-level, particularly for students with lower-division standing.

A 300-level Co-op experience typically applies to upper-division students who bring a significant degree of appropriate course work into the workplace. Such students may qualify for 300-level credit in their first Co-op placement.

A 400-level experience is for seniors in their second or third placement where they have obtained a promotion to higher responsibilities than in their previous 300-level placement.

The guideline for awarding credit is that one semester hour of Co-op general elective credit may be earned in a trimester for each 50 contact hours on the job. The student's major requirements and limits imposed by the major on general elective credits are taken into account.

Co-op students have represented all majors at Fort Lewis; however, departments and schools vary in the number of elective hours accepted toward graduation. It is possible to apply up to 12 Co-op elective credits toward graduation in some programs. The School of Business Administration allows a maximum of 10 Co-op credits to apply toward graduation. It is the student's responsibility to verify

the number of elective credits available in his/her degree program. In addition, the student should have the Co-op plan evaluated by his or her academic advisor.

Cooperative Education students analyze their work experience in the form of a daily work journal and a formal typed paper at the end of the trimester. These written materials are evaluated by the Co-op Director. This is done in cooperation with other faculty members whenever appropriate. Grading is on a credit (S) or no-credit (NC) basis.

At the beginning of the work experience an on-the-job supervisor is identified for each student. The supervisor submits a written performance evaluation at the end of the trimester to the Co-op Director. This document becomes part of the overall evaluation process.

The Cooperative Education Program operates through the calendar year and enrolls students for the fall, winter and summer trimesters. Each student receives a complete program information packet which includes instructions, policies, a listing of due dates, a job description form, a learning objectives statement, guidelines for journals and final papers, and a publication from the National Commission for Cooperative Education, of which Fort Lewis College is a member. Students who are based in Durango pay regular tuition and fees. Students who work outside a 20-mile radius of the college pay regular tuition and reduced fees.

The Director of Cooperative Education at Fort Lewis assists all students without discrimination.

### **Continuing Education**

Fort Lewis College Continuing Education extends the resources of the campus to the community to satisfy personal and professional needs for lifelong learning. The non-credit program emphasizes business development courses, computer applications, Southwest culture, liberal arts and recreational learning.

Specialized college credit courses designed for professional enhancement and scheduled for the convenience of adults are also offered. (Regular FLC classes are also open to the community if space is available; contact the Admission Office for information on unclassified student applications.)

The summer program is especially strong for Educators, offering endorsements in Middle School

and Early Childhood, as well as a Computer/Multimedia program and other recertification and endorsement courses, and the Silverton Western Arts Institute. Travel courses are a growing part of the program. The Continuing Education department will develop on- and off-campus courses geared to specific audiences and specialized needs. Address your inquires to the Director of Continuing Education.

### **The Japan Program**

The Japan Program was established at Fort Lewis College in 1975. The high quality of the program was fully recognized by 1976-77 when the College became the only small college in the United States to be awarded a full Education Abroad Grant of \$10,000 from the Japan Foundation. As of 1993, 130 Fort Lewis students have studied in Japan and have lived with Japanese families.

Some former Japan Program students have entered graduate school in international management and have developed careers in international business, often with the assistance of the Japan Program staff at Fort Lewis College. The Japan Program also places Fort Lewis graduates in teaching positions in Japan and arranges visiting professorships for faculty members.

The Japan Program staff arranges visits to the Fort Lewis campus for Japanese groups and formal study for Japanese students who wish to enroll in American colleges. The 10-week summer intensive English program at Fort Lewis usually enrolls 50 to 70 Japanese students. Between 60 and 70 students from Japan are continuously enrolled at Fort Lewis as regular degree students.

### **Programs in Mexico**

Fort Lewis College has encouraged a number of Study Abroad opportunities in Mexico. The main purpose of this program is to develop fluency in the use of the Spanish language and to acquire an in-depth knowledge of the culture of the Spanish-speaking people by immersion and by studying specific courses in the social sciences and arts oriented toward this goal. The normal duration of this experience is one or two trimesters. Most opportunities to study in Mexico require a good background in the language at least equivalent to one year of college-level Spanish. Students are strongly encouraged to live with a Mexican family. Students interested in a Study Abroad experience in Mexico must discuss various opportunities with members of

the Modern Language or Sociology Department and the Records Office.

### National Student Exchange

National Student Exchange gives FLC students the opportunity to enhance their education by studying for one or two semesters on another campus in the NSE network of more than 100 colleges and universities in the United States. FLC students pay FLC tuition and fees or resident tuition and fees at the host campus. Applications normally need to be made by February for the next academic year.

Credits and grades earned on exchange are incorporated into the student's FLC record and grade-point average. Financial aid normally can be arranged as usual.

To qualify for participation in NSE, a student should: (1) be a full-time FLC student; (2) be a sophomore, junior or first-semester senior at the time of exchange; and (3) have a grade-point average of 2.5 or better.

Information and applications may be obtained from the Assistant to the Vice President for Academic Affairs.

### SUMMER PROGRAMS

The summer programs at Fort Lewis College offer a rich variety of courses from the regular curriculum for students who wish to graduate in less than four years.

### Innovative Months

In addition, a wide choice of special "innovative month" courses is provided for those seeking new approaches to learning. Typically, these special projects are full-time courses carrying six semester credits. Often, the courses are conducted off campus in nontraditional settings. In the past, the projects have ranged from a geology field camp to creative writing in a wilderness situation; from an archaeological "dig" to four weeks in Denver studying the management process in metropolitan business firms; and from a two-week arts tour of New York City to a four-week "theatre-tour" in England.

## ACADEMIC POLICIES

### Grading

The quality of a student's work is appraised according to grade point averages. Fort Lewis uses the four-point system, which assesses grade points as follows:

A = 4 points	C = 2 points
A- = 3.75	C- = 1.75 points
B+ = 3.25 points	D+ = 1.25 points
B = 3 points	D = 1 point
B- = 2.75 points	D- = .75 point
C+ = 2.25	F = 0 points

The grade point average, carried to two decimal places, will be computed by dividing the total number of grade points by the total number of credits attempted. Grades of X, S, P, W, NC and NG do not affect the grade point average.

The grade of X means the student has passed a course by special examination.

The grade of P means that the student has passed a course on a Pass-Fail basis.

The grade of W signifies that the student has withdrawn from the course while passing. After census date, the instructor must assign a W or an F.

The grade of S (credit) means that the student has successfully completed the course.

The grade of NC (No Credit) means that the student did not complete the course. No credit is given nor is the grade figured in the grade point average.

The grade of NG (No Grade) indicates that the instructor did not report a grade by the deadline for submission of final grades.

**Incompletes.** A grade of Incomplete (I) is a student-initiated grade which must have the instructor's approval. It is appropriate only under the following conditions:

1. The major part of the course requirements has been met.
2. The student is unable to complete the requirements in the term in which the course is taken for compelling and unforeseen reasons.



- In the opinion of the instructor, the requirements can be completed by the student without repeating the course.

If the course requirements are not completed within one year after the end of the appropriate term, the incomplete grade will revert to an *F*. (See below for the single exception to this change.) The dean of the school in which the course is offered may waive for good reason the one-year deadline upon petition by the student. If, within the time allotted, the student completes the course requirements, the instructor will initiate the grade change by filing a Special Grade Report form.

When giving an Incomplete, the faculty member must file a Report of an Incomplete form with the dean and the Records Office, specifying in detail: (1) what work must be done in order to remove the Incomplete, and (2) the time deadline for completing the work. The student should sign this form at the time it is prepared. A copy of the form should be given to the student. An Incomplete cannot be removed by registering to repeat the course. When the student cannot complete the course material without repeating the course, he or she should not receive an Incomplete; *W* or *F* would be more appropriate.

A course for which a student has a grade of *I* at the time of graduation **cannot** be used to satisfy any graduation or major requirement and is not counted in units attempted or GPA. In the event that a student has graduated prior to removing the Incomplete, the *I* grade will remain permanently on the graduate's transcript.

**Grade Replacement Policy.** When a course is repeated, all grades for that course will remain on the student's record, but the credit will count only once. For the first 12 credits of repetition of courses in which the initial grade was *C-* or less, only the last grade earned will be counted in the grade point average. When a course for which the initial grade was *C* or better is repeated, or when a student has already excluded 12 credits of *C-* or lower grades from his grade point average, there shall be no exclusion of grades from the grade point average. The student should notify the Records Office of what courses to use for these 12 credits.

**Credit - No Credit Option.** Courses that primarily utilize field experience may, at the discretion of the sponsoring school, be graded either "credit - no credit," or with the traditional "A through *F*" letter grade system.

Should the "credit - no credit" option be used, the courses may still be applied to either the major or General Distribution Requirements.

**Pass-Fail Electives.** Students with a cumulative average of at least a *C* are permitted to take up to four pass-fail electives during their undergraduate career. The pass-fail basis is limited to elective courses only. Pass-fail may not apply to General Studies Requirements, Departmental Requirements or Teacher Education Requirements. Students may take no more than one pass-fail elective in any one trimester and no more than 18 credits may be taken during the term they are carrying the pass-fail elective. Freshmen may not choose a course on this basis before their second term. Students taking a pass-fail elective must fulfill all necessary prerequisites for that course. Changes to or from pass-fail status after the beginning of a term are limited to the normal period for adding courses.

**Audit.** Students may audit courses with the permission of the instructor if they desire to attend classes regularly but do not wish to receive grades and credit. Upon registration, the students must declare whether they wish to take a course for audit or for credit. Students may not change from audit or credit, or vice versa, after the closing date for adding classes in each trimester. When registering, students may take both audit and credit courses but the total should not exceed a normal load.

Students auditing courses are required to pay fees at the same rate as if enrolled for credit.

Students who wish to audit a course and later wish to obtain credit for it may do so by special examination, which requires an additional fee.

### Attendance

Regular class attendance is expected. Each instructor keeps a record of student absences and determines the extent to which absences affect final grades.

### Final Exams

The number and type of examinations in any particular course are determined by the instructor. Separate days are set aside for the final examinations at the close of each trimester. It is the student's responsibility to take all examinations or to arrange for exceptions directly with the instructor.

### Academic Progress

Fort Lewis College students are generally given two trimesters to make proper academic adjustments to college, but anyone not doing satisfactory academic work may receive a probation or suspension notice at any time.

An overall grade point average of 2.0 is considered satisfactory progress toward a degree. A grade point average of less than 2.0 may result in a student being placed on probation, suspension or dismissal from college. A student who has been suspended may petition for readmission after completion of his or her suspension period. However, such petition does not guarantee readmission.

The Academic Standards Committee reviews students based on cumulative grade point average and trimester grade point average based on the students' class levels. Listed below are class levels and cumulative grade point averages or below that are subject to suspension or academic dismissal.

<u>Class</u>	<u>Cumulative Grade Point Average</u>
Freshman	1.50
Sophomore	1.60
Junior	1.85
Senior	1.95

### Academic Renewal

A transfer or returning Fort Lewis College student who has not attended any college for at least five years (60 consecutive months) may apply for "academic renewal." Academic renewal is defined as the elimination of the student's entire previous academic record, including credits earned and grade point average. A student requesting academic renewal normally applies during the first year of resumed studies at Fort Lewis. In some cases, students may request academic renewal at the time that their application materials are complete with the Admission Office. A student requesting academic renewal must submit a written petition to the Academic Standards Committee within a year of resumption of studies. If the petition is granted, the student's permanent record will denote "ACADEMIC RENEWAL APPROVED" with the date. Students granted academic renewal must make satisfactory academic progress, if not, the student is then subject to review.

### Dean's List/Graduating with Honors

The Dean's List, published at the end of each trimester, honors students for high scholastic achievement. Students who attain a grade point average of 3.4 or better in not less than 14 hours of graded credit and who have completed all work for which they are registered by the end of the term will be listed for that term.

To graduate with honors, students must have earned in residence at Fort Lewis at least the same number of credit hours that are required for their major. No honors are awarded upon receipt of a second bachelor's degree. Grade point averages required for honors are as follows:

Summa cum laude – Grade point average of 3.8 to 4.0

Magna cum laude – Grade point average of 3.6 to 3.7

Cum laude – Grade point average of 3.4 to 3.5

Graduation with "honors" depends wholly on achieving a high grade point average. It should not be confused with participation in the John F. Reed Honors Program, which is described on Page 43 of this catalog.



## ACADEMIC PROCEDURES

### Registration

Registration for each trimester immediately precedes the beginning of classes for that trimester; however, both new and continuing students are encouraged to register early. For new or transfer students, early registration for the fall trimester is held from early June through early August. Freshmen also have an opportunity to register early during the three Summer Orientation Programs.

Early registration for continuing students is held generally in November for the winter trimester and in late March for the fall trimester. Registration for the three five-week summer sessions is held on the day classes begin for each session.

Any student registering after the official registration date for each trimester will be assessed a late charge.

### Classification

A regular student is one who has been admitted to the College and has declared an intention to pursue the requirements for the baccalaureate or associate degree.

Regular students are classified as follows according to semester credits completed:

Freshman	Less than 30 semester credits
Sophomore	30-59 semester credits
Junior	60-89 semester credits
Senior	90 or more semester credits

An unclassified student is one who has been permitted to enroll but who does not intend to work toward a degree.

### Special Scheduling

In exceptional cases, a regularly offered course not scheduled during a term may be taken on a non-scheduled basis when approved by the instructor, department chair and the appropriate dean. The Schedule Modification for Non-Scheduled Courses form is available in the Records Office.

### Academic Advising

Upon entering the College, each student is assigned an academic advisor. The program of courses selected by the student is approved by the advisor; the advisor also is available to counsel with the student about career plans and long-term academic programs and objectives. As the career and academic plans of the student evolve, he or she may select an advisor whose interests and specializations are consistent with the student's goals. Fort Lewis believes deeply in the importance of academic advising and encourages all students to make liberal use of the opportunity to meet and confer with their academic advisors.

### Course Load

The normal student load in a given trimester is 16 semester credits. A 3-credit course will customarily meet three hours per week, a 5-credit course, five hours per week. Students should plan to spend a minimum of two hours of outside preparation per week for every credit carried during the fall and winter trimesters.

Full-time load for enrollment certification for Veterans Benefit, athletics, loans, etc., is 12 credits per semester.

### Program Changes

Once a student has registered and confirmed a given set of courses, records are established and no courses are dropped from or added to the student's official registration except on forms provided by the Records Office or purchased from the Cashier's Office. Such changes are the responsibility of the individual student, who must make arrangements with the Records Office, the faculty advisor and the instructor(s) concerned. For dates, fees and other details, see the Schedule of Courses for each term.

As of 5 p.m. on the census date for any trimester or five-week summer session, all courses for which a student has registered will appear on the student's permanent academic record. Up through this date, all courses dropped from a student's registration will not appear on the student's permanent academic record.

A student has the right to withdraw from a class. After census date, the instructor must assign a *W* or an *F*.

### Effective Catalog

The academic policies and regulations are changed by the College from time to time. Which set of regulations (as published in the catalog) applies to a given student is determined by the following rule: all students intending to graduate from Fort Lewis College must meet the course requirements for graduation set forth in the catalog in effect at the time of their matriculation or the one in effect by the time of their graduation. Students may choose between the catalogs but may not combine them. Regulations other than course requirements will apply



according to the catalog in effect at the time of graduation except as new regulations have other effective, specifically fixed dates. However, no catalog more than 10 years old at the time of the student's graduation will be accepted as the source of graduation requirements. A student who matriculated more than 10 years before graduation will meet the requirements of the catalog in effect at the time of graduation, or may petition the Vice President for Academic Affairs to be permitted to graduate under some intervening catalog not more than 10 years old. Any student who is not registered at Fort Lewis College for any continuous period of two calendar years or more forfeits his claim to the catalog under which he entered and comes under the catalog in effect at the time he next returns to Fort Lewis College as a student. Students also have the right of appeal to the Vice President for Academic Affairs for use of an earlier catalog.

The College reserves the right to cancel a class (for that trimester) if enrollment is not deemed sufficient.

### Transcripts

The first transcript (record of grades) for a Fort Lewis College student is supplied free of charge. A charge is made for additional transcripts. All accounts with Fort Lewis must be settled before a transcript may be issued. Transcripts are processed as rapidly as possible and are usually issued within three working days from the date of request. However, at the end of a term, allow five to 10 working days for issuing a transcript.

### Family Educational Rights and Privacy Act of 1974

In compliance with the Family Educational Rights and Privacy Act of 1974 (P.L. 93-380), as amended, each eligible student has the right to review his or her own academic records, to seek correction of information contained in those records, and to limit disclosure of information from the records.

Student academic records are kept in the Records Office and are confidential to the student, the academic advisor, and to those faculty or staff members who must have access to the files to perform their duties. No information from a student's file will be released to any other party without the written permission of the student. This information plus the policy and details concerning the Act (copy of which is available in the Records Office) constitute the annual notification to students of their rights under the Act.

## ACADEMIC SUPPORT PROGRAMS

### The Library

In addition to serving as a resource and reference center, the John F. Reed Library is a popular study area with both individual carrels and lounge furniture for quiet study and research. There are several conference rooms where students may meet or study in small groups. An experienced professional staff, all of whom hold graduate degrees, and a well-trained complement of library assistants provide prompt, competent service to students, faculty, staff and citizens from the community.

Library holdings include more than 179,000 volumes of books, 8,600 reels of microfilm, 1,400 periodical subscriptions, approximately 30,000 volumes of microfiche and a wide selection of audiovisual material. The approximately 4,500 recordings include popular and classical music, poetry, dramatic readings and speeches. Films, filmstrips, videocassettes, and more than 6,000 overhead projector transparencies are important components of the audiovisual collection.

The Audiovisual Center has the capability to produce, or help students produce, audiovisual materials, ranging from simple overhead transparencies and 35mm slides to complex computer graphics and videocassette tapes.

Individualized reference service by a professional librarian is provided during most hours of library operation. Additionally, library orientation is a regular feature of the Freshman Seminar Program. An essential part of this orientation is instruction in the use of bibliographic tools, such as periodical indexes and abstracts and basic reference books needed to prepare research papers and reports. Reference resources include a number of CD-ROM and electronic full text databases.

The library is a member of the MARMOT and Online Computer Library Center (OCLC) computer networks. The MARMOT system serves as a catalog for many of the libraries in western Colorado and in the Denver area, providing easy access to more than 10 million volumes in more than a hundred libraries. The MARMOT system also serves as the circulation system for the library, making it easy for students to check out books by simply having their identification card and the books they wish to borrow scanned by

the computer. OCLC is a national network linking more than 11,000 libraries to a database of more than 25 million items. These systems facilitate interlibrary loans for books, articles and other materials. Students may use these systems to borrow research materials from other libraries free of charge or for a small fee. Thus, students have access to the resources of all the major libraries in Colorado and most of the major libraries in the rest of the country.

### Center of Southwest Studies

The Center of Southwest Studies provides a variety of essential services to the campus. The Center is a museum, library and archive and also provides the focus for an interdisciplinary approach to the history and culture of the Southwest. Coursework for this program is drawn from anthropology, art, history, literature, Spanish and a variety of other disciplines.

The holdings of the Center include books, magazines, microfilm, newspapers, photographs, audiovisual material and other records. The Center is one of the largest and most important archival institutions in Colorado. The materials on American Indians are among the largest in the western portion of the United States. Other important collections include mining, railroad and military records. Most of the collection is housed in the Southwest Center on the third floor of the John F. Reed Library, where the materials are available to students and faculty in all disciplines and research scholars throughout the nation.

The Center cooperates with other museums and with state, federal, and tribal agencies in the Four Corners region. Symposia, teacher institutes, and lectures are offered on a regular basis. The Center administers an ongoing oral history program and is developing a program of coursework in archival and museum training.

The Center of Southwest Studies is a unique and important institution which supports the academic program and offers programs for the general public. In 1990, Southwest Studies was selected by the Colorado Commission on Higher Education as one of five programs of excellence in state funded higher education.

### **Office of Computing and Telecommunications**

The Office of Computing and Telecommunications provides computing resources, voice and data communications, and technical support for the students, staff and faculty of Fort Lewis College.

Student computing labs are located in Room 680 Berndt Hall, Room 120 Noble Hall and Room 124a Hesperus Hall. These facilities include 32 interactive terminals connected to a Digital VAX 3600 minicomputer, 39 Apple Macintoshes, 6 Apple IIs and about 92 IBM PC-compatible microcomputers. Facilities are available seven days a week, except during holiday periods.

Any registered student may use any of the College's student computing labs. Students sign a usage agreement describing the lab policies and procedures. An ID is required.

Telephones are provided in on-campus housing rooms. Students are not allowed to receive collect calls or to make long-distance calls charged to any campus phone. Long-distance calls may be made by using a credit card or by reversing the charges.

### **Learning Assistance Center**

Most students during their college careers need help in achieving their educational goals. The Learning Assistance Center exists to provide academic support to any student who requests it. This support is supplied in a number of different forms.

Courses sponsored by the Center offer students the opportunity to improve their basic skills in writing, reading and mathematics. In addition, the learning skills classes aid entering freshmen in developing time-management skills, proficiency in note-taking, concentration, and test-taking skills. The Center also provides a peer tutorial program. Students needing assistance in a particular subject are assigned a free tutor; students who serve as tutors receive elective credit.

To select appropriate curricula, students may benefit from diagnostic tests in reading, writing and/or mathematics. The Center's personnel can evaluate the examination results and recommend courses or individual student programs. Furthermore, the Center's staff is prepared to offer non-credit minicourses and workshops to help students overcome academic difficulties. Other available resources in the Learning Assistance Center include computerized review programs, course outline texts, handouts,

individual academic counseling, and review for graduate record and teacher certification examinations.

### **Division of Intercultural Studies**

The purpose of the Division of Intercultural Studies is to provide an academic setting that promotes cultural pluralism and addresses the needs of students who are faced with the complexities and opportunities of education in a multicultural society. This effort is primarily tailored to the needs of the major ethnic societies in the service region of Fort Lewis College, but also seeks to enhance the educational accomplishments of other ethnic and cultural groups.

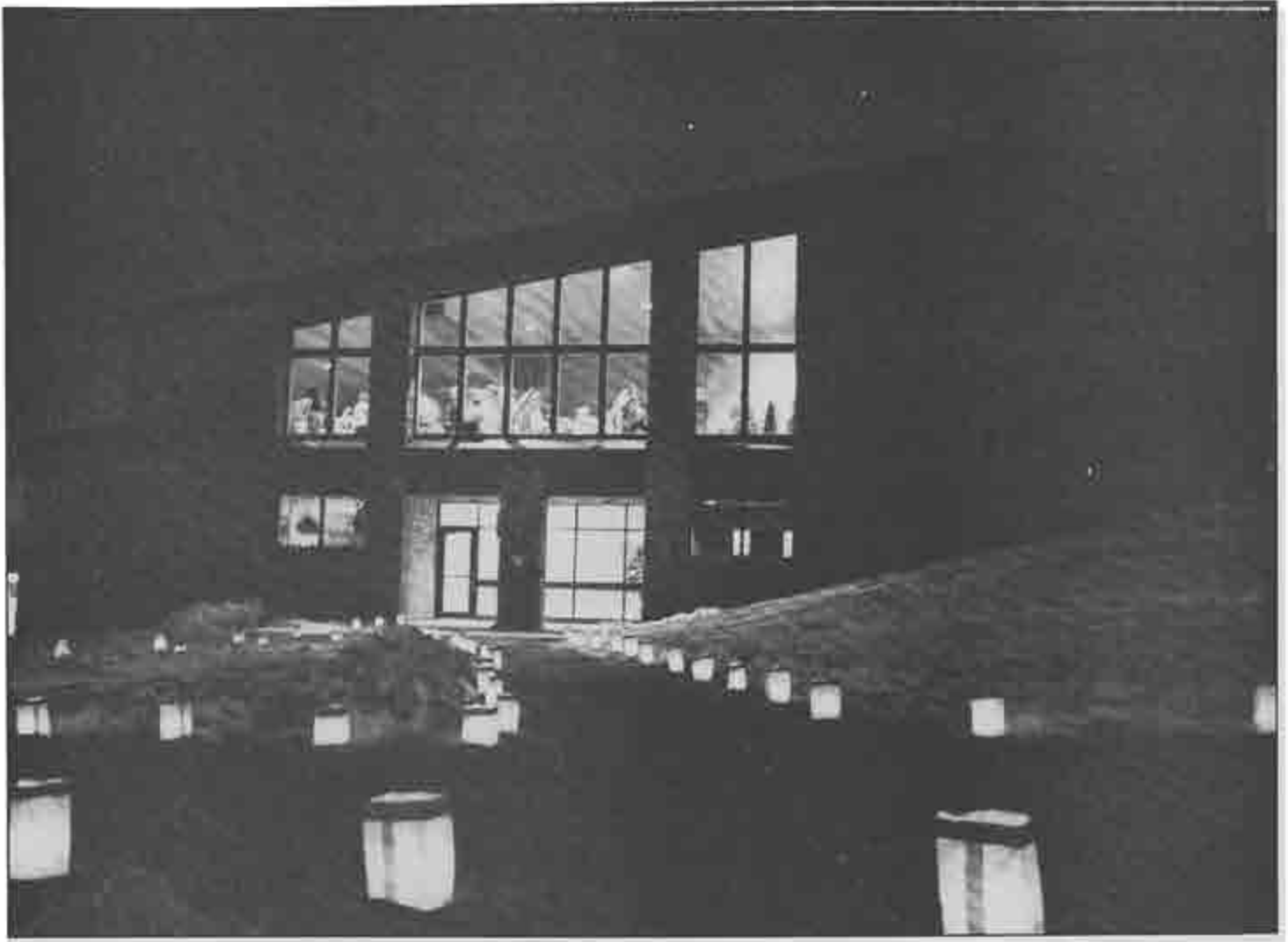
To accomplish this purpose, the Division of Intercultural Studies, in coordination with the college departments, offers academic, service, experiential and cultural approaches in multicultural education that relate to the following basic aspects of the college community: academic programs, student services, community services, social and living experiences, and cultural activities.

An important part of the Division of Intercultural Studies is the Intercultural Center, located in the Miller Student Center. It is a place where students of many cultural backgrounds may meet in an informal atmosphere for tutoring, studying or simply relaxing with friends. Faculty of the Division of Intercultural Studies are on hand at the Center to assist students with their studies and to help make the college experience for people of diverse backgrounds a rewarding one. Native Americans, Hispanics and foreign students make up a significant part of the Fort Lewis College student body.

### **Office of the Hispanic Student Organization**

The Office of the Hispanic Student Organization in the College Union Building was started to provide a support system for Hispanic and other minority students on campus. The office offers a variety of services from help with student scholarships and financial aid packages to academic and tutoring services for those who need it.

The Office works in close cooperation with Fort Lewis College's Intercultural Center to coordinate educational programs (including field trips to cultural sites and conferences) for minorities. Its goal is to provide the kinds of support needed to help make school life more relevant to increase the rate of enrollment and graduation of all minority students.



### **Office of Community Services**

The Office of Community Services has been established to offer technical assistance to a five-county area surrounding Fort Lewis College (Archuleta, La Plata, San Juan, Montezuma, Dolores). The Office has three purposes: to increase the opportunities for students and faculty to actively participate in public service projects in this region; to assist local communities with significant policy issues having to do with human service programs, natural resource management, community and economic development; and to ensure an educational partnership between students, faculty and citizens by establishing a community service learning process supported by the Fort Lewis College curriculum resources. The Office of Community Services contributes to the accomplishment of the College's mission in regard to public service by offering students an opportunity to gain valuable experience in direct community involvement.

The Office of Community Services has developed research activities in the areas of community studies, ethnography and public policy analysis. Projects have been established that offer students and faculty a variety of opportunities to conduct applied research on public interest issues, concerning community and social development.

Each public service project is initiated by a community request; linkages to the community are established through a local task force of appointed leaders. Students and faculty provide assistance to the community task force in setting its goals, collecting needed research data, and identifying alternative policy, planning and physical design solutions. Each project establishes a problem-oriented learning process for both the students and the community, guided by Office of Community Services staff and Fort Lewis College faculty members.





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## THE SCHOOL OF ARTS AND SCIENCES

KAREN I. SPEAR, DEAN  
DOREEN M. MEHS, ASSISTANT DEAN

### Departments and Programs:

*Anthropology* - Kathleen S. Fine, Chair  
*Art* - C. Gerald Wells, Chair  
*Biology, Agriculture and Forestry* - John R. Greathouse, Chair  
*Chemistry* - James W. Mills, Chair  
*Community Services* - Samuel A. Burns, Director  
*English* - Paul N. Pavich, Chair  
*Geology* - Robert W. Blair, Jr., Chair  
*History* - Reece C. Kelly, Chair  
*Humanities* - William Coe, Coordinator  
*International Studies* - Edward L. Angus, Coordinator  
*Mathematics* - Gregory W. Bell, Chair  
*Modern Languages* - Ingrid W. Ryan, Chair  
*Music* - Jan C. Roshong, Chair  
*Physics, General Science and Engineering* - Carla C. Williams, Chair  
*Political Science and Philosophy* - Byron Dare, Chair  
*Sociology and Human Services* - Dennis W. Lum, Chair  
*Southwest Studies* - Richard N. Ellis, Director  
*Theatre* - Dinah L. Leavitt, Coordinator

The programs in the School of Arts & Sciences are administered through its academic departments, but for easy reference the separate curricula are listed alphabetically.



## Agriculture

*Course listings for Agriculture begin on Page 123.*

Associate Professor John R. Greathouse  
Assistant Professor Philip E. Shuler

Several programs of study in Agriculture are available for students at Fort Lewis College.

As a cooperative effort between the Agriculture Program and the School of Business Administration, a four-year degree program is available for those students who are interested in professional careers in the agribusiness sector. See the School of Business Administration "Agricultural Business option" section of this catalog for more information.

Within Agriculture itself, four program options are available. A Guaranteed Transfer Program with Colorado State University is available for students interested in pursuing a four-year bachelor's degree. Through this program a student can complete a prescribed sequence of coursework at Fort Lewis during the freshman and sophomore years and, with a minimum grade point average, be qualified for full transfer to Colorado State with junior standing. Major areas of study offered through the transfer program include: Agricultural Business, Agronomy (production management, crop science, soil science, soil resources and conservation, and international concentrations), and Animal Sciences (industry and science concentrations).

A second agricultural option is a two-year program at Fort Lewis College leading to an Associate of Arts degree in Agricultural Science. This program is designed to fill the needs of those students pursuing an agricultural career on a farm, ranch or other agriculture-oriented business. Students may decide to concentrate in animal science, agricultural business or agronomy.

Students also have the option of developing a student-constructed major. This option is for students who plan to continue in a four-year program and combine agriculture with a second field of study, such as marketing or chemistry, which would lead to a degree in Agricultural Marketing or Agricultural Chemistry.

A minor in agriculture is available for students majoring in other disciplines. Requirements for a minor in agriculture are listed at the end of this section.

### REQUIREMENTS FOR AN ASSOCIATE OF ARTS DEGREE IN AGRICULTURAL SCIENCE:

**Credits**

#### General Studies:

Freshman Composition Seminar	4
Sophomore Composition Seminar	4
Approved math course	
(Math 110B or above, not Math 130B)	4-5
(The above math requirement does not fulfill the Group B General Distribution Requirement, although a second math course could be used.)	

Four courses to be selected from the General Distribution groups A-D, one from each group	12-16
<b>Total</b>	<b>24-29</b>

Physical Education Activity	2
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#### Specific Agricultural Science Requirements:

Ag 101B Introductory Animal Science	4
Ag 102B Principles of Crop Production	4
Ag 150 Farm Records and Accounts	3
<b>Total</b>	<b>11</b>

#### Agricultural Science Electives (at least five courses selected from the following):

Ag 202 Integrated Pest Management/ Weed Control	4
Ag 204 Forage Production and Management	3
Ag 235 Soils and Soil Fertility	4
Ag 240 Principles of Animal Nutrition	4
Ag 300D Agricultural Issues in Society	3
Ag 301 Range Management	4
Ag 325 Beef Science	3
Ag 346 Agricultural Marketing	3
Ag 350 Agricultural Law	3
Ag 370 Internship in Agriculture	3
Ag 390 Special Topics (as offered)	3-4
<b>Total</b>	<b>minimum 15</b>

#### Suggested Electives:

Engr 103 Computer Aided Drafting	
Engr 205 Surveying I	
Computer Science, Economics, Chemistry, Biology, Business Administration	
<b>TOTAL REQUIRED FOR GRADUATION</b>	<b>64*</b>

\*Agriculture Experience: A student is required to have a minimum of 15 weeks of work experience on a farm, ranch or other acceptable agricultural business prior to the awarding of the Associate of Arts degree in Agricultural Science.

**PROGRAM OF STUDY FOR GUARANTEED TRANSFER PROGRAM:**

Students participating in the guaranteed transfer program will select courses in consultation with their academic advisor. The specific courses required will depend on which concentration is selected.

**REQUIREMENTS FOR A MINOR IN AGRICULTURE:**

One or both of the following:

- Ag 101B Introductory Animal Science . . . 4
- Ag 102B Principles of Crop Production . . 4

Additional courses (select three to five of the following):

Ag 150 Farm Records and Accounts . . . .	3
Ag 202 Integrated Pest Management/ Weed Control . . . . .	4
Ag 204 Forage Production and Management . . . . .	3
Ag 235 Soils and Soil Fertility . . . . .	4
Ag 240 Principles of Animal Nutrition . .	4
Ag 300D Agricultural Issues in Society . .	3
Ag 301 Range Management . . . . .	4
Ag 325 Beef Science . . . . .	3
Ag 346 Agricultural Marketing . . . . .	3
Ag 350 Agricultural Law . . . . .	3
Ag 370 Internship in Agriculture . . . . .	3
Ag 390 Special Topics . . . . .	3-4
<b>Total . . . . .</b>	<b>20*</b>

\*A minimum of 20 credits is required, six of which must be 300 level or above. Students may concentrate in such areas as: General Agriculture, Animal Science, Agronomy or Agricultural Business.

**Anthropology**

*Course listings for Anthropology begin on Page 124.*

Professors W. James Judge and Susan M. Riches;  
Associate Professors Philip G. Duke,  
Kathleen S. Fine and Donald R. Gordon

Fort Lewis College offers a program of courses leading to the Bachelor of Arts degree with a major in Anthropology. A variety of courses is offered to serve the interests of all students. Courses within the department are suitable as electives in the broad liberal arts tradition and also are designed to fulfill the requirements of those who wish to continue their studies in one of the subfields of the discipline.

The department also offers an archaeological field school program and a variety of archaeological and ethnographic innovative month trips, both on this continent and in Europe.

Students majoring in anthropology may be certified to teach in the broad area of social studies at the secondary level. To obtain requirements for teacher certification, please contact the Department of Teacher Education.

The Department of Anthropology offers two minors for students majoring in other disciplines. Requirements for these minors are listed at the end of this section.

**REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN ANTHROPOLOGY:**

**Credits**

General Studies (not satisfied below under auxiliary requirements) . . . . . 40-41

**Specific Departmental Requirements:**

Anth 201C Introduction to Archaeology . .	4
Anth 210C Introduction to Sociocultural Anthropology . . . . .	4
Anth 205 Biological Anthropology I . . . .	3
Anth 301 Biological Anthropology II . . . .	4
Anth 395C History of Anthropological Thought . . . . .	4
Anth 496 Senior Research Seminar . . . .	4
<b>Total . . . . .</b>	<b>23</b>

**Other Departmental Requirements:**

Two additional courses in ethnology, one of which must be numbered 300 or above (choose from Anth 213CE, 215CE, 350CE, 351CE, 353CE, 354CE, 355C, 356C, 361CE, 371CE, or approved \*390 or 391) . . . . . 6-8

Two additional courses in archaeology, one of which must be non-New World oriented (choose from Anth 220C, 259, 271C, 306C, 330C, 348C, 402, 403, 430, or approved *390 or 391 for a general course; choose from Anth 308C, 309C, 341C, or approved *390 or 391 for a non-New World course) . . . . .	6-8
Total . . . . .	12-16
Auxiliary Requirement from another department (one of the following):	
Statistics (e.g., Math 201B, Psych 241B, BA 253B) . . . . .	3-4
or	
Linguistics (Engl 462A1) . . . . .	3
Total . . . . .	3-4
Electives . . . . .	41-46
<b>TOTAL REQUIRED FOR GRADUATION . . . . .</b>	<b>128</b>
<b>REQUIREMENTS FOR A MINOR IN SOCIOCULTURAL ANTHROPOLOGY OR ARCHAEOLOGY:</b>	

Sociocultural Anthropology	
Anth 210C Introduction to Sociocultural Anthropology . . . . .	4
Anth 201C Introduction to Archaeology	
or	
Anth 205 Biological Anthropology I . . . . .	3-4
Two additional courses in sociocultural anthropology, one of which must be upper-division . . . . .	6-8
Anthropology electives . . . . .	6-8
Total . . . . .	19-24
Archaeology	
Anth 201C Introduction to Archaeology . . . . .	4
Anth 210C Introduction to Sociocultural Anthropology	
or	
Anth 205 Biological Anthropology I . . . . .	3-4
Two additional courses in archaeology, one of which must be upper-division . . . . .	6-8
Anthropology electives . . . . .	6-8
Total . . . . .	19-24
<u>Important:</u> No grade of less than C will be accepted for the minor.	

\*Anth 390 and 391 are special topics courses announced each trimester.

## Art

Course listings for Art begin on Page 126.

Professors Mick Reber, Laurel C. Vogl and C. Gerald Wells;  
Associate Professor David J. Hunt;  
Assistant Professors Joanne Bock and Susan M. Moss

The art program is designed to increase the student's awareness and understanding of art and its relationship to society within a broad liberal arts background. The art major prepares the student to be a practicing artist, to enter graduate school for further professional schooling, or to teach on either the elementary or secondary level. The program also seeks to provide art experiences for application to problem solving, the use of leisure time, as well as a fuller and richer visual life.

Students, along with faculty members and other art professionals, have a continual opportunity to display their works in the Art Gallery on the Fort Lewis campus.

A minor in art is available for students majoring in other disciplines. Requirements for a minor in art

are listed at the end of this section.

### REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN ART:

	<i>Credits</i>
General Studies . . . . .	44
Specific Departmental Requirements:	
Art 101A2 Drawing . . . . .	3
Art 109A2 Basic Design . . . . .	3
Art 262A2 Art History to the Renaissance . . . . .	3
Art 263A2 Art History from the Renaissance . . . . .	3
Art 486 Theory and Aesthetics . . . . .	3
Art 496 Senior Seminar . . . . .	3
Total . . . . .	18

Other Departmental Requirements:  
 15 credits from the remainder of Art offerings  
 with the exception of Art 273 Art for Elementary  
 Teachers . . . . . 15

Electives . . . . . 51

**TOTAL REQUIRED FOR GRADUATION . . . . . 128**

Students seeking secondary certification must  
 complete, in addition to the specific requirements of  
 the art major, the following courses:

Art 154A2 or 155A2 Indian Arts  
 and Crafts . . . . . 3

Art 213 Basic Sculpture . . . . . 3  
 Art 224 Basic Painting . . . . . 3  
 Art 231A2 Introduction to Printmaking . . . 3  
 Art 243A2 Basic Photography . . . . . 3  
 Art 250A2 Ceramics . . . . . 3

(Recommended courses are Art 201 Drawing; and Art  
 273 Art for Elementary Teachers.)

#### REQUIREMENTS FOR A MINOR IN ART:

Students must complete 18 credits, including six  
 credits of upper-division work, and have the approval  
 of the department chair.

## Biology

*Course listings for Biology begin on Page 128.*

Professors John E. Dever, Jr., J. Page Lindsey and L. Preston Somers;  
 Associate Professors David W. Jamieson, William H. Romme and Thomas P. Sluss;  
 Assistant Professors Sherell Kuss Byrd, John M. Condie, Deborah M. Kendall, and Joseph C. Ortega

The various biology curricula are designed to meet  
 the different needs of students considering the broad  
 field of biology. Although all of these curricula lead to  
 a Bachelor of Science degree in Biology, there are  
 three options available: General Biology,  
 Environmental Biology, and Cellular and Molecular  
 Biology.

The General Biology option provides exposure to  
 all the major conceptual areas of biology. It is  
 intended for students wishing to pursue teaching and  
 professional careers or graduate school. It is also  
 recommended for those students who are undecided  
 about specific career goals in biology.

The Environmental Biology option provides a  
 broad exposure to the principles and practices of  
 ecology, environmental conservation and management  
 of natural resources. Thus, this option is particularly  
 valuable for those students who plan to work for the  
 many private firms and state and federal government  
 agencies concerned with natural resource  
 management and environmental impact assessment.  
 This curriculum also provides appropriate preparation  
 for students interested in teaching biology at the  
 secondary school level, as well as for those interested  
 in graduate study in ecology and environmental  
 science.

The Cellular and Molecular Biology option is  
 designed to prepare students for graduate study in  
 either molecular or cellular biology or to find  
 employment as laboratory technicians in those areas.

Both government and industry have considerable  
 demand for people trained in the biological sciences  
 and for which a bachelor's degree is sufficient.  
 Administrative and professional careers may be found  
 in government service and with a variety of  
 conservation and recreation agencies at both state  
 and federal levels. Laboratory and technical work is  
 available with industry and with several government  
 agencies. Some sales positions, especially with  
 pharmaceutical houses, require a biology background.  
 Many positions for biologists require a graduate  
 degree for which a liberal arts biology major is an  
 excellent background.

Students majoring in biology may be certified to  
 teach science at the secondary level. To obtain  
 requirements for teacher certification, please contact  
 the Department of Teacher Education.

A minor in biology is available for students  
 majoring in other disciplines. Requirements for a  
 minor in biology are listed at the end of this section.  
 All minors must be arranged in consultation with the  
 student's biology advisor.

**REQUIREMENTS FOR A BACHELOR OF SCIENCE  
DEGREE WITH A MAJOR IN BIOLOGY:**
**The General Biology Option:**

	<i>Credits</i>
General Studies (not satisfied below) . . . . .	34
<b>Specific Departmental Requirements:</b>	
Bio 100BL Laboratory Experiences in Biology . . . . .	1
Bio 111B Biology of the Cell . . . . .	3
Bio 206 General Botany . . . . .	4
Bio 207 General Zoology . . . . .	4
Bio 220 Fundamentals of Ecology . . . . .	4
Bio 321 General Physiology . . . . .	4
Bio 370 Genetics Laboratory . . . . .	1
Bio 371 General Genetics . . . . .	2
Bio 372 Evolutionary Genetics or	
Bio 373 Molecular Genetics . . . . .	1
Other biology courses, excluding cooperative education . . . . .	11
Bio 496 Senior Seminar . . . . .	2
<b>Total . . . . .</b>	<b>37</b>
<b>Auxiliary Requirements from Other Departments:</b>	
Chem 150B-151 Fundamentals of Chemistry . . . . .	11
Chem 303-304 Organic Chemistry . . . . .	10
Math 221B Calculus I . . . . .	5
Psych 241B Basic Statistics for Psychologists or	
Math 201B Elementary Statistics or	
BA 253B Business Statistics . . . . .	3-4
<b>Total . . . . .</b>	<b>29-30</b>
<b>Recommended Courses (suggested for those students anticipating graduate school):</b>	
Math 222 Calculus II	
Phys 212BL Introductory Physics Laboratory and Phys 262B, 263B Physics for Science & Engineering	
CSIS 120B Introduction to Programming (BASIC)	
Chem 311 General Biochemistry I	
Foreign Language (French or German recommended)	
<b>Electives . . . . .</b>	<b>27-28</b>
<b>TOTAL REQUIRED FOR GRADUATION . . . . .</b>	<b>128</b>

**The Environmental Biology Option:**

	<i>Credits</i>
General Studies (not satisfied below) . . . . .	34
<b>Specific Departmental Requirements:</b>	
Bio 100BL Laboratory Experiences in Biology . . . . .	1
Bio 111B Biology of the Cell . . . . .	3
Bio 206 General Botany . . . . .	4
Bio 207 General Zoology . . . . .	4
Bio 220 Fundamentals of Ecology . . . . .	4
Bio 302 Systematic Botany . . . . .	4
Bio 304 Field Zoology . . . . .	5
Bio 371 General Genetics . . . . .	2
Bio 372 Evolutionary Genetics . . . . .	1
Bio 471 Field Ecology . . . . .	5
Other biology courses (in the 300- or 400-series) . . . . .	3
Bio 496 Senior Seminar . . . . .	2
<b>Total . . . . .</b>	<b>38</b>
<b>Auxiliary Requirements from Other Departments:</b>	
Chem 150B-151 Fundamentals of Chemistry . . . . .	11
Chem 303 Organic Chemistry . . . . .	5
Chem 365 Analytical Chemistry I . . . . .	4
Math 221B Calculus I . . . . .	5
Math 201B Elementary Statistics, or	
Psych 241D . . . . .	3-4
Ag 301 Range Management . . . . .	4
Ag 235 Soils and Soil Fertility . . . . .	4
<b>Total . . . . .</b>	<b>36-37</b>
<b>Recommended electives (to be selected in consultation with student's advisor):</b>	
Math 222 Calculus II	
Math 360B Introduction to Operations Research	
Engr 205 Surveying I	
Geol 113B Physical Geology	
CSIS 150B Introduction to Programming (FORTRAN)	
Econ 266D Principles of Economics	
Engl 363 Advanced Composition	
Chem 304 Organic Chemistry	
Chem 465 Instrumental Analytical Chemistry II	
Phys 132B-232B-233B or 162B-262B-263B, 211BL, 212BL	
<b>Total Electives . . . . .</b>	<b>20</b>
<b>TOTAL REQUIRED FOR GRADUATION . . . . .</b>	<b>128</b>



**The Cellular and Molecular Biology Option:****Credits**

General Studies (not satisfied below) ..... 34

## Specific Departmental Requirements:

Bio 100BL Laboratory Experiences  
in Biology ..... 1

Bio 111B Biology of the Cell ..... 3

Bio 206 General Botany ..... 4

Bio 207 General Zoology ..... 4

Bio 321 General Physiology ..... 4

Bio 331 Microbiology

*or*

Bio 400 Plant Physiology ..... 4

Bio 342 Embryology & Developmental  
Biology of Vertebrates*or*

Bio 473 Mammalian Physiology ..... 4

Bio 370 Genetics Laboratory ..... 1

Bio 371 General Genetics ..... 2

Bio 373 Molecular Genetics ..... 1

Bio 433 Bacterial Physiology

*or*

Bio 455 Cell &amp; Molecular Biology

*or*

Bio 322 Radiation Biology ..... 4

Bio 496 Senior Seminar ..... 2

Total ..... 34

## Auxiliary Requirements from Other Departments:

Chem 150B-151 Fundamentals  
of Chemistry ..... 11

Chem 303-304 Organic Chemistry ..... 10

Math 221B Calculus I ..... 5

Psych 241B Basic Statistics for Psychologists

*or*

Math 201B Elementary Statistics

*or*

BA 253B Business Statistics ..... 3-4

Total ..... 29-30

Electives ..... 30-31

TOTAL REQUIRED FOR GRADUATION ..... 128

## REQUIREMENTS FOR A MINOR IN BIOLOGY:

Bio 100BL Laboratory Experiences  
in Biology ..... 1

Bio 111B Biology of the Cell ..... 3

Bio 206 General Botany

*or*

Bio 207 General Zoology ..... 4

Three additional biology courses, and two  
must be upper-division ..... 12

Total ..... 20

**Chemistry***Course listings for Chemistry begin on Page 132.*

Professors William R. Bartlett, Ron C. Estler, Rodney D. Hamilton, William C. Langworthy, Doreen M. Mehs,  
James W. Mills and John M. Ritchey;  
Assistant Professors Robert E. Milofsky and Leslie E. Sommerville

The chemistry curriculum provides a general knowledge of chemistry and of the scientific method; prepares students to become chemists in industry and education; and provides a background for medical, engineering, or other professional or graduate schools.

To achieve these objectives, a flexible curriculum has been designed, giving the student an opportunity to tailor a degree to fulfill personal needs and interests. The **chemistry option** prepares the student for professional work in various areas of chemical technology, for admission to graduate programs in chemistry, or may be combined with other majors or minors so that the student may ultimately practice in interdisciplinary vocations. The **biochemistry option** prepares students for entrance to graduate school in this rapidly expanding

interdisciplinary field and for employment in the biotechnology industry. Extensions of both these options are recommended for students contemplating graduate school.

The Chemistry Department also offers certification by the American Chemical Society to students who complete an ACS-certified curriculum. Those students planning on entering professional schools in medicine, dentistry, or veterinary medicine should consult with the chemistry faculty and the Pre-Health Committee when planning their curriculum. (See Health Careers Preparatory Programs section of this catalog.)

Chemists are concerned with the structure, composition, energy relationships, chemical

conversions and other properties of substances. The various areas of chemical and biochemical technology offer the largest field of employment in the physical sciences. Chemists are employed in fields such as environmental analysis, biotechnology, material science, semiconductors, waste management, pollution control, energy research and production, forensic science and pharmaceuticals.

Chemistry graduates will find many applications for their training, e.g., teaching, research, management, production and sales; and in the fields of education, business, industry, law, government and medicine.

A minor in chemistry is available for students majoring in other disciplines. Requirements for a minor in chemistry are listed at the end of this section.

#### REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN CHEMISTRY - CHEMISTRY OPTION:

	<b>Credits</b>
General Studies (not satisfied below) .....	34
<b>Specific Departmental Requirements:</b>	
Chem 150B, 151 Fundamentals of Chemistry .....	11
Chem 303, 304 Organic Chemistry .....	10
Chem 311 Biochemistry .....	3
Chem 358, 359 Physical Chemistry .....	6
Chem 360 Physical Measurements .....	2
Chem 364 Inorganic Chemistry .....	2
Chem 365 Analytical Chemistry .....	4
Chem 465 Instrumental Analytical Chemistry .....	4
Chem 496, 497 Senior Seminar .....	2
<b>Total</b> .....	<b>44</b>
<b>Auxiliary Requirements from Other Departments:</b>	
Math 221B-222 .....	9
Phys 162B-262-263 (132B-232-233), 211BL or 212BL* .....	10
<b>Total</b> .....	<b>19</b>
Electives .....	31
<b>TOTAL REQUIRED FOR GRADUATION</b> .....	<b>128</b>

\*See your advisor for the selection of the proper physics lab.

#### REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN CHEMISTRY - BIOCHEMISTRY OPTION:

	<b>Credits</b>
General Studies (not satisfied below) .....	34
<b>Specific Departmental Requirements:</b>	
Chem 150B-151 Fundamentals of Chemistry .....	11
Chem 303-304 Organic Chemistry .....	10
Chem 311-312-313 Biochemistry .....	7
Chem 358-359 Physical Chemistry .....	6
Chem 360 Physical Measurements .....	2
Chem 364 Inorganic Chemistry .....	2
Chem 365 Analytical Chemistry .....	4
Chem 496-497 Senior Seminar .....	2
<b>Total</b> .....	<b>44</b>
<b>Auxiliary Requirements from Other Departments:</b>	
Biology* (two of the following)	
Bio 321 General Physiology .....	4
Bio 331 Microbiology .....	4
Bio 371 General Genetics .....	2
Bio 455 Cellular and Molecular Biology ..	4
Math 221B-222 .....	9
Phys 162B, 262, 263 (132B, 232, 233), 211BL or 212BL** .....	10
<b>Total</b> .....	<b>25-27</b>
Electives .....	23-25
<b>TOTAL REQUIRED FOR GRADUATION</b> .....	<b>128</b>

\*See your advisor for assistance in making your selection; these courses have prerequisites.

\*\*See your advisor for the selection of the proper physics lab.

#### REQUIREMENTS FOR A MINOR IN CHEMISTRY:

Chem 150B-151 Fundamentals of Chemistry .....	11
Chem 303 Organic Chemistry or	
Chem 364 Inorganic Chemistry .....	2-5
Chem 365 Analytical Chemistry .....	4
Chem 305 Natural Products from Plants or	

Chem 311 General Biochemistry I or Chem 358 Physical Chemistry . . . . .	3
Total . . . . .	20-23

**THE ACS-CERTIFIED  
BACHELOR OF SCIENCE DEGREE**

Chemistry majors may qualify for certification by the American Chemical Society (ACS) upon graduation by successfully completing a core of specified courses in chemistry and related fields. This program is particularly recommended for students planning to seek employment in industry. The ACS certification of the Fort Lewis degree requires an extension of the degree requirements given above. You will need to consult with your advisor and the chemistry faculty to carefully plan your schedule to meet these requirements.

Students planning to earn an advanced degree in chemistry, engineering, medicine or other science-based postgraduate program for the purpose of teaching or research are encouraged to extend the basic chemistry major by taking the chemistry major and including three or four additional courses in biology, chemistry, mathematics or physics. These

courses should be selected in consultation with the chemistry faculty.

Chemistry majors are also encouraged to study a foreign language.

**CHEMISTRY MAJOR FOR CAREERS  
IN THE HEALTH PROFESSIONS**

Chemistry majors are well-prepared to seek admission to professional programs in medicine, veterinary medicine, dentistry, physical therapy, medical technology and pharmacy. For assistance in planning their curricula, students interested in these programs should consult with members of the chemistry faculty who are members of the PreProfessional Advisory Committee. (See Health Careers Preparatory Programs section of this catalog.)

**TEACHING IN CHEMISTRY**

Students majoring in chemistry may be certified to teach science at the secondary level or to teach at the elementary level. To obtain requirements for teacher certification, please contact the Department of Teacher Education and the Chemistry Department chair.

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**Communications**  
(See Communications Option in  
English Section of this catalog on Page 141.)

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**Community Services**  
(See Page 53.)

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## Computer Science Information Systems (CSIS)

*Course listings for Computer Science Information Systems begin on Page 134.*

Professors Gregory W. Bell, Roger P. Peters and Laszlo Szuecs;

Associate Professors Evans J. Adams, Lawrence S. Corman, O.D. Perry, Carla C. Williams and James A. Wixom;  
Assistant Professor Craig E. Young

The interdisciplinary major leading to the Bachelor of Arts degree in Computer Science Information Systems (CSIS) combines the fields of computer science (the science of creating computer software) and information systems (the application of computer software). The program emphasizes breadth of knowledge and the development of written and oral communication skills, which are trademarks of a liberal arts education, combined with professional competence in computer science and/or information systems. The student may specialize in these fields by choosing the Computer Science Option or the Information Systems Option described below. Students who prefer more flexibility in tailoring the curriculum to their specific interests should choose the General Option.

The primary objectives of the curriculum are to ensure that every graduate is thoroughly familiar with the fundamental principles of modern computer science and information systems; understand how these principles relate to software, hardware and systems design; and is familiar with at least one significant area of applications of computers. Other major objectives include: providing graduates with the ability to understand a variety of problem-solving algorithms; familiarity with several programming languages for implementing these algorithms; understanding of hardware and/or software systems; the ability to make informed choices of software and hardware for a variety of problems; and an understanding of the role that human factors play in implementing computer-based systems.

Computer Science (or Software Engineering) generally refers to the application of scientific and engineering principles to the development of software products. Students choosing the Computer Science Option will receive training far beyond the ability to write programs that work. Software engineers must construct program systems that work efficiently and are comprehensible so that modification can be performed effectively when required. Software maintenance is as much a part of software engineering as the creation of new software.

Selection of the Information Systems Option generally leads to a career as a systems analyst,

information system manager or software project manager. These positions are responsible for choosing the right hardware and software for a particular data-processing problem and for organizing the database in a suitable form. A significant portion of the courses for this option also will address the concepts of software engineering and software project management as they apply to the development of large-scale software systems. A growing number of systems analysts also design and maintain computer networks.

### REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN COMPUTER SCIENCE INFORMATION SYSTEMS (CSIS):

#### The General Option:

	<i>Credits</i>
General Distribution Requirements .....	44
<b>Required CSIS Courses:</b>	
CSIS 130B Introduction to Programming (PASCAL) .....	4
CSIS 140B Introduction to Programming (COBOL) .....	4
CSIS 221 Advanced Programming (PASCAL) .....	4
CSIS 310 Data Structures	
<i>or</i>	
CSIS 350 Database Management Systems	3
CSIS 421 Operating Systems	
<i>or</i>	
CSIS 430 Data Communications .....	3
CSIS 496 Senior Seminar .....	2
<b>CSIS Electives:</b>	
12 additional hours of CSIS courses numbered over 300, chosen with the supervision of CSIS faculty .....	12
<b>Total .....</b>	<b>32</b>
<b>Auxiliary Course Requirements:</b>	
Math 201B Elementary Statistics	
<i>or</i>	
BA 253B Business Statistics .....	4
Math 210B Calculus for Business	
<i>or</i>	
Math 221B Calculus I .....	4/5

Math 320 Numerical Analysis	
<i>or</i>	
Math 360B Introduction to Operations Research	3
GS 361 Computers and Human Issues	3
Total	14-15
General Electives	40-41
<b>TOTAL REQUIRED FOR GRADUATION</b>	<b>128</b>

**The Computer Science Option:**

	<i>Credits</i>
General Distribution Requirements	44
Required CSIS Courses:	
CSIS 130B Introduction to Programming (PASCAL)	4
CSIS 221 Advanced Programming (PASCAL)	4
CSIS 310 Data Structures	3
CSIS 320 Assembly Language Programming	3
CSIS 321 Computer Architecture and Organization	3
CSIS 421 Operating Systems	
<i>or</i>	
CSIS 430 Data Communications	3
CSIS 496 Senior Seminar	2
CSIS Electives:	
Nine additional hours of CSIS courses numbered above 300, chosen with the supervision of CSIS faculty	9
Total	31
Auxiliary Course Requirements:	
Math 221B Calculus I	5
Math 305B Discrete Mathematical Structures	3
Math 201B Elementary Statistics	4
Math 320 Numerical Analysis	
<i>or</i>	
Math 360B Introduction to Operations Research	3
GS 361 Computer and Human Issues	3
Total	18
General Electives	35
<b>TOTAL REQUIRED FOR GRADUATION</b>	<b>128</b>

**The Information Systems Option:**

	<i>Credits</i>
General Distribution Requirements	44
Required CSIS Courses:	
CSIS 140B Introduction to Programming (COBOL)	4
CSIS 240 Advanced Programming (COBOL)	4
CSIS 320 Assembly Language Programming	3
CSIS 350 Database Management Systems	3
CSIS 360 Information Systems Design and Systems Analysis	3
CSIS 370 Information Systems Implementation and Management	3
CSIS 420 Management Information Systems	4
CSIS 496 Senior Seminar	2
CSIS Electives	
Six additional hours of CSIS courses, three of which must be numbered above 300 chosen with the supervision of CSIS faculty	6
Total	32
Auxiliary Course Requirements:	
BA 253B Business Statistics	
<i>or</i>	
Math 201B Elementary Statistics	4
Math 210B Calculus for Business	
<i>or</i>	
Math 221B Calculus I	4/5
Math 320 Numerical Analysis	
<i>or</i>	
Math 360B Introduction to Operations Research	3
GS 361 Computers and Human Issues	3
Total	14-15
General Electives	37-38
<b>TOTAL REQUIRED FOR GRADUATION</b>	<b>128</b>

As part of the General Electives requirement for graduation, students majoring in CSIS are strongly encouraged to complete a minor (or the equivalent of a minor) in any field of study offered at the college. By doing so, the student will (a) solidify his/her liberal arts education and (b) be prompted to pay close attention to career planning during the last two years of study. The choice of the minor should be discussed with the student's CSIS advisor.

**REQUIREMENTS FOR A MINOR IN COMPUTER  
SCIENCE INFORMATION SYSTEMS:**

CSIS 130B Introduction to  
Programming (PASCAL) ..... 4  
and  
CSIS 221 Advanced Programming  
(PASCAL) ..... 4  
or

CSIS 140B Introduction to  
Programming (COBOL) ..... 4  
and  
CSIS 240 Advanced Programming  
(COBOL) ..... 4

Four additional CSIS courses (excluding  
CSIS 101 and 102), at least 3 of which  
are numbered above 300 ..... 12

Total ..... 20

### Engineering

*Course listings for Engineering begin on Page 140.*

Professors Omnia I. El-Hakim and Tom D. Norton;  
Associate Professor Carla C. Williams;  
Assistant Professor Don R. May

The engineering program at Fort Lewis College is designed primarily to meet the needs of those students who are interested in obtaining an engineering degree, but prefer to complete their first two years of study at a small college with a liberal arts emphasis. The engineering faculty regularly teaches those courses that students would normally take during their freshman and sophomore years at any four-year institution which grants a degree in engineering. After completing a requisite block of courses which includes, in addition to engineering, courses in mathematics and the humanities, students are eligible for full junior standing at one of the institutions with which Fort Lewis maintains a transfer agreement.

Fort Lewis College participates in formal engineering transfer agreement programs with Colorado State University (CSU) at Fort Collins, Colorado School of Mines (CSM) at Golden, the University of Colorado (CU) at Boulder, the University of Southern Colorado (USC) at Pueblo, and the University of New Mexico (UNM) at Albuquerque.

Under these block transfer agreements the student completes the prescribed sequence of courses, listed below, in residence at Fort Lewis. Successful completion of this sequence with the required minimum GPA is sufficient for the collective transfer of these courses to the cooperating institution with full junior standing. The block transfer sequence may be completed in two years of residence at Fort Lewis. For detailed information on specific agreements and programs students should see an engineering advisor.

#### Required minimum grade point averages by school:

Colorado State University - 2.5  
Colorado School of Mines - 2.5  
University of Colorado - 2.75  
University of Southern Colorado - 2.5 (Industrial Engineering only)  
University of New Mexico - 2.25 (Completion of an additional 18 technical hours with a grade point of at least 2.5 is required.)  
(Only those courses in which a student received a C or higher will transfer.)

Although the above plans pertain specifically to the agreements with Colorado State University, Colorado School of Mines, the University of New Mexico, the University of Southern Colorado and the University of Colorado, the courses offered are ordinarily accepted for credit in comparable courses at other degree-granting engineering institutions. In addition, the engineering courses are often used by students in planning student-constructed majors at Fort Lewis College. Student-constructed majors using the engineering courses are available in conjunction with physics, geology, mathematics and other disciplines. The student should consult with his or her advisor if interested in a student-constructed major in one of these areas.

As a cooperative effort between the engineering program and the School of Business Administration, a four-year degree program is available in Engineering Management. For more information, please see the School of Business Administration section of this catalog.

Students who are interested in obtaining a mathematics degree in addition to an engineering degree may wish to pursue a 3-2 program. The student attends Fort Lewis College for six terms (equivalent to three academic years) and the cooperating institution for two academic years. During residence at Fort Lewis, the student completes the requirements for the basic engineering core and most of the requirements for a mathematics major. At the cooperating institution the student completes the remaining requirements for a Bachelor of Arts degree in Mathematics, awarded by Fort Lewis College, and the requirements for an engineering degree from the cooperating institution.

A minor in engineering is available for students majoring in other disciplines. Requirements for a minor in engineering are listed at the end of this section.

#### CSU BLOCK TRANSFER PLAN

	<i>Credits</i>
Engr 103 Computer Aided Drafting	3
Engr 104B Computer Programming for Scientists and Engineers	3
Engr 105 Engineering Principles	3
Engr 201 Electric Networks I	4
Engr 217 Statics	3
Engr 221 Dynamics	3
Engr 270 Engineering Thermodynamics	2
FCS Freshman Composition Seminar	4
Math 221B, 222, 223 Calculus I, II, III	13
Math 327 Differential Equations	3
Phys 162B, 262B, 263B, Physics for Science and Engineering I, II, III	9
Phys 211BL, 212BL Physics Laboratory I, II	2
Chem 150B, 151 Fundamentals of Chemistry	11
Humanities and Social Sciences Electives	6
PE Act Physical Activities	2
<b>Total</b>	<b>71</b>

#### CSM BLOCK TRANSFER PLAN

Specific courses required of all students:	
FCS, SCS Freshman, Sophomore Composition Seminars	8
Math 221B, 222, 223, Calculus I, II, III	13
Math 327 Differential Equations	3
Engr 103 Computer Aided Drafting	3
Engr 104B Computer Programming for Scientists and Engineers	3
Engr 105 Engineering Principles	3
Engr 217 Statics	3

Chem 150B, 151, Fundamentals of Chemistry	11
Geol 113B Physical Geology and Laboratory	4
Phys 162B, 262B, 263B Physics for Science and Engineering I, II, III	9
Phys 211BL, 212BL Physics Laboratory I, II	2
Econ 262D Principles of Economics-Micro	3
PE Act Physical Activities	2
Humanities and Social Sciences Electives	6
<b>Total</b>	<b>73</b>

Additional course(s), depending on the intended major, selected from:

Econ 272D Principles of Economics-Macro	3
Engr 205 Surveying I	4
Engr 221 Dynamics	3
Engr 270 Engineering Thermodynamics	3
Engr 317 Mechanics of Materials	3
Engr 321 Fluid Mechanics	3
Geol 114B Historical Geology and Laboratory	4
Geol 207 Mineralogy	3
CSIS 130B Introduction to Programming (PASCAL)	4
Math 311B Matrices and Linear Algebra	3
Math 320 Numerical Analysis	3
Chem 358 Physical Chemistry	3
Phys 320 Modern Physics	3

#### UNM BLOCK TRANSFER PLAN

Common courses required of all students:

FCS, SCS Freshman, Sophomore Composition Seminars	8
Math 221B, 222, 223, Calculus I, II, III	13
Chem 150B, 151, Fundamentals of Chemistry	11
Engr 104B Computer Programming for Scientists and Engineers	3
Engr 105 Engineering Principles*	3
Phys 162B, 262B, 263B Physics for Science and Engineering I, II, III	9
Phys 211BL, 212BL, Physics Laboratory I, II	2
Engr 201 Electric Networks I	4
Math 327 Differential Equations	3
PE Act Physical Activities	2
<b>Total</b>	<b>58</b>

Minimum of 15 additional credits, depending on major, selected from:

Engr 202 Electric Networks II	4
Engr 205, 305 Surveying I, II	8
Engr 217 Statics	3
Engr 221 Dynamics	3

Engr 270 Engineering Thermodynamics . . .	3
Engr 317 Mechanics of Materials . . . . .	3
Engr 321 Fluid Mechanics . . . . .	3
Phys 320 Modern Physics . . . . .	3
Chem 303, 304, Organic Chemistry I, II	10
Econ 272D Principles of Economics-Macro	3
Bio 100BL, 111BL Introduction to Biology	4
Bio 207 General Zoology . . . . .	4
Humanities and Social Sciences Electives	11
<b>Total . . . . .</b>	<b>73</b>

\*Electrical Engineering majors take Engr 238 instead of Engr 105.

### CU BLOCK TRANSFER PLANS FOR AEROSPACE, ARCHITECTURAL, CHEMICAL, CIVIL, ELECTRICAL AND MECHANICAL ENGINEERING

Specific courses required for these disciplines are available from engineering advisers in the Physics/Engineering Department at Fort Lewis College.

### USC BLOCK TRANSFER PLAN FOR INDUSTRIAL ENGINEERING

Engr 103 Computer Aided Drafting . . . . .	3
Engr 104B Introduction to Computer Programming (FORTRAN) . . . . .	3
Engr 201 Electric Networks I . . . . .	4
Engr 217 Statics . . . . .	3
Engr 221 Dynamics . . . . .	3

Engr 317 Mechanics of Materials . . . . .	3
Math 221B, 222, 223 Calculus I, II, III . . .	13
Math 327 Differential Equations . . . . .	3
Phys 162B Physics for Science and Engineering . . . . .	3
Phys 211BL, 212BL Introduction to Physics Lab I and II . . . . .	1
Phys 262B, 263B Physics for Science and Engineering, I, II, III . . . . .	9
Chem 150B, 151 Fundamentals of Chemistry . . . . .	11
FCS, SCS, Freshman, Sophomore Composition Seminars . . . . .	8
Econ 262D Principles of Economics-Micro	3
Econ 272D Principles of Economics-Macro	3
<b>Total . . . . .</b>	<b>71</b>

### REQUIREMENTS FOR A MINOR IN ENGINEERING:

Engr 104B Computer Programming for Scientists and Engineers or CSIS 150B Introduction to Programming (FORTRAN) . . . . .	3
Engr 217 Statics . . . . .	3
Engr 221 Dynamics . . . . .	3
Engr 317 Mechanics of Materials . . . . .	3
Engr 321 Fluid Mechanics . . . . .	3
Two additional courses from the following group:	
Engr 105, 205, 270, 305, 201, 202, 238 . . . . .	6-7
<b>Total . . . . .</b>	<b>21-22</b>

## English

*Course listings for English begin on Page 141.*

Professors G. Leonard Bird, Gordon P. Cheesewright, Mark D. Coburn, Larry K. Hartsfield, Joel M. Jones, Roland C. Jones, Lillian B. Lang, Mary Jean Moseley, Paul N. Pavich, Carroll V. Peterson and Shaila Van Sickle;  
Assistant Professors Evie-Kaiulani Daufin, Faron L. Scott and James B. Wehmeyer;  
Instructor Delilah G. Orr

The work offered in English deals with several aspects of liberal education: the linguistic and literary history of Western culture; selected studies in non-Western literature in translation; human values; the relationships between cultures in the Southwest; and written and oral communication, both utilitarian and creative.

Students with other majors find the courses in English valuable for their general educational

development. In addition, the English Department offers supporting courses for the Southwest Studies major, the Humanities major and the Division of Intercultural Studies.

Verbal skills are valued in many professions. English advisors can help students plan courses of study preparing them for graduate or professional school; careers in business, industry or government; careers in communications, theatre or teaching.



The English major has four options:

**The General Option:** A traditional English major; preparation for graduate or professional school.

**The Communications Option:** An English major with a communications emphasis.

**The English Education Option:** Preparation for secondary school teaching.

**The Theatre Option:** An English major with a theatre emphasis. (See the Theatre section of this catalog.)

Minors in literature, writing and communications are available for students majoring in other disciplines. Requirements for these minors are described below. (See Theatre section of this catalog for a minor in Theatre.)

#### REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN ENGLISH:

##### The General Option:

	<i>Credits</i>
General Studies (not satisfied below) . . . . .	40-41

##### Specific Departmental Requirements:

Engl 122A1 European Literature to 1400 . . . . .	3
Engl 231A1 British Literature to 1800 . . . . .	3
Engl 232A1 British Literature since 1800 . . . . .	3
Engl 245A1 American Literature to 1865 . . . . .	3
Engl 246A1 American Literature since 1865 . . . . .	3
Engl 321A1 The Novel to 1870 . . . . .	3
or	
Engl 322A1 The Novel since 1870 . . . . .	3
Engl 363 Advanced Composition . . . . .	3
or	
Engl 464A1 Creative Writing . . . . .	4
Engl 432A1 Shakespeare . . . . .	3
Engl 461A1 History of the English Language . . . . .	3
or	
Engl 462A1 Linguistics . . . . .	3
Engl 496 Senior Seminar . . . . .	2-3
Engl 499 cannot replace Engl 496.	
One Topics course in British Literature (336, 337, 338, 339, 430) . . . . .	3
One Topics course in American Literature (345, 346) . . . . .	3
Two additional Topics courses chosen from: (336, 337, 338, 339, 345, 346, 380, 421, 422, 430, 475 or 476) . . . . .	6
Total Departmental Requirement . . . . .	42-43

##### Auxiliary Requirements:

Two trimesters of one college-level modern language . . . . .	6-8
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Electives . . . . .	37-40
(English advisors can help students choose electives which will further their individual career goals.)	

TOTAL REQUIRED FOR GRADUATION . . . . .	128
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##### The Communications Option:

	<i>Credits</i>
General Studies (not satisfied below) . . . . .	44

##### Specific Departmental Requirements:

Engl 116A1 Introduction to Mass Communications . . . . .	3
Engl 215 News Media Writing . . . . .	3
Engl 231A1 British Literature to 1800 and Engl 232A1 British Literature since 1800 . . . . .	3
or	
Engl 245A1 American Literature to 1865 and Engl 246A1 American Literature since 1865 . . . . .	6
Engl 265A1 Semantics . . . . .	3
Engl 304 TV Production . . . . .	3
or	
Engl 306 Radio Broadcasting . . . . .	3
Engl 321A1 The Novel to 1870 . . . . .	3
or	
Engl 322A1 The Novel since 1870 . . . . .	3
Engl 315 Media Writing: Topics . . . . .	3
or	
Engl 363 Advanced Composition . . . . .	3-4
Engl 416A1 Media Theory and Criticism . . . . .	3
Three Topics courses, one of which must be chosen from Engl 346, Engl 475 or Engl 476 (excluding Engl 315 if used to satisfy other major requirements) . . . . .	9
Engl 496 Senior Seminar . . . . .	2-3
Engl 499 cannot replace Engl 496.	

##### At least 6 credits from:

Engl 250/350 Practicum -- Newspaper
Engl 251/351 Practicum-Radio
Engl 252/352 Practicum-Television

(Students are allowed a maximum of 24 credits toward graduation in practicum courses in any combination of the following: Engl 250, 251, 252, 350, 351, 352.)

Total Departmental Requirements . . . . . 44-46

Electives . . . . . 38-40  
(English advisors can help students select courses which will further strengthen their individual career goals.)

TOTAL REQUIRED FOR GRADUATION . . . . . 128

### The English Education Option:

The English Education Option gives high-quality academic preparation to students who wish to become secondary teachers of English. This option recognizes that secondary education teachers must be able to teach in all standard areas of literature, language and composition, and frequently must also engage in teaching more specialized areas, such as reading, drama and/or journalism. Therefore, this option is extremely demanding and requires careful planning and advising. Students choosing this option should consult the English Education Advisor Lillian Lang as early as possible in their college careers.

#### Credits

General Studies (not satisfied below) . . . . . 40

#### Specific Departmental Requirements:

Engl 116A1 Introduction to Mass Communications . . . . . 3  
Engl 122A1 European Literature to 1400 . . . 3  
Engl 231A1 British Literature to 1800 . . . 3  
Engl 232A1 British Literature since 1800 . . 3  
Engl 246A1 American Literature since 1865 . . . . . 3  
Engl 265A1 Semantics . . . . . 3  
Engl 322A1 The Novel since 1870 . . . . . 3  
Engl 363 Advanced Composition\* . . . . . 4  
Engl 378A1 Literature for the Adolescent . . 3  
Engl 432A1 Shakespeare . . . . . 3  
Engl 461A1 History of the English Language . . . . . 3  
Engl 462A1 Linguistics . . . . . 3  
Engl 464A1 Creative Writing . . . . . 4  
Engl 483 Materials of Instruction in Teaching High School English . . . . . 3  
Engl 496 Senior Seminar\* . . . . . 3  
Engl 499 cannot replace Engl 496.

Additionally, students will select two three-hour courses from any of the Topics courses numbered 336 to 476\* . . . . . 6

Total . . . . . 53

#### Auxiliary Requirement:

Two trimesters of one college-level modern language\* . . . . . 6-8

\*A teacher-candidate who holds a Bachelor of Arts or a Bachelor of Science degree from any institution other than Fort Lewis College is exempt from the requirements marked with an asterisk. Also, these students do not have to meet the two-trimester requirement in a modern language.

Electives . . . . . 27-29

Refer to Education Section of the Catalog for specific Secondary Certification Requirements which students must complete.

TOTAL REQUIRED FOR GRADUATION . . . . . 128

### REQUIREMENTS FOR MINORS IN LITERATURE, WRITING AND COMMUNICATIONS:

*The Minor in Literature:* This minor requires 21 credits. These courses are required:

Engl 231A1 British Literature to 1800 . . . 3  
Engl 232A1 British Literature since 1800 . . 3  
Engl 245A1 American Literature to 1865 . . 3  
Engl 246A1 American Literature since 1865 . . . . . 3  
Engl 432A1 Shakespeare . . . . . 3

Two upper-division literature courses selected from:

Engl 321A The Novel to 1870  
Engl 322A The Novel since 1870  
Engl 336 British Renaissance Literature: Topics  
Engl 337 British Neo-Classical Literature: Topics  
Engl 338 British Romantic Literature: Topics  
Engl 339 British Victorian Literature: Topics  
Engl 345 American Literature: Topics I  
Engl 346 American Literature: Topics II  
Engl 421 Topics in the Novel  
Engl 422 Topics in Poetry  
Engl 430 Medieval Literature and Chaucer: Topics  
Engl 475 Modern Literature: Topics  
Engl 476 Contemporary Literature: Topics . . . . . 6

Total . . . . . 21

*The Minor in Writing:* This minor requires 23 credits.

Engl 231A1 British Literature to 1800 and Engl 232A1 British Literature since 1800 or Engl 245A1 American Literature to 1865 and Engl 246A1 American Literature since 1865	6
Engl 265A1 Semantics	3
Engl 315 Media Writing: Topics	3
Engl 322A1 The Novel since 1870	3
Engl 363 Advanced Composition	4
Engl 464A1 Creative Writing	4
<b>Total</b>	<b>23</b>

*The Minor in Communications:* This minor requires 21/22 credits.

Engl 116A1 Introduction to Mass Communications	3
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Engl 215 News Media Writing	3
Engl 265A1 Semantics	3
Engl 306 Radio Broadcasting or Engl 304 Television Production	3
Engl 315 Media Writing: Topics or Engl 363 Advanced Composition	3/4
Engl 416A1 Media Theory and Criticism	3

Three credits from:

Engl 250/350 Practicum -- Newspaper or Engl 251/351 Practicum -- Radio or Engl 252/352 Practicum -- Television	3
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**Total** 21/22

## Environmental Studies

### Advisors

Don Gordon, Anthropology; William Romme, Biology; Reyes Garcia, Philosophy; James Fitzgerald, Sociology

People are becoming more and more aware of the environmental impacts caused by the increasing human demands on the physical resources on the Earth. Issues such as population growth, food production, land use, pollution, energy production and technology, conservation of natural areas, and wildlife protection all fall under the broad category of environmental studies.

An Environmental Biology option is offered by the Biology Department, and an Environmental Geology option is offered by the Geology Department. Students in other fields of study may wish to supplement their academic programs with courses emphasizing environmental issues. Students may choose courses from the list below in consultation with their advisors. Special topics courses (190/191 and 390/391) and composition seminars on topics such as Hydrology, Energy Policy, Environmental Law and Spaceship Earth are frequently offered.

### Credits

<b>Agriculture</b>	
Ag 202 Integrated Pest Management/ Weed Control	4
Ag 235 Soils and Soil Fertility	4
Ag 301 Range Management	4

<b>Biology</b>	
Bio 110B Survey of Life Sciences	3
Bio 120B Environmental Conservation	3
Bio 220 Fundamentals of Ecology	4
<b>Chemistry</b>	
Chem 123B Chemistry for Consumers	3
<b>Economics</b>	
Econ 335D Environmental Economics	4
<b>Geography</b>	
Geog 271D World Geography	3
Geog 320B Natural Regions of North America	3
<b>Geology</b>	
Geol 110B Earth Science	3
Geol 113B Physical Geology	4
Geol 150B Geology of the Southwest	3
Geol 323 Geomorphology	4
Geol 401B Natural Resources and the Environment	3
<b>Philosophy</b>	
Phil 252C Environmental Ethics	3

Physics

Phys 400 Science and Human Values . . . . 2

Political Science

PS 305D Environmental Politics . . . . . 3

Sociology

Soc 301D Comparative Societies . . . . . 3

Soc 310D Ecology and Society . . . . . 3

Soc 380D Work and Authority in Society . 3

**Forestry**

*Course listings for Forestry begin on Page 146.*

Fort Lewis College has formal transfer agreements with Colorado State University and Northern Arizona University whereby students can complete the first two years of study at Fort Lewis College and then transfer to the other institution for the last two years of professional training. Students then receive a bachelor of science degree in forestry or a related natural resources field from Colorado State University or from Northern Arizona University.

Students who transfer to Colorado State University can complete a degree in any of the 12 majors/concentrations areas listed at the end of this section. Northern Arizona University offers a single degree program in Forestry - concentration in Multiresource Management. It is an integrated, team-taught curriculum emphasizing multiresource management. Students learn to address the impacts of land management decisions on all resources including timber, wildlife, range, water, recreation and scenic beauty.

To transfer to Colorado State University, a student must:

1. Be enrolled in the forestry program at Fort Lewis College for two years.
2. Have an overall grade point average of at least 2.00 (2.50 for international students).
3. Complete at least 60 credits in the forestry program at Fort Lewis College.
4. Qualify otherwise for admission to the College of Forestry and Natural Resources.

To transfer to Northern Arizona University, a student must:

1. Be enrolled in the forestry program at Fort Lewis College for at least one semester.

2. Have an overall grade point average of at least 2.5 (for early and automatic acceptance by NAU) or 2.0 for possible acceptance).
3. Complete at least 61.5 credits in the forestry program at Fort Lewis College.

Students interested in transferring to either Colorado State University or Northern Arizona University should consult with a member of the biology faculty early in their careers at Fort Lewis College to obtain specific course requirements and other information.

Majors and concentrations to complete a degree at Colorado State University:

- Watershed Sciences
- Forestry - Concentrations in Forest Management and Forest Fire Science
- Forestry - Concentration in Forestry Business
- Forestry - Concentration in Forest Biology
- Forestry - Concentration in Wood Science and Technology
- Natural Resources Management
- Range and Forest Management
- Range Ecology - Concentrations in Land Rehabilitation and Range Ecology
- Fishery Biology
- Wildlife Biology
- Recreational Resources Management - Concentrations in
  - Recreation Resource Administration and Resource Interpretation
  - Recreation Resources Management - Concentration in Commercial Recreation and Tourism

## French

(See Modern Languages on Page 86.)

## General Science

Course listings for General Science begin on Page 147.

The general science major is a broad interdisciplinary major in the traditional fields of science. The general science major provides excellent education in the sciences within the broad context of a liberal arts curriculum. The program offers a concentration of courses in which the students take a broad sampling of courses in the sciences and 20 to 25 credit hours in a concentration in one of the sciences (biology, chemistry, geology or physics).

The program is designed for students who wish to explore the intellectual challenges of the sciences without specializing in any particular science at the undergraduate level. It offers appropriate preparation for careers in secondary science education, in elementary education, in many allied health fields, in environmental law, in science and technology management, and for admission to medical, dental and veterinary schools. It is not recommended for students who wish to pursue graduate research studies in any of the four sciences.

For more information, contact the chair of the department in which you intend to concentrate.

### REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN GENERAL SCIENCE:

	<i>Credits</i>
General Studies (not satisfied below) .....	34
General Requirements:	
Bio 100BL, 111B, 206, 207 Introductory Biology .....	12
Chem 150B-151 Fundamentals of Chemistry .....	11
Chem 303, 323 or 365 .....	3-5

Phys 132B, 232B, 233B, (or 162B, 262B or 233B) 211BL, 212BL, Introductory Physics .....	11
Phys 320 Modern Physics .....	3
Geol 113B, 114B Physical and Historical Geology .....	8
Geol 320, 332 or 401B .....	3
Math through 221B	
Senior Seminar (in area of concentration)	2
<b>Total .....</b>	<b>58-60</b>

Additional Requirements depending on concentration selected:

Biology Concentration:	
Bio 220 Fundamentals of Ecology .....	4
Bio 321 General Physiology .....	4
Bio 371 General Genetics .....	2
<b>Total .....</b>	<b>10</b>

Chemistry Concentration (two of the following):	
Chem 303 Organic Chemistry .....	5
Chem 358 Physical Chemistry .....	3
Chem 365 Analytical Chemistry .....	4
<b>Total .....</b>	<b>7-9</b>

Geology Concentration:	
Geol 207 Mineralogy .....	3
Geol 210 Petrology .....	4
Geol Any upper-division course .....	3-4
<b>Total .....</b>	<b>10-11</b>

Physics Concentration:	
Any two upper-division courses .....	6-8

Electives .....	20-30
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**TOTAL REQUIRED FOR GRADUATION .....** 128

## Geography

Course listings for Geography begin on Page 148.

## Geology

*Course listings for Geology begin on Page 148.*

### Professors

Robert W. Blair, Jr., Douglas C. Brew, John A. Campbell and Jack A. Ellingson;  
Associate Professors James D. Collier and Thomas N. Westervelt

The department offers a Bachelor of Science degree in Geology with three different options: Geology, Environmental Geology and Geology for Liberal Arts. The Geology option is designed to meet the needs of students wishing to continue their education in graduate school or to work as professional geologists. The Environmental Geology option is designed for students planning to work in the areas of natural resource management and environmental impact assessment and remediation. The Geology for Liberal Arts option is designed for students interested in learning about geology but without specific career goals in geology. All three options offer appropriate preparation for students interested in teaching geology at the secondary school level.

The study of geology at Fort Lewis College is strengthened by the College's proximity to the remarkable natural geological laboratory in the Southern Rocky Mountains and adjacent areas of the Southwest. The Grand Canyon, Monument Valley, Shiprock, and the San Juan volcanic field and mining district are representative of classical geological localities nearby. The numerous outcrops and mine and oil field workings are sources of excellent real-world experiences for students. Also, the essentially continuous sequence of rocks in the Animas River Valley represents literally hundreds of millions of years of Earth history. Laboratory and field equipment and geological holdings in the college library facilitate the necessary research and reading.

Advanced graduate work in geology is required for positions in state and federal surveys, petroleum and mining companies, and college teaching. Employment with engineering firms, governmental agencies, mining companies, and environmental consulting organizations, among others, is available for persons with bachelors degrees in geology and environmental geology.

Students majoring in geology may be certified to teach science at the secondary level. To obtain requirements for teacher certification, please contact the Department of Teacher Education.

A minor in geology is available for students

majoring in other disciplines. Requirements for a minor in geology are listed at the end of this section.

### REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE WITH A MAJOR IN GEOLOGY:

#### Geology Option

	<i>Credits</i>
General Studies (not satisfied below) .....	34
<b>Specific Departmental Requirements:</b>	
Geol 113B Physical Geology .....	4
Geol 114B Historical Geology .....	4
Geol 202B Geologic Methods .....	2
Geol 207 Mineralogy .....	3
Geol 208 Optical Mineralogy .....	4
Geol 210 Petrology .....	3
Geol 323 Geomorphology .....	4
Geol 333 Introductory Paleontology .....	4
Geol 337 Structural Geology .....	5
Geol 361 Stratigraphy and Sedimentation .....	3
Geol 363 Sedimentary Petrology .....	4
<i>or</i>	
Geol 364 Igneous and Metamorphic Petrology	
Geol 441 Field Geology .....	6
Geol 496 Senior Seminar .....	1
Geol 497 Senior Seminar .....	2
<b>Total</b> .....	<b>49</b>
<b>Auxiliary Requirements from Other Departments:</b>	
Chem 150B-151 .....	11
Physics 162B-262B-263B (or 132B-232B-233B), 211BL or 212BL .....	10
Math 221B and 222 or Math 201B or BA 253B or Psych 241B or Geol 405 .....	8-9
<b>Total</b> .....	<b>29-30</b>
Electives .....	15-16
<b>TOTAL REQUIRED FOR GRADUATION</b> .....	<b>128</b>
<b>Environmental Geology Option</b>	
	<i>Credits</i>
General Studies (not specified below) .....	34

**Specific Departmental Requirements:**

Geol 113B Physical Geology	4
Geol 114B Historical Geology	4
Geol 202B Geologic Methods	2
Geol 207 Mineralogy	3
Geol 210 Petrology	3
Geol 323 Geomorphology	4
Geol 361 Stratigraphy and Sedimentation	3
Geol 371 Introduction to Geophysics	4
Geol 405 Geologic Data Analysis and Modeling by Computer	4
Geol 420 Introduction to Geochemistry	3
Geol 430 Engineering Geology	3
Geol 435 Groundwater Geology	3
Geol 441 Field Geology	6
Geol 496 Senior Seminar	1
Geol 497 Senior Seminar	2
<b>Total</b>	<b>49</b>

**Auxiliary Requirement from Other Departments:**

Chem 150B-151	11
Math 201B, 221B and 222	12
<b>Total</b>	<b>23</b>

Electives ..... 22

**TOTAL REQUIRED FOR GRADUATION** ..... 128

Recommended courses for the major in Environmental Geology (some of the courses satisfy group requirements in General Studies)

	<b>Credits</b>
Ag 235 Soils and Soil Fertility	4
Bio 120B Environmental Conservation	3
Chem 365 Analytical Chemistry	4
Geol 401B Natural Resources and the Environment	3
PS 305D Environmental Politics	3
Soc 380D Work and Authority in Society	4
Psych 157D Introduction to Psychology	3

**Geology for Liberal Arts**

	<b>Credits</b>
General Studies (not satisfied below)	34

**Specific Departmental Requirements:**

Geol 113B Physical Geology	4
Geol 114B Historical Geology	4
Geol 202B Geologic Methods	2

Geol 207 Mineralogy	3
Geol 210 Petrology	3
Geol 323 Geomorphology	4
Geol 332 Plate Tectonics	3
Geol 333 Introductory Paleontology	4
Geol 361 Stratigraphy and Sedimentation	3
Geol 401 Natural Resources and the Environment	3
Geol 415 Regional Geology of the United States	3
Geol 496 Senior Seminar	1
Geol 497 Senior Seminar	2
<b>Total</b>	<b>39</b>

**Auxiliary Requirements from Other Departments:**

Chem 150B-151	11
Math 111B	5
<b>Total</b>	<b>16</b>

Electives ..... 39

**TOTAL REQUIRED FOR GRADUATION** ..... 128

**PREPARATION FOR GRADUATE SCHOOL**

The following additional courses are recommended for geology majors who plan to go to graduate school.

- Geol 332 Plate Tectonics
- Geol 405 Geologic Data Analysis and Modeling by Computer
- Geol 415 Regional Geology of the U.S.
- French or German
- Engr 205 Surveying I
- Engr 103 Computer Aided Drafting

**REQUIREMENTS FOR A MINOR IN GEOLOGY:**

**Specific Departmental Requirements:**

Geol 113B Physical Geology	4
Geol 114B Historical Geology	4
Geol 207 Mineralogy	3
Geol 210 Petrology	3
<b>Total</b>	<b>14</b>

Upper-Division Geology Electives ..... 10

**Total** ..... 24

## German

(See Modern Languages on Page 86.)

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### Health Careers Preparatory Programs

Students considering careers in health professions should carefully plan their academic program very early in their undergraduate education. To assist the prospective pre-health professions student in selecting curricula which will satisfy the academic requirements of specific professional schools, Fort Lewis College has established a Pre-Health Advisory Committee. It is strongly recommended that the pre-health professions student, in addition to consulting his or her major advisor, select a member of this committee to serve as a personal academic advisor.

Specific preprofessional course requirements vary significantly depending upon the health field chosen. All professional schools, however, prefer those students who have had a broad undergraduate education, a solid foundation in the natural sciences and who possess well-developed communication skills. Hence, the pre-health professions student should anticipate securing a thorough understanding in biology, chemistry, mathematics, physics and English. Although most pre-health professions students have majored in biology or chemistry, most professional schools will consider graduates in other major fields who have met the basic requirements for admission.

Students may pursue courses at Fort Lewis College which lead to a variety of health careers. Over the years, the Pre-Health Advisory Committee and Fort Lewis College have developed a very favorable

rapport with the professional schools in Colorado, Arizona, New Mexico and Utah. Many of our students have chosen to attend schools in the Four Corners states; many also have attended professional schools throughout the nation.

The most popular preprofessional programs at Fort Lewis College have been those in dentistry, medicine, medical technology, physical therapy and veterinary medicine, but advising and academic planning also are available for programs in other allied health fields.

The purpose of the Pre-Health Advisory Committee is to guide and counsel all students in the health careers preparatory programs. This committee has prepared a Preprofessional Student Handbook containing examples of suggested course schedules and curricula. Interested students may obtain a copy of the handbook by contacting any member of the Pre-Health Advisory Committee.

In addition to advising students in their preparatory programs, the committee assists students with application procedures and in preparing for professional school admissions interviews. The committee will, upon student request, provide recommendation documents to professional schools in accordance with the student's qualifications.

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## History

*Course listings for History begin on Page 150.*

Professors Thomas R. Eckenrode, Richard N. Ellis, Doreen Hunter, Reece C. Kelly and Duane A. Smith;  
Associate Professor Neil McHugh;  
Assistant Professors James K. Ash, Michael F. Fry and William J. Haas

The Department provides study in history, a discipline which develops basic skills with wide application. Students learn to collect and interpret data, to develop logical and convincing arguments, and to write with clarity and concision. The Department offers courses in the history of Africa, East Asia (China and Japan), Europe, Latin America, Middle East and the United States of America.

Offerings in these areas range from survey courses which cover broad periods of general history to advanced courses which deeply explore political, military, economic, intellectual, cultural or social history over shorter periods of time.

Courses numbered 100 and 200 are introductory courses designed for first- and second-year students.



The courses designated 300 explore more specialized topics in greater depth, while 400-level courses are designed for students who have had the appropriate introductory courses, or who receive the permission of the instructor.

The courses described here are those which are generally offered on a regular basis. Other courses may be offered. The department prides itself on offering new, timely courses as interests change and needs develop. We urge students to check the full list of courses published by the department at the time of registration.

History majors are required to take a minimum of 39 credits, but no more than 42 credits of history shall apply toward the major. Majors must concentrate in one of the areas listed below. A student also has the option to propose a student-constructed concentration with permission of the department chair. Students majoring in history may be certified to teach social studies at the secondary level. To obtain requirements for teacher certification, please contact the Department of Teacher Education.

A minor in history is available for students majoring in other disciplines. Requirements for a minor in history are listed at the end of this section.

#### REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN HISTORY:

	<i>Credits</i>
General Studies .....	44

#### Lower-division History Requirements:

Survey sequence in the area of concentration (6 credits):

##### Areas of Concentration:

- African History
- United States History
- East Asian History
- European History
- Latin American History
- Student-Constructed Concentration

Three additional survey courses (9 credits):

Non-U.S. history majors must take at least one U.S. history survey course.

U.S. history majors must take three non-U.S. history survey courses.

Total ..... 15

#### Upper-Division History Requirements:

Four courses at the 300- or 400-level in the area of concentration (12 credits), at least one of which must be at the 400-level, other than Hist 496.

Three additional 300- or 400-level courses taken outside the concentration in at least two areas (9 credits).

**Note:** The Department recommends that Hist 396, The Philosophy and Methods of History, be taken before Hist 496, Research Senior Seminar.

Hist 496 Research Senior Seminar (3 credits).

Total ..... 24

#### Auxiliary Requirements:

Two courses in one modern language (6-9)

Six courses selected among three of the following disciplines (18 credits): **Note:** The Department recommends that at least two of these courses be in the same area as the concentration in history.

Political Science (except PS 350, 450, 496 and 499)

Economics (except Econ 201)

Sociology (except Soc 110, 353D, 496 and 499)

Anthropology (except Anth 301, 350CE, 496 and 499)

Philosophy (except Phil 496 and 499)

Geography 271D

Psychology 157D, 387, 425 and 499

English 122A1, 123A1, 125A1, 173E, 175A1, 221A1, 231A1, 232A1, 245A1, 246A1, 272A1, 280A1, 321A1, 322A1, 336, 337, 338, 339, 345, 346, 370A1, 380E, 430, 432A1, 461A1, 475 and 476

Art 162A2, 262A2, 263A2, 265A2, 365A2E and 486

(Courses selected from these disciplines may also be used to fulfill General Distribution requirements if they are designated as General Distribution courses).

Total ..... 24-27

Electives ..... 18-45

TOTAL REQUIRED FOR GRADUATION ..... 128

**REQUIREMENTS FOR A MINOR IN HISTORY:**

A total of 18 credits is required from at least two different instructors. Nine of the 18 credits should be

in upper-division courses, and nine credits in lower-division courses. See the department chair for further information.

**Humanities**

Professor William Coe, Coordinator

**Humanities Advisors**

Professor Susan M. Riches, Anthropology; Professor Laurel C. Vogl or Assistant Professor Susan M. Moss, Art; Professor Vernon E. Lynch, Jr., Economics; Professor Carroll V. Peterson, English; Professor Reece C. Kelly, History; Associate Professor Reinaldo M. Alcazar, Modern Language; Associate Professor Jan Roshong, Music; Professor William Coe, Philosophy; Assistant Professor Rita Horwath, Political Science; Professor Thomas A. Skurky, Psychology; Assistant Professor Dennis W. Lum, Sociology; Assistant Professor Jean E. Brody, Theatre

The humanities major is a broad interdisciplinary major in the traditional fields of the humanities and social sciences. It affords a sound education to those who wish a broad cultural grounding for the bachelor's degree, for those seeking certification in elementary education, for those preparing for graduate school, and for those contemplating careers in law or governmental service.

The humanities major consists of a primary concentration of 30 credits in one of the disciplines listed below (other than Music, which may not serve as a major concentration) and two secondary concentrations of 12 credits each in two other of these disciplines. At least half of the credits constituting the primary concentration, and half of the total credits in the secondary concentrations, must be for upper division courses. Students majoring in humanities must choose advisors from the disciplines of their primary concentrations and be sure to complete the departmental prerequisites for the senior seminar in their chosen discipline. Students may not count courses used in their primary concentrations toward second majors in the disciplines of their primary concentrations.

The disciplines from which students may choose concentrations within the humanities major are:

- Anthropology
- Economics
- English
- History
- 1 Modern Language
- Music (secondary concentration only)\*\*
- Philosophy
- Psychology
- Sociology
- Theatre

Courses in these disciplines which **do not count** toward the concentrations in the humanities major

are: Econ 201, Engl 202, 215, 250, 251, 306, 450, 451 and 483; first-year Modern Language courses; Music courses other than those listed below; PS 301, 350 and 450; Psych 228D and 395; Thea 101A2 and 121, and more than nine hours in the primary concentration, or four hours in the secondary concentration, from the following group of courses: Thea 100, 175, 176, 200, 300, 375, 376 and 400.

\*Students choosing any concentration in Art must select at least two art history courses and at least two studio courses.

\*\*Those choosing a secondary concentration in Music must take Mu 331A2 & 332A2, and six credits from Mu 120A2, 128A2, 129A2, 228, 229 and 337.

**REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN HUMANITIES:**

	<i>Credits</i>
General Studies (not satisfied below) . . . . .	22-32
Primary Concentration (to include 496 Senior Seminar) . . . . .	30
Two Secondary Concentrations (12 credits each) . . . . .	24
Auxiliary Requirements: Two trimesters of one college-level modern language . . . . .	6-8
Electives . . . . .	34-46
<b>TOTAL REQUIRED FOR GRADUATION . . . . .</b>	<b>128</b>

## **Intercultural Studies**

Assistant Professor Clifford B. Capp, Acting Director  
Assistant Professor Richard Wheelock; Instructor Delilah G. Orr

(See Page 52.)

## **International Studies Program**

Professor Edward L. Angus, Coordinator

The intent of this curricular program is to offer the student an inter-disciplinary introduction to the multifaceted nature of international and inter-state relations. Students wishing this major must follow the format for a student-constructed major (see page ??). Shown below is a suggested model program but it can be modified to meet individual needs. The core courses in a student-constructed international studies major are appropriate courses in history, political science and economics of a given region or several geographical regions. In addition, courses proposed for the major should reflect sufficient exposure to contemporary cultures and societies from the viewpoints of language, business, anthropology and sociology. Typically, the student is expected to stipulate a geographical region of concentration which will have a coherence in terms of specific course selection from those disciplines that offer courses relevant to the geographical orientation (for example a European concentration will have appropriate courses from history, modern language, political science, etc.). Successful completion of a well designed international studies major will give the student a broader, more analytical understanding of the international community in terms of bilateral and multilateral relations which affect the decisions of individuals and their governments.

### **Expectations**

Regardless of the geographical orientation, each student is expected to choose courses from the following disciplines.

### **Language-Methods**

Listed below are the possible geographical designations with the appropriate language courses. The language section includes a total of 12 hours of intermediate and advanced work in a single language. There are exceptions in the Asian and American fields because of course offerings and the desire to make the U.S. specialist conversant in a computer language.

Europe:	6 hours of intermediate French, German or Spanish 6 hours of upper level French, German or Spanish
Latin America:	6 hours of intermediate Spanish 6 hours of upper-level Spanish
Asia:	6 hours of beginning Japanese 6 hours of cultural Japanese
Africa:	6 hours of intermediate French 6 hours of upper-division French
U. S.:	6 hours of intermediate computer science 6 hours of upper-division computer science
Total	12

### **History**

Because the listing of courses for the history department is by geographical area and not by course title, the student is encouraged to select the appropriate courses within the geographical area of the major. Moreover, it is understood that the courses selected from this discipline are contemporary in scope. It is desirable for each student to consult with one's advisor concerning the contemporary nature of a course. Select two courses from one of the areas listed below in order to satisfy this component of the major. This applies to all students in the program.

Hist 340CE Studies in Middle Eastern and African History	6
Hist 350CE Studies in Asian History	6
Hist 360C Studies in European History	6
Hist 370CE Studies in Latin American History	6
Hist 380C Studies in American History	6
Total	6

**Political Science**

Each student is to select a total of seven hours from the political science area regardless of geographical designation. However, all students will be required to take PS 280DE and then one course in political science that corresponds to the geographical designation for the proposed program.

**Required:**

PS 280DE Introduction to Comparative  
Politics . . . . . 4

**Select one of the following:**

PS 300D Religion and Politics . . . . . 3  
PS 320D International Politics . . . . . 3  
PS 337D U. S. Foreign Policy . . . . . 3  
PS 370DE Latin American Politics . . . . . 3  
PS 380DE Comparative Communist  
Systems . . . . . 3

Total . . . . . 7

**Business**

Each student is urged to take one of the following as part of the program in International Studies.

BA 309D International Management . . . . . 3  
BA 349 International Marketing . . . . . 3  
BA 389 International Finance . . . . . 3

Total . . . . . 3

**Economics**

Each student, regardless of geographical area of concentration, is urged to select from the following courses offered by the Department of Economics.

Econ 371D International Economics . . . . . 4  
Econ 410D Radical Economics . . . . . 4

Total . . . . . 8

**Anthropology**

Each student in International Studies is urged to take Anthropology 210C, regardless of geographical area of concentration.

Anth 210C Introduction to Cultural  
and Social Anthropology . . . . . 4

Each student is urged to select one of the following, which must be contemporary, and the course must be in accord with the area of concentration selected:

Anth 350CE Ethnology of Mesoamerica . . . . . 4  
Anth 351CE Ethnology of Andean  
South America . . . . . 4  
Anth 353CE Culture of India . . . . . 4

Total . . . . . 8

**Sociology/Human Services**

Each student, regardless of geographical area of concentration is urged to take the following courses in Sociology/Human Services. Additional courses may be added to this section depending upon availability of faculty and variety of offerings.

Soc 301DE Comparative Societies . . . . . 4  
Soc 376D Language and Social Behavior . . . . . 4

Total . . . . . 8

Appropriate Independent Study  
or Senior Seminar . . . . . 2-3

**TOTAL HOURS FOR INTERNATIONAL  
STUDIES PROGRAM . . . . . 54/55**

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**Japanese**

(See Modern Languages on Page 86.)

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**Latin**

(See Modern Languages on Page 86.)

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## Mathematics and Statistics

*Course listings for Mathematics begin on Page 152.*

Professors Gregory W. Bell, Richard A. Gibbs, Gary W. Grefsrud, William C. Ramaley,  
Laszlo Szuecs and Raymond E. Williams;  
Associate Professors Evans J. Adams, Annette J. Cooper, Harry C. Rosenberg,  
Thomas L. Schaffter, Richard C. Walker and James A. Wixom;  
Assistant Professors Deborah L. Berrier and Clifford B. Capp

Society as a whole is becoming increasingly dependent upon solving complex problems of a numerical, quantitative and statistical nature which require logical thought. The Mathematics Department meets this demand by preparing its students for teaching careers, graduate school, or employment in such fields as computer science, statistics, engineering, business, biometrics, the actuarial sciences and other areas involving mathematics.

Increasingly, mathematical applications depend on the use of a computer. To facilitate the training of students in these areas, Fort Lewis College has modern interactive computing systems with video and hard copy terminals.

### MATHEMATICS MAJOR AND OPTIONS

A flexible curriculum has been designed which consists of four different options within the mathematics major. These options are computer science, middle-secondary school teaching, probability and statistics, and general. Preparation for Actuarial Science is available. They provide the student with an opportunity to develop creative mathematical talents within areas of personal interest. Specific requirements for each option follow.

Many mathematics majors begin their studies with Math 111B if their high school backgrounds include at least three years of mathematics, including two years of algebra and one of geometry. Students with stronger backgrounds may begin with Math 221B.

### TEACHER EDUCATION

The mathematics major who plans to teach in a senior high school must complete Math 223, 301B, 310, 325, 342, 385 and 386. The Middle-Secondary Teaching Option is intended for those who plan to teach at the junior high or middle school level. A Bachelor of Arts degree in Mathematics, Middle-Secondary Teaching Option, is awarded only upon successful completion of all courses required for

secondary school teaching certification and middle school endorsement. To obtain requirements for teacher certification, please contact the Department of Teacher Education.

### MATHEMATICS MINORS

Minors are available in mathematics and probability and statistics for students majoring in other disciplines. Requirements for these minors listed at the end of this section.

### REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN MATHEMATICS:

#### The General Option:

	<i>Credits</i>
General Studies .....	44
 Specific Departmental Requirements:	
Math 201B Elementary Statistics .....	4
Math 221B, 222, 223 Calculus I, II, III .....	13
Math 301B Foundations for Advanced Mathematics .....	3
Math 385 Algebraic Structures I <i>and</i> Math 386 Algebraic Structures II <i>or</i> Math 422 Advanced Calculus I <i>and</i> Math 423 Advanced Calculus II .....	6
Total .....	26
 Other Departmental Requirements:	
Additional courses numbered above Math 300 (except Math 315B) .....	12
Math 496 Senior Seminar <i>or</i> Math 499 Independent Study .....	2
Total .....	14

## Auxiliary Requirements:

(should be taken first year at Fort Lewis)

CSIS 120B Introduction to Programming (BASIC) .....	3
or	
CSIS 150B (Engr 104B) Introduction to Programming (FORTRAN) .....	3
or	
CSIS 130B Introduction to Programming (PASCAL) .....	4
Total .....	3-4
Electives .....	40-41
<b>TOTAL REQUIRED FOR GRADUATION</b> .....	<b>128</b>

**The Computer Science Option:****Credits**

General Studies .....	44
Mathematics Requirements:	
Math 201B Elementary Statistics .....	4
Math 221B, 222 Calculus I, II .....	9
Math 305B Discrete Mathematical Structures .....	3
Math 311B Matrices and Linear Algebra ..	3
Math 320 Numerical Analysis .....	
or	
Math 360B Introduction to Operations Research .....	3
Total .....	22

## Computer Science Requirements:

A total of 18 credits of CSIS classes (excluding CSIS 101 and CSIS 102), at least 12 of which must be numbered over 300.

The 18 credits must include the following:

1. Knowledge of at least two high-level languages (FORTRAN, COBOL, PASCAL, etc.)
2. CSIS 310 Data Structures
3. CSIS 320 Assembly Language Programming

Total .....

## Other Departmental Requirements:

Math 496 or CSIS 496 Senior Seminar

or

Math 499 or CSIS 499 Independent Study 2

Electives .....

**TOTAL REQUIRED FOR GRADUATION** .....**The Middle Secondary School****Math Teaching Option:****Credits**

General Studies .....	44
Mathematics Requirements:	
Math 201B Elementary Statistics .....	4
Math 215B Math for The Elementary School Teacher .....	4
Math 221B Calculus I .....	5
Math 222 Calculus II .....	4
Math 301B Foundations for Advanced Mathematics .....	3
Math 310 Methods of Teaching Mathematics in the Secondary School .....	3
Math 385 Algebraic Structures I .....	3
Math 315B Real Numbers and Geometry ..	3
Math 325B History of Mathematics .....	3

One of the following:

Math 305B Discrete Mathematical Structures

Math 311B Matrices and Linear Algebra

Math 316B Topics in Number Theory

Math 342 Modern College Geometry

Math 386 Algebraic Structures II .....

Math 496 Senior Seminar

or

Math 499 Independent Study .....

Total .....

Auxiliary Requirements:

(should be taken first year at Fort Lewis)

CSIS 120B Introduction to Programming (BASIC) .....	3
or	
CSIS 150B (Engr 104B) Introduction to Programming (FORTRAN) .....	3
or	
CSIS 130B Introduction to Programming (PASCAL) .....	4
Total .....	3-4
Courses for Secondary School Teaching Certification .....	32
Courses for Middle School Endorsement .....	12
<b>TOTAL REQUIRED FOR GRADUATION</b> .....	<b>128 (or 129)</b>

**The Probability and Statistics Option:**

General Studies ..... 44 *Credits*

**Specific Mathematics & Statistics and Probability Requirements:**

Math 201B Elementary Statistics ..... 4  
 Math 221B, 222, 223 Calculus I, II, III . 13  
 Math 327 Differential Equations  
*or*  
 Math 311B Linear Algebra ..... 3  
 Math 340 Computer Assisted Statistical  
 Modeling ..... 3  
 Math 350B Design and Analysis  
 of Experiments ..... 3  
 Math 360B Introduction to  
 Operations Research ..... 3  
 Math 401, 402 Probability & Statistics I & II  
 Math 496 Senior Seminar  
*or*  
 Math 499 Independent Study ..... 2  
**Total** ..... 37

**Auxiliary Requirement:**

(should be taken first year at Fort Lewis)

CSIS 120B Introduction to Programming  
 (BASIC) ..... 3  
*or*  
 CSIS 150B Introduction to Programming  
 (FORTRAN) ..... 3  
*or*  
 CSIS 130B Introduction to Programming  
 (PASCAL) ..... 4  
**Total** ..... 3-4  
 Electives ..... 43-44

**TOTAL REQUIRED FOR GRADUATION** ..... 128

**Actuarial Science Preparation**

For students interested in careers as actuaries, Fort Lewis offers the appropriate courses for study.

The Society of Actuaries lists five basic courses. Their Fort Lewis equivalents are listed here:

- S.A. 100 (Calculus and Linear Algebra) - FLC Math 221B, 222, 223 (Calculus I, II, III) Math 311B (Matrices and Linear Algebra)
- S.A. 110 (Probability and Statistics) - FLC Math 201B (Elementary Statistics) Math 401-402 (Probability and Statistics I & II)

S.A. 120 (Applied Statistical Methods) - FLC Math 340 (Computer-Assisted Statistical Modeling/Regression Analysis and Time Series)

S.A. 130 (Operations Research) - FLC Math 360B (Operations Research)

S.A. 135 (Numerical Methods) - FLC Math 320 (Numerical Analysis)

Beyond the Mathematics, it is helpful to take liberal arts courses which emphasize communication skills, both written and oral, and business courses that provide background in finance, accounting, economics and insurance. It is also important for students in college to take advantage of the educational opportunities available to them and not focus exclusively on a curriculum oriented to a particular career. For more information about being an Actuary, see the chair in the Department of Mathematics.

**REQUIREMENTS FOR MINORS IN MATHEMATICS AND PROBABILITY AND STATISTICS:**

**Mathematics:**

Calculus (Math 221B, 222 ..... 9  
 Three additional mathematics courses at upper-division level. One course must emphasize the concept of proof (e.g., Math 301B, 305B, or 316B) ..... 9  
**Total** ..... 18

**Probability and Statistics:**

Math 201B Elementary Statistics ..... 4  
 CSIS 120B Introduction to Programming (BASIC) ..... 3

A minimum of 12 credits in upper-division statistics courses such as Math 340, 350B, 360B and 401-402 or BA 353. BA 253B may be substituted for Math 201B. CSIS 150B or CSIS 130B may be substituted for CSIS 120B. Upper-division courses may be substituted for lower-division requirements.  
**Total** ..... 18

**Mathematics Examination and Placement Policy**

All students must take the FLC Mathematics Placement Examination prior to enrolling at Fort Lewis College unless they have mathematics transfer credit from another college or university. The Mathematics Placement Examination is normally taken during the new-student orientation sessions. Students may also arrange to take, or retake, the

Mathematics Placement Examination at any time by contacting the Learning Assistance Center, Room 280 Noble Hall, 303-247-7383.

Students must meet the prerequisites before enrolling in a mathematics class. There are no mathematics prerequisites for Math 130B or Math 215B.

## Modern Languages

*Modern Language courses are listed alphabetically in course listings.*

Professors Lourdes Carrasco, M. Federico Cano-Montenegro, Deborah A. MacKeefe and Ingrid Ryan; Associate Professors Reinaldo M. Alcazar and James Fitzgerald (jointly with Sociology/Human Services); Assistant Professor Nicole M. Mosher

The Department of Modern Languages offers work in French, German, Japanese, Latin and Spanish as an important element of a well-rounded liberal arts education (See course listing). Occasionally other modern languages are taught under Special Topics. A Bachelor of Arts degree with a major in Spanish is offered. (See statement under SPANISH below.)

### GUIDELINES FOR GRANTING CREDIT FOR FOREIGN LANGUAGE COMPETENCE

Fort Lewis College has two methods of granting credit for foreign language competence. One method is based upon the student's satisfactory transfer of college credits from a fully accredited college or university. The second method is by appropriate examinations. A student may pass subject examinations of the College Level Examination Program (CLEP) or Advanced Placement (AP). Also, a student may challenge a foreign language course for credit through the Credit by Examination procedure, provided the challenged course is not more than one step below the student's present level. Except for transfer credits, credit will be granted for competence in a foreign language only for courses taught at Fort Lewis College.

Further information concerning foreign language competence is available through the Modern Language Department or the Records Office.

Minors are available in Spanish, French and German for students majoring in other disciplines. A minor in French or German requires at least 20 credits or equivalent knowledge in the appropriate language, six credits of which must be 300- or 400-level courses. A minor in Spanish requires 21 credits, nine credits of which must be 300- or 400-level courses.

### REQUIREMENTS FOR A MINOR IN SPANISH, FRENCH AND GERMAN:

	<i>Credits</i>
<b>Spanish:</b>	
ML 215 Intermediate Spanish I . . . . .	3
ML 216 Intermediate Spanish II . . . . .	3
ML 319 Advanced Spanish Conversation . . . . .	3
ML 320 Advanced Spanish Stylistics and Composition . . . . .	3
ML 321E, 322E Survey of Hispanic American Literature I & II . . . . .	6
<i>or</i>	
ML 325, 326 Survey of Spanish Literature I & II . . . . .	6
ML 345 Hispanic Culture and Civilization I: Spain . . . . .	3
<i>or</i>	
ML 346E Hispanic Culture and Civilization II: Latin America . . . . .	3
<b>Total</b> . . . . .	<b>21</b>
<b>French:</b>	
ML 147 Elementary French I . . . . .	4
ML 148A1 Elementary French II . . . . .	4
ML 247 Intermediate French I . . . . .	3
ML 248 Intermediate French II . . . . .	3
300- or 400-level courses . . . . .	6
<b>Total</b> . . . . .	<b>20</b>
<b>German:</b>	
ML 123 Elementary German I . . . . .	4
ML 124A1 Elementary German II . . . . .	4
ML 223 Intermediate German I . . . . .	3
ML 224 Intermediate German II . . . . .	3
300- or 400-level courses . . . . .	6
<b>Total</b> . . . . .	<b>20</b>

When planning a minor in Spanish, French or German, students should consult with an appropriate faculty member in the Department of Modern Languages.



## Spanish

To earn a major in Spanish, a student is required to complete the equivalent of 30 credits of coursework in the language. 100-level courses do not count toward the major. A student with previous study may be placed on the appropriate level, but will still have to complete 30 credits to earn a major in Spanish.

A student electing Spanish as a major will devise a plan of study in consultation with a member of the Spanish faculty. Students intending to acquire a teaching credential at the elementary or secondary level should consult with the appropriate chair in the School of Education. At the elementary level, a bilingual/bicultural concentration is offered.

Students desiring to pursue a major in Southwest Studies requiring courses in Spanish should consult with the Director of the Center of Southwest Studies, and the chair of the Department of Modern Languages.

### REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN SPANISH:

	<i>Credits</i>
General Studies .....	44

### Specific Departmental Requirements:

ML 215 and 216 Intermediate Spanish I and II .....	6
ML 321 and 322 Survey of Hispanic- American Literature I and II .....	6
or	
ML 325 and 326 Survey of Spanish Literature I and II .....	6
ML 319 Advanced Spanish Conversation .	3
ML 320 Spanish Stylistics and Advanced Composition .....	3
ML 496 Senior Seminar in Spanish or	
ML 499 Independent Study in Spanish . .	3

### Departmental Electives:

9 credits to be taken from any 300- or 400-level Spanish courses .....	9
Total .....	30
Electives .....	54
<b>TOTAL REQUIRED FOR GRADUATION .....</b>	<b>128</b>

For French, German, Japanese and Latin, see course listings.

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## Music

*Course listings for Music begin on Page 154.*

Professors Jan C. Roshong and Richard G. Strawn;  
Associate Professors Linda S. Mack and Rochelle G. Mann;  
Assistant Professors Hao Huang, James L. Klages and John Pennington

In today's complex society, the need persists for the educated person to be aware of the important role played by the arts. The Fort Lewis College Music Department, an accredited member of the National Association of Schools of Music, provides an opportunity for all students to be actively involved in the expansion of their understanding of music. The discipline and sensitivity developed by the study of music provides an excellent background for many and varied careers. The Music Department awards both majors and minors in music.

For the student interested in majoring in music, the department offers a comprehensive curriculum. Three different courses of study, each leading to the Bachelor of Arts degree in Music, allow concentrations in General Music Studies, Performance or Music Education.

### Liberal Arts - General Music Studies

Designed for students interested in a liberal arts education with an emphasis in music.

### Liberal Arts - Performance Concentration

Designed for students who have demonstrated a strong commitment to music performance and who wish to use some of their elective hours to further concentrate in this area. The performance concentrations are limited to the areas of expertise represented by the music faculty. The areas of concentration are: Piano, Voice, Brass, Woodwinds, Percussion and Strings. A specific instrument must be chosen from within the brass, woodwinds and strings.

**Liberal Arts - Music Education Concentration**

Designed for students planning to teach music in the public schools.

**REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN MUSIC:**

All music majors must satisfy the following Special Departmental Requirements as well as the listed Common Requirements.

**Special Departmental Requirements:****Piano Proficiency Requirement:**

All music majors must satisfy a piano proficiency requirement before taking Mu 349 Conducting I or Mu 423 Orchestration. The requirement includes sight reading, harmonization of a simple melody, and demonstrated ability to perform easier piano compositions (such as Clementi: Sonatina Op. 36 #1; Bartok: Mikrokosmos II; Gillock: Lyric Preludes). Students with adequate skills may petition to take the examination and may receive credit for the appropriate courses. (See Credit for Prior Work and Credit by Examination, Page ??.) Those with less background must take a piano placement test and, in their freshman year, enroll in the proper course in the Piano Class sequence 103, 104, 203 and 204. Successful completion, with a grade of A or B, of this sequence also satisfies the piano proficiency requirement.

**Music Literature Requirement:**

Mu 100 is required each trimester of residency. Attendance at scheduled recitals and concerts and at regularly scheduled listening labs are requisite.

**Major Ensemble Requirement:**

At least 6 credits from the following: Mu 105A2, 110A2, 117A2, 121, 305A2, 310A2, 317A2 or 321 are required with a maximum of 12 credits allowable toward graduation in any combination of these courses. Students will be assigned to the appropriate major ensemble by the applied music instructor(s). At least one of the above is required each trimester of residency with the exception contained within the following: Music Education Concentration - A Major Ensemble is not required during the trimester of student teaching. Mu 110A2, 117A2, 310A2 or 317A2 is required for the instrumental specialization, and Mu 105A2 or 305A2 for the choral specialization.

**Applied Music Requirement:**

One applied course is required each trimester of residency except during the trimester of student teaching (Music Education Concentration). The following guidelines pertain to the Performance Concentration: Students must obtain music faculty approval before declaring the Performance Concentration and subsequently register for 2 credits of applied music on their major instrument each trimester of residency. A maximum of 16 credits in a single applied music area is allowable toward graduation.

**Foreign Language Requirement:**

Two trimesters of foreign language, either German or French, are strongly recommended for the General Music Studies and for the Instrumental Performance Concentration. The voice specialization within the Performance Concentration requires three trimesters of German or French, including at least one trimester of each language.

**Common Requirements:**

	<i>Credits</i>
Mu 128A2 Theory and Musicianship I . . .	5
Mu 129A2 Theory and Musicianship II . .	5
Mu 228 Theory and Musicianship III . . .	5
Mu 229 Theory and Musicianship IV . . .	5
Mu 331A2 History of Music I . . . . .	3
Mu 332A1 History of Music II . . . . .	3
Mu 349 Conducting I . . . . .	3
Mu 350 Conducting II . . . . .	3
Mu 423 Orchestration . . . . .	2
Mu 496 Senior Seminar	
<i>or</i>	
Mu 499 Independent Study . . . . .	2
<b>Total . . . . .</b>	<b>36</b>

**Liberal Arts - General Music Studies:**

	<i>Credits</i>
General Studies . . . . .	44
Common Requirements . . . . .	36
Special Departmental Requirements:	
Music Literature . . . . .	3-4
Major Ensemble . . . . .	6-8
Applied Music . . . . .	8
<b>Total . . . . .</b>	<b>17</b>
Electives . . . . .	31
<b>TOTAL REQUIRED FOR GRADUATION . . . . .</b>	<b>128</b>

**Liberal Arts - Performance Concentration:**

	<i>Credits</i>
General Studies .....	44
Common Requirements .....	36
<b>Special Departmental Requirements:</b>	
Music Literature .....	3-4
Major Ensemble .....	6-8
Applied Music .....	12-16
<b>Total</b> .....	<b>21</b>

**Additional Requirements:**

Students must present a half recital of at least 30 minutes duration during the junior year and a full recital of at least one hour duration during the senior year.

Electives .....	27
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<b>TOTAL REQUIRED FOR GRADUATION</b> .....	<b>128</b>
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**Liberal Arts - Music Education Concentration:**

The required classes are in compliance with the Teacher Certification Act of 1975, which outlines three areas of specialization: General Music, Instrumental Music and Choral Music. Those who elect piano as their primary applied area and who do not have a secondary instrumental area should select the choral music specialization.

	<i>Credits</i>
General Studies .....	44

Common Requirements .....	36
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**Additional Departmental Requirements:**

Mu 103 Voice in Class .....	1
Mu 103 Brass in Class .....	1
Mu 103 Woodwinds in Class .....	1
Mu 103 Percussion in Class .....	1

Mu 103 Strings in Class .....	1
Mu 314 Methods and Principles of Teaching Vocal Music .....	3
Mu 315 Methods and Principles of Teaching Instrumental Music .....	3
Mu 316 Music in the Elementary School .....	3
<b>Total</b> .....	<b>14</b>

**Special Departmental Requirements:**

Music Literature .....	3-4
Major Ensemble .....	6-8
Applied Music .....	7
<b>Total</b> .....	<b>16</b>

**Additional Requirements:**

Students must complete all courses required for teacher certification. Consult the Teacher Education Department for specific requirements.

Students must present a half recital of at least 30 minutes duration during the junior or senior year.

<b>MINIMUM REQUIRED FOR GRADUATION</b> ..	<b>128</b>
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**REQUIREMENTS FOR A MINOR IN MUSIC:**

1. A minimum of 19 credits of music with at least six credits in upper-division courses.
2. A core curriculum which includes:
 

Mu 128A2 Theory and Musicianship I .....	5
Mu 129A2 Theory and Musicianship II .....	5
Mu 331A2 Music History I	
<i>or</i>	
Mu 332A2 Music History II .....	3
3. Three years of Applied Music, MU 109, 209 and 309.

Interested students should consult with their applied professor or the department chair.

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## Philosophy

*Course listings for Philosophy begin on Page 156.*

Professor William Coe;  
Associate Professor Reyes R. Garcia;  
Assistant Professor Dugald L. Owen

The purpose of the philosophy curriculum at Fort Lewis College is not only the study of traditional and contemporary philosophical issues and positions for their intrinsic interest and importance, but also the

demonstration that these age-old but continuing efforts to understand ourselves and our relation to the world are important to everyone. It is the mark of a liberally educated person to understand the

conclusions of the specialized sciences in terms of their basic assumptions, to think seriously about the nature of such assumptions, and to be aware of the way in which our views of reality are influenced by our cultural heritages and by the very structures of our languages. Perhaps the most important function of philosophy as a part of the liberal education is the destruction — or at least the recognition — of the complacency and provincialism of much of our thinking.

A major in philosophy will provide a sound foundation for graduate studies in philosophy and will also serve as an excellent preparation for law school or for theological studies. For its majors, as well as for those majoring in other disciplines and minoring in philosophy and for those taking several philosophy courses as electives, the program is designed to provide a systematic acquaintance with mankind's most fundamental attempts at self-knowledge and a concomitant basis from which students can formulate their own views of themselves and the world.

#### REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN PHILOSOPHY:

	<i>Credits</i>
General Studies (not satisfied below) .....	38-40
Specific Departmental Requirements:	
Phil 141C Introduction to Philosophy	
<i>or</i>	
Phil 274C Early Foundations of Philosophy .....	4
Phil 251C Moral Philosophy .....	4
Phil 271B Logic .....	4
Phil 375C Modern Foundations of Philosophy .....	4

Phil 377C Contemporary European Philosophy .....	4
Phil 496 Seminar in Philosophy .....	4
Total .....	24

#### Other Departmental Requirements:

A minimum of 12 additional credits in Philosophy including at least 8 credits in courses numbered 300 or higher. PS 486D Ancient Political Thought and PS 487D Modern Political Thought may be credited toward this requirement .....

12

#### Auxiliary Requirements from Other Departments:

Two trimesters of one modern language .....	6-8
Total .....	18-20

Electives .....	46
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**TOTAL REQUIRED FOR GRADUATION .....** 128

#### REQUIREMENTS FOR A MINOR IN PHILOSOPHY

Phil 141C Introduction to Philosophy	
<i>or</i>	
Phil 274C Early Foundations of Philosophy .....	4
Phil 251C Moral Philosophy .....	4
Phil 375C Modern Foundations of Philosophy .....	4
Phil 271B Logic .....	4
At least one other philosophy course numbered 300 or above .....	4
Total .....	20

### Physics

*Course listings for Physics begin on Page 158.*

Professors James M. Costello, Robert N. Likes and Tom D. Norton;  
Associate Professor Gerald Crawford;  
Assistant Professor Martha S. Iverson

The Bachelor of Science degree in Physics is designed to allow students to attain their professional goal of entering graduate work in physics or astrophysics; to obtain technical positions in industry in such areas as energy science, engineering and electronics; or to obtain preparation for secondary certification in teaching physics in public schools. The geologist, engineer, chemist and biologist all deal with

matter and energy in their various forms. Since physicists probe the physical laws underlying all physical processes, the study of physics becomes the cornerstone for all the natural sciences.

The physics curriculum is predicated upon the role physicists play in a modern, technological world society that is currently experiencing shortages of

trained personnel in various scientific areas and in science education. Coursework in physics will provide the student pursuing entrance to graduate school in physics or astronomy with a strong grounding in mathematics and physics, while being immersed in an atmosphere of a broad, liberal education in the humanities and social sciences. This curriculum also will enable a student to enter applied technical fields in industry such as electronics, optics and aerospace, where there is currently a high demand. Students seeking a degree in physics should consult early in their college career with staff members of the Physics Department.

A minor in physics is available for students majoring in other disciplines. Requirements for a minor in physics are listed at the end of this section.

#### REQUIREMENTS FOR A BACHELOR OF SCIENCE DEGREE IN PHYSICS:

	<i>Credits</i>
General Studies (not satisfied below) .....	34
Specific Departmental Requirements:	
Phys 162B, 262B, 263B Physics for Science and Engineering .....	9
Phys 211BL, 212BL Physics Lab .....	2
Phys 320 Modern Physics .....	3
Phys 354 Theoretical Mechanics .....	3
Phys 361 Principles of Electricity and Magnetism .....	4
Phys 380 Advanced Lab I .....	1
Phys 381 Advanced Lab II .....	1
Phys 400 Science and Human Values .....	2
Phys 420 Introductory Quantum Mechanics I .....	3
Phys 496 Senior Seminar	
or	
Phys 499 Independent Study .....	2
Total .....	30

#### Additional Departmental Requirements:

Additional physics courses numbered above 300 to be chosen from:	
Phys 301 Introduction to Electronics .....	3

Phys 340 Optics .....	4
Phys 370 Heat and Thermodynamics .....	3
Phys 421 Quantum Mechanics II .....	3
Phys 454 Advanced Topics in Physics .....	1-4
Total .....	6

#### Auxiliary Requirements from Other Departments:

Chem 150B, 151 Fundamentals of Chemistry .....	11
Math 221B, 222, 223 Calculus I, II, III .....	13
Math 327 Differential Equations .....	3
Engr 104B Computer Programming for Scientists and Engineers .....	3
Engr 201 Electric Networks .....	4
Engr 202 Electric Networks II* .....	4
Math 311B Matrices and Linear Algebra or	
Math 320 Numerical Analysis	
or	
Math 401 Probability and Statistics .....	3
Total .....	40-41

Electives .....

TOTAL REQUIRED FOR GRADUATION .....

\*Can substitute Phys 301.

All courses listed under Specific Departmental Requirements, Additional Departmental Requirements and Auxiliary Requirements from other departments must be passed with a grade of C- or higher.

#### REQUIREMENTS FOR A MINOR IN PHYSICS:

Phys 162B, 262B, 263B (with departmental approval Phys 132B, 232B, 233B) .....	9
Phys 211BL, 212BL Lab .....	2
Phys 320 .....	3
Phys 380 or 381 Lab .....	1
Two additional Physics courses from the following:	
Phys 301, 340, 354, 361, 370, 420, 421 .....	6-7
Total .....	21-22

## Political Science

*Course listings for Political Science begin on Page 159.*

Professors Edward L. Angus and Byron Dare;  
Assistant Professors Kenyon D. Bunch and Rita J. Horwath

The study of political science is concerned with the relationship between the governed and the government, the nature of the political process and the role of the citizen in a democratic society.

The political science major provides excellent training for the person who: (1) plans a career in law, journalism or government; (2) hopes to work abroad; (3) plans to enter graduate school and later teach or serve as an administrator at the college level; or (4) expects to enter politics, either as a candidate or as an administrative aide to a public official.

Political science course offerings are available also to the student who is majoring in another area but who wants to learn something about politics and government.

Students majoring in political science may be certified to teach in the broad area of social studies at the secondary level. To obtain requirements for teacher certification, please contact the Department of Teacher Education.

A minor in political science is available for students majoring in other disciplines. Requirements for a minor in political science are listed at the end of this section.

### REQUIREMENTS FOR A BACHELOR DEGREE WITH A MAJOR IN POLITICAL SCIENCE:

*Credits*

General Studies (not satisfied below) . . . . . 32-38

#### Specific Departmental Requirements:

PS 101D Introduction to Political Science . . . . . 3  
PS 110D U.S. National Government . . . . . 3  
PS 250 Introduction to Political Analysis . . . . . 3  
PS 486D Ancient Political Thought . . . . . 3  
PS 487D Modern Political Thought . . . . . 3  
PS 496 Senior Seminar  
or  
PS 499 Independent Study . . . . . 3

#### Other Departmental Requirements:

22 additional hours in Political Science  
with not more than 8 credits in  
internships . . . . . 22  
Total . . . . . 40

#### Auxiliary Requirements from Other Departments:

Hist 280C Survey of United States History, 1600-1865, and Hist 281C Survey of United States History, 1865-Present (General Studies, Group C) . . . . . 6

#### One of the following:

BA 253B Business Statistics, Math 201B  
Elementary Statistics,  
Psych 241B Basic Statistics for Psychologists  
and  
Engl 363 Advanced Composition  
or  
two courses in one modern language . . . 6-8

#### Two courses in any one of the following areas:

Anthropology, Economics, Philosophy,  
Psychology or Sociology (General  
Studies, Group C or D) . . . . . 6

Total . . . . . 18-20

Electives . . . . . 30-38

TOTAL REQUIRED FOR GRADUATION . . . . . 128

### REQUIREMENTS FOR A MINOR IN POLITICAL SCIENCE:

1. At least 18 credits in political science, exclusive of internship hours.
2. At least 9 of those credits must be in upper-division courses.

## Sociology/Human Services

Course listings for Sociology/Human Services begin on Page 162.

Professors Samuel A. Burns, Betty J. Leyerle and Norman K. Linton;  
Associate Professors James Fitzgerald (jointly with Modern Language) and Dennis W. Lum;  
Assistant Professor Cecelia Orellano-Rojas

Sociology seeks to explore how our individual and collective biographies intersect history within society. The relationships between social structure and individual consciousness, historical processes and everyday life, and collective interests and individual prerogatives provide the sociological substance by which we become self-conscious. It is through the study of sociology that we become aware of the meaning of our everyday lives and recognize the extent to which we participate in the construction of social formations.

The sociological task of comprehending the relationships among individuals and groups is a significant part of any student's educational experience. Extensive work in sociology is recommended for students planning careers in human services. Health services administration, family case work, community planning and development, and criminal justice work are typical human service careers. Moreover, an emphasis in sociology provides foundational preparation for graduate work in sociology, social work, public administration, law, journalism and other fields.

The sociology and human services curriculum is organized to reflect two central concerns: theory (reflection) and practice (action). Thus, field experience, sociology practicum and participation in the Cooperative Education Program form the nucleus for off-campus experiences in applied sociology. These experiences as conventional knowledge will be critically compared with sociological theory in terms of their human relevance, viability and consequences for moral action.

A minor in sociology and human services is available for students majoring in other disciplines. Requirements for a minor in sociology/human services are listed at the end of this section.

### REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN SOCIOLOGY/HUMAN SERVICES:

General Studies ..... 42

### Specific Departmental Requirements:

Soc 100D Social Issues .....	4
Soc 200 Social Change and Human Services .....	4
Soc 210 Sociological Inquiry and Research Methods .....	4
Soc 300D Theories of Social and Personal Life .....	4
Soc 320 Community Service Practicum ..	4
Soc 421 Contemporary Social Analysis in the Southwest .....	4
Soc 496 Senior Seminar .....	4
<b>Total .....</b>	<b>28</b>

### Other Departmental Requirements:

A minimum of 12 additional credits in Sociology/Human Services .....	12
<b>Total .....</b>	<b>12</b>
Electives .....	46

**TOTAL REQUIRED FOR GRADUATION ..... 128**

### REQUIREMENTS FOR A MINOR IN SOCIOLOGY/HUMAN SERVICES:

Completion of 20 credits in sociology/human services of which a minimum of 12 credits are in upper-division courses.



## Southwest Studies

*Course listings for Southwest Studies begin on Page 163.*

Professors Leonard D. Atencio, Samuel A. Burns, Miguel Cano-Montenegro, Lourdes M. Carrasco, Jack A. Ellingson, Richard N. Ellis, Roland C. Jones, W. James Judge, Gary D. Knight, Mary Jean Moseley, Paul N. Pavich, Susan M. Riches and Duane A. Smith;  
Associate Professors Reinaldo M. Alcazar, Kathleen S. Fine, Reyes R. Garcia, James Fitzgerald and Donald R. Gordon;  
Assistant Professors J. Todd Ellison, Michael F. Fry and Richard M. Wheelock

The Southwest Studies major is designed to be a truly interdisciplinary program that introduces students to a variety of academic disciplines. The interdisciplinary nature of the program permits it to be tailored to the needs of individual students. Students are required to take approved coursework in a minimum of four different departments. Coursework applicable to the Southwest major and minor must be approved by the department chair or by a member of the Southwest Studies faculty advisory board.

A major in Southwest Studies will consist of 45 hours of coursework with at least 27 credit hours at the 300- and 400-levels. Courses on the Southwest must be taken in at least four different subject areas such as anthropology, art, history, language, literature, sociology, economics, geology and Southwest Studies. At least 18 credit hours must have a Southwest prefix. Students will also take a three-hour senior seminar in Southwest Studies.

All majors are required to take at least one year of Spanish or one year of a southwestern Indian language.

A major in Southwest Studies prepares students for careers in state and local governments, museum work, and other occupations as well as admission to graduate school. Students majoring in Southwest Studies may be certified to teach in the broad area of social studies at the secondary level. To obtain requirements for teacher certification, please contact the Department of Teacher Education.

A minor in Southwest Studies will consist of 18 hours of coursework on the Southwest in at least three subject areas. At least nine hours will be upper division.

### REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN SOUTHWEST STUDIES:

	<i>Credits</i>
General Studies (not satisfied below) . . . . .	26
<b>Southwest Studies Requirements:</b>	
Southwest courses must be taken in at least four different subject areas: anthropology, art, history, language, literature, sociology, economics, geology and Southwest Studies. Approved Southwest courses are listed below. At least 27 credit hours must be at the 300- and 400-level. At least 18 credit hours must have a Southwest prefix. Southwest 496 is required.	
Southwest Studies Requirements . . . . .	45
<b>Language Requirement:</b>	
At least one year of Spanish or one year of a southwest Indian language . . . . .	6-8
Electives . . . . .	49-51
<b>TOTAL REQUIRED FOR GRADUATION . . . . .</b>	<b>128</b>

### Approved Courses

- Anth 231 Archaeology of the Southwest:  
The Anasazi Culture
- Anth 259 Field Training in Archaeology  
(if on Southwest topic)
- Anth 331 Archaeology of the Southwest:  
Hohokam and Mogollon (Prerequisite)
- Anth 350 Ethnology of Mesoamerica
- Anth 354 Pueblo Indians of the Southwest
- Anth 403 Advanced Archaeological Field Techniques  
(if on Southwest topic) (Prerequisite)
  
- Art 154A2/SW 154A2 Indian Arts and Crafts I
- Art 155A2/SW 155A2 Indian Arts and Crafts II
- Art 265A2/SW 265A2 Art History of the Southwest
- Art 365C Mesoamerican Art History



- Bio 471 Field Ecology  
(if on Southwest topic) (Prerequisite)
- Econ 320DE Economics of Southwest
- Engl 280A1 Literature of the Southwest
- Engl 380E American Indian Literature
- Geol 150B Geology of the Southwest
- Hist 270CE Survey of Colonial Latin America
- Hist 271CE Survey of National Latin America
- Hist 370CE Studies in Latin American History:  
History of Mexico
- Hist 380C Studies in American History:  
Trans-Mississippi West
- Hist 380C/SW 323CE Southwest Indian History
- Hist 380C/SW 326C West and Southwest in  
Film and Fiction
- Hist 380C/SW 383C Southwest History to 1868
- Hist 380C/SW 384C Southwest History,  
1868 to Present
- Hist 380C/SW 481C Colorado History
- Hist 380C/SW 482C Mining in the American West
- ML 215 & 216 Intermediate Spanish (Prerequisite)
- ML 321E Survey of Hispanic American  
Literature I (Prerequisite)
- ML 322E Survey of Hispanic American  
Literature II (Prerequisite)
- ML 331E Chicano Literature (Prerequisite)
- ML 427E Hispanic American Novel  
and Poetry (Prerequisite)
- ML 429E Mexican Literature (Prerequisite)
- Soc 279D Ethnicity, Gender and Class  
in the Southwest
- Soc 421 Contemporary Social Analysis  
in the Southwest
- SW 100 & 101A1 Navajo Language
- SW 123CE American Indian History
- SW 131C Southwest History and Culture  
(Students who previously completed SW 135E and  
SW 136, The Southwest I & II, cannot receive  
credit for SW 131C, Southwest History  
and Culture)
- SW 154A2/Art 154A2 Indian Arts and Crafts I
- SW 155A2/Art 155A2 Indian Arts and Crafts II
- SW 135E and SW 136 The Southwest I & II  
(Students who previously completed SW 131,  
Southwest History and Culture, cannot receive  
credit for SW 135E and SW 136, The Southwest I  
& II.)
- SW 265A1/Art 265A2 Art History of the Southwest
- SW 280DE Native American in the Modern World
- SW 317A1 History of American Indians in Film
- SW 322CE American Indian Philosophies
- SW 323CE/Hist 380C Southwest Indian History
- SW 326C/Hist 380C West and Southwest  
in Film and Fiction
- SW 367C Hispanic Civilization
- SW 375 Hispanic-American Civilization
- SW 381A1 Mexican American Literature
- SW 383C/Hist 380C Southwest History to 1868
- SW 384C/Hist 380C Southwest History,  
1868 to Present
- SW 481C/Hist 380C Colorado History
- SW 482C/Hist 380C Mining in the American West
- SW 381A1 Mexican American Literature
- SW 496 Senior Seminar
- SW 499 Problems in Southwest Studies

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**Spanish**

(See Modern Languages on Page 86.)

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## Theatre

*Course listings for Theatre begin on Page 166.*

Professor Dinah L. Leavitt;  
Assistant Professors Jean E. Brody,  
Kathryn S. Martin and Peter E. Winter

The Theatre Program at Fort Lewis College offers a major in theatre as an option of the English major. The major is designed to enable students to fully explore their potential as literate, articulate and humane members of society through a close study of the theory and practice of the stage. Students so trained are able to bring highly developed communication skills, flexibility and creativity to a wide range of career opportunities.

All courses are suitable for majors and non-majors with an interest in the arts.

The academic program is supported by a strong production program. These productions are the cornerstone of our work and are produced in conjunction with the student-run Commedia Club. Both backstage and acting roles are open to all students, and auditions are held at the beginning of each term. Credit can be given for involvement in productions.

A minor in theatre is also available. Requirements are listed at the end of this section.

### REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN ENGLISH - THEATRE OPTION:

	<i>Credits</i>
General Studies (not satisfied below) .....	44
Departmental Requirements (English):	
Engl 363 Advanced Composition	
<i>or</i>	
Engl 364 Creative Writing .....	4
Engl 231A1 British Literature to 1800 ...	3
Engl 232A1 British Literature from 1800 .	3
Engl 432A1 Shakespeare .....	3
Total .....	13

### Departmental Requirements (Theatre):

Thea 125A2 Acting I .....	3
Thea 126A2 Theatrical Dance .....	3
Thea 230A2 Theatre Design and Technology .....	3
Thea 250 Introduction to Dramatic Literature .....	3
Thea 302 Theatre History .....	3
Thea 365 Acting II .....	3
Thea 403 Modern Drama 1875-1956 ...	3
Thea 405 Contemporary Drama 1956-Present .....	3

### One course from (Practical group):

Thea 222 Creative Dramatics .....	3
Thea 232A2 Theatrical Costume and Make-up .....	3
Thea 401 Advanced Studies .....	3
Thea 190/390 Special Topics .....	3

### One course from (Academic group):

Thea 280 Interdisciplinary Studies .....	3
Thea 381 Plays: Theme or Topics .....	3
Thea 496 Senior Seminar .....	2-3
<i>or</i>	
Thea 499 Independent Study .....	2-3
Total .....	32-33

### Performance Requirements:

9 credits from Thea 100, 175A2, 176A2, 200A2, 223A2, 300A2, 375, 376, 400 .....	9
Electives .....	29-30

**TOTAL REQUIRED FOR GRADUATION .....** 128

### REQUIREMENTS FOR A MINOR IN THEATRE:

A minor in Theatre requires at least 18 credits, no more than six of which may be in performance courses. Of the remaining credits at least 6 must be in upper-division courses.

## Women's Studies

### Advisors

Terra Anderson, Affirmative Action; Karen Burn, Business; Kathleen Fine, Anthropology;  
Martha Iverson, Physics; Mukti Khanna, Psychology; Betty Leyerle, Sociology; Susan McGinness, Counseling;  
Dugald Owen, Philosophy

Women's Studies programs and course offerings are growing in number at both the graduate and undergraduate levels in American colleges and universities. This trend reflects the maturation of Women's Studies as an important academic discipline that has been dedicated for the past twenty years to issues at the heart of curriculum revitalization today. Such issues include a respect for sociocultural diversity; an understanding of systematic and historical forms of inequality; a concern for building social equality and justice; the rethinking of methodological issues in conducting research in any discipline; and the creation of classroom contexts in which an honest and critical discussion can take place about the ways that the individual, society and culture intersect.

Although Fort Lewis College does not offer a major in Women's Studies, students can currently select from a variety of courses in several disciplines which either deal substantively with women's issues, or which integrate these issues and subject matter into the regular course content. Students have also used these courses to self-construct their own majors in Women's Studies. Relevant courses offered at Fort Lewis College include the following:

### Credits

#### Anthropology

Anth 210C Introduction to Sociocultural Anthropology	4
Anth 355C Anthropology of Gender	4

#### Biology

Bio 132B Human Sexuality	3
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#### English

Engl 175A1 Women's Literature	3
Engl 116A1 Introduction to Mass Communications	3

#### General Studies

GS 300 Ancient Women's Religion	3
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#### History

Hist 280C Survey of United States History, 1600-1865	3
Hist 281C Survey of United States History, 1865-Present	3
Hist 350CE Women in Modern China	3
Hist 380C Women in American History	3
Hist 445CE Women in the Middle East	3

#### Philosophy

Phil 191 Feminist Philosophy	3
Phil 391 Feminist Philosophy	3

#### Sociology

Soc 100D Social Issues	4
Soc 279D Ethnicity, Gender and Class in the Southwest	4
Soc 275D Families, Marriages and Other Sex Role Systems	4
Soc 280D Popular Culture and Mass Communication	4
Soc 300D Theories of Social and Personal Life	4
Soc 390 Women in Society	4

## THE SCHOOL OF BUSINESS ADMINISTRATION

JOHN (Skip) E. CAVE, DEAN  
O.D. PERRY, ASSISTANT DEAN

The School of Business Administration provides students with the professional education necessary for responsible careers in business, government, and non-profit organizations, as well as for teaching or admission to graduate school. The educational emphasis, reflecting the environment in which Fort Lewis College is located, tends toward small- to medium-sized organizations, but does not disregard the large organizations in which many graduates develop their careers. The School is accredited by the American Assembly of Collegiate Schools of Business (AACSB) and fully adheres to the high standards of this accreditation. Fort Lewis College, the University of Colorado, the University of Denver, Colorado State University and the University of Northern Colorado are the only institutions in Colorado to have achieved this prized accreditation.

The School of Business Administration degree programs are designed to provide a balanced combination of the arts and sciences and professional business education. The more specific objectives of the Bachelor of Arts degree programs offered by the School of Business Administration are:

- To provide, as a base, a general understanding of the principles of modern business and organizational practices.
- To develop balanced thinking and understanding of the economic, political, and social environments in which modern business and government are conducted.
- To ensure that students are skilled in the use of analytical tools and techniques for decision making.
- To develop the capacity for critical thought, leadership and the ability to work with others.
- To enhance each student's appreciation for international customs and cultural values, and for one's responsibilities in modern society.

The School is characterized by its professional attitude, the diversity of its largely work-experienced faculty and its close student-faculty relationship. In addition to concern for good classroom instruction, the

faculty believe that much learning takes place through personal and informal contacts with and among students. The Business Club, Accounting Club and Beta Gamma Sigma, a national honorary business fraternity, are active campus groups. The curricula offered by the School lead to the Bachelor of Arts degree with a major in Accounting, Economics or Business Administration. Within the Business Administration major, options are offered in Agricultural Business, Business Administration, Engineering Management, Finance, International Business, Management, Marketing, Operations Management, and Tourism and Resort Management.

### Acceptance of Transfer Credits

It is recommended that students planning to transfer into the Fort Lewis College School of Business Administration do so by the end of their sophomore year. Students must complete their final 28 credit hours in residence at Fort Lewis College.

**Students taking their first two years of work at a junior or community college or at another four-year institution should take only those business courses that are offered at the freshman or sophomore level at Fort Lewis College. Business courses taught at junior or community colleges may not be used to satisfy upper-division course requirements (courses at the 300- and 400-level) of the School of Business Administration.**

### Prerequisite Requirement

Students who enroll in a business course without having satisfactorily completed the required prerequisite(s), or received consent of the instructor, are subject to administrative withdrawal from the course.

### Non-Business Students

Students who are not working toward a baccalaureate degree in business are prohibited from taking business credits which will exceed 25 percent of their total program. This provision is in accordance with the accreditation standards of the American Assembly of Collegiate Schools of Business.

**The "4 + 1" BA/MBA Programs**

Fort Lewis College graduates with a Bachelor of Arts degree in Accounting, Business Administration or Economics, and who meet the entrance requirements of the respective institution, may earn an MBA (normally a two year program) in one year. This opportunity is available from Colorado State

University, University of Southern Colorado, or Northern Arizona University.

**Accounting/Business/Economics Minors**

Requirements for minors in Accounting, Business Administration and Economics are given at the end of the School of Business Administration section of this catalog.

**School of Business Administration Faculty**

- Professors Leonard D. Atencio, John E. Cave, James P. Clay, Jeremy J. Coleman, Joseph C. Colgan, Robert Dolphin, Jr., J. Larry Goff, John F. Hale, Vernon E. Lynch, Jr., Reed H. McKnight, and Richard A. Podlesnik;  
 Associate Professors Roy A. Cook, Lawrence S. Corman, William B. Dodds, Dale E. Lehman, O.D. Perry, Randall K. Serrett and Charles O. Tustin;  
 Assistant Professors Thomas R. Blue, Nancy J. Boykin, Karen S. Burn, Wen Hai, Robert P. Harrington, Iqbal A. Memon, Carol L. Smith and Laura J. Yale;  
 Instructor Lisa N. Tuttle (on leave)

**THE CURRICULUM**

A student who majors in one of the Bachelor of Arts degree programs in the School of Business Administration must complete:

	<i>Credits</i>
General Studies .....	40
Students majoring in Accounting, Business Administration or Economics <u>may not</u> use courses taught within the School of Business Administration (Acc, BA, Econ) to satisfy General Distribution Requirements.	
<b>Common Requirements:</b>	
Acc 225 Introduction to Financial Accounting .....	4
Acc 226 Introduction to Managerial Accounting .....	4
Econ 266D Principles of Economics .....	4
BA 253B Business Statistics .....	4
BA 260D Legal Environment of Business .....	3
BA 301D Management and Organizational Behavior .....	4
BA 340 Principles of Marketing .....	3
BA 353 Operations Management .....	4
BA 380 Financial Management .....	3

BA 496 Senior Seminar in Administrative Strategy .....	4
<b>Total .....</b>	<b>37</b>

<b>Auxiliary Requirements outside the School of Business Administration:</b>	
CSIS 101 Word Processing .....	1
CSIS 102 Electronic Spreadsheets .....	1
CSIS 420 Management Information Systems .....	4
Math 210B Calculus for Business .....	4
<b>Total .....</b>	<b>10</b>

At least 50 percent of the business credit hours for a School of Business major must be earned at Fort Lewis College.

Additional requirements are listed on the following pages under each major or option.

Sufficient elective credits to bring the student's total credits to 128 (the minimum number required for graduation). At least 50 percent of the student's total credits must be taken outside of the School of Business Administration.

**Prerequisite Statement:**

Acc 225, Acc 228, Econ 266D, FCS 101 and SCS 201 are prerequisites for 300- and 400-level courses offered by the School of Business Administration. Students with majors offered by the School of Business Administration should complete these courses by the end of their sophomore year.

These students may not enroll in 300- or 400-level business courses until FCS 101 and SCS 201 have been completed and the student has attained junior standing (60 or more credit hours completed). Any exceptions require the written approval of the School of Business Administration Dean or Assistant Dean.

**Scheduling the Common Business Requirements**

It is recommended that courses in Box 1 below be completed before taking courses in Box 2 and those in

Box 2 be completed before taking courses in Box 3. It is required that courses in the first three boxes be completed before taking BA 496.

Box 1*	Box 2*	Box 3*	Box 4*
Acc 225 Acc 228 BA 253 Econ 262 Econ 272 Math 210 CSIS 101 CSIS 102	BA 301 BA 310 BA 340 BA 380	BA 353 BA Electives	BA 420 BA 496

\* This does not mean Year 1,2,3,4

**Suggested Course Sequence\*\***

**First Year**

(to be divided between two terms)

FCS Freshman Composition Seminar . . . . .	4
Math 210B Calculus for Business . . . . .	4
CSIS 101 Word Processing . . . . .	1
CSIS 102 Electronic Spreadsheets . . . . .	1
Econ 266D Principles of Economics . . . . .	4
General Distribution Requirements . . . . .	17
Physical Education . . . . .	1
<b>Total . . . . .</b>	<b>32</b>

**Suggested Course Sequence**

**Second Year**

(to be divided between two terms)

SCS Sophomore Composition Seminar . . . . .	4
Acc 225 Introduction to Financial Accounting . . . . .	4
Acc 226 Introduction to Managerial Accounting . . . . .	4
BA 253B Business Statistics . . . . .	4

**BA 260D Legal Environment**

of Business . . . . .	3
General Distribution Requirements . . . . .	12
Physical Education . . . . .	1
<b>Total . . . . .</b>	<b>32</b>

**Third and Fourth Years**

Students are encouraged to develop a suggested sequence sheet with their advisor. Check lists are available for the following programs:

Accounting	International Business
Agricultural Business	Management
Business Administration	Marketing
Economics	Operations Management
Engineering Management	Tourism & Resort
Finance	Management

**\*\*This does not apply to the Engineering Management Option.**

## Accounting

Course listings for Accounting begin on Page 123.

The accounting major prepares students to embark immediately upon a career as a public, industrial or governmental accountant and provides a foundation in accounting and business administration that will enable them to pursue graduate study. Graduates can expect to work in such areas as income tax preparation, general accounting, cost accounting, budgeting and management advisory services.

The accounting program at Fort Lewis College is approved by the State Board of Accountancy of Colorado as preparation for the Certified Public Accountant Examination and for those receiving CPA certificates.

In addition to the College's General Requirements, the Common Requirements of the School of Business Administration and Auxiliary Requirements outside of the School of Business Administration, a student studying accounting must complete the following:\*

Acc 323 Intermediate Accounting I . . . . .	4
Acc 324 Intermediate Accounting II . . . . .	4
Acc 327 Cost/Managerial Accounting . . . . .	4
Acc 330 Income Tax Accounting . . . . .	4
Acc 436 Auditing - Theory and Practice . . . . .	4
Accounting Elective** . . . . .	3-4
BA 321 Business Communications . . . . .	3
Total . . . . .	26-27*

\*The credits used to satisfy the accounting major may not be used to satisfy any other major, minor or option within the School of Business Administration.

\*\*Courses containing substantial amounts of review material (i.e., CPA Review) may not be used as the Accounting Elective.

## Agricultural Business

Course listings for Business Administration begin on Page 130.

The agricultural business option integrates agriculture, economics, and business administration to prepare students for professional careers in the agribusiness sector. These include positions in agricultural finance, product development, marketing and distribution, and agribusiness management. Flexibility within this option allows students to concentrate in a specific area of study, including general agriculture, animal science or agronomy.

In addition to the College's General Requirements, the Common Requirements of the School of Business Administration and the Auxiliary Requirements outside the School of Business Administration, a student studying agricultural business must complete the following requirements:

### Required:

Ag 101B Introductory Animal Science . . . . .	4
Ag 102B Principles of Crop Production . . . . .	4
Ag 346 Agricultural Marketing . . . . .	3
Ag 350 Agricultural Law . . . . .	3

Plus 12 credits from the list below  
(at least two courses must be taken  
from each category):

### Agriculture:

Ag 150 Farm Records and Accounts . . . . .	3
Ag 202 Integrated Pest Management/ Weed Control . . . . .	4
Ag 204 Forage Production and Management . . . . .	3
Ag 235 Soils and Soil Fertility . . . . .	4
Ag 240 Principles of Animal Nutrition . . . . .	4
Ag 300D Agricultural Issues in Society . . . . .	3
Ag 301 Range Management . . . . .	4
Ag 325 Beef Science . . . . .	3
Ag 390 Special Topics . . . . .	3

### Economics/Business Administration:

Econ 330 Production Economics and Agribusiness . . . . .	4
Econ 390 Special Topics . . . . .	4
BA 387 Real Estate . . . . .	3
BA 401 Entrepreneurship and Small Business Management . . . . .	3
BA 446 Marketing Research . . . . .	3
Total . . . . .	26*

\*The 26 credits used to satisfy an option in Agricultural Business may not be used to satisfy any other major, minor or option within the School of Business Administration.

## Business Administration

*Course listings for Business Administration begin on Page 130.*

The business administration program, sometimes referred to as general business, provides a broad base of knowledge for beginning a business career. It enables maximum flexibility in career choice and change throughout one's career.

Students are expected to develop a basic understanding of the social, legal and economic environments of business, including an introduction to international business, organizational behavior, the principles of leadership and organization theory, the quantitative tools of decision making and the functional areas of the firm.

Students work with assigned advisors to select elective courses that enhance their particular interest. Emphasis is placed on developing a general background with a well-balanced understanding of business. This program, then, provides a sound undergraduate education for entrance in a professional career or into graduate school.

In addition to the College's General Requirements and the Common Requirements of the School of Business Administration, and Auxiliary Requirements outside of the School of Business Administration, a student studying business administration must complete the following requirements:

One 300- or 400-level Economics course . . . . . 4

A minimum of 15 credits of business administration courses at the 300- or 400-level, with at least one course from each group.\*

### GROUP A:

BA 341 Services Marketing . . . . .	3
BA 342 Retailing . . . . .	3
BA 343 Sales Management . . . . .	3
BA 344 Advertising . . . . .	3
BA 345 Professional Salesmanship . . . . .	3

BA 349 International Marketing . . . . .	3
BA 390 Special Topics in Marketing . . . . .	3
BA 437 Internship in Business-Marketing . . . . .	3
BA 445 Marketing Management . . . . .	3
BA 446 Marketing Research . . . . .	3

### GROUP B:

BA 302 Human Resource Management . . . . .	4
BA 308 Office Management . . . . .	3
BA 309 International Management . . . . .	3
BA 311 Business Law I . . . . .	3
BA 312 Business Law II . . . . .	3
BA 313 Ethical Issues in Business . . . . .	3
BA 321 Business Communications . . . . .	3
BA 330 Tourism and Resort Management . . . . .	4
BA 357 Studies in Operations Management . . . . .	4
BA 360 Introduction to Management Science . . . . .	3
BA 382 Financial Institutions . . . . .	3
BA 386 Insurance . . . . .	3
BA 387 Real Estate . . . . .	3
BA 389 International Finance . . . . .	3
BA 390 Special Topics in Management . . . . .	3
BA 401 Entrepreneurship and Small Business Management . . . . .	3
BA 407 Management Consulting . . . . .	3
BA 415 Management in Action . . . . .	3
BA 437 Internship in Business - General, Finance or Management . . . . .	3
BA 439 Services Management . . . . .	3
BA 481 Cases and Problems of Financial Management . . . . .	3
BA 483 Investments . . . . .	3
BA 484 Portfolio Management . . . . .	3

Total Groups A and B . . . . . 15\*

**\*The 15 credits used to satisfy an option in Business Administration may not be used to satisfy any other major, minor or option within the School of Business Administration.**

## Economics

*Course listings for Economics begin on Page 135.*

The major in economics is designed to: (1) provide the student with an understanding of our present-day economic system and an understanding of economics and its relationship to other disciplines; and (2) prepare the student for graduate work or employment in government and business.

Students majoring in economics may be certified to teach in the broad area of social studies at the secondary level. To obtain requirements for teacher certification, please contact the Department of Teacher Education.



In addition to the College's General Requirements, the Common Requirements of the School of Business Administration, and Auxiliary Requirements outside of the School of Business Administration, a student studying economics must complete the following departmental requirements:

**Specific Major Requirements:**

Econ 462 Microeconomic Theory	4
Econ 472 Macroeconomic Theory	4
<b>Total</b>	<b>8</b>

**Other Major Requirements:**

Any three of the following courses:

Econ 310C Economic History of the U.S.	4
Econ 330 Economics of the Agribusiness Industry	4

Econ 335 Environmental Economics	4
Econ 369D Public Finance and Regulation	4
Econ 371D International Economics	4
Econ 375D Industrial Organization	4
Econ 380D Labor Force Economics	4
Econ 381D Economics of the Health Care Industry	4
BA 382/Econ 382 Financial Institutions	3-4
Econ 383D Economics of the Mass Media	4
Econ 390/391 Special Topics in Economics	4
Econ 407C Evolution of Economic Thought	4
Econ 410D Radical Economics	3
<b>Total</b>	<b>11-12</b>

## Engineering Management

Course listings for Business Administration begin on Page 130.

Course listings for Engineering begin on Page 140.

The engineering management option prepares students who can integrate management skills with engineering skills to solve complex problems in an increasingly technical world. It is designed to prepare students for entry level engineering-related jobs and to be able to move rapidly into supervisory/management positions.

**Credits**

General Studies (not satisfied below) . . . . . 25

**Departmental Requirements:**

Engr 103 Computer-Aided Drafting	3
Engr 104B Computer Programming for Scientists & Engineers	3
Engr 201 Electric Networks I	4
Engr 202 Electric Networks II	
<i>or</i>	
Engr 317 Mechanics of Materials	4-3
Engr 217 Statics	3
Engr 221 Dynamics	3
BA 253B Business Statistics	4
BA 260D Legal Environment of Business	3
BA 301D Management and Organizational Behavior	4
BA 302 Human Resource Management	4
BA 340 Principles of Marketing	3
BA 353 Operations Management	4
BA 380 Financial Management	3
BA 437 Internship in Business	3
BA 496 Senior Seminar in Administrative Strategy	4

Two upper-division Business Courses	6*
<b>Total</b>	<b>55-56</b>

**Auxiliary Requirements From Other Departments:**

Math 221B Calculus I	5
Math 222 Calculus II	4
Chem 150B Fundamentals of Chemistry	5.5
CSIS 420 Management Information Systems	4
Phys 162B Physics for Science and Engineering	3
Phys 262B/211BL Physics for Science and Engineering and Lab	4
Phys 263B/212BL Physics for Science and Engineering and Lab	4
Acc 225 Introduction to Financial Accounting	4
Acc 226 Introduction to Managerial Accounting	4
Econ 266D Principles of Economics	4
Econ 410 Radical Economics	4
<b>Total</b>	<b>44.5</b>
Electives	6

**TOTAL REQUIRED FOR GRADUATION 131.5-132.5**

\*The two upper-division business courses used to satisfy an option in Engineering Management may not be used to satisfy any other major, minor or option within the School of Business Administration.

## Finance

*Course listings for Business Administration begin on Page 130.*

The finance option focuses on those financial activities that affect business, government and non-profit organizations. Students will be introduced to financial planning and management as they pertain to organizations, to the function of both capital and money markets, and to fund raising in these markets.

Financial theory and practice have changed rapidly in the past 20 years and will probably continue to change at least as rapidly in the immediate future. Therefore, students will be introduced to the rapidly evolving theory of finance so that they will be able to evaluate the effectiveness of a firm's financing decisions and investments. Students also will become familiar with the analytical techniques that can be used to seek solutions to a wide range of financial problems.

In addition to the College's General Requirements and the Common Requirements of the School of Business Administration, and Auxiliary Requirements outside of the School of Business Administration, a student studying finance must complete the following requirements:

One Upper-Division Economics course . . . . . 4

Required:

BA 382 Financial Institutions . . . . . 3

BA 481 Cases and Problems of  
Financial Management . . . . . 3  
BA 483 Investments . . . . . 3

Plus any two of the following courses:

BA 386 Insurance . . . . . 3  
BA 387 Real Estate . . . . . 3  
BA 389 International Finance . . . . . 3  
BA 390 Special Topics in Finance . . . . . 3  
BA 437 Internship in Business -  
Finance Related . . . . . 3  
BA 484 Portfolio Management . . . . . 3

with no more than one coming from the following sub-group:

Econ 310 Economic History of the  
United States\*\* . . . . . 4  
Econ 369 Public Finance\*\* . . . . . 4  
Econ 371 International Economics\*\* . . . . . 4  
Econ 472 Macroeconomic Theory\*\* . . . . . 4

Total . . . . . 15-16\*

**\*The 15 credits used to satisfy an option in Finance may not be used to satisfy any other major, minor or option within the School of Business Administration.**

**\*\*May not be used to fulfill the 300- or 400-level Economics course requirement and the Finance option requirement simultaneously.**

## International Business

*Course listings for Business Administration begin on Page 130.*

The international business option has been designed to prepare students to enter the exciting and rapidly growing world of international business. Increasingly businesses find that suppliers and customers may come from anywhere in the world. To better prepare students for a future career in business that will likely require some international proficiency, students in this option take courses to gain competency in at least one foreign language, a cultural and political understanding of the region of the world where that language is dominant, and those special business skills needed to operate effectively in the international environment.

The option is strongly interdisciplinary. In

addition to the College's General Requirements not satisfied below and the Common Requirements of the School of Business Administration, a student studying international business must complete the following requirements:

	<i>Credits</i>
General Studies (not satisfied below) . . . . .	23
Business Administration Requirements . . . . .	37

Required:

BA 309D International Management . . . . . 3  
BA 349 International Marketing . . . . . 3  
BA 389 International Finance . . . . . 3

Select at least two (2) courses from the following:

BA 315 International Business Law	3
BA 370 Topics in International Business	3
BA 390 Special Topics with International Emphasis	3
BA 499 Independent Study: Semester Abroad	3
Econ 371 International Economics	4
Econ 390 Special Topics with International Emphasis	4
Econ 410 Radical Economics	4
<b>Total</b>	<b>15</b>

Auxiliary Requirements:

<b>A. At least two (2) courses from Group A:</b>	
Anth 210C Introduction to Cultural and Social Anthropology	4
Anth 350CE Ethnology of Mesoamerica	4
Anth 351CE Ethnology of Andean South America	4
Anth 353CE Culture of India	4
Geog 271D World Geography	3
Phil 321E World Religions	4
PS 280DE Introduction to Comparative Politics	3
PS 320D International Politics	3
PS 337D U.S. Foreign Policy	3
PS 380DE Soviet and Chinese Political Systems	3
Soc 301E Comparative Societies	4
<b>Total</b>	<b>6-8</b>

**B. Area Emphasis:**

Two (2) courses focused on one of the following areas: Africa, Asia, Europe or Latin American (such as history courses in these areas or area emphasis courses from Group A not used to satisfy the Group A requirement).

**Total** 6

**C. Modern Language:**

Two years of one modern language or one year each of two modern languages if one of two languages is Japanese.

**Total** 14-16

**D. CSIS 101 Word Processing** 1

CSIS 102 Electronic Spreadsheets 1

CSIS 420 Management Information Systems 4

**E. Math 210B Calculus for Business** 4

**Electives** 14-16

**TOTAL REQUIRED FOR GRADUATION** 128

**\*The 15 credits used to satisfy an option in International Business may not be used to satisfy any other major, minor or option within the School of Business Administration.**

## Management

Course listings for Business Administration begin on Page 130.

The management option prepares students for responsible supervisory and management positions in all types of organizations: business, government and non-profit. Students become familiar with the opportunities and processes of management as they develop skills in planning, organizing, leading and controlling.

Students in management are introduced to the process of acquiring and using financial, human and physical resources in the pursuit of organizational objectives. Interpersonal relations, leadership and decision-making are emphasized.

In addition to the College's General Requirements, the Common Requirements of the School of Business Administration, and Auxiliary Requirements outside

of the School of Business Administration, a student studying management must complete the following requirements:

One 300- or 400-level Economics course 4

A minimum of 15 credits from the following courses:\*

BA 302 Human Resource Management 4

BA 308 Office Management 3

BA 309D International Management 3

BA 313C Ethical Issues in Business 3

BA 330 Tourism and Resort Management 3

BA 357 Studies in Operations Management 4

BA 360 Introduction to Management Science 3

BA 370 Topics in International Business 3

BA 390 Special Topics in Management . . .	3
BA 401 Entrepreneurship and Small Business Management . . . . .	3
BA 407 Management Consulting . . . . .	3
BA 415 Management in Action . . . . .	3
BA 437 Internship in Business - Management . . . . .	3
BA 439 Services Management . . . . .	4
Econ 375 Industrial Organization** . . . . .	4
<b>Total . . . . .</b>	<b>15*</b>

**\*The 15 credits used to satisfy an option in Management may not be used to satisfy any other major, minor or option within the School of Business Administration.**

**\*\*May not be used to fulfill the 300- or 400-level Economics course requirement and the Management option requirement simultaneously.**

## Marketing

*Course listings for Business Administration begin on Page 130.*

The marketing option emphasizes the performance of business activities designed to plan, price, promote, and distribute goods and services to satisfy consumer wants. The study of marketing recognizes the large proportion of the consumer dollar allocated to marketing, creating vast opportunities for graduates in this field.

Careers in marketing may be pursued in industry, government, and non-profit organizations, in such areas as retailing, purchasing, marketing research, personal selling, advertising, sales promotion, product management, public relations, physical distribution and consumer affairs.

In addition to the College's General Requirements, the Common Requirements of the School of Business Administration, and Auxiliary Requirements outside of the School of Business Administration, a student studying marketing must complete the following requirements:\*

One 300- or 400-level Economics course . . . . . 4

Required:

BA 445 Marketing Management . . . . . 3

BA 446 Marketing Research . . . . . 3

Plus any three of the following courses:

BA 313C Ethical Issues in Business . . . . . 3

BA 341 Services Marketing . . . . . 3

BA 342 Retailing . . . . . 3

BA 343 Sales Management . . . . . 3

BA 344 Advertising . . . . . 3

BA 345 Professional Salesmanship . . . . . 3

BA 349 International Marketing . . . . . 3

BA 390 Special Topics in Marketing . . . . . 3

BA 437 Internship in Business -

Marketing . . . . . 3

**Total . . . . . 15\***

**\*The 15 credits used to satisfy an option in Marketing may not be used to satisfy any other major, minor or option within the School of Business Administration.**

## Operations Management

*Course listings for Business Administration begin on Page 130.*

Operations Management is the core of any organization, including not-for-profit organizations. Operations is where services are delivered, where goods are produced - and where most people work. Essentially every person in an organization will either be involved in operations or be in contact with operations personnel. The efficient and effective management of operations determines America's productivity in producing goods and delivering services, and therefore, is directly linked to America's standard of living. Only through an increase in productivity can a nation's standard of living continue to rise.

The primary function of Operations Management is to efficiently and effectively convert inputs into products and services. This option in Operations Management studies the concepts and decision-making tools necessary for managing an organization's productive resources. Although Operations Management has its origins in the sciences and mathematics, it does not ignore the essential human factors. Key issues addressed are quality, timeliness, global competitiveness, productivity and flexibility. In addition, Operations Management has the distinction of integrating the ideas and concepts from other disciplines such as

marketing, industrial engineering, accounting, finance, economics and human-resource management.

In addition to the College's General Requirements, the Common Requirements of the School of Business Administration, and Auxiliary Requirements outside the School of Business Administration, a student studying operations management must complete the following requirements:

Select one of the following:

- Econ 335 Environmental Economics . . . . . 4
- Econ 462 Microeconomics Theory . . . . . 4

Select at least three courses from Group A and at least one course from Group B for a total of 15 hours.

**GROUP A:**

- Acc 327 Cost Accounting . . . . . 4
- BA 357 Studies in Operations Management (may be repeated) . . . . . 4
- BA 360 Introduction to Management Science . . . . . 3

- BA 439 Services Management . . . . . 4
- Math 340 Computer-Assisted Computer Modeling . . . . . 3
- Math 350B Design and Analysis of Experiments . . . . . 3

**GROUP B:**

- BA 302 Human Resource Management . . 4
- BA 308 Office Management . . . . . 3
- BA 309 International Management . . . . 3
- BA 313C Ethical Issues in Business . . . . 3
- BA 407 Management Consulting . . . . . 3
- BA 415 Management in Action . . . . . 3-6
- BA 437 Internship in Business - Operations related . . . . . 3
- GS 361 Computers and Human Issues . . . 3

Total . . . . . 15

**The 15 credits used to satisfy an option in Operations Management may not be used to satisfy any other major, minor, or option within the School of Business Administration.**

**Tourism and Resort Management**

*Course listings for Business Administration begin on Page 130.*

Recent decades have witnessed the phenomenal growth of service industries. The service sector of the economy now accounts for most of the job opportunities. In this region of the country the leading service industry is the tourism industry, a major portion of this industry is located in growing year-round resorts. This industry will continue to grow and serve national and international markets. As it does, it will need future leaders and managers with better education and broader perspectives. The tourism and resort option addresses this need.

This option provides a general understanding of the management challenges and organizational practices of a complex and diverse industry. The use of analytical tools and techniques for decision making, the development of the capacity for critical thought and leadership, and the ability to work with others will be significantly improved by interaction with regional companies through field projects in most courses and a required work experience.

In addition to the College's General Requirements and the Common Requirements of the School of Business Administration, and Auxiliary Requirements outside the School of Business Administration, a

student studying tourism and resort management must complete the following requirements:

One 300- or 400-level Economics course . . . . . 4

Required:

- BA 330 Tourism and Resort Management 3
- BA 437 Internship in Business . . . . . 3  
(With approved industry work experience, an additional BA elective from the list below may be substituted for BA 437.)
- BA 439 Services Management . . . . . 4

Plus two additional courses from the following:

- BA 302 Human Resource Management . . 4
- BA 312 Business Law II . . . . . 3
- BA 313C Ethical Issues in Business . . . . 3
- BA 341 Services Marketing . . . . . 3
- BA 342 Retailing . . . . . 3
- BA 349 International Marketing . . . . . 3
- BA 357 Studies in Operations Management . . . . . 4
- BA 387 Real Estate . . . . . 3
- BA 401 Entrepreneurship and Small Business Management . . . . . 3
- BA 407 Management Consulting . . . . . 3

BA 445 Marketing Management	3
BA 446 Marketing Research	3
Total	16

\*These 16 credits used to satisfy an option in Tourism and Resort Management may not be used to satisfy any other major, minor or option within the School of Business Administration.

## REQUIREMENTS FOR MINORS IN THE SCHOOL OF BUSINESS ADMINISTRATION

### REQUIREMENTS FOR A MINOR IN ACCOUNTING:

A student majoring in any discipline other than Accounting may complete a minor in Accounting upon satisfactorily fulfilling the following requirements:\*

Acc 225 Introduction to Financial Accounting	4
Acc 226 Introduction to Managerial Accounting	4
Acc 323 Intermediate Accounting I	4
Acc 327 Cost/Managerial Accounting	4
Plus at least one of the following:	
Acc 301 Governmental/Not-For-Profit Accounting	4
Acc 324 Intermediate Accounting II	4
Acc 330 Income Tax Accounting	4
Total	20

### REQUIREMENTS FOR A MINOR IN BUSINESS ADMINISTRATION:

A student majoring in another discipline may complete a minor in Business Administration upon satisfactorily fulfilling the following requirements:\*

Econ 170 Current Economic Issues	
or	
Econ 266D Principles of Economics	4

Acc 225 Introduction to Financial Accounting	4
BA 260D Legal Environment of Business	3
BA 301D Management and Organizational Behavior	4
BA 340 Principles of Marketing	3
Two (2) upper-division Business Administration electives	6
Total	24

### REQUIREMENTS FOR A MINOR IN ECONOMICS:

A student majoring in another discipline may complete a minor in Economics upon satisfactorily fulfilling the following requirements:\*

Econ 266D Principles of Economics	4
Electives:	
Fourteen (14) semester hours of additional Economics courses, which must be upper-division	14
Total	18

\*Contact the Office of the Dean of the School of Business Administration once the requirements for a minor in Accounting, Business Administration or Economics are complete.

**THE SCHOOL OF EDUCATION**  
STEPHEN A. RODERICK, DEAN

**Departments:**

*Teacher Education* - Virginia Engman, Chair

*Exercise Science* - Charles H. Walker, Chair

*Psychology* - Thomas A. Skurky, Chair

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**Teacher Education**

*Course listings for Education begin on Page 137.*

Professors Virginia A. Engman, Marvin L. Giersch, Gary D. Knight, Stephen A. Roderick, Janice L. Simmons, Ray N. Wilson and Pamela R. Young;  
Assistant Professors T. Jane deGraw, W. Grant Frankenberg and Linda L. Simmons

Since its inception in 1970, the Department of Teacher Education has been committed to a quality program for the training of teachers. The teacher certification programs are approved by the Colorado Department of Education (CDE). Below are descriptions of available certifications; admission requirements follow.

**Early Childhood:** Students seeking teacher certification at the early childhood level (Pre-School, K-2) complete the early childhood certification sequence and a subject major or a broad field interdisciplinary major drawn from the following areas: liberal arts, language arts, sciences, mathematics, humanities, social science or health. It is also possible for students to add an early childhood endorsement on to an elementary certification by completing the requirements for elementary certification and a minimum number of additional hours. Colorado Department of Education has approved this program. Consult with the Early Childhood Program advisor for details.

**Elementary:** Students seeking teacher certification at the elementary level (K-6) complete the elementary certification sequence and a subject major or a broad field interdisciplinary major drawn from the following areas: liberal arts, language arts, sciences, mathematics, humanities, social sciences or health. Consult with an elementary education advisor for details.

**Middle School:** Students seeking teacher certification at the middle school level (6-8) complete a baccalaureate degree, and either the elementary professional sequence or the secondary professional

sequence with Colorado Department of Education endorsement standards. Colorado Department of Education has approved this endorsement program. Consult with the Middle School Program advisor for details.

**Secondary:** Students seeking certification at the secondary level (7-12) complete a baccalaureate degree, the secondary professional sequence and Colorado Department of Education endorsement standards. (See Endorsement Advising Checklists available in 121 Hesperus Hall.) Certification is offered in business, English, mathematics, science, (includes biology, chemistry, geology, general science or physics), social studies (includes anthropology, history, economics, political science, psychology, sociology, Southwest Studies or International Studies) and Spanish. Consult with a secondary education advisor for details.

**Bilingual:** Students seeking certification at the elementary level can earn a bilingual education endorsement. In addition to the 30-hour endorsement sequence given below, the student must pass a language competency exam in Spanish, Navajo or another southwestern language. Contact the Bilingual/ESL Director for more details.

**English as a Second Language:** Students seeking certification at either the elementary or secondary level can earn an English as a Second Language (ESL) endorsement. Although no second-language competence is required, some facility in a non-English language is recommended. Contact the Bilingual/ESL Director for more details.

**K-12:** Students may seek certification for grades K-12 in art, music and physical education. Students must complete a baccalaureate degree and K-12 certification program, and the Colorado Department of Education Endorsement Standards. Contact a secondary education advisor for details.

**RULES AND REGULATIONS REGARDING TEACHER CERTIFICATION ARE ESTABLISHED BY THE COLORADO STATE BOARD OF EDUCATION. ADJUSTMENTS ARE MADE IN THE FORT LEWIS COLLEGE PROGRAM AS THESE RULES AND REGULATIONS CHANGE.**

### PHILOSOPHY

The philosophy of the Teacher Education Department draws from many sound ideas of educational theorists, past and present. The most predominant and driving element of the faculty's philosophy is the absolute worth of the individual. Hence, we adhere to Dewey's view of instrumentalism and trust in each student to adapt and use codified knowledge with varying degrees of coaching by our faculty. Our purpose is not so much to describe teaching or the perfect teacher but rather to orient the future teacher toward a reflective and flexible practice.

### GOALS

Academic as well as experiential bases are a vital concern for a program oriented toward the individual student's acquisition of subject matter and critical/analytical pedagogical skills. The goals of the program are:

1. The preservice teacher should have liberal arts-based experiences that will lead to an enthusiasm for life and a love of learning to help make it possible for each student to successfully meet the challenges s/he faces in a rapidly changing world.
2. The preservice teacher should have experiences that will enable the student to maximize his/her own potential as a person and recognize that every person is of great worth and is entitled to develop to her/his potential.
3. The preservice teacher should have a broad background and developmental experiences for subject matter teaching.

4. The preservice teacher should learn about children in the surrounding geographic area where many cultures are represented.

### ADMISSION TO THE PROGRAM

The student must have been accepted into the Teacher Education Program prior to enrollment in any course required in the certification program. The procedures for meeting the initial admission requirements may be obtained by contacting the Teacher Certification Office. The requirements for initial admission include:

1. A passing score (75th percentile or higher) on the Colorado State Board-adopted basic skills test, California Achievement Test - Level 19 (CAT), which consists of mathematics, spelling and English grammar.
2. An acceptable oral presentation before a panel of three or more judges or completion of a college speech class with a grade of B- or higher.
3. Demonstrated competency in written communication skills.
4. Evidence of having met at least one of the following:
  - a) a rank in the top two quartiles of the candidate's high school graduating class;  
*OR*
  - b) a score of 19 or above on the American College Test (ACT);  
*OR*
  - c) a score of 950 or above on the Scholastic Aptitude Test (SAT);  
*OR*
  - d) a grade point average of at least 2.50 on a 4.00 scale for the most recent 30 semester credits of college or university work. (All credits in the term in which the 30th is reached must be included.)
5. Completion of a minimum of 30 college credits.
6. Evidence of prior experience of working with children or youth.



## ADMISSION TO STUDENT TEACHING

Requirements for admission to student teaching are more stringent than for initial admission to the program. In addition to the criteria listed under "Admission to the Program," each candidate must:

1. Receive the recommendation of the Teacher Education Department, which considers each candidate in light of such factors as character, personal adjustment, physical condition and human relations skills.
2. Have completed 100 hours of supervised practicum experience since admission into the program.
3. Have completed 80 percent of the required courses for the major and/or teaching endorsement and have senior or postgraduate standing.
4. Satisfactorily complete, with no grade lower than a C-, all elementary or secondary education courses listed under "Departmental Requirements" and "Auxiliary Requirements."
5. Possess a minimum grade point average of 2.50 in each of the following:
  - a) overall,
  - b) the major,
  - c) the "Certification Program."
6. Submit a completed application form no later than the second week of the fall term for winter student teaching; no later than the second week of the winter term for fall student teaching.
7. Be prepared to move or commute to a surrounding community as the majority of student teachers are placed outside of the city of Durango.
8. Meet additional academic and personal qualifications to be considered for student teaching outside of the Fort Lewis College supervising area (Durango and surrounding communities).
9. Have completed an appropriate number of the professional sequence courses at Fort Lewis College, not at another institution.

## ADMISSION OF TRANSFER OR UNCLASSIFIED STUDENTS

Transfer or unclassified students will be accepted into the Teacher Certification Program if prior preparation and scholastic achievement meet the requirements listed under "Admission to the Program." The requirements listed under "Admission to the Program" and "Admission to Student Teaching" apply to these students. Written evaluation and acceptance of the student's teaching field preparation by the appropriate academic department of Fort Lewis College are required. Students should contact an advisor in the Teacher Education Department as soon as possible to plan their program.

### NOTE:

All certification requirements, entrance tests and exit test may change on 7-1-94 as a result of recent state legislation.



## EARLY CHILDHOOD CERTIFICATION PROGRAM

	<i>Credits</i>		
Departmental Requirements:			
<p><b>The following courses require admission to the Teacher Certification Program. (See above for qualifications for admission.)</b></p>			
<p><b>COURSES SHOULD BE TAKEN IN THE FOLLOWING ORDER:</b></p>			
Ed 307 Introduction, Methods and Practicum in Early Childhood . . . . .	4	Ed 324 Methods and Practicum in Teaching Exceptional Elementary Children . . . . .	4
Ed 316 Elementary Teacher Aide Practicum and AV (K-2 Setting) . . . . .	2	Ed 440 Behavior/Classroom Management . . . . .	3
Ed 353 Growth and Development of the Young Child . . . . .	2	Ed 451 Preschool Teaching Practicum and Multicultural Seminar . . . . .	3
Ed 357 Language Arts for the Young Child . . . . .	2	Ed 453 Cognitive Skills . . . . .	3
Ed 359 Creative Arts for the Young Child . . . . .	2	Ed 456 Early Childhood Administration/Parent Community Relations . . . . .	3
Ed 361 Methods of Teaching Reading and Reading Diagnosis . . . . .	4	Ed 491 Lab Experience and Seminar in the Preschool/Kindergarten . . . . .	5
		Ed 492 Lab Experience and Seminar in the Primary (1-2) School Setting . . . . .	10
		<b>Total . . . . .</b>	<b>47</b>
		Auxiliary Requirements:	
		Psych 218 Psychological Foundations of Education . . . . .	3
		Psych 254D Life Span Human Development . . . . .	3
		<b>Total . . . . .</b>	<b>6</b>
		<b>Total . . . . .</b>	<b>53</b>

## EARLY CHILDHOOD ENDORSEMENT

	<i>Credits</i>		
Departmental Requirements:			
<p>Students who complete the Elementary Certification Program* requirement may complete the following courses to add on an early childhood endorsement.</p>			
Ed 307 Introduction, Methods and Practicum in Early Childhood . . . . .	4	Ed 451 Preschool Teaching Practicum and Multicultural Seminar . . . . .	3
Ed 359 Creative Arts for the Young Child . . . . .	2	Ed 453 Cognitive Skills . . . . .	3
		Ed 456 Early Childhood Administration/Parent Community Relationships . . . . .	3
		<b>Total . . . . .</b>	<b>15</b>
		<p>*Students desiring to add an early childhood endorsement to an elementary certification will be required to complete Ed 494 (Lab Experience and Seminar in the Elementary School) in a K-2 classroom.</p>	

## ELEMENTARY CERTIFICATION PROGRAM

	<i>Credits</i>	
<b>Departmental Requirements:</b>		
<b>The following courses require admission to the Teacher Certification Program. (See above for qualifications for admission.)</b>		
Ed 308 Introduction to Elementary Teaching Methods .....	3	Ed 415 Methods of Teaching Social Studies .....
Ed 316 Elementary Teacher Aide Practicum and AV .....	2	2
Ed 324 Methods and Practicum in Teaching Exceptional Elementary Children ....	4	Ed 433 Language Arts in the Elementary School .....
Ed 410 Mathematics in the Elementary School .....	2	2
Ed 361 Methods of Teaching Reading and Reading Diagnosis .....	4	Ed 494 Laboratory Experience and Seminar in the Elementary School ..
Ed 440 Behavior/Classroom Management	3	15
Ed 412 Science, Health and Evaluation in the Elementary School .....	4	
		<b>Auxiliary Requirements:</b>
		Psych 218 Psychological Foundations of Education .....
		3
		Psych 254D Life Span Human Development .....
		3
		ES 370 Methods of Teaching Exercise Science in the Elementary School ....
		3
		Art 273 Art for Elementary Teachers or
		Mu 316 Music in the Elementary School .
		3
		<b>Total .....</b>
		<b>53</b>

## MIDDLE SCHOOL ENDORSEMENT PROGRAM

	<i>Credits</i>	
<b>Departmental Requirements:</b>		
Students who complete the Elementary or Secondary Certification Program requirements may complete the following courses to add on a middle school endorsement.		
<b>The following courses require admission to the Teacher Certification Program. (See above for qualifications for admission.)</b>		
Ed 470 Middle School History and Philosophy .....	2	Ed 472 Communication Skills for Young Adolescents .....
Ed 471 Middle School Organization, Methods and Materials .....	4	3
		Ed 473 Psychology of Young Adolescents .
		3
		In addition to the courses listed above, a total of 3 hours of practicum are required from the courses below. It is recommended that the practicum be concurrent with the coursework. Practicum assignments will be made by the Teacher Education Department.
		Ed 312 Middle School Teacher Aide Practicum .....
		1-3
		Ed 497 Laboratory Experience and Seminar in the Middle School ....
		1-3
		<b>Total .....</b>
		<b>15</b>

## SECONDARY CERTIFICATION PROGRAM

	<i>Credits</i>	
<b>Departmental Requirements:</b>		
<b>The following courses require admission to the Teacher Certification Program. (See above for qualifications for admission.)</b>		
Ed 309 Orientation to Secondary Teaching	4	Ed 441 Classroom Management . . . . . 3
Ed 325 Exceptional Students: Secondary	4	Ed 467 Secondary Methods . . . . . 3
Ed 362 Teaching Reading in the Content Area: Secondary	3	Ed 495 Laboratory Experience and Seminar in Secondary School . . . . . 15
		<b>Total . . . . . 32</b>
<b>Auxiliary Requirements:</b>		
		Psych 218 Psychological Foundations of Education . . . . . 3
		<b>Total . . . . . 35</b>

## BILINGUAL ENDORSEMENT

(Available to students seeking elementary certification.)

	<i>Credits</i>	
<b>Departmental Requirements:</b>		
<b>(Complete 18 hours)</b>		
Ed 330 Human Relations in the Classroom . . . . .	3	Engl 462A1 Linguistics . . . . . 3
Ed 331 The Southwestern Minority Child in the Classroom . . . . .	3	Ed 390 Special Topics: Language Learning and Teaching . . . . . 3
Ed 332 Materials and Methods of Bilingual Education . . . . .	3	
Ed 334 Methods of Teaching English as a Second Language . . . . .	3	<b>Cultural Emphasis: Literature/Art</b> Choose six hours from the following:
		Engl 280A1 Literature of the Southwest . . 3
		Engl 380E American Indian Literature . . 3
		ML 321E Survey of Hispanic American Literature I . . . . . 3
		ML 322E Survey of Hispanic American Literature II . . . . . 3
		ML 427E Hispanic American Novel and Poetry . . . . . 3
		ML 429E Mexican Literature . . . . . 3
		SW 265A1 Art History of the Southwest . 3
		<b>Cultural Emphasis: Social Science</b> Choose six hours from the following:
		Anth 354CE Pueblo Indians of the Southwest . . . . . 3
		Anth 361CE The North American Indian . 3
		Hist 123CE American Indian History . . . 3
		Hist 270CE Survey of Colonial Latin America . . . . . 3
		Hist 271CE Survey of National Latin America . . . . . 3
		Soc 279D Ethnicity, Gender and Class in the Southwest . . . . . 3
		Soc 376D Language & Social Behavior . . 3
		SW 280DE Native American in the Modern World . . . . . 3
		<b>Total . . . . . 30</b>



**ENGLISH AS A  
SECOND LANGUAGE ENDORSEMENT**  
(Available to students seeking elementary or secondary certification.)

<b>Departmental Requirements:</b>	<b>Credits</b>	
<b>(Complete 18 hours)</b>		
Ed 330 Human Relations in the Classroom . . . . .	3	
Ed 331 The Southwestern Minority Child in the Classroom . . . . .	3	
Ed 334 Methods of Teaching English as a Second Language . . . . .	3	
Ed 390 Special Topics: Language Learning and Teaching . . . . .	3	
Engl 265A1 Semantics . . . . .	3	
Engl 462A1 Linguistics . . . . .	3	
 <b>Cultural Emphasis: Literature/Art</b> Choose six hours from the following:		
Engl 280A1 Literature of the Southwest . . .	3	
		Engl 380E American Indian Literature . . . 3
		SW 265A1 Art History of the Southwest . . 3
		 <b>Cultural Emphasis: Social Science</b> Choose six hours from the following:
		Anth 354CE Pueblo Indians of the Southwest . . . . . 3
		Anth 361CE The North American Indian . . 3
		Hist 123CE American Indian History . . . . 3
		Hist 270CE Survey of Colonial Latin America . . . . . 3
		Hist 271CE Survey of National Latin America . . . . . 3
		Soc 279D Ethnicity, Gender and Class in the Southwest . . . . . 3
		Soc 376D Language & Social Behavior . . . 3
		SW 280DE Native American in the Modern World . . . . . 3
		 <b>Total . . . . . 30</b>

**K-12 CERTIFICATION PROGRAM**  
(Art, Physical Education or Music)

<b>Departmental Requirements:</b>	<b>Credits</b>	
<b>The following courses require admission to the Teacher Certification Program. (See above for qualifications for admission)</b>		
Ed 309 Orientation to Secondary Teaching . . . . .	4	
Ed 310 Advanced Elementary Teacher Aide Practicum . . . . .	1	
Ed 324 Methods and Practicum in Teaching Exceptional Elementary Children <i>or</i>		Ed 440 Behavior/Classroom Management <i>or</i>
Ed 325 Exceptional Students: Secondary . . 4		Ed 441 Classroom Management . . . . . 3
Ed 362 Teaching Reading in the Content Area: Secondary . . . . .	3	Ed 467 Secondary Methods . . . . . 3
		Ed 494 Laboratory Experience and Seminar in the Elementary School <i>and</i>
		Ed 495 Laboratory Experience and Seminar in the Secondary School . . . 15
		<b>Total . . . . . 33</b>
		 <b>Auxiliary Requirements:</b>
		Psych 218 Psychological Foundations of Education . . . . . 3
		Psych 254D Life Span Human Development . . . . . 3
		Methods Course in Major, if appropriate 0-3
		<b>Total . . . . . 6-9</b>
		 <b>Total . . . . . 39-42</b>

## Exercise Science

Course listings for Exercise Science begin on Page 144.

Professor Charles H. Walker;  
Associate Professor Carol M. Seale;  
Assistant Professors James S. Cross, William E. Hayes, Paul W. Petersen, Josie Siftt,  
Cathy M. Simbeck and JoAnn C. Soignier;  
Instructor Marcelyn B. Jung

The objectives of the Department of Exercise Science are to provide the following:

1. The professional preparation of skilled teachers of human movement and exercise forms as well as qualified persons in the allied areas of coaching, athletic training and the field of fitness.
2. A meaningful program of fitness; individual, dual and team activities; stressing the carry-over value for all students.
3. Practical extracurricular experiences in health, fitness, exercise and athletic training.
4. Professional leadership for the intramural, recreational and athletic activities of the students.

### REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN EXERCISE SCIENCE:

	<i>Credits</i>
General Studies .....	38
Specific Departmental Requirements:	
ES 130 Professional Methods & Skills ... 1 (Softball/Volleyball)	1
ES 131 Professional Methods & Skills ... 1 (Soccer/Basketball)	1
ES 132 Professional Methods & Skills ... 1 (Tumbling/Fundamental Motor Skills)	1
ES 133 Professional Methods & Skills ... 1 (Badminton/Tennis)	1
ES 134 Professional Methods & Skills ... 1 (Dance/Aquatics)	1
ES 135 Professional Methods & Skills ... 1 (Fitness/Outdoor Leisure Pursuits)	1
ES 150 Sociocultural Foundations of Human Movement .....	3
ES 165 Standard First Aid/CPR .....	2
ES 224 Basic Principles of Athletic Training .....	3
ES 243 Personal Health .....	3
ES 330 Anatomical Kinesiology .....	3
ES 332 Biomechanical Analysis and Application .....	2

ES 340 Motor Learning and Control .....	3
ES 350 Measurement & Evaluation .....	3
ES 354 Adapted Exercise .....	3
ES 360 Exercise Physiology .....	4
ES 375 Psychology of Sport .....	2
ES 480 Administration of Programs in Exercise Science .....	3
ES 496 Senior Seminar and Research in Exercise Science .....	2
<b>Total .....</b>	<b>42</b>

Auxiliary Requirements from Other Departments:  
Bio 121B Human Anatomy and  
Physiology .....

Psych 157D Introduction to Psychology ..	3
<b>Total .....</b>	<b>6</b>
<b>Electives .....</b>	<b>42</b>
<b>TOTAL REQUIRED FOR GRADUATION .....</b>	<b>128</b>

In addition to the major in Exercise Science, students *may* pursue additional studies in areas of concentration by taking the Exercise Science core *plus*:

1. Teaching Concentration*	
ES 370 Methods of Teaching Physical Education in Elementary Schools .....	3
ES 380 Methods of Teaching Physical Education in Secondary Schools .....	2
<b>Total .....</b>	<b>5</b>

\*Students also complete appropriate teacher certification sequence. (All teaching majors are K-12.)

2. Athletic Training Concentration	
ES 353 Basic Principles of Nutrition .....	2
ES 324 Advanced Techniques of Athletic Training .....	3
ES 385 Therapeutic Modalities .....	2
ES 387 Reconditioning of Athletic Injuries	3
<b>Total .....</b>	<b>10</b>

3. Coaching Concentration	2 courses - Methods of Coaching
ES 353 Basic Principles of Nutrition . . . . 2	(Elect sport) . . . . . 4
	2 courses - Officiating (Elect sport) . . . . . 2
	Total . . . . . 8

### \*Suggested Course Sequence

\*For teaching majors; non-teaching majors substitute electives for Ed courses.

<b>TERM 1</b> FCS 4 ES 150 3 Psych 157D 3 Electives 6 (General Studies) PE Activity <u>1</u> 17	<b>TERM 2</b> ES 165 2 Bio 121B w/lab 3 ES 130 Series 1 or 2 Electives 9 (General Studies) PE Activity <u>1</u> 16 or 17	<b>TERM 3</b> SCS 4 ES 224 3 ES 130 Series 1 or 2 Psych 218 3 Electives 6 (General Studies) <u>  </u> 17 or 18	<b>TERM 4</b> ES 243 3 Psych 254D 3 Ed 309 3 ES 130 Series 1 or 2 Electives 3 Ed 310 <u>3</u> 16 or 17
<b>TERM 5</b> ES 330 3 ES 354 3 ES 340 3 ES 370 3 ES 380 2 ES 130 Series <u>1 or 2</u> 15 or 16	<b>TERM 6</b> ES 332 2 ES 350 3 ES 360 4 ES 375 2 Ed 324 or 325 3 Ed 362 3 ES 130 Series <u>1 or 2</u> 18 or 19	<b>TERM 7</b> ES 480 3 ES 496 2 Ed 440 or 441 3 Ed 467 3 Electives 3 ES 130 Series <u>1 or 2</u> 15 or 16	<b>TERM 8</b> Ed 494 <u>and</u> 495 15

## Psychology

*Course listings for Psychology begin on Page 160.*

Professors Roger P. Peters and Thomas A. Skurky;

Associate Professors Michael C. Anziano and Beverly R. Chew;

Assistant Professors Alane S. Brown, Betty J. Inglett, Janet L. Jones, Mukti Khanna and Marilyn S. Leftwich

The psychology major is designed to meet the needs of many students, all of whom have an interest in the scientific study of behavior and its causes, which is the most general definition of modern psychology. Some students may wish to pursue psychology in depth; others may prefer to approach psychology from a more general interdisciplinary perspective within the liberal arts tradition.

The needs of all psychology students are addressed by a major that is demanding, yet flexible; a major that ensures exposure to current thinking and techniques of modern psychology, but at the same time allows students to explore their own interests and set their own goals. As they become more familiar with the field of psychology and more aware of individual interests, students are encouraged to redefine their goals.

The psychology major also provides the opportunity for interdisciplinary study by encouraging students to take courses in other departments. These courses can be counted toward the requirements of the psychology major.

### REQUIREMENTS FOR A BACHELOR OF ARTS DEGREE WITH A MAJOR IN PSYCHOLOGY:

	<i>Credits</i>
General Studies .....	44

Specific Departmental Requirements (Core Program: All psychology majors must complete these requirements):

1. Orientation to Psychology (ALL required)
  - Psych 157D Introduction to Psychology .. 3
  - Psych 241B Basic Statistics for Psychologists .....
  - Psych 296 Psychological Research Methods .....
2. Human Perspectives (select three courses)
  - Psych 218 Psychological Foundations of Education .....
  - Psych 233D Personality .....
  - Psych 242 Psychological Testing .....

- Psych 254D Life Span Human Development .....
- Psych 283D History of Psychology .....
- Psych 328D Industrial/Organizational Psychology .....
- Psych 387 Abnormal Psychology .....
- Psych 393D Health Psychology .....

3. Laboratory Experience (select two courses)
  - Psych 327 Physiological Psychology .....
  - Psych 330 Animal Behavior .....
  - Psych 365 Psychology of Learning .....
  - Psych 425 Social Psychology .....
  - Psych 426 Sensation and Perception .....
  - Psych 441 Human Memory and Cognition .....
4. Program Integration (BOTH required)
  - Psych 396 Advanced Research Methods .. 4
  - Psych 496 Senior Seminar .....

Total .....

### Additional Departmental Requirements:

Each student must submit a proposal for an additional 24 credits to be taken as an adjunct to the 33 credits of core psychology courses presented above. The department recommends that at least 12 of the 24 adjunct credits be upper-division courses (300-level or above). Up to 18 adjunct credits may be selected from any discipline (including psychology), or any combination of disciplines, in accordance with the interests and career plans of the student. The remaining 6 adjunct credits must be selected from a discipline other than psychology.

The proposal should be submitted to the student's psychology advisor for approval by the beginning of the junior year. It will then be reviewed by the psychology faculty, and upon agreement and approval, will become a contract which the student must complete in order to satisfy this requirement.

The adjunct requirement is designed to encourage psychology majors to examine their goals carefully and prepare for the opportunities they expect to have upon graduation. It also encourages participation in interdisciplinary study.



The requirements for a Bachelor of Arts degree in Psychology may be summarized as follows:

	<i>Credits</i>
General Studies .....	44
Core Program in Psychology .....	34
Adjunct Courses .....	24
General Electives .....	26
<b>TOTAL REQUIRED FOR GRADUATION .....</b>	<b>128</b>

A minor in psychology is available for students majoring in other disciplines. Requirements for a minor in psychology are described below.

#### REQUIREMENTS FOR A MINOR IN PSYCHOLOGY:

A minor in psychology consists of at least 20 credits, distributed as follows: the three courses from the Orientation group (Psychology 157D, 241B and 296); one upper-division course from the Laboratory Experience group; one upper-division course from the Human Perspective group; and one other upper-division psychology course.





# COURSE LISTINGS

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## Courses

Letters A, B, C, D or E after the course number indicate courses that meet general distribution requirements. (See Page 39.) Courses with two or more letters after the number may qualify for each of the general distribution sections indicated, but only one will count toward the degree.

### Accounting

#### Acc 225 INTRODUCTION TO FINANCIAL ACCOUNTING (4-0) 4

Concepts related to the preparation of financial statements and reports for parties external to the firm, such as stockholders, creditors and labor unions will be introduced. Understanding the information presented in the financial statements, the balance sheet, the income statement, and the statements of changes in financial position will be the major emphasis of the course.

#### Acc 226 INTRODUCTION TO MANAGERIAL ACCOUNTING (4-0) 4

Concepts related to the preparation of reports useful to management in planning and controlling the operations of a business will be introduced. The primary emphasis in this course will be on using accounting information for management planning, control and decision making. Topics include: behavior of costs, budgeting and planning, cost-volume-profit analyses and analysis of financial statements.

**Prerequisite:** Acc 225.

#### Acc 232 PREPARATION OF YOUR INCOME TAX RETURN (3-0) 3

A non-technical approach to the fundamental concepts and mechanics of preparation of federal income tax returns. All classes of individual returns and commonly encountered business forms are covered.

#### Acc 301 GOVERNMENTAL/NOT-FOR-PROFIT ACCOUNTING(4-0) 4

This course covers accounting standards and principles applicable to local and state governments and other not-for-profit entities.

**Prerequisites:** Junior standing, Acc 226 and SCS 201.

#### Acc 319 MANAGERIAL ACCOUNTING (3-0) 3

The application of accounting information for the principal purpose of making managerial decisions is stressed. Topics include: the analysis and interpretation of financial statements; budgeting for planning and control; cost behavior (cost-volume-profit relationships); relevant cost analysis for making long- and short-range capital expenditure decisions; and the impact of income taxes on management planning. This course is not available to students who have over 14 semester credits in accounting. Offered on demand.

**Prerequisites:** Junior standing, Acc 226 and SCS 201.

#### Acc 323 INTERMEDIATE ACCOUNTING I (4-0) 4

The fundamental process of accounting is analyzed. The proper treatment of business transactions in the recording and analyzing phases is reviewed. Financial accounting theory and problems are studied along with financial statement presentation. Fall term.

**Prerequisites:** Junior standing, Acc 226 and SCS 201.

#### Acc 324 INTERMEDIATE ACCOUNTING II (4-0) 4

Continuation of financial accounting theory and problems. In addition, partnership accounting and an introduction to business combinations are covered. Winter term.

**Prerequisite:** Acc 323.

#### Acc 327 COST/MANAGERIAL ACCOUNTING (4-0) 4

Emphasis on standard costs, analyses for decision making and other special cost and analysis problems.

**Prerequisites:** Junior standing, Acc 226 and SCS 201.

#### Acc 330 INCOME TAX ACCOUNTING (4-0) 4

A brief history of the income tax, income tax accounting and a study of current federal income tax provisions are presented.

**Prerequisite:** Acc 323 or consent of instructor.

#### Acc 431 ADVANCED INCOME TAX ACCOUNTING (3-0) 3

An introduction to tax research and planning, federal income tax treatment of taxpayers other than individuals (corporations, subchapter S corporations, partnerships, trusts and estates), the treatment of property transfers subject to federal and state gift and death taxes. The student will learn and use methodology of tax research. Offered on demand.

**Prerequisite:** Acc 330.

#### Acc 432 APPLIED TAX RESEARCH (3-0) 3

This course covers tax research and planning. Students learn to analyze tax problems and communicate a solution in written and oral format. Computer-based research techniques are used.

**Prerequisite:** Acc 330.

#### Acc 434 ADVANCED ACCOUNTING (4-0) 4

This course develops basic accounting principles relating to consolidated statements, fund and governmental accounting, bankruptcies, receiverships, estates and trusts, actuarial accounting. Fall term.

**Prerequisite:** Acc 324.

#### Acc 435 SURVEY OF ACCOUNTING THEORY TRENDS (4-0) 4

The origin and development of accounting; a review of the ideas of leading accounting theoreticians; an examination of current accounting theory; a look at accounting theory as it relates to the CPA examination. Winter term.

**Prerequisite:** Acc 324.

#### Acc 436 AUDITING - THEORY AND PRACTICE (4-0) 4

Functions of the independent public accountant are stressed. The course includes audit reports and options, account analysis, audit programs, working paper content and form, professional ethics, applications of accounting and auditing standards, SEC stock exchange regulations, investigations for purchase and financing, and current literature on auditing. Winter term.

**Prerequisites:** Acc 324 and 327 or consent of instructor.

#### BA 499 INDEPENDENT STUDY 1-3

Individual research is conducted under the supervision of a faculty member. Fall and winter terms.

**Prerequisite:** Approval of the Dean of the School of Business Administration.

### Agriculture

#### Ag 101B INTRODUCTORY ANIMAL SCIENCE (3-3) 4

Basic introduction to the aspects of animal science, concentrating on products, reproduction, genetics, anatomy, basic production in cattle, sheep, swine and dairy.

**Ag 102B PRINCIPLES OF CROP PRODUCTION (3-3) 4**

Basic principles of crop production, concentrating on growth, development, management, utilization and cultural practices dealing mainly with the crops of Colorado.

**Ag 150 FARM RECORDS AND ACCOUNTS (3-0) 3**

This course is designed to give proficiency in keeping farm records for income tax and management purposes.

**Ag 202 INTEGRATED PEST MANAGEMENT/ WEED CONTROL (3-3) 4**

Principles and practices of weed control and integrated pest management. The recognition of important weed and insect pests.

**Ag 204 FORAGE PRODUCTION AND MANAGEMENT (3-0) 3**

Principles and practices of forage production and management in the United States.

**Prerequisite:** Ag 102B or consent of instructor.

**Ag 235 SOILS AND SOIL FERTILITY (3-3) 4**

A basic course dealing with soil formation, physical and chemical properties, fertility, management and conservation.

**Prerequisite:** Chem 150B.

**Ag 240 PRINCIPLES OF ANIMAL NUTRITION (3-3) 4**

Nutrient sources and requirements of livestock, including ration balancing and laboratory analysis of feedstuffs.

**Prerequisite:** Ag 101B or consent of instructor.

**Ag 300D AGRICULTURAL ISSUES IN SOCIETY (3-0) 3**

The human population relies on agriculture to provide food and fiber for its very existence. As consumers we sometimes fail to recognize the inherent environmental, economic, and social problems created as a direct result of our demands for a safe and abundant supply of agricultural products. This course will explore some of the problem areas directly and indirectly associated with production, distribution, and consumption of agricultural commodities. Students will have the opportunity to examine and openly discuss numerous controversial agricultural issues of our time in an attempt to separate fact from fiction and reality from sensationalism.

**Prerequisite:** SCS.

**Ag 301 RANGE MANAGEMENT (3-3) 4**

Application of range science principles in managing rangelands emphasizing range history, ecology, multiple-use, grazing systems, range improvements and identification, physiology and utilization of important range plants.

**Prerequisites:** Bio 100BL and 111B.

**Ag 325 BEEF SCIENCE (3-0) 3**

A comprehensive course in beef cattle production, including topics in breeding and selection, reproduction, nutrition, herd health and marketing. Commercial beef cattle production enterprises will be emphasized.

**Prerequisite:** Ag 101B.

**Ag 346 AGRICULTURAL MARKETING (3-0) 3**

An introduction to agricultural grain and livestock marketing in the U.S. Basic marketing principles and practical marketing strategies will be discussed.

**Prerequisite:** Recommended BA 340.

**Ag 350 AGRICULTURAL LAW (3-0) 3**

An overview of the U.S. judicial system and a study of various laws, regulations and case decisions which directly pertain to the agricultural production sector.

**Ag 370 INTERNSHIP IN AGRICULTURE 3**

Directed work experience in agricultural production and agribusiness. Minimum requirements are that students maintain a detailed journal and complete a term paper. Requires at least 125 hours of directed experience.

**Prerequisite:** Agriculture or biology major and consent of supervising faculty member.

## Anthropology

**Anth 151C INTRODUCTION TO ANTHROPOLOGY (4-0) 4**

A comprehensive study of general anthropology covering the four major subfields (archaeology, biological anthropology, linguistic anthropology, and ethnology). This course is recommended as a beginning course for students who have had no previous background in anthropology. Fall and winter terms.

**Anth 171C WORLD ARCHAEOLOGY (4-0) 4**

This course serves as an introduction to the great multiplicity of cultures of the past. In reviewing world archaeology, students are introduced not only to the great range of archaeological techniques, but also to how Western perception of other peoples' pasts have colored our interpretations. Offered on demand.

**Anth 201C INTRODUCTION TO ARCHAEOLOGY (4-0) 4**

This course is designed to introduce the beginning student to the basic techniques, concepts, and theories of archaeology and its relation to the wider field of anthropology. Fall and winter terms.

**Anth 205 BIOLOGICAL ANTHROPOLOGY I (2-2) 3**

This course is the first trimester of a two-trimester sequence aimed at presenting a coherent study of the biological evolution and diversity of *Homo sapiens*. Part I introduces basic genetics, evolutionary theory, human osteology, and human variation, and the broad field of human biology as applied within an anthropological framework. Fall term.

**Anth 210C INTRODUCTION TO SOCIOCULTURAL ANTHROPOLOGY (4-0) 4**

Sociocultural anthropology (also known as ethnology) deals with the relationship of culture to society and the individual. This course is designed for the beginning student and introduces the basic concepts, theories, and methods of this broad field. It also looks at the application of ethnological thought to the consideration of modern human realities and problems. Fall and winter terms.

**Anth 213CE PEASANT SOCIETIES (4-0) 4**

A study of agricultural societies throughout the world and the position of these societies within more complex systems. The instructor will select a specific area for in-depth study to complement a more general perspective on world peasantries. Winter term.

**Anth 215CE MAGIC AND RELIGION (3-0) 3**

This course provides an inquiry into the forms that spiritual and religious beliefs take cross-culturally and investigates the various practices and symbols through which these beliefs are expressed and enacted in public life. Offered on demand.

**Anth 217 CULTURAL IMAGES OF WOMEN AND MEN (3-0) 3**

Sociocultural aspects of gender relations are examined cross-culturally from the perspectives of symbolism, history and political economy. Special attention is given to investigating causes of sexual inequality and attitudes about homosexuality in a variety of societies. Alternate winter terms.

**Anth 220C COLORADO ARCHAEOLOGY (4-0) 4**

This course covers the prehistoric and historic archaeology of Colorado. It examines the historical development of archaeology in the state, our current state of knowledge, and how Colorado archaeology has developed in relationship to the wider goals of archaeology. Winter term.

**Anth 259 FIELD TRAINING IN ARCHAEOLOGY 4-8**

Actual excavation in the field with instruction in the various techniques of archaeology. The student will spend all day, five days a week, in the field. The length of the "dig" is based on current excavation plans and may vary. Credit is determined by the field school period. A written description of the field school for each year will be furnished to prospective students. Summer term.

**Anth 271C PUBLIC ARCHAEOLOGY (4-0) 4**

This course examines the relationship between academic archaeology and the public which supports it, through the study of relevant issues. Among topics included are cultural resource management, antiquities legislation, indigenous archaeology, museums and archaeology, and the role of the public as receptors of the interpreted past. Offered on demand.

**Anth 301 BIOLOGICAL ANTHROPOLOGY II (3-2) 4**

This is the second trimester of a two-trimester sequence in biological anthropology. This portion of the course focuses on primate populations, both in the past and at present. Winter term.

**Prerequisite:** Anth 205 and junior standing or consent of instructor.

**Anth 306C PLAINS ARCHAEOLOGY (4-0) 4**

This course examines the prehistoric and historic cultures of the Plains of North America. Particular emphasis is placed on how recent archaeological theory can contribute to a deeper understanding of past cultural dynamics. Winter term.

**Anth 308C MEDITERRANEAN ARCHAEOLOGY (4-0) 4**

This course covers the rise of ancient civilizations of the Mediterranean and combines archaeological data with historical and epigraphic evidence. A final section covers how these ancient civilizations are still an integral part of Western culture. Alternates with Anth 309C and Anth 341C.

**Anth 309C ARCHAEOLOGY OF BRITAIN (4-0) 4**

A survey of the cultural history of the British Isles from the Paleolithic to the Medieval period as seen from the archaeological record. Alternates with Anth 308C and Anth 341C.

**Anth 330C ARCHAEOLOGY OF THE SOUTHWEST (3-2) 4**

An intensive survey of the major archaeological traditions of the prehistoric Southwestern United States, and the environmental and cultural influences that made them distinct. Fall term.

**Prerequisite:** Anth 201C or consent of instructor.

**Anth 341C PREHISTORY OF EUROPE (4-0) 4**

A survey of early cultures of Europe from the earliest evidence of humans until the development of civilizations. Alternates with Anth 306C and Anth 309C.

**Anth 348C NORTH AMERICAN ARCHAEOLOGY (4-0) 4**

This course traces the development of the aboriginal cultures of North America. Emphasis is placed on evaluating the degree to which our understanding of the past is influenced by both the discipline of anthropology and by contemporary Western values. Fall term.

**Anth 350CE ETHNOLOGY OF MESOAMERICA (4-0) 4**

This course provides a comparative study of major cultural topics concerning contemporary ethnic groups of central Mexico and northern Central America. Geography, demography, ecology, and prehistory will be touched upon, while social, economic, and political systems will be studied in more depth. Alternate winter terms.

**Anth 351CE ETHNOLOGY OF ANDEAN SOUTH AMERICA (4-0) 4**

Indigenous peoples and peoples of mixed descent are studied in terms of their past and present cultural and political-economic experiences. Particular emphasis is given to understanding the ways that the North American and Andean worlds intersect, as well as to the ways that Andean studies reflect and influence trends in anthropological thought. Fall term.

**Prerequisite:** Anth 210C or junior standing.

**Anth 353CE ETHNOLOGY OF INDIA (4-0) 4**

While we are overwhelmed by the cultural diversity of the Indian subcontinent, this course focuses on the unity of cultures in the area. Topics include the caste system, contemporary economic and political systems, and a brief look at geography, demography, ecology, and prehistory. Tribal peoples will be studied in addition to peasants. Alternate fall terms.

**Anth 354CE PUEBLO INDIANS OF THE SOUTHWEST (3-0) 3**

This course deals with the traditional lifeways of Southwestern Pueblo peoples. Religion, language, art and their adaptation to the environment are discussed. Offered on demand.

**Anth 355C ANTHROPOLOGY OF GENDER (4-0) 4**

An in-depth, cross-disciplinary analysis of the nature and origins of gender concepts cross-culturally, particularly as they relate to explaining gender hierarchy. Topics to be covered include the contributions of feminist thought to social scientific theories, the cultural construction of gender categories, and the relationship of gender to power. Alternate winter terms.

**Prerequisite:** Anth 210C or junior standing.

**Anth 356C ECOLOGICAL ANTHROPOLOGY (4-0) 4**

The comparative study of human populations in ecosystems, stressing the relations between culture and the biophysical environment with the focus on cultural adaptations. Implications for anthropological theory, sociocultural evolution, and contemporary problems will be investigated. Alternate winter terms.

**Prerequisite:** Anth 210C or junior standing.

**Anth 361CE NORTH AMERICAN INDIANS (3-0) 3**

Archaeological, ethnological and linguistic relationships of the aboriginal peoples of North America. Offered on demand.

**Anth 371CE ETHNOLOGY OF LOWLAND SOUTH AMERICA (4-0) 4**

The unique cultures of the peoples of the Amazon rainforest and of selected other non-Andean regions of South America are studied in this survey, which complements Anth 351CE. Special attention is paid to the relationship of these peoples to their ecosystem and to their struggles to retain and regain hold of their lands in the face of the continued onslaughts to their environment. Alternate winter terms.

**Prerequisite:** Anth 210C or junior standing.

**Anth 395C HISTORY OF ANTHROPOLOGICAL THEORY (4-0) 4**

A critical survey of the major schools of anthropological thought from a historical perspective. This course serves as a prerequisite to Anth 496, but may be taken by anyone interested in the development of social scientific thought.

**Prerequisites:** Anth 201C and Anth 210C, or consent of instructor.

**Anth 402 ADVANCED ARCHAEOLOGICAL LABORATORY TECHNIQUES (2-4) 4**

This course covers laboratory techniques and analysis of prehistoric artifacts, with special emphasis on lithic, ceramic, and bone technologies, and on the preparation of technical reports. Fall term.

**Prerequisite:** Anth 259 or consent of instructor.

**Anth 403 ADVANCED ARCHAEOLOGICAL FIELD TECHNIQUES 4-8**

This course involves actual excavation and survey in the field. It will cover a range of advanced field techniques, such as the development of research designs and strategies, and the rudiments of leading field crews. Summer term.

**Prerequisite:** Anth 259 or equivalent, or consent of instructor.

**Anth 430 ADVANCED STUDIES IN SOUTHWESTERN ARCHAEOLOGY (4-0) 4**

Detailed study and research on current topics in the archaeology of the Southwestern United States, with special emphasis on the theoretical and empirical contributions of recent major archaeological projects. Individual research will focus on current topics in archaeology. Winter term.

**Prerequisite:** Anth 330C or consent of instructor.

**Anth 496 SENIOR RESEARCH SEMINAR (4-0) 4**

Advanced study and research in anthropological method and theory.

Winter term. Fall term on demand.

**Prerequisites:** Anth 395C, graduating senior status, and consent of instructor.

**Anth 499 INDEPENDENT STUDY 1-3**

Original individual research is conducted under the supervision of a faculty member. Offered on demand.

**Prerequisites:** Anth 210C, Anth 201C, Anth 205, and consent of department chair.

## Art

**Art 101A2 DRAWING (0-6) 3**

Practice in problems of technique, perspective, color design and basics of composition. Subject matter includes still life, landscape, animals and the human figure. (Coursework in this area offered at the beginning and advanced levels.) Fall and winter terms.

**Art 109A2 BASIC DESIGN (0-6) 3**

An exploration into the principles of design and composition using line, shape and color theory with an emphasis on the development of visual communication. An introduction to basic tools and materials used in the visual process. Fall and winter terms.

**Art 154A2 INDIAN ARTS/CRAFTS I (0-6) 3**

A two-term course which includes working in the following media: leather, basketry, pottery, weaving, spinning, experimental vegetal dying, painting with sandstone, carving, decorative feather, quill and antler work, fabric molas, applique and batik, and stained glass. Whenever possible, the projects are started with the raw material. Fall and winter terms. This course is the same as SW 154A2.

**Art 155A2 INDIAN ARTS/CRAFTS II (0-6) 3**

A two-term course which includes such media as weaving, silversmithing, pottery work, leathercraft, bead work and basketry. Each course will end with an exhibit of student work. Fall and winter terms. This course is the same as SW 155A2.

**Art 162A2 ART IN THE HUMANITIES (3-0) 3**

Art in the Humanities explores various forms of visual arts produced in different cultures and times. The purpose is to develop visual perceptiveness, a method of judgment, increased recognition and enthusiasm for the major art works of mankind.

**Art 201 FIGURE DRAWING (0-6) 3**

A studio experience designed to allow an in-depth study of the human figure in drawing. Live models will be used exclusively. May be repeated once for an additional 3 credits.

**Prerequisites:** Open to non-art majors without prerequisite. Art 101A2 and 109A2 are prerequisites for art majors. Consent of instructor required.

**Art 210 DESIGN II (0-6) 3**

In-depth exploration of design principles.

**Prerequisite:** Art 109A2.

**Art 213 BASIC SCULPTURE (0-6) 3**

A course in three-dimensional and two-dimensional (bas-relief) sculpture. Consists of modeling, carving and shaping rigid and pliable material. Some work will use the human form.

**Prerequisites:** Open to non-art majors without prerequisite. Art 101A2 and 109A2 are prerequisites for art majors.

**Art 224 BASIC PAINTING (0-6) 3**

Instruction in various painting media. Students will concentrate on compositional and color problems while working from still life, landscape and figures. (Coursework in this area offered at the beginning and advanced levels.)

**Prerequisites:** Open to non-art majors without prerequisite. Art 101A2 and 109A2 are prerequisites for art majors.

**Art 226 WATERCOLOR PAINTING (0-6) 3**

This course deals with traditional and contemporary watercolor techniques as they relate to the area of Fine Arts. Subject matter will be landscape, still life and figure. Instruction in the various types and uses of papers, tools, techniques, brushes and paints will be given. May be repeated once for an additional 3 credits. On demand.

**Art 227 BEGINNING MURAL PAINTING (0-6) 3**

Mural design and execution will be experienced on an actual location in or near Durango. The processes and problems relating to scale and enlargement will be employed. All paint, brushes and supplies are furnished by the business or client contacted for the mural site. May be repeated once for an additional 3 credits. On demand.

**Art 231A2 INTRODUCTION TO PRINTMAKING (0-6) 3**

A studio experience exploring the materials and methods basic to making prints. Relief, etching, calligraphic and silk-screen techniques will be emphasized.

**Prerequisites:** Open to non-art majors without prerequisite. Art 101A2 and 109A2 are prerequisites for art majors.

**Art 243A2 BASIC PHOTOGRAPHY (0-6) 3**

A basic studio course supplemented with lectures presenting an overview of photography. A creative approach designed to introduce students to shooting and printing techniques with silver and non-silver media.

**Prerequisites:** Open to non-art majors without prerequisite. Art 101A2 and 109A2 are prerequisites for art majors.



**Art 250A2 CERAMICS (0-6) 3**  
Individual projects and forming of pottery of varied styles. Emphasis will be placed on expressive forms. Practice in ceramic procedures and use of materials: throwing, slab, molding, glazing and firing. Fall and winter terms.

**Prerequisites:** Open to non-art majors without prerequisite. Art 101A2 and 109A2 are prerequisites for art majors.

**Art 262A2 ART HISTORY TO THE RENAISSANCE (3-0) 3**  
History and appreciation of painting, sculpture and architecture. These forms will be studied through their relationships to each other and to the societies which produced them. Fall term.

**Art 263A2 ART HISTORY FROM THE RENAISSANCE (3-0) 3**  
A continuation of Art 262A2. Winter term.

**Art 265A2 ART HISTORY OF THE SOUTHWEST (3-0) 3**  
A comprehensive study of the art forms developed in the Southwest, starting with Mesoamerica and ending with contemporary Southwest artists. The course emphasizes the cultural impact upon design transitions as it traces contemporary designs to their roots. This course is the same as SW 265A1.

**Art 273 ART FOR ELEMENTARY TEACHERS (2-2) 3**  
Contemporary concepts, practices, materials and methods used in the elementary school art program.

**Art 301 ADVANCED FIGURE DRAWING (0-6) 3**  
A continuation of Art 201. May be repeated once for an additional 3 credits.  
**Prerequisites:** 6 semester hours of Art 201. Consent of instructor required.

**Art 312 ADVANCED DESIGN (0-6) 3**  
Problems and theory of design topics.  
**Prerequisite:** Art 210.

**Art 313 ADVANCED SCULPTURE I (0-6) 3**  
A continuation of Art 213. May be repeated once for an additional 3 credits.  
**Prerequisite:** Art 213.

**Art 324 ADVANCED PAINTING I (0-6) 3**  
Students will continue to develop their technical knowledge and skills. They will concentrate on color and compositional problems while working with their choice of subject matter. The primary teaching concern will be directed toward the discovery and selection of meaningful individualized subject matter. Each continuation will emphasize the search for meaningful content. May be repeated once for an additional 3 credits.  
**Prerequisite:** Art 224.

**Art 326 ADVANCED WATERCOLOR PAINTING (0-6) 3**  
Continuation of Art 226. Winter term.  
**Prerequisite:** Art 226 or consent of instructor.

**Art 327 ADVANCED MURAL PAINTING (0-6) 3**  
Continuation of Art 227. On demand.  
**Prerequisite:** Art 227 or consent of instructor.

**Art 331 ADVANCED PRINTMAKING I (0-6) 3**  
Advanced development of printmaking skills with opportunity to do specialized work in one or more areas. May be repeated once for an additional 3 credits.  
**Prerequisite:** Art 231A2.

**Art 343 PHOTOGRAPHIC DESIGN (0-6) 3**  
A creative approach to photography generated in basic design principles. A studio course allowing for individual specialization and refinement of basic skills. Experimentation in both black-and-white and color media will be introduced. May be repeated once for an additional 3 credits.

**Prerequisite:** Art 243A2.

**Art 350 ADVANCED CERAMICS I (0-6) 3**  
A continuation of Art 250A2. Fall and winter terms. May be repeated once for an additional 3 credits.

**Prerequisite:** Art 250A2.

**Art 354 ADVANCED CRAFT (0-6) 3**  
This class is designed to increase the skill and proficiency in a craft area. (See Art 154A2 and 155A2, SW 154A2 and 155A2.) In addition to demonstrating skill in a craft, students must keep adequate records, price their work, and produce their portfolios. It also includes seminars on pricing, selling, artist agents and juried shows.  
**Prerequisite:** Consent of instructor.

**Art 363A2 MODERN PAINTING AND SCULPTURE - 1890 TO 1945 (3-0) 3**

This course examines the medium movements, painting, sculpture, by developing an understanding and appreciation of the stylistic, historic and cultural background of the modern art movement.

**Art 364A2 MODERN PAINTING AND SCULPTURE - 1945 TO PRESENT (3-0) 3**

This course examines the medium movements, painting, sculpture, by developing an understanding and appreciation of the stylistic, historic and cultural background of the modern art movement.

**Prerequisite:** Art 363A1.

**Art 365A2E MESOAMERICAN ART HISTORY (3-0) 3**  
Mesoamerican Art History is an overview of the prehistoric civilizations of Mesoamerica. It examines in detail culture, art and architecture of the area, including Maya, Olmec, Mixtec, Zapotec, Huastec, Colima and Aztec. Winter term.

**Art 401 INTERPRETIVE DRAWING (0-6) 3**  
A class of interpretive drawing, using skills acquired in previous drawing classes, based on a concept approach to drawing. All media and materials used. May be repeated once for an additional 3 credits.  
**Prerequisite:** 6 hours of Art 201.

**Art 413 ADVANCED SCULPTURE II (0-6) 3**  
Continuation of Art 313. May be repeated once for an additional 3 credits.  
**Prerequisite:** Art 313.

**Art 424 ADVANCED PAINTING II (0-6) 3**  
Continuation of Art 324. May be repeated once for an additional 3 credits.  
**Prerequisite:** Art 324.

**Art 425 ADVANCED PAINTING, PORTRAIT AND FIGURE (0-6) 3**  
Advanced studies in painting as related to the human portrait and figure. Traditional and contemporary philosophies will be explored. Models will be used. May be repeated once for an additional 3 credits.  
**Prerequisites:** Art 224 and 201 or consent of instructor.

**Art 431 ADVANCED PRINTMAKING II (0-6) 3**  
Continuation of Art 331. May be repeated once for an additional 3 credits.  
**Prerequisites:** Art 231A2 and 331.

**Art 443 ADVANCED PHOTOGRAPHIC DESIGN (0-6) 3**  
Continuation of Art 343. May be repeated once for an additional 3 credits.  
**Prerequisite:** Art 343.

**Art 450 ADVANCED CERAMICS II (0-6) 3**  
Continuation of Art 350. Fall and winter terms. May be repeated once for an additional 3 credits.  
**Prerequisite:** Art 350.

**Art 473 ART METHODS FOR SECONDARY TEACHERS (3-0) 3**  
Introduces and expands on materials for teaching studio art, art history, criticism and aesthetics in the secondary schools. Includes experiences in developing sequential semester plans in a variety of courses that integrate studio, art history and other areas. Teaching techniques will be included. On demand.  
**Prerequisite:** Consent of instructor or senior standing.

**Art 486 THEORY AND AESTHETICS (3-0) 3**  
Appreciation and understanding of various art forms through the study of aesthetics. Material from both historical and contemporary writers will be examined. Lecture and discussion.

**Art 496 SENIOR SEMINAR (3-0) 3**  
Advanced study and research in selected topics. Completion of senior portfolio and statement. On demand.  
**Prerequisite:** Consent of instructor.

**Art 499 INDEPENDENT STUDY 1-3**  
Individual research is conducted under the supervision of a faculty member. Offered on demand.  
**Prerequisite:** Approval of department chair.

## Biology

**Bio 100BL LABORATORY EXPERIENCES IN BIOLOGY (0-3) 1**  
This course is designed to accompany Bio 110B or 111B. Fall, winter and summer terms.

**Bio 110B SURVEY OF LIFE SCIENCES (3-0) 3**  
An introductory biology course providing the non-science major with a comprehensive view of modern biology, especially how it affects man. Concepts of scientific method will be covered in this course to give the non-major a feeling for processes that are carried out in biological research. This course is designed for non-science majors. Credit cannot be earned for both Bio 110B and 111B. Fall, winter and summer terms.

**Bio 111B BIOLOGY OF THE CELL (3-0) 3**  
An introduction to the unifying central concepts of biology, including cell structure, evolution, respiration, photosynthesis and genetics. This course is designed for science majors. Credit cannot be earned for both Bio 110B and 111B. Fall and winter terms.  
**Prerequisite:** Concurrent enrollment in Bio 100BL.

**Bio 120B ENVIRONMENTAL CONSERVATION (3-0) 3**  
A study of natural resources in a global context. Attention is given to public policies and programs which affect the long-range availability and use of these resources. Winter term.

**Bio 121B HUMAN ANATOMY & PHYSIOLOGY (2-3) 3**  
An introduction to the structure and function of the human body. Fall and winter terms.

**Bio 132B HUMAN SEXUALITY (3-0) 3**  
Biological aspects of human reproduction, supplemented by discussion of medical, societal, psychological and ethical issues. Credit not applicable to the biology major. Winter term.

**Bio 206 GENERAL BOTANY (3-3) 4**  
This course has two parts. Part one addresses the structure, development and physiology of vascular plants. Part two presents a survey of the structure, reproduction, evolution and the relation to humans of the fungi, algae, bryophytes, ferns, gymnosperms and angiosperms. Fall and winter terms.  
**Prerequisites:** Bio 100BL, 111B.

**Bio 207 GENERAL ZOOLOGY (3-3) 4**  
A survey of the field of zoology and its major subdivisions. It includes an overview of the evolutionary relationships of animal groups from protozoa through vertebrates. Fall and winter terms.  
**Prerequisites:** Bio 100BL, 111B.

**Bio 220 FUNDAMENTALS OF ECOLOGY (3-3) 4**  
A study of the fundamental relationships among organisms and their environments. Lab will include an introduction to field methods, sampling, analyses of data and problem solving in ecology. One all-day Saturday field trip is required. Fall term.  
**Prerequisites:** Bio 206 or 207, Math 111B and Math 201B or Psych 241B.

**Bio 301 VASCULAR PLANT MORPHOLOGY (3-3) 4**  
The course is a comparative evolutionary survey of the vegetative and reproductive morphology of living and fossil vascular plants.  
**Prerequisite:** Bio 206.

**Bio 302 SYSTEMATIC BOTANY (2-6) 4**  
A study of the identification, classification, and relationships of the vascular plants with emphasis on temperate flowering plant families. Major emphasis will be given to the origin of flowering plants and especially the nature of species as revealed by modern techniques. Laboratory work will focus on the use of keys and terminology, the identification of species and the recognition of family characteristics. Fall term.  
**Prerequisite:** Bio 206.

**Bio 303 HISTOLOGY (2-3) 3**  
Study of the microscopic anatomy of the vertebrate body. Winter term.  
**Prerequisite:** Bio 207.

**Bio 304 FIELD ZOOLOGY (4-3) 5**  
A study of vertebrate animals with emphasis on taxonomic and ecological relationships. Laboratory work includes collection, identification and museum preparation. Summer term.  
**Prerequisite:** Bio 207.

**Bio 305 ENTOMOLOGY (2-6) 4**  
A study of insect anatomy, physiology, identification, ecology and behavior. Fall term of odd-numbered years.  
**Prerequisite:** Bio 207.

**Bio 321 GENERAL PHYSIOLOGY (3-3) 4**  
Emphasis is on comparative animal physiology, covering respiration, gas transport, energy metabolism, temperature regulation, osmotic regulation, movement, and hormonal and nervous integration. Fall and winter terms.  
**Prerequisites:** Bio 206, 207, Chem 303, 304, and Math 201B.

- Bio 322 RADIATION BIOLOGY** (3-3) 4  
An introduction to the theory of radioactivity and the application of isotopes in medicine, physiology and research. Animals and plants will be used to demonstrate tracer techniques and results will be evaluated by use of scaler-counters and liquid scintillation. Offered on demand.  
**Prerequisites:** Bio 111B, 206, 207, 321 and consent of instructor.
- Bio 331 MICROBIOLOGY** (3-3) 4  
A survey of the microbial world with emphasis on staining and culturing techniques and clinical methods for identification of bacteria and fungi of medical, economic and agricultural importance. Fall and winter terms.  
**Prerequisites:** Bio 111B, 206, 207 and Chem 150B, 151 and 303.
- Bio 332 IMMUNOLOGY** (3-3) 4  
An introduction to the structures and biochemical activities of antibodies and the mechanisms of the immune response. The laboratory will emphasize analytical methods of measuring antibody-antigen reactions. Fall term of odd-numbered years.  
**Prerequisite:** Bio 331.
- Bio 341 VERTEBRATE COMPARATIVE ANATOMY** (2-6) 4  
A comparative study of the morphology of representative vertebrates with the objectives of understanding their evolutionary relationships and the functional basis of their variations on a common plan. Fall, even years.  
**Prerequisite:** Bio 207.
- Bio 342 EMBRYOLOGY & DEVELOPMENTAL BIOLOGY OF THE VERTEBRATES** (2-6) 4  
A detailed study of reproduction and development in representative vertebrates. The laboratory work explores the anatomy of development in depth, and the lecture correlates this development with and explains it on the basis of cellular and molecular events during ontogeny. Winter term.  
**Prerequisite:** Bio 207.
- Bio 350 MYCOLOGY** (3-3) 4  
A survey of the Kingdom Fungi covering classification, physiology, development, genetics and environmental relationships peculiar to the fungi. Fall term of odd-numbered years.  
**Prerequisites:** Bio 206 and Chem 150B, 151.
- Bio 355 PLANT PATHOLOGY** (3-3) 4  
A general survey of plant diseases, including viruses, bacteria, nematodes and fungi. Ecology, epidemiology, physiology, diagnosis and control are emphasized. Winter term of odd-numbered years.  
**Prerequisites:** Bio 206, 207 and Chem 151.
- Bio 360 BRYOPHYTES AND LICHENS** (2-6) 4  
A course treating the taxonomy, morphology, ecology, reproduction and evolution of the Bryophytes and Lichens. Winter term of odd-numbered years.  
**Prerequisite:** Bio 207.
- Bio 370 GENETICS LABORATORY** (0-3) 1  
An introduction to the organisms and methodology used in genetic research. This course is designed to accompany Bio 371 for those students requiring a genetics laboratory component.  
**Prerequisite:** 20 hours of biology or consent of instructor.
- Bio 371 GENERAL GENETICS** (3-0) 2  
A survey of basic transmission and quantitative genetics. First 10 weeks of fall term.  
**Prerequisite:** 20 hours of biology or consent of instructor.
- Bio 372 EVOLUTIONARY GENETICS** (3-0) 1  
A survey of the evidence for and principles and mechanisms of evolution. Last 5 weeks of fall term.  
**Prerequisite:** Bio 371.
- Bio 373 MOLECULAR GENETICS** (3-0) 1  
A survey of modern molecular genetics, including the mechanics and regulation of transcription and translation. Last 5 weeks of fall term.  
**Prerequisites:** Chem 303, Bio 371.
- Bio 400 PLANT PHYSIOLOGY** (3-3) 4  
A study of plant-water relations, nutrition, metabolism and adaptations to different environments. Winter term of even-numbered years.  
**Prerequisites:** Bio 206, Chem 303 and Math 201B. Previous or concurrent enrollment in Chem 304, 311 and Bio 220 (or For 218) recommended.
- Bio 407 EVOLUTION** (3-0) 3  
A survey of the current explanations of evolutionary mechanisms. Winter term of even-numbered years.  
**Prerequisite:** Bio 371.
- Bio 433 BACTERIAL PHYSIOLOGY** (3-3) 4  
Unique characteristics of metabolic pathways in bacteria will be studied. Major laboratory emphasis is placed on the interrelationships of bacteria, viruses and immune response, and their effects on human physiology. Offered on demand.  
**Prerequisites:** Bio 321, 331 and Chem 304.
- Bio 455 CELLULAR AND MOLECULAR BIOLOGY** (3-3) 4  
Examination of the metabolic processes of the cell with respect to organelle compartmentalization. Emphasis will be placed on bioenergetics, intermediate metabolism and the biology of the gene. Winter term.  
**Prerequisites:** Chem 304, Bio 321 or 433. Biochemistry is strongly recommended.
- Bio 471 FIELD ECOLOGY** 5  
An advanced ecology course that emphasizes sampling methods, description of local plant and animal communities, and techniques of environmental monitoring in terrestrial and aquatic ecosystems. Summer term.  
**Prerequisites:** Bio 220, 302, 304, and Math 201B or Psych 241B.
- Bio 473 MAMMALIAN PHYSIOLOGY** (3-3) 4  
Functions of mammalian organ systems with emphasis on sensory, cardiovascular, endocrine and reproductive systems. Laboratory work involves live animal experimentation. Fall term of odd-numbered years.  
**Prerequisite:** Bio 321.
- Bio 477 BIOGEOGRAPHY** (3-3) 4  
A study of current hypotheses explaining past and present distribution of plants and animals. The emphasis is on seed plants and vertebrate animals. Winter term of odd-numbered years.  
**Prerequisite:** Consent of instructor.
- Bio 496 SENIOR SEMINAR** (2-0) 2  
Advanced study and research in selected topics. Fall and winter terms.  
**Prerequisites:** Senior standing and consent of instructor.
- Bio 499 INDEPENDENT STUDY** 1-3  
Individual research under the supervision of a faculty member. Offered on demand. Study and proposal should begin in junior year.  
**Prerequisite:** Approval of department chair.

## Business Administration

### BA 253B BUSINESS STATISTICS (4-0) 4

An introductory course covering the collection and analysis of numerical data for decision-making purposes. Topics to be covered include descriptive statistics, measures of central tendency and dispersion, probability, sampling distributions, estimation, hypothesis testing, and regression and correlation. Credit toward graduation will be given for only one of the following courses: BA 253B, Psych 241B and Math 201B.

**Prerequisite:** Math 110B or equivalent preparation.

### BA 255 STATISTICAL INFERENCE AND COMPUTER APPLICATIONS (1-0) 1

This course is designed as a follow up to Math 201B - Elementary Statistics and Psych 241B - Basic Statistics for Psychologists. The course, coupled with one of these two courses, will meet the requirements of BA 253B - Business Statistics. Course content includes topics in hypothesis testing and regression, as well as application of computer programs to statistical inference. This course may not be taken for credit by students who have received credit for BA 253B.

**Prerequisite:** Math 201B, Psych 241B or equivalent preparation.

### BA 260D LEGAL ENVIRONMENT OF BUSINESS (3-0) 3

An examination of the primary lawmaking and adjudicatory processes, with a substantial emphasis upon the role that economic, social, political and ethical forces play upon the shaping of domestic and international legal rules.

**Prerequisites:** FCS or consent of instructor.

### BA 301D MANAGEMENT AND ORGANIZATIONAL BEHAVIOR (4-0) 4

A study of the principles, practices and processes of administration: the organization of a system, the behavior of people in the organization, and the development of organizational effectiveness. Both domestic and international aspects of management theory and practice will be considered.

**Prerequisites:** Junior standing and SCS.

### BA 302 HUMAN RESOURCE MANAGEMENT (4-0) 4

Human resource system makeup within an organization. Topics include but are not limited to, recruitment and selection, training and development, performance appraisal, wage and salary administration, discipline, labor relations, union-management relations, and the role of government in manpower administration.

**Prerequisite:** BA 301D

### BA 308 OFFICE MANAGEMENT (3-0) 3

The principles of office management. The responsibilities of management for office services, office layout and space utilization, office furniture and equipment, machines and appliances, branch office management, office personnel problems, training of office workers, office costs, and office methods and procedures are included. Individual research required. Winter term.

**Prerequisites:** Junior standing and SCS.

### BA 309D INTERNATIONAL MANAGEMENT (3-0) 3

An introduction to the unique issues, challenges and opportunities confronting managers in an international environment. The relationship of socio-cultural forces to performance of management functions is emphasized. Topics will include issues such as international competitiveness, comparative management styles, corporate/government relations, entry strategies, transfer of technology, logistics and international human resource management. Fall term.

**Prerequisite:** BA 301D.

### BA 311 BUSINESS LAW I (3-0) 3

Basic principles of law as applied to business transactions. Study of the law of contracts and sales, warranties and secured transactions are included. The interactions between social, political and economic factors with law are considered.

**Prerequisite:** BA 260D.

### BA 312 BUSINESS LAW II (3-0) 3

Continuation of Business Law I. Study of the law of agencies, business associations, bankruptcy, property and regulatory law are examined.

**Prerequisite:** BA 260D.

### BA 313C ETHICAL ISSUES IN BUSINESS (3-0) 3

This course will examine ethical issues which arise and are unique to managerial decision-making in business settings. The course will proceed developmentally with ethical systems commonly used in business, personal ethics, and, finally, ethics in business through case studies.

**Prerequisites:** Junior standing and SCS.

### BA 315 INTERNATIONAL BUSINESS LAW (3-0) 3

An introduction to public international law with emphasis on international commerce and an examination of national laws and practices that states apply to international commercial transactions.

**Prerequisite:** BA 260D.

### BA 321 BUSINESS COMMUNICATIONS (3-0) 3

A course built around the basic concept that both the functions and objectives of business are achieved through effective communication. This concept is developed through the processes of writing letters, memoranda and reports, and an understanding of applied verbal and other communications techniques. Fall and winter.

**Prerequisites:** Junior standing and SCS.

### BA 330 TOURISM AND RESORT MANAGEMENT (3-0) 3

An introductory course covering the scope, organization and environment of the domestic and international tourism and resort industry. Topics to be covered include industry components, supply and demand, motivation and sociology, economics, public policy and environmental issues, and current leadership and management challenges facing the industry.

**Prerequisite:** BA 301D.

### BA 340 PRINCIPLES OF MARKETING (3-0) 3

The course stresses marketing activities from a managerial perspective. It includes the marketing of goods and services and ideas in both business and non-business organizations. There is an emphasis on concepts of marketing and application of these concepts in decision making and managing marketing variables in a dynamic domestic and international environment.

**Prerequisites:** Junior standing, SCS, Econ 286D, or concurrent enrollment, and Acc 226 or concurrent enrollment.

### BA 341 SERVICES MARKETING (3-0) 3

This course focuses on the distinctive nature of marketing strategy development and execution in service organizations as diverse as airlines and accounting, hotels and hospitals, and banking and real estate brokerages. Includes lectures and detailed case analysis, including international focus, to demonstrate application of marketing strategies, market research, segmentation and the marketing mix to varied service organization challenges.

**Prerequisite:** BA 340.

- BA 342 RETAILING** (3-0) 3  
An introduction to retailing from the management point of view: study of retail policies and organization, the operation of the buying and selling functions, merchandise control, store systems, personnel management, retail accounting and expense control.  
**Prerequisite:** BA 340.
- BA 343 SALES MANAGEMENT** (3-0) 3  
The course is concerned primarily with the management of outside sales forces of manufacturers and wholesaling middlemen.  
**Prerequisite:** BA 340.
- BA 344 ADVERTISING** (3-0) 3  
The course is a comprehensive survey of advertising that deals with the management, planning, creation and use of advertising.  
**Prerequisite:** BA 340 or consent of instructor.
- BA 345 PROFESSIONAL SALESMANSHIP** (3-0) 3  
The salesperson considered (viewed) as a consultant whose job is to assist buyers to make purchase decisions. Course examines the consultant relationship of a professional salesperson in assisting the buyers. The ethics, responsibilities and sales skills of a professional salesperson are examined.  
**Prerequisite:** BA 340 or consent of instructor.
- BA 349 INTERNATIONAL MARKETING** (3-0) 3  
An environmental approach to marketing across national borders. Economic, cultural and geographic differences are stressed as they apply to marketing. Emphasis is placed upon adapting marketing principles to different cultures. Winter term.  
**Prerequisite:** BA 340.
- BA 353 OPERATIONS MANAGEMENT** (3-2) 4  
Concepts and methods for economical planning and control of activities required for transforming a set of inputs into specified goods or services. Emphasis is given to forecasting, decision analysis, cost analysis, design of production systems, production/marketing relationships, operations planning and control, and the importance of global competitiveness.  
**Prerequisites:** Junior standing, FCS 101, SCS, BA 253B or equivalent, BA 301D and Math 210B. Recommended: BA 310 and 340.
- BA 357 STUDIES IN OPERATION MANAGEMENT** (3-2) 4  
A study of selected topics in operations management. This course's content will vary. Students may take this course more than once, provided the subject is different on each occasion. Some examples of different subjects are: Computer Applications in Decision-making; Quality and Productivity; Transportation and Logistics; Purchasing; Project Management; Forecasting.  
**Prerequisite:** BA 353.
- BA 360 INTRODUCTION TO MANAGEMENT SCIENCE** (3-0) 3  
Same as Math 360B.
- BA 370 TOPICS IN INTERNATIONAL BUSINESS** (3-0) 3  
An examination of selected topics and issues pertaining to the international marketplace. Students may take this course one or more times for credit, provided the subject is different on each occasion.  
**Prerequisites:** Junior standing and SCS.
- BA 380 FINANCIAL MANAGEMENT** (3-0) 3  
Covers the time value of money, determination of stock and bond values, the role of risk in decision making, capital budgeting, cost of capital, and the long- and short-term financial management of assets and liabilities for firms competing in the domestic and international arenas. **Recommended for the junior year.**  
**Prerequisites:** Junior standing, SCS, Acc 226 and Econ 266D.
- BA 382 FINANCIAL INSTITUTIONS** (3-0) 3  
Provides a descriptive and analytical understanding of financial markets, the major categories of financial institutions, the public policy toward these institutions, the nature of financial planning, interest rate analysis and liquidity/credit management. This course is the same as Econ 382. Credit cannot be awarded for both BA 382 and Econ 382.  
**Prerequisite:** BA 380.
- BA 386 INSURANCE** (3-0) 3  
Coverage available, buying methods and general procedures of operation of all types of insurance companies. Special emphasis on the analysis of the standards of more common forms of fire, marine, casualty and life insurance contracts. Fall term.  
**Prerequisite:** BA 380.
- BA 387 REAL ESTATE** (3-0) 3  
This introductory course covers the regulation, practices, legal aspects and professional ethics of the real estate business. Some consideration is given to real estate finance, investment and appraisal techniques.  
**Prerequisites:** BA 310 and BA 380.
- BA 389 INTERNATIONAL FINANCE** (3-0) 3  
An eclectic overview of international finance with emphasis on the multinational corporation. Discussion of international financial management and the corporation. Emphasis is placed on foreign exchange risk management, investment analysis, capital asset management and working capital management. Fall term.  
**Prerequisite:** BA 380.
- BA 401 ENTREPRENEURSHIP AND SMALL BUSINESS MANAGEMENT** (3-0) 3  
How to conceive, initiate, organize, manage and operate a small business.  
**Prerequisites:** BA 340, 353 and 380, senior standing or consent of instructor.
- BA 407 MANAGEMENT CONSULTING** (2-2) 3  
The study of the concepts and models of management consulting and their application in business organizations. Emphasis is on practical application and the use of relevant tools and techniques. Students are required to engage in consulting services.  
**Prerequisites:** BA 340, 353 and 380, senior standing and consent of instructor.
- BA 415 MANAGEMENT IN ACTION** 3-6  
The study of management principles and their application through research, plant visits and on-site interviews with top management personnel.  
**Prerequisites:** BA 301D and consent of instructor.
- BA 437 INTERNSHIP IN BUSINESS** 3  
Directed experience working in a business organization performing professional duties and responsibilities. Specific requirements will depend on the supervising college faculty member but include, as a minimum, the keeping of a detailed journal and the completion of a term paper. A minimum of 125 hours of directed experience will be required, however, normally students complete 200-300 hours. The student's performance will be evaluated by his/her supervisor in the business organization as well as the assigned college faculty member.  
**Prerequisites:** Business majors having completed 80 semester hours and approval by the dean.

## Chemistry

**BA 439 SERVICES MANAGEMENT (3-2) 4**

The integration and application of relevant business theories, techniques, and skills to industry issues and problems through lectures, cases and a major project. Areas of emphasis will include the strategic service vision, operational strategies and operations management, law, service delivery systems, marketing, people and the service culture, quality control, management accounting, financial management, as well as the global implications of services management.

**Prerequisites:** BA 260D, 340, 353 and 380. Recommended BA 330 and 437 or equivalent work experience for students majoring in the Tourism and Management option.

**BA 445 MARKETING MANAGEMENT (3-0) 3**

Detailed case analysis of corporate marketing problems. Cases include all of the marketing inputs and allied internal and external forces and resources.

**Prerequisites:** BA 340 and senior standing.

**BA 446 MARKETING RESEARCH (3-0) 3**

Evaluates the role of research in marketing management. Includes the use of research in defining, analyzing and resolving marketing problems. Consideration is given to research procedures, sources of data and the use of information for decision making.

**Prerequisites:** BA 253B and BA 340.

**BA 481 CASES AND PROBLEMS OF FINANCIAL MANAGEMENT (3-0) 3**

This course will apply the tools learned in BA 380 to a variety of business problems and cases. Areas of analysis will not be confined to finance but will include decision making in marketing, management, etc., realizing the interdisciplinary reality of business.

**Prerequisite:** BA 380.

**BA 483 INVESTMENTS (3-0) 3**

Analysis of several theories of investment followed by an investigation and study of security markets. Corporate bonds and stocks are stressed; however, federal and state bonds and private investment opportunities are also considered.

**Prerequisite:** BA 380.

**BA 484 PORTFOLIO MANAGEMENT (3-0) 3**

A continuation of analysis of investment theories from BA 483, followed by application of these theories through advanced security analysis. Derivative instruments, such as financial futures and options, will be studied in order to understand their use in diversification and in the mitigation of risk. Offered on demand.

**Prerequisite:** BA 483.

**BA 496 SENIOR SEMINAR IN ADMINISTRATIVE STRATEGY (4-0) 4**

The integration of managerial theories, techniques and skills, provides vicarious experiences and research in administrative decision making, policy, strategy and tactics. Emphasis is on the total organization and its internal and external relationships and responsibilities. Cases analyzing firms ranging from small to large, local to international and profit to not-for-profit are covered. An appropriate term paper is required.

**Prerequisites:** Senior standing and completion of all other courses in the Common Requirements, with the exception of CSIS 420.

**BA 499 INDEPENDENT STUDY 1-3**

Individual research is conducted under the supervision of a faculty member.

**Prerequisite:** Approval of the Dean of the School of Business Administration.

**Chem 123B CHEMISTRY FOR CONSUMERS (3-0) 3**

Topics of interest to the consumer, with focus on making personal choices of everyday chemicals. Topics include food additives and nutrition, cosmetics, drugs, pesticides, fertilizers, soaps, detergents, fabrics and plastics. The course presents basic principles leading to a practical understanding. This is a "humane" chemistry course for people afraid of science and mathematics. Credit will not be given for both Chemistry 123B and 323B. Fall and winter terms.

**Chem 124BL CHEMISTRY FOR CONSUMERS LAB (0-3) 1-1/2**

A laboratory course to follow or accompany "Chemistry for Consumers." Laboratory work includes experiments involving different classes of consumer products, providing a basis for the science behind the products. (Prior or concurrent enrollment in Chemistry for Consumer lecture.)

**Chem 150B FUNDAMENTALS OF CHEMISTRY (4-3) 5-1/2**

A conceptual approach to fundamental principles of chemistry including electronic structure of atoms and molecules, stoichiometry, solutions and states of matter, metallic and non-metallic properties, chemical thermodynamics and equilibrium, acids and bases, reaction kinetics, nuclear chemistry and electrochemistry. It is the recommended beginning course for science majors. Fall and winter terms.

**Prerequisite:** Either two years of high school mathematics, satisfactory performance on ACT/SAT examination or concurrent enrollment in Math 111B or 221B.

**Chem 151 FUNDAMENTALS OF CHEMISTRY (4-3) 5-1/2**

Continuation of Chemistry 150B. Fall and winter terms.

**Prerequisite:** Chem 150B or consent of instructor.

**Chem 301 SCIENTIFIC GLASSBLOWING (0-3) 1**

Basic skills of glassblowing. The properties and uses of different types of glass will be considered. Simple laboratory apparatus will be designed and built.

**Chem 303 ORGANIC CHEMISTRY (4-3) 5**

Nomenclature, structure, stereochemistry, and reactions of aliphatic and aromatic halides, alkenes, alkynes and alcohols. Unifying principles of reaction mechanisms are introduced and applied to free-radical substitution, nucleophilic substitution, elimination and electrophilic addition reactions. The laboratory introduces separation, purification, reaction mechanism studies and synthesis techniques. Fall term.

**Prerequisite:** Chem 151 or consent of instructor.

**Chem 304 ORGANIC CHEMISTRY (4-3) 5**

Nomenclature, structure, spectroscopy and reactions of the major functional group classes including ketones, aldehydes, acids, esters, amides, amines and aromatics. The chemistry of biological compounds is introduced with studies of carbohydrates and amino acids. Laboratory emphasis is on synthesis and identification of organic compounds. Winter term.

**Prerequisite:** Chem 303.

**Chem 305 NATURAL PRODUCTS FROM PLANTS (1-6) 3**

A comprehensive study of the biologically active constituents of plants of the Southwest and elsewhere. Medicinal compounds and poisons are emphasized. Chemical structures, physiological activity, plant sources and biosynthetic pathways are discussed. Lab work includes field gathering, isolation and identification of compounds. First summer session.

**Prerequisite:** Chem 303.

- Chem 311 GENERAL BIOCHEMISTRY I (3-0) 3**  
The basic principles of biochemistry. Emphasis is on the structure and function of proteins and lipids and the metabolic processes occurring within living organisms. Fall term.  
**Prerequisite:** Chem 304.
- Chem 312 GENERAL BIOCHEMISTRY LAB (0-3) 1**  
Basic biochemical techniques. Fall term.  
**Prerequisite:** Chem 311 concurrent.
- Chem 313 GENERAL BIOCHEMISTRY II (3-0) 3**  
The basic principles of biochemistry. Emphasis is on nucleic acid chemistry, carbohydrates, and immune response. Winter term.  
**Prerequisite:** Chem 311.
- Chem 323B CHEMISTRY FOR CONSUMERS (3-0) 3**  
Topics of interest to the consumer, with focus on making personal choices about the use of everyday chemicals. Topics include food additives and nutrition, cosmetics, drugs, pesticides, fertilizers, soaps, detergents, fabrics and plastics. For upper division credit, this course will require extensive writing exercises culminating in a major research paper on a consumer topic. Credit will not be given for both Chemistry 123B and 323B. Fall and winter terms.
- Chem 351 PHARMACOLOGY (3-0) 3**  
Studies of the effects produced by drugs and of their administration, absorption, distribution and excretion. Special emphasis is placed on the theories of the mechanism of action of drugs. First summer session.  
**Prerequisite:** Chem 303.
- Chem 358 PHYSICAL CHEMISTRY (3-0) 3**  
An introduction to thermodynamics and its application to chemical processes. The course explores why chemical reactions occur, the nature of chemical equilibrium, the factors determining the speed of reactions, and the role of temperature in reactions and equilibria. Includes elementary kinetic gas theory and the Boltzman distribution, energy, entropy, free energy and equilibrium, ideal solutions, colligative properties and reaction rate theory. Fall term.  
**Prerequisites:** Chem 151, Phys 162B (or 132B), concurrent enrollment in Math 222 and scientific computer literacy.
- Chem 359 PHYSICAL CHEMISTRY (3-0) 3**  
A study of the quantum theory of atoms and molecules. Includes fundamentals of quantum mechanics, electronic structure of atoms and molecules, molecular symmetry, molecular and reaction dynamics, and the interaction of matter with light. Winter term.  
**Prerequisite:** Chem 358.
- Chem 360 PHYSICAL MEASUREMENTS (0-6) 2**  
Instruction in design of experiments to measure physical properties and the analysis of data. These general techniques are applied in studies of kinetics, thermochemistry, electrochemistry, spectroscopy and molecular structure. Winter term.  
**Prerequisite:** Concurrent enrollment in Chem 359 or consent of instructor.
- Chem 364 INORGANIC CHEMISTRY (2-0) 2**  
Occurrence, metallurgy, properties, uses of selected elements, compounds and alloys. Also included are aspects of inorganic environmental chemistry, crystal structure, stereochemistry of non-transition elements, coordination compounds, acidity and basicity, energy and chemical change, solution chemistry, solid-liquid phase equilibria, periodic relationships and organometallic compounds. Fall term.  
**Prerequisite:** Chem 151.
- Chem 365 ANALYTICAL CHEMISTRY (3-3) 4**  
Introduction to quantitative analytical chemistry. A rigorous development of the theory of chemical equilibria is presented to guide the development of laboratory skills, the rational design of experimental methodologies, and the use of instruments. Major topics include chemical and chromatographic separations, spectroscopic analysis and electrochemical methods.  
**Prerequisites:** Chem 151 and scientific computer literacy.
- Chem 411 ADVANCED BIOCHEMISTRY (3-0) 3**  
Advanced studies of basic biochemical concepts. Emphasis is placed on protein and carbohydrate structure, enzyme kinetics, membrane properties, biochemical reaction mechanisms, thermodynamic relationships in biochemical systems and nucleic acid chemistry. A problem-solving approach is taken to these topics. On demand.  
**Prerequisites:** Chem 313 and 358 or consent of instructor.
- Chem 431 ADVANCED ORGANIC CHEMISTRY (3-0) 3**  
Studies of Huckel and MNDO molecular orbital methods as applied to organic structures. Advanced studies of aromaticity, pericyclic reactions, stereochemistry, reaction mechanisms, linear free energy relationships and applications of spectroscopic techniques. Fall term.  
**Prerequisite:** Chem 304.
- Chem 454 ADVANCED TOPICS IN CHEMISTRY 1-4**  
Advanced material in various areas of chemistry. Examples of offerings include polymer chemistry and advanced topics in analytical, physical and organometallic chemistry. The time spent in the classroom and in the laboratory will vary with the topic. On demand.  
**Prerequisites:** The 300-level course(s) in the specific subject area.
- Chem 460 SYNTHESIS TECHNIQUES (1-6) 3**  
Laboratory instruction in standard advanced synthesis techniques including high and low temperatures, high pressures, photochemical syntheses, Schlenk-line manipulations and chromatographic methods. Organic, inorganic and organometallic compounds will be synthesized. The synthesis literature and spectroscopic methods of structure determination will also be studied. Winter term.  
**Prerequisites:** Chem 304 and 358 or consent of instructor.
- Chem 464 ADVANCED INORGANIC CHEMISTRY (3-0) 3**  
Atomic structure and periodic table, magnetic properties, modern bonding theories, chemistry of selected transition and non-transition elements, reaction mechanisms, solid state, organometallic and bioinorganic chemistry. Winter term.  
**Prerequisites:** Chem 364, 358 or consent of instructor.
- Chem 465 INSTRUMENTAL ANALYTICAL CHEMISTRY (3-3) 4**  
Advanced instruction in state-of-the-art instrumental analysis, including separations methods, spectroscopic analysis and electrochemical methods of detection. Emphasis is placed upon analytical decision-making, instrumental design, and analysis of "real world" samples. Technical report writing is emphasized. Aspects of environmental analysis, pharmaceutical analysis, and bioanalytical chemistry are also included.  
**Prerequisites:** Chem 360, 365 and SCS.
- Chem 496 SENIOR SEMINAR (1-0) 1**  
Preparation of library thesis on significant research topic from recent primary literature. Includes chemical abstracts instruction, on-line literature searching, advanced library techniques and advanced technical writing and presentations. Also career preparation activities and participation in seminars by visiting scientists. Fall term.  
**Prerequisite:** Junior or senior standing.

**Chem 497 SENIOR SEMINAR (1-0) 1**

Continuation of Chem 496 with emphasis upon presentation of senior thesis to the chemistry community. Winter term.

**Prerequisite:** Chem 496 or consent of instructor.

**Chem 499 INDEPENDENT STUDY 1-3**

Laboratory work on a current research problem under the direction of a faculty member. Students present oral and written papers based on this research. On demand.

**Prerequisites:** Junior or senior standing and consent of instructor.

## Communications

(See Communications Option in English Section of this catalog on Page 70.)

## Computer Science Information Systems (CSIS)

**INTRODUCTORY PROGRAMMING COURSE:** Students with previous programming experience or a strong mathematical aptitude should enroll in CSIS 130B. Other students should select one of the following: CSIS 120B (general programming), CSIS 150B (scientific programming), or CSIS 140B (business-oriented programming). For further information on placement, consult the coordinator of the CSIS program.

**CSIS 101 WORD PROCESSING (1-0) 1**

An overview of word-processing concepts and equipment through classroom lectures. Hands-on learning using equipment in an open lab environment is emphasized. Basic text creation, editing, formatting, output, and document storage will be emphasized. Outside of class exercises using WordPerfect computer software are a major part of the course. The class will also incorporate a brief presentation of the most commonly used MS-DOS operating system commands. **NOTE:** This course lasts 1/3 (5 weeks) of the trimester. It is offered during the first, second and last third of the fall and winter terms.

**CSIS 102 ELECTRONIC SPREADSHEETS (1-0) 1**

A study of electronic spreadsheets through classroom lectures. Hands-on learning using equipment in an open lab atmosphere is emphasized. Worksheet creation, editing, formatting and printing, graphics and elementary macros will be featured. Outside of class exercises using LOTUS 1-2-3 computer software are a major part of the course. The class will also incorporate a brief presentation of the most commonly used MS-DOS operating system commands. **NOTE:** This course lasts 1/3 (5 weeks) of a trimester. It is offered during the first, second and last third of the fall and winter terms.

**CSIS 120B INTRODUCTION TO PROGRAMMING (BASIC) (3-0) 3**

Introduction to programming using the BASIC language, problem-solving methods, algorithm development, program design, debugging documentation, and computer solution to several problems from various disciplines. Fall and winter terms.

**Prerequisite:** Math 110B or equivalent.

**CSIS 130B INTRODUCTION TO PROGRAMMING (PASCAL) (3-2) 4**

Introduction to programming in PASCAL, problem-solving methods, algorithm development, program design, debugging and documentation. This course is required for students who wish to pursue further study in computer science. Fall and winter terms.

**Prerequisite:** Math 110B or equivalent.

**CSIS 140B INTRODUCTION TO PROGRAMMING (COBOL) (3-2) 4**

Introduction to programming using the COBOL language, problem-solving methods, algorithm development, program design, debugging, documentation, and computer solution to several business-oriented problems. Fall and winter terms.

**Prerequisite:** Math 110B or equivalent.

**CSIS 150B INTRODUCTION TO PROGRAMMING (FORTRAN) (3-0) 3**

Introduction to programming using the FORTRAN language, problem-solving methods, algorithm development, program design, debugging, documentation, and computer solution to several mathematical/scientific problems. Same as Engr 104B. Fall and winter terms.

**Prerequisite:** Math 111B or equivalent.

**CSIS 221 ADVANCED PROGRAMMING (PASCAL) (3-2) 4**

Continuation of topics from CSIS 130B. File processing and organization, introduction to data structures and software development, team programming of projects. Fall and winter terms.

**Prerequisite:** CSIS 130B.

**CSIS 238 COMPUTER LOGIC DESIGN (4-0) 4**

Introduction to the building blocks of digital computer design. Application of Boolean algebra to the synthesis of logic circuits from logic elements. The design and implementation of combinational and sequential circuits. Understanding of hardware operations in a simple computer in terms of register transfer language. Same as Engr 238. Winter term.

**Prerequisite:** A course in computer programming.

**CSIS 240 ADVANCED PROGRAMMING (COBOL) (3-2) 4**

Continuation of topics from CSIS 140B. Advanced file organization and processing. Sort and merge features. Subprograms. Advanced table handling. Team programming of projects. Winter term.

**Prerequisite:** CSIS 140B.

**CSIS 270 COMPUTER GRAPHICS (3-0) 3**

Fundamental concepts of graphical display of data. Techniques in two and three dimensional display. Hardware and software of graphics systems will be discussed with hands-on experience using available tools. Fall term of odd-numbered years.

**Prerequisite:** CSIS 130B.

**CSIS 310 DATA STRUCTURES (3-0) 3**

Stacks, queues, lists, trees, graphs, memory management and algorithms for implementation. Algorithm design and analysis, simple data base management systems. Winter term.

**Prerequisites:** CSIS 221 and Math 305.

**CSIS 320 ASSEMBLY LANGUAGE PROGRAMMING (3-0) 3**

Computer structure, machine language, assemblers and assembly language, addressing techniques, program segmentation and linkage. Fall term.

**Prerequisite:** CSIS 221 or 240.

**CSIS 321 COMPUTER ARCHITECTURE AND ORGANIZATION (3-0) 3**

Organization of computer systems, including characteristics of and relationships between I/O devices, processors, control units, main and auxiliary memory. Studies and comparisons among popular computer architectures including the Intel and Motorola families of microprocessors. Winter term of even-numbered years.

**Prerequisite:** CSIS 320.



**CSIS 340 COMPARATIVE PROGRAMMING LANGUAGES (3-0) 3**

Basic notions of syntax (BNF grammars, derivation trees) and semantics (data types, control structures, parameter passing mechanisms, scope and lifetime of variables) of programming languages. Provides students with exposure to languages with unique features such as PROLOG and LISP in comparison with more traditional languages such as C and Ada. Fall term of odd-numbered years.

**Prerequisite:** CSIS 221 or 240 and SCS.

**CSIS 350 DATABASE MANAGEMENT SYSTEMS (3-0) 3**

A composite analysis of data base concepts to include evaluation and objectives of Database Management Systems (DBMS); a comparison of state-of-the-art DBMS, data base implementation and the administration of control of the data base. Fall term of even-numbered years.

**Prerequisite:** CSIS 221 or 240 and SCS.

**CSIS 360 INFORMATION SYSTEMS DESIGN AND SYSTEMS ANALYSIS (3-0) 3**

Analysis of functional subsystems to look at the problem in context, to systematically investigate objectives of the system and criteria for system effectiveness. Fall term of even-numbered years.

**Prerequisite:** CSIS 130B or 140B, and SCS.

**GS 361 COMPUTERS AND HUMAN ISSUES (3-0) 3**

Social, political, ethical and philosophical issues raised by the existence and use of the computer. Artificial intelligence, the nature and impact of information and our enhanced abilities to store and retrieve it; computer ethics and computer crime; the relationship between computer languages and natural language; impact of the computer on our conceptions of ourselves. Winter term.

**Prerequisite:** SCS.

**CSIS 370 INFORMATION SYSTEMS IMPLEMENTATION AND MANAGEMENT (3-0) 3**

Insights into this highly technical field to include current development trends and related organizational issues, planning, budgeting and management controls applicable to information systems; day-to-day operation management; the development of new applications and technology. Winter term of odd-numbered years.

**Prerequisite:** CSIS 360.

**CSIS 420 MANAGEMENT INFORMATION SYSTEMS (4-0) 4**

A study of information processing, the systems concept, the analysis and design of information systems, and data-base technology as they apply to producing information to be used in business decision-making. Advanced applications of word processing, spreadsheet and database software will be included. Fall and winter terms.

**Prerequisite:** CSIS 101 and 102. BA 340 and BA 353 (or concurrent enrollment) for business students.

**CSIS 421 OPERATING SYSTEMS (2-2) 3**

A study of basic concepts of operating system design, process communication and synchronization, memory management, scheduling, file management, deadlocks. Programming assignments leading to the construction of a simple operating system. Winter term of odd-numbered years.

**Prerequisite:** CSIS 320.

**CSIS 430 DATA COMMUNICATIONS (2-2) 3**

Analysis and design of distributed computing systems. Network topology, flow of control, transmission, media and methods, network protocols, switching types. Winter term of even numbered years.

**Prerequisite:** CSIS 320.

**CSIS 496 SENIOR SEMINAR (2-0) 2**

Advanced study and research in selected topics. Winter term.

**Prerequisite:** Senior standing.

**CSIS 499 INDEPENDENT STUDY 1-3**

Individual study conducted under the supervision of a faculty member.

## Cooperative Education

**COOP ED 200 COOPERATIVE EDUCATION 1-10**

A first-time cooperative education work experience by underclassmen.

**COOP ED 300 COOPERATIVE EDUCATION 1-10**

A cooperative education work experience by upperclassmen. A maximum number of credits is allowed toward a degree.

**COOP ED 400 COOPERATIVE EDUCATION 1-10**

An advanced cooperative education work experience by upperclassmen who have completed one or more Co-op terms. A maximum number of credits is allowed toward a degree.

## Economics

**Econ 170D CURRENT ECONOMIC ISSUES (4-0) 4**

Explores current economic issues in society by developing a set of basic tools of economic analysis and then applying those tools to contemporary economic questions. Issues to be covered will include topics such as inflation, unemployment, the farm problem, U.S. economic leadership, poverty, environmental standards, our financial system and worldwide economic growth. Recommended for **NON-BUSINESS MAJORS** who are interested in taking only one course in economics.

**Econ 201 PERSONAL FINANCE (2-0) 2**

Managing personal finances including budgeting, insurance, taxes, home ownership, investments, retirement and estate planning. This course is designed for majors outside the School of Business Administration. Offered primarily in summer.

**Econ 262D PRINCIPLES OF ECONOMICS - MICRO (2-0) 2**

An introductory course in price theory. Topics include opportunity cost, demand, supply, markets, elasticities and the organization of markets. This is a half semester course for which credit is earned by completing the first half of Econ 266D. For transfer students who have only had macro. Half semester course.

**Econ 266D PRINCIPLES OF ECONOMICS (4-0) 4**

An introductory course covering microeconomics and macroeconomics. The micro section includes opportunity cost, demand and supply analysis, elasticities, market behavior, market structures and international trade theory. The macro section includes national income theory, income flows, macroeconomic equilibrium and how these concepts are applied to examine economic growth, inflation, unemployment, monetary and fiscal policy, deficits and the national debt and the balance of payments.

**Prerequisite:** TRST 92 or better.

**Econ 272D PRINCIPLES OF ECONOMICS - MACRO (2-0) 2**

An introductory course on national income analysis. Included are income flows, macro-economic equilibrium, monetary and fiscal policy and balance of payments. This is a half semester course for which credit is earned by completing the second half of Econ 266D. For transfer students who have only had micro. Half semester course.

**Econ 310C ECONOMIC HISTORY OF THE UNITED STATES (4-0) 4**

A study of the origin and development of the economic institutions of the United States from Colonial times to the present. U.S. economic development is considered in relation to theories of economic growth and development. Offered on demand.

**Prerequisites:** Junior standing and SCS.

**Econ 330 PRODUCTION ECONOMICS AND AGRIBUSINESS (4-0) 4**

An application of economic principles to problems in agriculture and the analysis of the agricultural enterprise as a business. Topics include supply and demand analysis, an analysis of agricultural production, industrial organization as it applies to agriculture, the use of management tools and decision making processes in farm and ranch management.

**Prerequisite:** Econ 266D and SCS.

**Econ 335D ENVIRONMENTAL ECONOMICS (4-0) 4**

This course presents the application of economic theory and analytical tools to a variety of environmental and resource problems. Economic reasoning is used to gain insights into the causes of, consequences of, and ways of dealing with environmental problems. The economic tools of cost/benefit analysis are developed and applied to environmental costs and benefits associated with a variety of private and public projects/policies. The ethical implications of these tools is also considered. Students will be expected to conduct an economic analysis of some proposed project/policy. Winter term.

**Prerequisites:** Econ 266D or permission of instructor, and SCS.

**Econ 369D PUBLIC FINANCE (4-0) 4**

An analysis of the financing of federal, state and local units of government. Emphasis given to problems of taxation, expenditures and debt management. Offered on demand.

**Prerequisites:** Junior standing, Econ 266D and SCS.

**Econ 371D INTERNATIONAL ECONOMICS (4-0) 4**

Classical, neoclassical and modern trade theory. Comparative analysis of marketing functions, institutions and structures in different national environments. Exchange rates, import/export monopolies, quotas, tariffs and other foreign fiscal policies. Offered on demand.

**Prerequisites:** Junior standing, Econ 266D and SCS.

**Econ 375D INDUSTRIAL ORGANIZATION (4-0) 4**

An empirical, theoretical and legal analysis of economic concentration in the United States. Includes detail of market and aggregate concentration, alternative models of oligopoly behavior from economic theory and studies of cases in antitrust law. Offered on demand.

**Prerequisites:** Junior standing, Econ 266D and SCS.

**Econ 380D LABOR FORCE ECONOMICS (4-0) 4**

A course that examines the effects of changing demographics such as age, ethnicity, gender and immigration on the labor force. Changes in the structure of the economy and how these impact on work arrangements and labor unions are also included. This course is intended for students interested in issues concerning the labor force. Prior knowledge of economics is not required.

**Prerequisite:** Junior standing or consent of instructor.

**Econ 381D ECONOMICS OF THE HEALTH CARE INDUSTRY (4-0) 4**

A survey of the issues in the field of health care economics. Health insurance, health care costs, and the financing and delivery of personal medical services are studied as is the role of government in the provision of health and medical care. This course is intended for students interested in issues concerning the health care industry. Prior knowledge of economics is not required.

**Prerequisite:** Junior standing or consent of instructor.

**Econ 382 FINANCIAL INSTITUTIONS (4-0) 4**

This course is the same as BA 382. See BA 382 for description. Credit cannot be awarded for both BA 382 and Econ 382.

**Econ 383D ECONOMICS OF THE MASS MEDIA (4-0) 4**

A course that explores the evolving market structure of the mass media industries. Topics include the globalization, integration, disintegration and consolidation of firms in the industry as well as public policy issues concerning the regulation and deregulation of the industry. This course is intended for students interested in the mass media industry. Prior knowledge of economics is not required.

**Prerequisite:** Junior standing or consent of instructor.

**Econ 407C EVOLUTION OF ECONOMIC THOUGHT (4-0) 4**

Traces the evolution of economic thought from the 1600s to the present. Each major school of thought, e.g., Mercantilist, Classical, Marxist, Keynesian, etc., will be analyzed to see how it met the conditions of its time, which concepts were only relevant to that period, and which have had enduring relevance.

**Prerequisites:** Junior standing, Econ 170 or above, SCS or consent of instructor.

**Econ 410D RADICAL ECONOMICS (4-0) 4**

Examines the determination of price, the allocation of resources, and social issues such as racism, sexism, poverty and class conflict within a framework that includes economic, social, political, cultural and institutional forces.

**Prerequisites:** Junior standing, SCS and consent of instructor.

**Econ 462 MICROECONOMICS THEORY (4-0) 4**

This course deals with the price system as it directs resources to more efficient use. It deals with pricing under the various degrees of competition and stresses demand analysis. The principles of production economics are explored. Fall term.

**Prerequisite:** Junior standing, Econ 266D and SCS.

**Econ 472 MACROECONOMICS THEORY (4-0) 4**

A course that examines the economy as a whole. Included are an analysis of national income accounting, consumption, investment, government spending, the level of employment, monetary theory, monetary and fiscal policy, and international economic policy. Winter term.

**Prerequisites:** Junior standing, Econ 266D and SCS.

**BA 499 INDEPENDENT STUDY 1-4**

Individual research is conducted under the supervision of a faculty member. Fall and winter terms.

**Prerequisite:** Approval of School of Business Administration Dean.

## Education

### Ed 307 INTRODUCTION, METHODS AND PRACTICUM IN EARLY CHILDHOOD (4-0) (4)

An overview of the field of early childhood education, historical influences and present trends in teaching methodologies. Designed to provide students with a working knowledge of early childhood curriculum (birth - age eight) with an emphasis on assessment, curriculum planning and teaching strategies. Practicum includes 25 hours of observations and aiding in preschool/kindergarten settings.

**Prerequisite:** Admission to the Teacher Education Program.

### Ed 308 INTRODUCTION TO ELEMENTARY TEACHING METHODS (3-0) 3

This course is designed to introduce students to elementary school teaching. In this course students will explore the historical, philosophical and sociological development of elementary education. As a background for the methods courses for specific curriculum areas, students will study the teaching methods and materials that are common to good elementary teaching and write behavioral objectives, plan lessons, construct units of instruction. In addition, students will be introduced to the philosophical base of the Teacher Education Department, the Reflective Practitioner model, which focuses on the teacher as a decision maker who reflects on the teaching and learning in the classroom and makes adjustments as indicated. This course must be taken during the first term of enrollment in the Elementary Teacher Certification Program. It may be taken concurrently with Ed 316 and with courses listed under "Auxiliary Requirements" for the Elementary Education Program. Those who have previously earned a degree may take this course concurrently with Ed 316, Ed 324, Ed 440 and courses listed under "Auxiliary Requirements" for the Elementary Education Program. Offered every term.

**Prerequisite:** Admission to the Teacher Education Program.

### Ed 309 ORIENTATION TO SECONDARY TEACHING (3-2) 4

A course designed to orient the prospective teacher to the teaching profession by exploring philosophical and historical issues and trends. Initial training in planning, microteaching and critical reflection/analysis takes place. Through collaborative and cooperative learning groups, students study the complex variables in the field of education. A field experience (25 hours) provides the basis for analysis of teaching. Offered every term.

**Prerequisite:** Admission to the Teacher Education Program.

### Ed 310 ADVANCED ELEMENTARY TEACHER AIDE PRACTICUM 1-3

A course that gives students additional practical experience in an elementary school setting. It features placement in local or nearby schools and the experience of a regular assignment in one teaching situation for the duration of the term - not to exceed 12 hours per week. Assignments are highly individualized and are monitored by public school personnel. Credit is based on the ratio of 1 credit per 35 contact hours. Fall and winter terms.

**Prerequisite:** Admission to the Teacher Education Program.

### Ed 311 ADVANCED SECONDARY TEACHER AIDE PRACTICUM 1-3

A course that gives students additional practical experience in a secondary school setting. It features placement in local or nearby schools and the experience of regular assignment in one teaching situation for the duration of the term - not to exceed 12 hours per week. Assignments are highly individualized and are monitored by public school personnel. Credit is based on the ratio of 1 credit per 35 contact hours. Fall and winter terms.

### Ed 312 MIDDLE SCHOOL TEACHER AIDE PRACTICUM 1-3

A course that gives students additional practical experience in a middle school setting. It features placement in local or nearby schools and the experience of regular assignment in one teaching situation for the duration of the term -- not to exceed 12 hours per week. Assignments are highly individualized and are monitored by public school personnel. Credit is based on the ratio of 1 credit per 35 contact hours. Fall and winter terms.

**Prerequisite:** Admission to Teacher Education Program.

### Ed 316 ELEMENTARY TEACHER AIDE PRACTICUM AND AV 2

A course that gives students practical field experience in an elementary school setting as well as instruction in group process, analysis of classroom observations, and basic audio-visual equipment and materials. It features placement in local or nearby schools and the experience of a regular assignment in one teaching situation for the duration of the term. Assignments are highly individualized and are monitored by public school personnel. There are weekly discussion seminars and audio-visual instructional sessions. A minimum of 50 contact hours in the school is required. Fall and Winter Terms.

**Prerequisite:** Admission to the Teacher Education Program.

### Ed 324 METHODS AND PRACTICUM IN TEACHING EXCEPTIONAL ELEMENTARY CHILDREN (4-0) 4

Recognizing that more than a knowledge base is required to effectively meet the needs of exceptional students, this course follows an integrated approach in which students will: 1) study the current literature and pedagogy which will permit them to be more sensitive to the needs of unique students, 2) be provided opportunities to develop preactive reflection skills as they perform cooperative learning assignments requiring individualization of instructional plans to meet the unique needs of students, and 3) be required to accumulate a minimum of 25 hours in a practicum experience with an exceptional student and to engage in post-active reflection. Offered every term.

**Prerequisites:** Admission to the Teacher Education Program and Ed 307 or Ed 308 or consent of instructor.

### Ed 325 EXCEPTIONAL STUDENTS: SECONDARY (3-2) 4

This course provides through lecture and student research (1) a knowledge base for identifying and serving exceptional learners including those specified by P.L. 94-142, gifted/ talented (P.L. 95-561), and "at risk" students; (2) experience in applying a range of special education techniques, ideally with their exceptional client with whom they must complete 35 field hours; (3) class discussion (following activities) for reflection. Offered every term.

**Prerequisites:** Admission to the Teacher Education Program and Ed 309 or consent of instructor.

### Ed 327 CHILDREN'S LITERATURE (3-0) 3

A study of all types of literature for children, development of criteria for evaluating books, and methods of creating in children a love of good books through a sound literature program in the elementary school. Fall and winter terms.

### Ed 330 HUMAN RELATIONS IN THE CLASSROOM (3-0) 3

Designed to increase teacher effectiveness in the realm of interpersonal relations and group dynamics; analysis of individual and group behavior in a classroom setting; theoretical concepts and skill training in classroom management. Offered on demand.

**Ed 331 THE SOUTHWESTERN MINORITY CHILD IN THE CLASSROOM (3-0) 3**

Course is designed to provide a systematic analysis of the forces which shape the behavior of the Native American, Hispanic and other minority children in an educational setting. Major emphasis will be placed on the development of an understanding of the differences in culture, value systems, attitudes and feelings of these minority students as they relate to the education system. The goal is a change in teacher behavior given adequate information to reflect upon education from the minority perspective. Fall term, summer on demand.

**Ed 332 MATERIALS AND METHODS OF BILINGUAL EDUCATION (3-0) 3**

This course covers specialized methodology and materials to empower teachers to serve the needs of linguistically different students in bilingual settings. Current methods for teaching cognitive areas in other languages and English as a second language are covered. Students make specialized materials to meet future classroom needs. Offered on demand.

**Prerequisite:** Ed 308 or consent of instructor.

**Ed 333 SOUTHWEST LANGUAGE IMMERSION FOR TEACHERS 1-3**

Language immersion is designed for prospective teachers who may encounter Native American languages and/or Southwest Spanish dialects in the school community. It provides the student with basic oral skills in the languages and the respective course is taught almost entirely in the target language. Students may enroll for one, two or all of the courses for a total of 3 credits. Offered on demand.

**Ed 334 METHODS OF TEACHING ENGLISH AS A SECOND LANGUAGE (3-0) 3**

This course is designed to provide specialized techniques and materials to appropriately teach students whose first language is not English, either in special programs or in the regular classroom. Diagnosis of need and reflective prescription are emphasized. Students make materials fitting their ESL teaching goals. Offered on demand.

**Prerequisite:** Engl 462A1 or permission of instructor.

**Ed 353 GROWTH AND DEVELOPMENT OF THE YOUNG CHILD (2-0) 2**

A critical study of the whole child (the physical, emotional, cognitive, and social development) conception through early childhood. A special emphasis is placed on analyzing developmental stages as they relate to children in the school setting. Offered on demand.

**Prerequisites:** Admission to the Teacher Education Program and should be taken concurrent with or prior to Ed 307.

**Ed 355 METHODS AND TECHNIQUES FOR TEACHING PRESCHOOL CHILDREN (3-0) 3**

Designed to acquaint the student with the preschool curricula and methods of teaching children ages 1-6. The student will have the opportunity to discover creative activities and their implementation in the classroom. An eclectic approach will be used. Offered on demand.

**Prerequisite:** Consent of instructor.

**Ed 357 LANGUAGE ARTS FOR THE YOUNG CHILD (2-0) 2**

A dynamic course offered to acquaint students with the latest theory and practices of emergent literacy programs. Emphasis is placed on a critical analysis of holistic language teaching strategies as well as traditional approaches; recent research in listening, speaking, reading and writing is considered. Students take an active role in the learning process through modeling various teaching strategies. Offered on demand.

**Prerequisites:** Admission to the Teacher Education Program and Ed 307, Ed 353.

**Ed 359 CREATIVE ARTS FOR THE YOUNG CHILD (2-0) 2**

Designed to acquaint the student with creative arts for young children with emphasis given to visual arts, creative movement, music and physical education. The process of creative arts and its relationship to the development of young children is considered as developmentally appropriate practices are stressed. Offered on demand.

**Prerequisites:** Admission to the Teacher Education Program and Ed 307.

**Ed 361 METHODS OF TEACHING READING AND READING DIAGNOSIS (4-0) 4**

This course provides information on a wide variety of reading approaches, materials, and underlying philosophies to empower teachers with choices in strategies to meet individual literacy needs. In addition, students become familiar with the scope and sequence of reading skills and diagnostic processes for reflective identification of need and individually appropriate prescription. A field experience of 5 hours is required. Many activities are conducted as simulations. Fall and winter terms, summer on demand.

**Prerequisites:** Admission to the Teacher Education Program and Ed 307 or Ed 308.

**Ed 362 TEACHING READING IN THE CONTENT AREAS: SECONDARY (3-0) 3**

Using a metacognitive approach, this course teaches the prospective teacher how to incorporate the teaching of reading skills into his/her respective content area. A synthesis of research on vocabulary development and comprehension strategies is presented for infusion into unit and lesson plans. A directed reading activity will be developed and implemented by each student for discussion and analysis. Offered every term.

**Prerequisites:** Admission to the Teacher Education Program and Ed 309.

**Ed 365 EDUCATIONAL MEASUREMENT (3-0) 3**

A presentation of the applications of measurement and their contributions to and usefulness in the education program. Offered on demand.

**Prerequisite:** Psych 218 or consent of instructor.

**Ed 387 PRACTICUM IN EXTRACURRICULAR ACTIVITIES 1-3**

Students will be assigned to a supervisor with responsibility for an extracurricular activity. Examples include, but are not limited to, athletics, intramurals, drama, musicals and speech teams. The student receives 1 credit for every 25 hours of actual experience. In addition, a paper is required. Placement is contingent upon availability of assignment. A maximum of 3 credits is permitted. Fall and winter terms.

**Prerequisite:** Consent of instructor.

**Ed 410 MATH IN THE ELEMENTARY SCHOOL (2-0) 2**

This course focuses on the methods of teaching mathematics in the elementary school with emphasis on providing a foundation in math concepts and application of those concepts in practical situations. Students will plan and teach lessons in a local elementary school and reflect on their lessons in order to identify strengths and weaknesses. There will be a field experience of approximately 12½ hours. Fall and winter terms.

**Prerequisites:** Admission to the Teacher Education Program, Ed 308 and grade C or better in Math 215B.

**Ed 412 SCIENCE HEALTH AND EVALUATION  
IN THE ELEMENTARY SCHOOL**

(4-0) 4

A three part course in which students: 1) understand the need to teach elementary school science and health, gain confidence that they can change the status quo of current teaching practices and study accepted pedagogy, 2) engage in reflection in action, becoming preactive as they plan lessons and engage in structured planning interviews, interactive as they teach the lessons in elementary classrooms, and post-active as they engage in evaluative reflection of their teaching, and 3) acquire proficiency in developing procedures for assessing student learning and in interpreting and performing basic statistical procedures commonly utilized in reporting data about children. There will be a field experience of a minimum of 12½ hours. Fall and Winter terms.

**Prerequisites:** Admission to the Teacher Education Program, Ed 308 and at least one natural science class and its associated lab.

**Ed 415 METHODS OF TEACHING SOCIAL STUDIES**

(2-0) 2

The class is designed to give the elementary education certification student an overview of the methods, materials functions, and purposes of Social Studies curricula in contemporary elementary schools. The class activities and instructional processes are based on the belief that Social Studies learning is an active and reflective process gained through experience. Fall and winter terms.

**Prerequisites:** Admission to the Teacher Education Program, Ed 308 and completion of 6 credits of social science.

**Ed 420 INSTRUCTIONAL MEDIA**

(3-0) 3

A study of the importance of instructional media in the learning process; advanced principles underlying the selection and use of materials for instructional purposes; exploration of visual and auditory aids available to teachers in the elementary and secondary schools; and demonstration and achievement of skills in the use of instructional media in teaching. Offered on demand.

**Ed 433 LANGUAGE ARTS IN THE  
ELEMENTARY SCHOOL**

(2-0) 2

A critical analysis of the content areas in the elementary language arts program and an in-depth study of both traditional and whole language methods for empowering children with literacy skills. Areas of emphasis include creative writing, listening, processes in grammar and spelling, poetry, and drama. Students are given opportunities to model multiple teaching strategies. Fall and winter terms.

**Prerequisites:** Admission to the Teacher Education Program and Ed 308.

**Ed 440 BEHAVIOR/CLASSROOM MANAGEMENT**

(3-0) 3

The purpose of this class is to acquaint the prospective elementary teacher with the relationships among classroom management, behavior management and effective teaching. Focus of study will be on general principles of classroom and behavior management, specific behavior management systems and theories and the ability to reflect on situations and children in order to make appropriate decisions about classroom and behavior management. Offered every term.

**Prerequisites:** Admission to the Teacher Education Program and Ed 308, or consent of instructor.

**Ed 441 CLASSROOM MANAGEMENT**

(3-0) 3

Overview of alternative techniques for classroom management and discipline. Role-playing and simulations provide the avenue for analysis and critique whereby the preservice teacher begins to adapt specific strategies to his/her teaching style. Topics include behavior modification, assertive discipline, reality therapy, and legal issues/implications of classroom management. Offered every term.

**Prerequisites:** Admission to the Teacher Education Program and Ed 309, or permission of instructor.

**Ed 451 PRESCHOOL TEACHING PRACTICUM AND  
MULTICULTURAL SEMINAR**

(2-2) 3

A minimum of 30 hours in a teaching role is spent in the preschool setting coupled with an on-campus seminar stressing multicultural education. Attention is given to developing the knowledge and skills needed to plan multicultural curriculums for young children. Offered on demand.

**Prerequisites:** Admission to the Teacher Education Program and Ed 307, Ed 359 and consent of instructor.

**Ed 453 COGNITIVE SKILLS**

(3-0) 3

A critical evaluation of teaching strategies for integrating mathematics, social studies and science in early childhood classrooms. Learning experiences and materials are designed to develop sensory awareness as Piagetian theory of cognitive development is analyzed. Students become familiar with activities such as cooperative learning, thematic unit planning, direct teaching, Piaget's teaching-learning cycle, and the integrated teaching approach. Offered on demand.

**Prerequisites:** Admission to the Teacher Education Program and Ed 307, Ed 316, Ed 353.

**Ed 455 MODERN TRENDS IN EARLY  
CHILDHOOD EDUCATION**

(3-0) 3

Emphasis is given to recent developments which have influenced early childhood education programs such as Head Start, day care and federal legislation. A consideration of appropriate curriculum materials is also included. Offered on demand.

**Prerequisite:** Consent of instructor.

**Ed 456 EARLY CHILDHOOD ADMINISTRATION/  
PARENT, COMMUNITY RELATIONS**

(3-0) 3

An analysis and evaluation of current educational programs for young children as well as emphasis on development of skills to develop programs commensurate with the needs of children. (Curriculum, staffing, nutrition, administration and more.) Also explores important and complex roles of parents in the educational development of young children. Assists prospective teachers in developing skills to aid parents in guiding their children. Community resources and services are included. Offered on demand.

**Prerequisites:** Admission to the Teacher Education Program and should be taken the semester prior to student teaching or consent of instructor.

**Ed 461 DIAGNOSTIC AND REMEDIAL READING**

(3-0) 3

A study of the diagnosis and teaching of children with reading difficulties with emphasis on the development of appropriate skills through laboratory experience. Offered on demand.

**Prerequisites:** Admission to the Teacher Education Program and Ed 308, or consent of instructor.

**Ed 467 SECONDARY METHODS**

(2-2) 3

A course designed to give the prospective teacher a repertoire of methods to use in the secondary classroom. The knowledge base for a variety of teaching skills includes (1) curriculum planning for course outlines, unit and daily plans; (2) using resources such as school texts, curriculum guides, instructional software and instructional media; and (3) applying a variety of teaching strategies. The emphasis is on the teacher learning to reflectively choose the most appropriate strategy for a desired outcome. Includes a 40-hour practicum experience with a professional teacher in the student's subject area to provide opportunities to apply learning in an authentic environment. Offered every term.

**Prerequisites:** Admission to the Teacher Education Program and Ed 309.

**Ed 470 MIDDLE SCHOOL HISTORY AND PHILOSOPHY (2-0) 2**

This course will provide the prospective middle school teacher with knowledge about the philosophy, historical development and characteristics of the middle school. Offered on demand.

**Prerequisites:** Admission to the Teacher Education program, Ed 308/309, and Middle School Advisor approval.

**Ed 471 MIDDLE SCHOOL ORGANIZATION, METHODS AND MATERIALS (4-0) 4**

This course will provide the prospective middle school teacher with knowledge concerning various organizational schemes, methods, and materials found at the middle school level. Offered on demand.

**Prerequisites:** Admission to the Teacher Education program, Ed 308 or 309, and Middle School Advisor approval.

**Ed 472 COMMUNICATION SKILLS FOR YOUNG ADOLESCENTS (3-0) 3**

This course will provide the prospective middle school teacher with knowledge concerning the development of oral and written communication skills at the middle school level.

**Prerequisites:** Admission to the Teacher Education program, Ed 308/309, and Middle School Advisor approval.

**Ed 473 PSYCHOLOGY OF YOUNG ADOLESCENTS (3-0) 3**

The course will provide the prospective middle school teacher with knowledge about the characteristics and special needs of young adolescents.

**Prerequisites:** Admission to the Teacher Education program, Ed 308/309, and Middle School Advisor approval.

**Ed 487 ADVANCED PRACTICUM IN EXTRACURRICULAR ACTIVITIES 1-3**

Students will be assigned to a supervisor of an extracurricular activity. The student receives 1 credit for every 35 hours of actual experience. In addition, a research paper is required. Placement is contingent upon availability of assignment. A maximum of 3 credits is permitted. Fall and winter terms.

**Prerequisites:** Ed 387 and consent of instructor.

**Ed 488 SEMINAR AND PRACTICUM IN COLLEGE TEACHING (1-2) 2**

A course designed for students in all academic disciplines who are interested in gaining knowledge and experience in teaching at the college level, especially students planning to attend graduate school with a teaching assistantship. The seminar portion of the course includes discussion of such topics as: learner/student characteristics, characteristics of good teaching, course outline or syllabus, lesson planning, goals and objectives, teaching techniques and methods, instructional aids, testing and grading. The practicum portion of the course consists of a mentor relationship with a Fort Lewis College faculty member in which the student arranges to assist the instructor with a course in his/her academic discipline. The student spends a minimum of 40 hours during the term working with the instructor in all aspects of that course. Fall and winter terms. Repeatable once with consent of instructor.

**Ed 490 ADVANCED TOPICS IN EDUCATION 1-3**

Designed to accommodate the needs or requests of school systems, teachers or regular Fort Lewis College students who seek credit for topics of immediate concern. Course topic will be one not normally or regularly available through another course offering. Offered on demand.

**Ed 491 LAB EXPERIENCE AND SEMINAR IN THE PRESCHOOL/KINDERGARTEN SETTING (2-5) 5**

Includes observation, participation, teaching and allied activities under the direction of a selected, regular teacher in a preschool/kindergarten school setting in consultation with college consultants. Periodic seminars are offered.

**Ed 492 LAB EXPERIENCE AND SEMINAR IN THE ELEMENTARY PRIMARY (1-2) SETTING (3-10) 10**

Includes observation, participation, teaching and allied activities under the direction of a selected, regular teacher in an elementary school in consultation with college consultants. Periodic seminars are offered.

**Prerequisite:** Admission to student teaching.

**Ed 494 LABORATORY EXPERIENCE AND SEMINAR IN THE ELEMENTARY SCHOOL 5-15**

Includes observation, participation, teaching and allied activities under the direction of a selected regular teacher in an elementary school in consultation with college consultants. Periodic seminars are offered. Fall and winter terms.

**Prerequisite:** Admission to student teaching.

**Ed 495 LABORATORY EXPERIENCE AND SEMINAR IN THE SECONDARY SCHOOL 5-15**

Includes observation, participation, teaching and allied activities under the direction of a selected regular teacher in a secondary school in consultation with college consultants. Periodic seminars are offered. Offered every term.

**Prerequisite:** Admission to student teaching.

**Ed 496 SENIOR SEMINAR (2-0) 2**

The class will include information on health care and health education in the public schools, child abuse, school and community relationships, classroom management, professional organizations and negotiations, current issues, and information pertaining to placement files, job applications, interview techniques and teacher certification. Fall and winter terms.

**Prerequisites:** Senior standing, and to be taken the trimester immediately prior to student teaching.

**Ed 497 LABORATORY EXPERIENCE AND SEMINAR IN THE MIDDLE SCHOOL 1-3**

Includes observation, participation, teaching and allied activities under the direction of a selected regular teacher in a middle school in consultation with college consultants. Periodic seminars are offered. Offered every term.

**Prerequisite:** Admission to student teaching.

**Ed 499 INDEPENDENT STUDY 1-3**

Individual research is conducted under the supervision of a faculty member. Offered every term.

**Prerequisites:** Approval of instructor and department chair after submittal of formal request form available from the Teacher Education Department.

## Engineering

**Engr 103 COMPUTER AIDED DRAFTING (3-0) 3**

A basic course in engineering graphics, including geometric constructions, orthographic projection, sectional views, dimensioning, layout, working drawings and elementary descriptive geometry. The primary drafting tool for this course will be the computer.

**Engr 104B COMPUTER PROGRAMMING FOR SCIENTISTS AND ENGINEERS (3-0) 3**

Introduction to programming using the FORTRAN language, problem-solving methods, algorithm development, program design, debugging, documentation and computer solution to several mathematical/engineering problems. Same as CSIS 150B.

**Prerequisite:** Math 111B or equivalent.

**Engr 105 ENGINEERING PRINCIPLES (3-0) 3**

Solution of fundamental engineering and design problems using digital computation and graphical techniques. Topics include graphical and numerical mathematics, engineering statistics and computer graphics.

**Prerequisites:** Math 221B and Engr 104B.

**Engr 201 ELECTRIC NETWORKS I (4-0) 4**

An introduction to engineering circuit analysis. Topics include the study of linear circuit elements (resistors, capacitors, inductors, operational amplifiers), linear circuits, Kirchoff's laws, methods of analysis, RL, RC, and RLC circuits, phasors, sinusoidal steady state response, average value RMS values and power in AC circuits.

**Prerequisite:** Math 222.

**Engr 202 ELECTRIC NETWORKS II (3-2) 4**

Topics include polyphase circuits, complex frequency and frequency response of linear networks, magnetically coupled circuits, two-port networks, Fourier analysis, Laplace transform techniques, operational amplifiers.

**Prerequisite:** Engr 201.

**Engr 205 SURVEYING I (2-4) 4**

Plane surveying methods in engineering; taping, leveling, traversing, topographic mapping, associate computation. Use and care of instruments. Sources and evaluation of errors.

**Prerequisite:** Math 111B or equivalent.

**Engr 217 STATICS (3-0) 3**

Vectors, forces and moments. Static equilibrium of particles and rigid bodies. Trusses, frames and machines. Internal forces, shear and bending moment diagrams. Centroids, moment of inertia, friction and virtual work.

**Prerequisite:** Math 221B.

**Engr 221 DYNAMICS (3-0) 3**

Kinematics and kinetics of particles and rigid bodies. Includes the applications of Newton's laws, work-energy, and impulse-momentum, and their applications to determine the motion of rigid bodies in two and three dimensions.

**Prerequisite:** Engr 217.

**Engr 238 COMPUTER LOGIC DESIGN (3-3) 4**

Introduction to the building blocks of digital computer design. Application of Boolean algebra to the synthesis of logic circuits from logic elements. The design and implementation of combinational and sequential circuits. Understanding of hardware operations in a simple computer in terms of register transfer language (RTL). Winter term of odd-numbered years.

**Prerequisites:** Engr 104B or equivalent math and programming experience.

**Engr 270 ENGINEERING THERMODYNAMICS (3-0) 3**

Fundamental concepts and basic theory of classical thermodynamics including study of the first and second laws of thermodynamics, properties of pure substances, thermodynamic states and functions, applications to engineering.

**Prerequisites:** Phys 262B, Engr 221 or concurrent enrollment.

**Engr 305 SURVEYING II (2-4) 4**

Topics include the Public Land Survey system, coordinate systems and control surveys, photogrammetry, astronomic observations and route surveys.

**Prerequisites:** Engr 205 and Math 221B.

**Engr 317 MECHANICS OF MATERIALS (3-0) 3**

Stresses and deformations in structural members and machine elements, combined stresses and stress transformations. Deflection by integration, superpositions and moment area method. Strain energy concept, impact loading and column design.

**Prerequisite:** Engr 217.

**Engr 321 FLUID MECHANICS (3-0) 3**

Fluid properties, statics, kinematics, and kinetics of fluids including gravitational and viscous effects. Differential analysis of fluid motion. Incompressible inviscid flow, dimensional analysis and similitude. Flow measurements, boundary layers, flow about immersed bodies and flow in open channels.

**Prerequisite:** Engr 221.

**Engr 499 INDEPENDENT STUDY 1-3**

Individual research is conducted under the supervision of a faculty member. Offered on demand.

## English

All courses with an A or E suffix fulfill Group A (or E) distribution requirements. A and E courses are open to non-majors. English majors may take either one A or one E course for general distribution requirements, but not both.

**Engl 116A1 INTRODUCTION TO MASS COMMUNICATIONS (3-0) 3**

An examination of the development, organization and functions of the print and electronic media. Fall and winter terms.

**Engl 122A1 EUROPEAN LITERATURE TO 1400 (3-0) 3**

A study of representative major works by European writers to the Renaissance, including selections from the Bible and from ancient Greek, Roman and Medieval writers. Fall term.

**Engl 123A1 EUROPEAN LITERATURE SINCE 1400 (3-0) 3**

A study of representative works by European writers since the Renaissance. Winter term.

**Engl 125A1 THE BIBLE AS LITERATURE (3-0) 3**

A study of the Hebrew Bible and the New Testament as literature, together with their historical, mythological and archaeological backgrounds. Fall term.

**Engl 173E 20TH CENTURY ASIAN AND AFRICAN LITERATURE (3-0) 3**

A study of selected 20th century novels in translation from Asia and Africa. Designed to give an appreciation and awareness of cultures other than EuroAmerican. Fall Term.

**Engl 174A1 AFRICAN-AMERICAN LITERATURE (3-0) 3**

A study of selected 19th and 20th century works by African-American writers. Winter term.

**Engl 175A1 WOMEN'S LITERATURE (3-0) 3**

A study of literature by and about women. Winter term.

- Engl 215 NEWS MEDIA WRITING (3-0) 3**  
 This course will cover newswriting and reporting for both print and electronic media with emphasis on newsgathering, interviewing techniques and news story types. Fall and winter terms.  
**Prerequisites:** FCS or consent of instructor.
- Engl 221A1 CLASSICAL LITERATURE (3-0) 3**  
 A study of ancient Greek and Roman literature. Winter term.
- Engl 231A1 BRITISH LITERATURE TO 1800 (3-0) 3**  
 An overview of major British writings from the beginnings to 1800, with emphasis on poetry and non-fictional prose. Fall term.
- Engl 232A1 BRITISH LITERATURE SINCE 1800 (3-0) 3**  
 An overview of major British writings from 1800 to the present, with emphasis on poetry and non-fictional prose. Winter term.
- Engl 245A1 AMERICAN LITERATURE TO 1865 (3-0) 3**  
 An overview of major American writings from its beginnings to 1865. Fall term.
- Engl 246A1 AMERICAN LITERATURE SINCE 1865 (3-0) 3**  
 An overview of major American writings from 1865 to the present. Winter term.
- Engl 250 PRACTICUM -- NEWSPAPER 1-6**  
 Directed experience for lower-division students in newspaper work on the *Independent* or other newspapers. Credit is based on the ratio of 30 hours of work for each credit earned. Students will be directed by a professor who will assign, monitor and evaluate their work. Engl 250 and 350 are each repeatable but the maximum for all practical courses is 24 credits. Fall and winter terms.  
**Prerequisites:** FCS and consent of instructor.
- Engl 251 PRACTICUM -- RADIO 1-6**  
 Directed experience for lower-division students in radio broadcasting on KDUR or other radio stations. Credit is based on the ratio of 30 hours of work for each credit earned. Students will be directed by a professor who will assign, monitor and evaluate their work. Engl 251 and 351 are each repeatable but the maximum for all practical courses is 24 credits. Fall and winter terms.  
**Prerequisites:** FCS and consent of instructor.
- Engl 252 PRACTICUM -- TV 1-4**  
 Directed experience for lower-division students working at a TV station or participating in FLC News. Credit is based on the ratio of 30 hours of work for each credit earned. Students will be directed by a professor who will assign, monitor and evaluate their work. Engl 252 and 352 are each repeatable but the maximum for all practical courses is 24 credits. Fall and winter terms.  
**Prerequisites:** FCS and consent of instructor.
- Engl 265A1 SEMANTICS (3-0) 3**  
 A study of the meanings of language, emphasizing its social and psychological uses and abuses. Fall and winter terms.
- Engl 272A1 FANTASY AND SCIENCE FICTION (3-0) 3**  
 A study of fantasy and science fiction from the beginnings to the present day. Winter term.
- Engl 280A1 LITERATURE OF THE SOUTHWEST (3-0) 3**  
 The American Southwest seen through fiction, poetry, biography, and other works by Anglos, Indians and Spanish Americans. Fall term.
- Engl 304 TELEVISION PRODUCTION (3-0) 3**  
 An introduction to small-format video production. Winter term.  
**Prerequisite:** Consent of instructor.
- Engl 306 RADIO BROADCASTING (3-0) 3**  
 An introduction to radio broadcasting through its history, economics, organization and programming, with considerable emphasis on production. Winter term.  
**Prerequisite:** Consent of instructor.
- Engl 315 MEDIA WRITING: TOPICS (3-0) 3**  
 A course in advanced writing for media. Specific course content will vary. Students may repeat the course for credit provided that the subject is different on each occasion.  
 Fall and winter terms.  
**Prerequisite:** SCS or consent of instructor.
- Engl 317 MASS COMMUNICATIONS: TOPICS (3-0) 3**  
 This course will be an in-depth study of a selected topic in the mass media. Students may repeat the course for credit providing that the subject is different on each occasion. Fall and winter terms.  
**Prerequisite:** SCS or consent of instructor.
- Engl 321A1 THE NOVEL TO 1870 (3-0) 3**  
 A survey of the development of the European, British and American novel from its beginnings through the Age of Dickens. Fall term.
- Engl 322A1 THE NOVEL SINCE 1870 (3-0) 3**  
 A survey of the development of the European, British, and American novel from the Age of Dickens to the present. Winter term.
- Engl 336 BRITISH RENAISSANCE LITERATURE: TOPICS (3-0) 3**  
 An in-depth study of selected British writings from about 1500 to 1660. The specific course content will vary. Students may repeat the course for credit, provided the subject is different on each occasion. Fall term.  
**Prerequisites:** Engl 231A1 and 232A1, or both Engl 245A1 and 246A1.
- Engl 337 BRITISH NEO-CLASSICAL LITERATURE: TOPICS (3-0) 3**  
 An in-depth study of selected British writings from about 1600 to 1799. The specific course content will vary. Students may repeat the course for credit, provided the subject is different on each occasion. Winter term.  
**Prerequisites:** Engl 231A1 and 232A1 or Engl 245A1 and 246A1.
- Engl 338 BRITISH ROMANTIC LITERATURE: TOPICS (3-0) 3**  
 An in-depth study of selected British writings from about 1798 to 1832. The specific course content will vary. Students may repeat the course for credit, provided the subject is different on each occasion. Winter term.  
**Prerequisites:** Engl 231A1 and 232A1 or both Engl 245A1 and 246A1.
- Engl 339 BRITISH VICTORIAN LITERATURE: TOPICS (3-0) 3**  
 An in-depth study of selected British writings from about 1832 to 1901. The specific course content will vary. Students may repeat the course for credit, provided the subject is different on each occasion. Fall term.  
**Prerequisites:** Engl 231A1 and 232A1, or both Engl 245A1 and 246A1.
- Engl 345 AMERICAN LITERATURE: TOPICS I (3-0) 3**  
 An in-depth study of selected American writings from the beginnings to about 1865. The specific course content will vary. Students may repeat the course for credit, provided that the subject is different on each occasion. Fall term.  
**Prerequisites:** Engl 231A1 and 232A1, or both Engl 245A1 and 246A1.



**Engl 346 AMERICAN LITERATURE: TOPICS II (3-0) 3**

An in-depth study of selected American writings from 1865 to the present. The specific course content will vary. Students may repeat the course for credit, provided that the subject is different on each occasion. Winter term.

**Prerequisites:** Engl 231A1 and 232A1, or both Engl 245A1 and 246A1.

**Engl 350 PRACTICUM – NEWSPAPER 1-6**

Directed experience for upper-division students in newspaper work on the *Independent* or other newspapers. Credit is based on the ratio of 30 hours of work for each credit earned. Students will be directed by a professor who will assign, monitor and evaluate their work. Engl 250 and 350 are each repeatable but the maximum for all practical courses is 24 credits. Fall and winter terms.

**Prerequisites:** Engl 215, 250 and consent of instructor.

**Engl 351 PRACTICUM – RADIO 1-6**

Directed experience for upper-division students in radio broadcasting on KDJR or other radio stations. Credit is based on the ratio of 30 hours of work for each credit earned. Students will be directed by a professor who will assign, monitor and evaluate their work. Engl 251 and 351 are each repeatable but the maximum for all practical courses is 24 credits. Fall and winter terms.

**Prerequisites:** Engl 215, 251 and consent of instructor.

**Engl 352 PRACTICUM – TV 1-4**

Directed experience for upper-division students working at a TV station or participating in FLC News. Credit is based on the ratio of 30 hours of work for each credit earned. Students will be directed by a professor who will assign, monitor and evaluate their work. Engl 252 and 352 are each repeatable but the maximum for all practical courses is 24 credits. Fall and winter terms.

**Prerequisites:** Engl 215, 252, 304 and consent of instructor.

**Engl 363 ADVANCED COMPOSITION (4-0) 4**

An advanced writing course with emphasis on the common forms of writing used by educated adults. Fall and winter terms.

**Prerequisite:** SCS.

**Engl 370A1 HISTORY OF THE FILM (2-2) 3**

A study of the film as an art form, with emphasis on American and European films. Students view at least one major film each week. Fall and winter terms.

**Engl 378A1 LITERATURE FOR THE ADOLESCENT (3-0) 3**

This course is a study of all types of literature for adolescents and young adults. Evaluative criteria for book selection will be considered. Emphasis on minority and ethnic literature. Fall term.

**Engl 380E NATIVE AMERICAN LITERATURE (3-0) 3**

A study of traditional and contemporary American Indian expression of thought as seen through oration, tales and legends, chants and songs, poetry, drama and the novel. Winter term.

**Engl 385E CONTEMPORARY NATIVE AMERICAN NOVELISTS (3-0) 3**

This course will study the contribution of Native American writers to contemporary American literature since 1960. Fall term.

**Prerequisite:** SCS.

**Engl 386E NATIVE AMERICAN AUTOBIOGRAPHY (3-0) 3**

This course has as its objective the study of the personal and historical experiences of Native American people through the examination of autobiographies. Winter term.

**Prerequisite:** SCS.

**Engl 416A1 MEDIA THEORY AND CRITICISM (3-0) 3**

This course is designed to acquaint students with the major contemporary theories of mass communication; students will also gain acquaintance with critical theory and texts, including semiotics, genre criticism and ideological criticism. Fall and winter terms.

**Engl 421 TOPICS IN THE NOVEL (3-0) 3**

An in-depth study of the novel as genre. The specific course content will vary. Students may repeat the course for credit, provided the subject is different on each occasion. Winter term.

**Prerequisites:** Engl 321A1 or 322A1 or consent of instructor.

**Engl 422 TOPICS IN POETRY (3-0) 3**

An in-depth study of poetry as genre. The specific course content will vary. Students may repeat the course for credit, provided the subject is different on each occasion. Fall term, alternate years.

**Prerequisite:** Engl 363 or consent of instructor.

**Engl 430 MEDIEVAL LITERATURE AND CHAUCER: TOPICS (3-0) 3**

An in-depth study of selected British writings from the beginnings to about 1500. The specific course content will vary. Students may repeat the course for credit, provided the subject is different on each occasion. Fall term, alternate years.

**Prerequisites:** Engl 231A1, 232A1, or consent of instructor.

**Engl 432A1 SHAKESPEARE (3-0) 3**

A study of Shakespearean drama. Fall and winter terms.

**Prerequisites:** Engl 231A1, 232A1 or consent of instructor.

**Engl 450 INTERNSHIP IN NEWSPAPER 1-6**

Directed experience working on the *Independent* or other newspapers, performing professional duties and responsibilities. Specific requirements will vary but include, as a minimum, keeping a detailed journal and writing a 15-page paper analyzing the organization and what the student learned. A minimum of 100 hours of directed experience must be documented, but interns usually work to complete tasks. Credit and evaluation are normally based on achieving written goals (in the case of the *Independent*, established in consultation with the faculty adviser, the faculty supervisor and the Publications Board), the journal and the paper.

**Prerequisites:** 80 hours toward graduation, appropriate communications coursework, a competitive portfolio, consent of instructor, and completed arrangements for the internship.



**Engl 451 INTERNSHIP IN RADIO 1-6**

Directed experience working at KDUR or other radio stations, performing professional duties and responsibilities. Specific requirements will vary but include, as a minimum, keeping a detailed journal and writing a 15-page paper analyzing the organization and what the student learned. A minimum of 100 hours of directed experience must be documented, but interns usually work to complete tasks. Credit and evaluation are normally based on achieving written goals (in the case of KDUR, established in consultation with the Station Manager, the faculty supervisor and the Radio Board), the journal and the paper.

**Prerequisites:** 80 hours of work toward graduation, substantial communications coursework, competitive radio portfolio, consent of instructor, and completed arrangements for the internship.

**Engl 452 INTERNSHIP IN TELEVISION 1-6**

Directed experience working in television, performing professional duties and responsibilities. Specific requirements will vary but include, as a minimum, keeping a detailed journal and writing a 15-page paper analyzing the organization and what the student learned. A minimum of 100 hours of directed experience must be documented, but interns usually work to complete tasks. Credit and evaluation are usually based on achieving the goals in a written contract signed by the student, the supervisor, and the practicum instructor, on the journal, and on the analytic paper.

**Prerequisites:** 80 hours of work toward graduation, substantial communications coursework, consent of instructor and completed internship arrangements.

**Engl 453 INTERNSHIP IN COMMUNICATIONS 1-6**

Directed experience in media writing/production which does not directly involve newspaper, radio or television. The internship will be described in ways appropriate to the work, such as "Public Relations," "Advertising," "Layout and Design," "Magazine," "Newsletter," "Video Production." Credit and evaluation are based on achieving the goals in a written contract signed by the student, the supervisor, and the practicum instructor, on a journal documenting at least 100 hours of directed experience, and on a 15-page analytic paper.

**Prerequisites:** Engl 215, a minimum of six credits of appropriate upper division practicum courses, a high-quality portfolio, and consent of both the on-site and the faculty supervisor prior to enrollment.

**Engl 461A1 HISTORY OF THE ENGLISH LANGUAGE (3-0) 3**

A study of the development of English from Indo-European sources to the present. Winter term.

**Engl 462A1 LINGUISTICS (3-0) 3**

A scientific analysis of language, examining the nature and development of the unique human facility with language, a facility which depends on employing and combining a limited number of sounds in predictable ways to create a limitless number of words and sentences. While the focus of the course will be on English, those features and principles shared by all languages will be emphasized. Fall and winter terms.

**Engl 463 LINGUISTIC ANALYSIS (1-0) 1**

A course in sentence analysis, applying principles learned in English Linguistics. Must be taken concurrently with Engl 462A1. Fall and winter terms.

**Engl 464A1 CREATIVE WRITING (4-0) 4**

An advanced writing course with concentrations in poetry and short fiction. Students may repeat the course for credit, but may apply it only once towards the major. Fall and winter terms.

**Prerequisites:** Engl 265A1, 315 or 363.

**Engl 475 MODERN LITERATURE: TOPICS (3-0) 3**

An in-depth study of selected European, British or American writings from about 1900 to 1945. The specific course content may vary. Students may repeat the course for credit, provided the subject is different on each occasion. Fall term.

**Engl 476 CONTEMPORARY LITERATURE: TOPICS (3-0) 3**

An in-depth study of selected European, British or American writings from about 1945 to the present. The specific course content will vary. Students may repeat the course for credit, provided the subject is different on each occasion. Winter term.

**Engl 483 MATERIALS OF INSTRUCTION IN TEACHING HIGH SCHOOL ENGLISH (3-0) 3**

Introduces and expands on materials for teaching literature, language and composition in the secondary schools. Includes principles for the selection of literature for high school pupils and the relationship of language and composition to the total secondary program. Teaching techniques are a point of emphasis. To be taken in the fall trimester, prior to student teaching.

**Prerequisite:** Consent of instructor or completion of 90 credits.

**Engl 496 SENIOR SEMINAR (2-0) 2; OR (3-0) 3**

Advanced study and research in selected topics. Fall and winter terms.

**Prerequisites:** At least two overview courses and at least two topics courses or consent of instructor.

**Engl 499 INDEPENDENT STUDY 1-3**

Individual research is conducted under the supervision of a faculty member. Fall and winter terms.

**Prerequisite:** Consent of instructor.

**Environmental Studies**

(See Page 73.)

**Exercise Science****PE ACT PHYSICAL ACTIVITY (0-2) 1**

Seasonal physical activities during each trimester for men or women. Up to a maximum of 6 credits can be counted toward graduation. No physical activity at the same level can be repeated for credit. Offered each term.

**ES 130 PROFESSIONAL METHODS/SKILLS (Softball/Volleyball) (0-2) 1**

This course introduces the student to the method of teaching softball and volleyball; in addition, assists student in the development of his/her skill in those activities. Fall and winter terms.

**ES 131 PROFESSIONAL METHODS/SKILLS (Soccer/Basketball) (0-2) 1**

This course introduces the student to the methods of teaching soccer and basketball; in addition, assists student in the development of his/her skills in those activities. Fall and winter terms.

**ES 132 PROFESSIONAL METHODS/SKILLS (Tumbling and Stunts/Fundamental Motor Skills) (0-2) 1**

This course introduces the student to the method of teaching tumbling/stunts and fundamental motor skills; in addition, assists students in the development of his/her skills in those activities. Fall and winter terms.

**ES 133 PROFESSIONAL METHODS/SKILLS** (0-2) 1  
(Badminton/Tennis)

This course introduces the student to the method of teaching badminton and tennis; in addition, assists student in the development of his/her skill in those activities. Fall and winter terms.

**ES 134 PROFESSIONAL METHODS/SKILLS** (0-2) 1  
(Dance/Aquatics)

This course introduces the student to the method of teaching dance and aquatics; in addition, assists student in the development of his/her skills in those activities. Fall and winter terms.

**ES 135 PROFESSIONAL METHODS/SKILLS** (0-2) 1  
(Fitness/Outdoor Leisure Pursuits)

This course introduces the student to the method of teaching fitness and outdoor leisure pursuits; in addition, assists student in the development of his/her skills in those activities. Fall and winter terms.

**ES 150 SOCIOCULTURAL FOUNDATIONS** (3-0) 3  
OF HUMAN MOVEMENT

An introductory study of the historical, cultural, sociological and philosophical aspects of exercise, sport and human movement. Fall and winter terms.

**ES 165 STANDARD FIRST AID/CPR** (2-0) 2

Study and practice of Red Cross first aid procedures in handling common injuries, accidents and medical emergencies. Fall and winter terms.

**ES 185 INTRODUCTION TO COACHING - (ACEP)** (2-0) 2

This introductory course is the American Coaching Effectiveness Program's Sport Science Coaching Course. It covers the areas of Coaching Philosophy, Sport Psychology, Sport Pedagogy, Sport Physiology, Sport Management and Sport Specific Planning. The course covers what is important for a coach to know and presents the material in a manner that is of practical value to a coach. A series of videotapes helps create an atmosphere of discussion which gives students practical ways of handling coach/player relationships and situations. The student who passes the ACEP exam will receive ACEP certification which is rapidly becoming the required coaching certification.

**ES 186 PHYSICAL CONDITIONING** (0-2) 1

This course introduces the student to method and techniques in the area of Physical Conditioning. It will emphasize three major areas: power development, speed enhancement and aerobic/anaerobic conditioning. Emphasis will be placed on the student's ability to instruct in these three areas.

**ES 224 BASIC PRINCIPLES OF ATHLETIC TRAINING** (3-0) 3

An introduction to the field of athletic training. Professional opportunities in this field are discussed. Students will develop a basic understanding of athletic injuries as they relate to prevention, nature and causes. Fall term.

**Prerequisite:** Bio 121B or consent of instructor.

**ES 225 TECHNIQUES OF COACHING FOOTBALL** (2-0) 2

Classroom instruction directed toward the various phases of American football; history, defensive theory, strategy, personnel, offensive theory, the kicking game, practice organization, relationship and influence of teachers, parents, booster clubs and news media. Winter term.

**ES 226 TECHNIQUES OF COACHING VOLLEYBALL** (2-0) 2

The study of principles, methods, techniques and strategies involved in the coaching of volleyball. Winter term.

**ES 227 TECHNIQUES OF COACHING BASKETBALL** (2-0) 2

The analysis of the game of basketball in theory and application with special emphasis upon teaching the game. Development of offense, defense, and special situations for both prospective coaches and enthusiasts. Fall term.

**ES 228 TECHNIQUES OF COACHING WRESTLING** (2-0) 2

The study of principles, methods, techniques and strategies involved in the coaching of wrestling. Fall term, alternate years.

**ES 229 TECHNIQUES OF COACHING TRACK AND FIELD** (2-0) 2

Designed to teach methods, techniques and principles of coaching all events in track and field at both the high school and college levels. Offered on demand.

**ES 230 TECHNIQUES OF COACHING SOFTBALL** (2-0) 2

Study of principles, methods, techniques and strategies involved in coaching of softball. Offered on demand.

**ES 231 TECHNIQUES OF COACHING SOCCER** (2-0) 2

The study of principles, methods, techniques and strategies involved in coaching soccer. Offered on demand.

**ES 233 OFFICIATING OF FOOTBALL** (1-0) 1

Designed to provide individuals with the rules, skills and mechanics of officiating. Includes rules of the National Federation of High Schools, National Association of Intercollegiate Athletics and National Collegiate Athletic Association. Fall term.

**ES 234 OFFICIATING OF VOLLEYBALL** (1-0) 1

Instruction in the rules and practice of the mechanics and skills of officiating volleyball at the high school and college levels. Fall term, alternate years.

**ES 235 OFFICIATING OF BASKETBALL** (1-0) 1

Designed to teach the student the rules, skills and mechanics of officiating basketball. Winter term.

**ES 236 OFFICIATING OF WRESTLING** (1-0) 1

Discussion and practice in the techniques of officiating wrestling, with an intensive study of the rules of both high school and college. Winter term, alternate years.

**ES 237 OFFICIATING OF SOFTBALL** (1-0) 1

Designed to provide students with the rules, skills and mechanics for umpiring in softball. Offered on demand.

**ES 238 OFFICIATING OF SOCCER** (1-0) 1

Designed to provide students with the rules, skills and mechanics for officiating soccer. Offered on demand.

**ES 243 PERSONAL HEALTH** (3-0) 3

A study of the basic facts related to the health of the individual with a strong emphasis on the social implication of these facts. Fall and winter terms.

**ES 261 WATER SAFETY INSTRUCTOR** (1-2) 2

Water safety instructors course designed to train and certify (Red Cross) teachers of swimming. Fall term.

**ES 312 ADMINISTRATION OF INTRAMURAL PROGRAMS** (1-2) 2

The course will give the student information in all pertinent areas of intramural administration. In addition, each student will have "hands on" experience working in the Fort Lewis College Intramural and Recreation Program. Winter term, on demand.

**ES 324 ADVANCED TECHNIQUES OF ATHLETIC TRAINING (2-2) 3**

An in-depth practical course devoted to athletic injury evaluation. Each injury will be explored from the following viewpoints: prevention, etiology, pathology, recognition of clinical signs and symptoms and disposition. Winter term.

**Prerequisite:** ES 224.

**ES 330 ANATOMICAL KINESIOLOGY (3-0) 3**

An in-depth study of the basic body movements; osteology, applied myology, spatial relations of muscles to joints, aggregate muscle action, kinesiological constructs of summation of internal forces, aerodynamics and hydrodynamics, techniques for cinematographic and noncinematographic analysis of sport skills. Fall term.

**Prerequisite:** Bio 121B.

**ES 332 BIOMECHANICAL ANALYSIS AND APPLICATION (2-0) 2**

The study of methods, mechanics and analysis of movement as applied to the structure and function of the human organism. Winter term.

**Prerequisite:** ES 330.

**ES 340 MOTOR LEARNING AND CONTROL (3-0) 3**

Principles involved in learning motor skills, the individual variables which affect this learning, and the practice and techniques for improving motor performance. Fall term.

**Prerequisite:** Psych 157D.

**ES 350 MEASUREMENT AND EVALUATION (3-0) 3**

Administration of tests in physical education. Obtaining data from tests, analyzing this data, and the evaluation and interpretation of this data. Winter term.

**Prerequisite:** Consent of instructor.

**ES 353 BASIC PRINCIPLES OF NUTRITION (2-0) 2**

A study of the principles of nutrition science, guidelines for making healthful food choices, and techniques for evaluating nutrition information. Students will study the relationship between nutrition and general health. Winter term.

**ES 354 ADAPTED EXERCISE (2-2) 3**

Course includes an overview of the legislation impacting adapted exercise programs; exceptional conditions and disabilities affecting individuals in exercise programs, assessment tests and diagnostic instruments. It includes practical experience in teaching exceptional students in diverse exercise settings, and arranging and prescribing a program to meet the needs of students with specific disabilities. Fall term.

**ES 360 EXERCISE PHYSIOLOGY (4-0) 4**

Theory and laboratory investigations into the temporary and adaptational adjustments of selected body systems to the stress of human movement under different intensities, durations and environments. Winter term.

**Prerequisite:** Bio 121B.

**ES 363 COMPUTER APPLICATIONS IN EXERCISE SCIENCE (2-2) 3**

This course is designed to provide students with a general introduction to computer use in Exercise Science including hands-on experience. Credit cannot be awarded for CSIS 101 and CSIS 102, and ES 363. Offered on demand.

**ES 370 METHODS OF TEACHING PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOLS (3-0) 3**

Emphasis will be upon values, principles, objectives, growth and development characteristics, curriculum construction, and general methods of organizing and teaching physical education in grades K-6. Fall and winter terms.

**ES 375 PSYCHOLOGY OF SPORT (2-0) 2**

A study of various psychological phenomena that influence sport and exercise performance, i.e., personality traits, anxiety, stress, motivation, aggression, group dynamics (cohesion). Winter term.

**Prerequisite:** Psych 157D.

**ES 380 METHODS OF TEACHING PHYSICAL EDUCATION IN SECONDARY SCHOOLS (2-0) 2**

A teacher candidate course designed to familiarize the student with methods and materials for successful teaching at the junior high and senior high levels. Emphasis is upon planning objectives, growth and development characteristics, curriculum construction, organization, and today's issues and current trends. Winter term.

**ES 385 THERAPEUTIC MODALITIES (2-0) 2**

The theoretical basis of therapeutic modalities will be explored as well as the clinical application of those modalities in the treatment of athletic injuries. Winter term, alternate years.

**Prerequisite:** ES 224.

**ES 387 RECONDITIONING OF ATHLETIC INJURIES (3-0) 3**

Students will examine the theory and physiological basis of rehabilitating athletic injuries. Practical experience in a clinical-type setting will be used to help students to develop skills of exercise testing, manual testing, PNF, goniometry and program planning. Winter term, alternate years.

**Prerequisite:** ES 224.

**ES 480 ADMINISTRATION OF PROGRAMS IN EXERCISE SCIENCE (3-0) 3**

Relationships, procedures and problem-solving approaches in effective organization and administration of exercise, fitness and sport programs. Budget, use of facilities and equipment, legal responsibilities, public relations, policy development and supervision are analyzed. Fall term.

**Prerequisite:** Junior standing.

**ES 496 SENIOR SEMINAR AND RESEARCH IN EXERCISE SCIENCE (2-0) 2**

Discussions and inquiries dealing with contemporary issues, trends and problems in exercise science. An individual student research project is required. Fall and winter terms.

**Prerequisite:** Senior standing.

**ES 499 INDEPENDENT STUDY 1-3**

Opportunity to investigate a significant problem through laboratory or library research under the supervision of a faculty member. Fall and winter terms.

**Prerequisites:** Senior standing and approval of department chair and instructor after presentation of a problem outline.

## Forestry

**For 218 FUNDAMENTALS OF ECOLOGY (3-0) 3**

A study of the fundamental relationships among organisms and their environments. One all-day Saturday field trip is required. Same as Bio 220. Fall term.

**Prerequisites:** Bio 100BL, 111B and Math 111B.

## French

**ML 147 ELEMENTARY FRENCH I** (4-0) 4  
A course in grammar, prose composition, reading and conversation.

**ML 148A1 ELEMENTARY FRENCH II** (4-0) 4  
Further study of French with emphasis on reading, composition and conversation.

**Prerequisite:** ML 147 or consent of instructor.

**ML 247 INTERMEDIATE FRENCH I** (3-0) 3  
A course in second-year French with emphasis on grammar review, reading, writing and conversation.

**Prerequisite:** ML 148 or consent of instructor.

**ML 248 INTERMEDIATE FRENCH II** (3-0) 3  
Continuation of ML 247.

**Prerequisite:** ML 247 or consent of instructor.

**ML 301 FRENCH COMPOSITION AND SYNTAX** (3-0) 3  
Emphasis on advanced reading, grammar and composition.

**Prerequisite:** ML 248 or consent of instructor.

**ML 303 FRENCH CONVERSATION** (3-0) 3  
Emphasis on speaking everyday French to increase students' abilities in maintaining ordinary conversations concerning current events and French Culture.

**Prerequisite:** ML 248 or consent of instructor.

**ML 308 TOPICS IN FRENCH LITERATURE** (3-0) 3  
Topics will vary; the course may be repeated for a different topic. Offered on demand.

**Prerequisite:** ML 248 or consent of instructor.

**ML 315 SEMINAR IN FRENCH** (3-0) 3  
Advanced reading and research in selected areas of French Studies. Offered on demand.

**Prerequisite:** ML 248 or consent of instructor.

## Freshman Composition Seminars

At Fort Lewis College the Freshman Composition Seminar is offered in lieu of what many other colleges and universities call "Freshman English." This course is designed to teach library research methods as well as strengthen written and oral communication skills. To meet these objectives, students become familiar with library resources and write a major research paper which involves collecting, organizing and documenting library material. In addition, students write a number of other papers, each of which is evaluated by the instructor. Oral skills are improved through formal oral presentations and class discussion.

Seminars are taught on a variety of topics by faculty from throughout the College. Motivation for learning these important communication skills is enhanced by allowing students to choose topics of individual interest upon which to focus their written and oral presentation.

The seminar format, limited enrollment and student choice of topics make the Freshman Composition Seminar a particularly effective means of learning basic oral and written communication skills.

## General Science

**Gn Sc 100BL PHYSICAL SCIENCE LABORATORY** (0-2) 1

Work covers experiments in the fields of physics, chemistry, meteorology, geology and astronomy. Laboratory techniques and scientific processes are emphasized. Fall and winter terms.

**Gn Sc 105B THE PHYSICAL SCIENCES** (3-0) 3

History, processes and methods of science. Study is made of the development of some of the most important concepts of science, modern developments, problems in science, and problems from science. Fall and winter terms.

**Gn Sc 200BL INTRODUCTORY ASTRONOMY LABORATORY** (0-2) 1

Work is aimed toward a greater appreciation of the universe through selected observational laboratory experiments in astronomy. Fall and winter terms.

**Prerequisite:** Gn Sc 205B taken concurrently.

**Gn Sc 205B INTRODUCTORY ASTRONOMY FOR THE LIBERAL ARTS** (3-0) 3

A course designed for students interested in elementary astronomy. A survey of modern observations of astronomy including the moon, planets, stars and their formations. A short history of astronomy is also included. Fall and winter terms.

**Gn Sc 251B SURVEY OF CHEMISTRY AND BIOLOGY** (3-2) 4

This course surveys the great ideas of modern biology and modern chemistry. The historical development of science is discussed along with the importance of the ideas in the context of our modern technological society. Modern topics at the interface of biology and chemistry are discussed with particular emphasis on biomedical issues. This course is especially useful for non-science students intending to seek teaching certification, or who wish to fulfill their science requirements with a moderately rigorous but brief survey of these two sciences. It would also be a fundamental introduction to biology and chemistry for students considering biomedical studies but who have insufficient preparation in basic biology and basic chemistry.

**Prerequisite:** FCS.

## General Studies

**GENERAL STUDIES 101 and 102 Human Heritage I and II** (3-0) 3

This two-term course is a study of Western, Chinese and Native American intellectual traditions. The course is designed to help students understand how our cultural traditions influence our ways of looking at the world and how studying cultures other than our own expands and challenges our frame of reference. The course emphasizes intellectual, artistic, political, scientific, religious, and economic aspects of the three cultures from selected periods in history. Human Heritage II is a continuation of Human Heritage I. Students must complete both courses to fulfill designated distribution requirements.

**GENERAL STUDIES 200** 2-4

A lower-division seminar in interdisciplinary studies. Offered on sufficient demand. This course and General Studies 300 may be repeated for a combined maximum of 9 credits.

**GENERAL STUDIES 300** 2-4

An upper-division seminar in interdisciplinary studies. Offered on sufficient demand. This course and General Studies 200 may be repeated for a combined maximum of 9 credits.

**GENERAL STUDIES 361 Computers and Human Issues** (3-0) 3

A study of the broad social, political, ethical and philosophical issues raised by the existence and use of the computer. Topics may include artificial intelligence (can computers think?), the impact of enhanced storage and retrieval of information, computer ethics, computer languages vs. natural languages, and the impact of the computer on our concepts of ourselves. CSIS 100 or 120B or experience with computers is recommended but not required of those taking this class.

## Geography

**Geog 271D WORLD GEOGRAPHY** (3-0) 3

This course will introduce the student to the physical, cultural, political, psychological and resource factors of geography and how they affect the various peoples of the world. Winter and summer terms.

**Geog 320B NATURAL REGIONS OF NORTH AMERICA** (3-0) 3

A survey of the origin and nature of the landscapes of North America. Emphasis is placed upon the relationships between natural resources, topography, geology, climate and soils. Map work is required.

**Prerequisite:** Geol 113B or 110B.

## Geology

**Geol 110B EARTH SCIENCE** (3-0) 3

A review of the earth sciences, including geology, oceanography, meteorology and astronomy. Course intended for non-science majors. Fall and winter terms.

**Geol 111B ANCIENT LIFE** (3-0) 3

An examination of Earth's ancient life, its origin, the record in the rocks, and the processes and mechanisms that have transformed it through time. Winter term.

**Geol 113B PHYSICAL GEOLOGY** (3-3) 4

The study of geologic processes and materials within the Earth's interior and on the Earth's surface. Laboratory work on minerals, rocks and maps. Field trips. Fall and winter terms.

**Geol 114B HISTORICAL GEOLOGY** (3-3) 4

The geologic history and development of life on Earth. Laboratory work on rocks, fossils and maps. Field trips. Winter term.

**Prerequisite:** Geol 113B.

**Geol 150B GEOLOGY OF THE SOUTHWEST** (3-0) 3

A survey of the historical, economic and structural geology and geomorphology of the Southern Rockies, Colorado Plateau, and the Basin and Range Provinces. Emphasis is on classic geologic areas; national parks, natural resource development and problems associated with human activity in this delicate environment. Fall and winter terms.

**Geol 202B GEOLOGIC METHODS** (1-3) 2

An introduction to basic field and computer techniques used in geology. Fall term.

**Prerequisite:** Geol 113B or concurrent enrollment in Geol 113B.

**Geol 207 MINERALOGY** (2-3) 3

The elements of crystallography and the classification and identification of minerals. Fall term.

**Prerequisites:** Geol 113B and completion of, or concurrent enrollment, in Chem 150B.

**Geol 208 OPTICAL MINERALOGY** (2-6) 4

Procedures for identification of minerals in thin section, with emphasis on the optical determination of rock-forming minerals. Winter term.

**Prerequisite:** Geol 207.

**Geol 210 PETROLOGY** (2-3) 3

The megascopic study of igneous, sedimentary and metamorphic rocks with emphasis on the physical and chemical conditions governing the origins, occurrences and associations of various rock types. Winter term.

**Prerequisite:** Geol 207.

**Geol 323 GEOMORPHOLOGY** (3-3) 4

The classification, description, nature, origin and development of present landforms and their relationships to underlying structures. Field trips. Fall term.

**Prerequisite:** Geol 207.

**Geol 325 INTRODUCTION TO REMOTE SENSING** (2-3) 3

Introduction to the principles of remote sensing. Includes the study of the electromagnetic spectrum and the geologic interpretation of visible, infrared and microwave imagery from airborne as well as spaceborne platforms. Winter term. Alternates with Geol 430.

**Prerequisites:** Geol 113B, Math 110B, and junior standing.

**Geol 332 PLATE TECTONICS** (3-0) 3

An introduction to crustal plates, their boundaries and their interactions given in terms of classic geological settings throughout the world. Fall term. Alternates with Geol 371.

**Prerequisites:** Geol 113B, Math 111B.

**Geol 333 INTRODUCTORY PALEONTOLOGY** (3-3) 4

The systematic study of fossils, primarily invertebrate fossils, used often in the identification and correlation of geologic formations. Fall term, alternate years.

**Prerequisite:** Geol 114B or consent of instructor.

**Geol 337 STRUCTURAL GEOLOGY** (3-6) 5

The geometric, kinematic and dynamic analysis of structural features in the earth's crust. Basic operation and applications of the stereonet will be emphasized throughout the course. Fall term.

**Prerequisites:** Math 111B, Geol 113B and 202B.

**Geol 361 STRATIGRAPHY AND SEDIMENTATION** (2-3) 3

Sediments and sedimentary rocks - their characteristics and classification; sedimentary processes, tectonics and sedimentation. Stratigraphy - its history, stratigraphic nomenclature, facies relationships and correlation. Fall term.

**Prerequisites:** Geol 207 and 210.

**Geol 363 SEDIMENTARY PETROLOGY** (3-2) 4

The origin, occurrence and classification of sedimentary rocks. Winter term. Alternates with Geol 364.

**Prerequisites:** Geol 208, 210 and 361.

**Geol 364 IGNEOUS AND METAMORPHIC PETROLOGY** (3-3) 4

The origin, occurrence, classification and petrography of igneous and metamorphic rocks. Winter term. Alternates with Geol 363.

**Prerequisites:** Geol 208 and 210.

**Geol 371 INTRODUCTION TO GEOPHYSICS (3-3) 4**  
The fundamentals of geophysics, particularly gravitational, magnetic and seismic methods. Fall term. Alternates with Geol 332.  
**Prerequisites:** Geol 113B, Math 111B.

**Geol 401B NATURAL RESOURCES AND THE ENVIRONMENT (3-0) 3**  
A critical study of the need for development of fossil fuel and industrial mineral deposits and the need to preserve regions in their natural state. Fall term.  
**Prerequisite:** Geol 113B or consent of instructor and junior standing.

**Geol 405 GEOLOGIC DATA ANALYSIS AND MODELING BY COMPUTER (2-6) 4**  
Use of the computer to help transform geologic data into information. Covers computer fundamentals, univariate and multivariate statistics, contouring/mapping algorithms, trend surface analysis, variograms and kriging. Fall term.  
**Prerequisites:** Geol 202B and junior or senior standing.

**Geol 409 ECONOMIC MINERAL DEPOSITS (3-3) 4**  
Principles of ore genesis; geologic occurrence of uranium and metallic mineral deposits; mine tours. Winter term. Alternates with Geol 410.  
**Prerequisites:** Geol 337, 364 and 420, or consent of instructor.

**Geol 410 PETROLEUM GEOLOGY (2-3) 3**  
The origin, migration and entrapment of petroleum, and the methods employed in exploration and development of petroleum occurrences. Winter term. Alternates with Geol 409.  
**Prerequisites:** Geol 337 and 363, or consent of instructor.

**Geol 415 REGIONAL GEOLOGY OF THE UNITED STATES (3-0) 3**  
An examination of the stratigraphy, tectonic setting and geologic evolution of the major physiographic units of the United States. Fall term. Alternates with Geol 461.  
**Prerequisites:** Geol 337 and 361.

**Geol 420 INTRODUCTION TO GEOCHEMISTRY (3-0) 3**  
Behavior of the common rock-forming oxides in endogenic and exogenic processes; isotope geochemistry; geochemical exploration. Winter term. Alternates with Geol 435.  
**Prerequisites:** Geol 207, 210 and 405, or consent of instructor.

**Geol 430 ENGINEERING GEOLOGY (3-0) 3**  
Application of geological sciences to the location, design, construction, operation and maintenance of engineering works. Winter term. Alternates with Geol 325.  
**Prerequisites:** Geol 210, Math 111B.

**Geol 435 GROUNDWATER GEOLOGY (3-0) 3**  
The qualitative and quantitative aspects of the occurrence of water in the ground. Winter term. Alternates with Geol 420.  
**Prerequisite:** Geol 361.

**Geol 441 FIELD GEOLOGY 6**  
The fundamental procedures and practices in geologic mapping. Summer term.  
**Prerequisites:** Geol 114B, 202B, 210 and 337, or consent of instructor.

**Geol 442 FIELD STUDIES 5**  
Intensive field work on various geological problems emphasizing interpretation of petrologic and structural relationships. Summer term.  
**Prerequisite:** Senior standing in geology or consent of instructor.

**Geol 461 DEPOSITIONAL SYSTEMS (2-3) 3**  
Modeling of sedimentary deposits with respect to time and the development of stratigraphic sequences. Fall term. Alternates with Geol 415.  
**Prerequisite:** Geol 361.

**Geol 496 SENIOR SEMINAR (1-0) 1**  
Preparation of senior thesis project including library and original research, demonstrating advanced library techniques and critical thinking. Career preparation activities and participation in seminars given by visiting scientists. Fall term.  
**Prerequisite:** Senior standing or consent of instructor.

**Geol 497 SENIOR SEMINAR (2-0) 2**  
Continuation of Geol 496 with emphasis on technical writing and public presentation of senior thesis. Winter term.  
**Prerequisite:** Consent of instructor.

**Geol 499 INDEPENDENT STUDY 1-3**  
Individual research under the supervision of a faculty member. Offered on demand.  
**Prerequisite:** Consent of department chair.

## German

**ML 123 ELEMENTARY GERMAN I (4-0) 4**  
A course in grammar, pronunciation, reading and conversation. Fall term.

**ML 124A1 ELEMENTARY GERMAN II (4-0) 4**  
Continuation of ML 123. Winter term.  
**Prerequisite:** ML 123 or consent of instructor.

**ML 128 CONVERSATION I - GERMAN (1-0) 1**  
Instruction in everyday conversation. Optional.  
**Prerequisite:** Students must be enrolled in ML 123 Elementary German I, or obtain consent of instructor.

**ML 129 CONVERSATION II - GERMAN (1-0) 1**  
Continuation of ML 133. Optional.  
**Prerequisite:** Students must be enrolled in ML 124 Elementary German II, or obtain consent of instructor.

**ML 223 INTERMEDIATE GERMAN I (3-0) 3**  
Second-year German with emphasis on reading, composition and conversation. Fall term.  
**Prerequisite:** ML 124 or consent of instructor.

**ML 224 INTERMEDIATE GERMAN II (3-0) 3**  
Continuation of ML 223. Winter term.  
**Prerequisite:** ML 223 or consent of instructor.

**ML 333 ADVANCED GERMAN COMPOSITION AND CONVERSATION (3-0) 3**  
Emphasis on advanced reading and conversation as well as on grammar and composition.  
**Prerequisite:** ML 224 or consent of instructor.

**ML 334 TOPICS IN GERMAN LITERATURE (3-0) 3**  
Topics will vary; may be repeated for a different topic. Offered on demand.  
**Prerequisite:** ML 224 or consent of instructor.

**ML 335 SEMINAR IN GERMAN (3-0) 3**  
Advanced reading and research in selected areas of German Studies.  
**Prerequisite:** ML 224 or consent of instructor.

## History

**Hist 123CE AMERICAN INDIAN HISTORY (3-0) 3**  
The history of Indians of the United States from contact to the present.

**Hist 140CE SURVEY OF AFRICAN HISTORY I (3-0) 3**  
An overview of important historical trends in Africa from A.D. 1000 to the 19th century. Themes of technological innovation, social change, state and empire building, the spread of Islam, international commerce, and the slave trade receive emphasis.

**Hist 141CE SURVEY OF AFRICAN HISTORY II (3-0) 3**  
A treatment of 19th and 20th century Africa. Special attention is paid to the growing importance of Africa in world affairs and to links with the peoples of African descent in the Americas.

**Hist 160C SURVEY OF WESTERN CIVILIZATION I (3-0) 3**  
Examines the origins of the institutions and beliefs of western civilization from the earliest civilizations in Mesopotamia and Egypt, tracing the development of these beliefs and institutions through Greece and Rome and their preservation and enhancement in the early medieval period of European history.

**Hist 161C SURVEY OF WESTERN CIVILIZATION II (3-0) 3**  
Examines the transition of European society from medieval times through the Renaissance to the modern era, noting the profound economic, social and political changes which are expressed in cultural and political revolutions, dominance of Europe and America in the world, and devastating war on a scale unknown before.

**Hist 170CE SURVEY OF ASIAN CIVILIZATION: JAPAN (3-0) 3**  
An examination of traditional and modern Japan from the perspective of language, geography, philosophy/religion, literature, social structure and politics. Primary focus is on a general understanding of the nature of the culture and people and how the traditional period prepared Japan to become the chief competitor to the western industrial powers.

**Hist 171CE SURVEY OF ASIAN CIVILIZATION: CHINA (3-0) 3**  
An examination of traditional and modern China from the perspective of language, geography, philosophy/religion, literature, social structure and politics. Primary focus is on a general understanding of the nature of the culture and people and how the traditional period prepared China for the 20th century and the radical changes under Communism.

**Hist 270CE SURVEY OF COLONIAL LATIN AMERICA (3-0) 3**  
Examines the time span of 1492 to 1825. Topics discussed include the Indian Hispanic backgrounds, conquest, colonial institutions and societies, 18th century reforms and independence.

**Hist 271CE SURVEY OF NATIONAL LATIN AMERICA (3-0) 3**  
Studies the development of Latin America since independence. While the larger nations are examined, attention is also given to smaller countries where problems exist. Topics include instability, modernization and dependency, and efforts at change.

**Hist 280C SURVEY OF UNITED STATES HISTORY, 1600-1865 (3-0) 3**  
A survey of topics in American history from the founding of the first successful English colony at Jamestown to the end of the Civil War. The course will explore the settlement of the New World, the Revolution, the creation of the republic, the wonderful facts, reforms and cultural renaissance of the 1840s, and the conflicts that led to the Civil War.

**Hist 281C SURVEY OF UNITED STATES HISTORY, 1865-PRESENT (3-0) 3**

A survey of topics in American history from Reconstruction to the present. The course will study the economic developments that transformed the United States into a leading industrial nation, the shift from diplomatic isolation to a quest for global supremacy, the many efforts to modernize and reform American politics, and the everyday experiences of ordinary men and women at work and play.

**Hist 340CE STUDIES IN MIDDLE EASTERN AND AFRICAN HISTORY (3-0) 3**

A study of the history of the Mid-East and Africa. The specific course will vary. Students may take courses in this area more than once, provided the subject is different on each occasion. Fall and winter terms. Some examples of courses taught in this area are: **Contemporary Africa, Modern Islamic World and South Africa.**  
**Prerequisite:** Sophomore standing.

**Hist 350CE STUDIES IN ASIAN HISTORY (3-0) 3**

A study of the history of Asia. The specific topic will vary. Students may take courses in this area more than once, provided the subject is different on each occasion. Fall and winter terms. Some examples of courses taught in this area are: **Emergence of Modern Japan: Origins to 1800; Modern Japan: 1700 to the Present; Japanese Diplomatic History: 19th and 20th Centuries; China: Imperialism, Nationalism and Communism; and China in the 20th Century.**  
**Prerequisite:** Sophomore standing.

**Hist 360C STUDIES IN EUROPEAN HISTORY (3-0) 3**

A study of the history of Europe. The specific course will vary. Students may take courses in this area more than once, provided the subject is different on each occasion. Fall and winter terms. Some examples of courses taught in this area are: **The Fall of Rome and the Rise of the Middle Ages; The Era of the Crusades; Medieval England and Ireland; Germany, 1870-1970; Russian Revolution and the Soviet Regime and Soviet Union: Stalin to Gorbachev.**  
**Prerequisite:** Sophomore standing.

**Hist 370CE STUDIES IN LATIN AMERICAN HISTORY (3-0) 3**

A study of the history of Latin America. The specific course will vary. Students may take courses in this area more than once, provided the subject is different on each occasion. Fall and winter terms. Some examples of courses taught in this area are: **History of Mexico, U.S. - Latin American Relations and History of Central America.**  
**Prerequisite:** Sophomore standing.

**Hist 380C STUDIES IN AMERICAN HISTORY (3-0) 3**

A study of the history of the United States. The specific course will vary. Students may take courses in this area more than once, provided the subject is different on each occasion. Fall and winter terms. Some examples of courses taught in this area are: **Colonial America, Civil War America, Colorado History, American Mining History, Women In American History, The Wilderness Experience, the United States and Vietnam, Southwest Indian History, Southwest History to 1868 and Southwest History 1868 to Present.**  
**Prerequisite:** Sophomore standing.

**Hist 396 PHILOSOPHY AND METHODS OF HISTORY (3-0) 3**

An introduction to the way historians of the past and present think about and practice the craft of writing history. The course examines various historians' assumptions about the meaning of the past, the methods and techniques for writing successful research papers. Recommended for sophomores and juniors.



**Hist 445CE ADVANCED STUDIES IN AFRICAN AND MIDDLE EASTERN HISTORY (3-0) 3**

An examination of selected historical topics and issues pertaining to the African continent. A senior-level paper will be expected of those enrolled. An example of a course taught in this area is *Women in the Middle East*.

**Prerequisite:** Junior standing.

**Hist 455CE ADVANCED STUDIES IN ASIAN HISTORY (3-0) 3**

An examination of selected historical topics and issues pertaining to the Asian world. A senior-level paper will be expected of those enrolled. Some examples of courses taught in this area are: *The Concept of Man in Oriental Society* and *Japan and China in Film and Fiction*.

**Prerequisite:** Junior standing.

**Hist 465C ADVANCED STUDIES IN EUROPEAN HISTORY (3-0) 3**

An examination of selected historical topics and issues pertaining to the European world. A senior-level paper will be expected of those enrolled. An example of a course taught in this area is *War and Peace in Medieval Europe*.

**Prerequisite:** Junior standing.

**Hist 475CE ADVANCED STUDIES IN LATIN AMERICAN HISTORY (3-0) 3**

An examination of selected historical topics and issues pertaining to the Latin American world. A senior-level paper will be expected of those enrolled.

**Prerequisite:** Junior standing.

**Hist 485C ADVANCED STUDIES IN AMERICAN HISTORY (3-0) 3**

An examination of selected historical topics and issues pertaining to the American world. A senior-level paper will be expected of those enrolled. An example of a course taught in this area is: *The United States and Vietnam*.

**Prerequisite:** Junior standing.

**Hist 496 RESEARCH SENIOR SEMINAR (3-0) 3**

Advanced study and research in selected topics.

**Prerequisites:** Senior standing and consent of instructor.

**Hist 499 INDEPENDENT STUDY 1-3**

Reading program or research project conducted under the supervision of a faculty member. Offered on demand.

**Prerequisites:** Approval of department chair and instructor.

## Honors

**HONORS 104AC HONORS SEMINAR IN THE HISTORY OF WESTERN CULTURE (4-0) 4**

An examination of selected topics in the history of western culture from Classical Greece through the Renaissance. These topics will be considered in their historical context and with a view to identifying their enduring influence on the course of western civilization.

**HONORS 203CD HONORS SEMINAR IN THE SOCIAL SCIENCES (3-0) 3**

An interdisciplinary approach to understanding the relationships between fundamental human values and the economic, political and social behavior of individuals and groups.

**HONORS 205A HONORS SEMINAR IN THE HUMANITIES (3-0) 3**

An interdisciplinary approach to understanding the nature of human experience through the study of aesthetics and important works of literature, the fine arts and the performing arts.

**HONORS 306B HONORS SEMINAR IN THE NATURAL SCIENCES (3-0) 3**

An interdisciplinary exploration of the scientific and technological developments that have shaped our lives and our understanding of our universe and ourselves.

**HONORS 405C HONORS SEMINAR IN ETHICS AND SCIENCE IN THE 21ST (3-0) 3**

A multi-disciplinary exploration of the complex reciprocal relationship between scientific inquiry and its social and cultural contexts.

**HONORS 499 HONORS THESIS 1-2**

The Honors Thesis is the result of an independent study project undertaken during the senior year. The topic of the thesis must draw significantly on at least two academic disciplines. The student should choose a topic for the thesis in consultation with a faculty advisor, a reader from the second discipline, and the Honors Coordinator. At the end of the first term, the student must submit evidence of substantial work accomplished. During the second term, the student will complete the thesis and make a public presentation of the results.

## Humanities

(See Page 80.)

## Intercultural Studies

(See Page 81.)

## International Studies Program

(See page 81.)

## Independent Study

**INDEPENDENT STUDY 499 1-3**

All major fields require either independent study or a seminar at the senior level. Independent study may be undertaken in a field other than the student's major. To do so, the student must have the approval of his or her advisor, department chair, the department chair in whose area the study will be made, and the professor who will supervise the study. However, independent study in the field outside the student's major cannot be substituted for the requirement of independent study or seminar in his or her major field.

## Individualized Study

**Individualized Study 299 1-3**

Independent study for lower-division or non-major students. Available in most disciplines.

## Japanese

**ML 135 INTRODUCTORY JAPANESE I (4-0) 4**

An introduction to the Japanese language. Fall term.

**ML 136A1 INTRODUCTORY JAPANESE II (4-0) 4**

Continuation of ML 135. Winter term.

**Prerequisite:** ML 135 or consent of instructor.

## Latin

- ML 109 INTRODUCTORY LATIN I** (4-0) 4  
An introduction to the Latin language. Fall term.
- ML 110A1 INTRODUCTORY LATIN II** (4-0) 4  
Continuation of ML 109. Winter term.  
**Prerequisite:** ML 109 or equivalent.

## Mathematics

Students will not receive credit for a mathematics course that is a prerequisite for a previously completed course. A prerequisite course in the Mathematics Department must be completed with a grade of C- or better, or the student must have the consent of the instructor to take the course.

- Math 110B COLLEGE ALGEBRA** (4-0) 4  
This course covers the topics in algebra necessary for students who plan on enrolling in Math 210B, Calculus for Business. Specific topics covered are: simplification of algebraic expressions, solutions of equation (including systems of linear equations) and inequalities, functions and relations including polynomial, root, rational, exponential and logarithmic and the conic section. Graphing and analysis of the above functions and relations will be emphasized. NOTE: Credit toward graduation will be given for only one of Math 110B or Math 111B. Fall, winter and summer terms.  
**Prerequisites:** Two years of algebra, one year of geometry and placement into Math 110B through the Mathematics Placement Examination or successful completion of TRST 92.
- Math 111B PRE-CALCULUS** (5-0) 5  
This course covers the topics in algebra and trigonometry necessary for students who plan on enrolling in Math 221B, Calculus I. Specific topics covered are: simplification of algebraic expressions, solutions of equation (including systems of linear equations) and inequalities, functions and relations including polynomial, root, rational, exponential, logarithmic, trigonometric and inverse trigonometric functions, and the conic sections. Graphing and analysis of the above functions and relations will be emphasized. NOTE: Credit toward graduation will be given for only one of Math 110B or Math 111B. Fall, winter and summer.  
**Prerequisite:** Two years of algebra, one year of geometry and placement into Math 111B through the Mathematics Placement Examination or successful completion of TRST 92.
- Math 130B MATHEMATICS FOR LIBERAL ARTS** (3-0) 3  
This course contains an introductory survey of a variety of topics such as theory and history of mathematics, logic, problem solving, number theory, consumer applications and probability. Fall, winter and summer terms.
- Math 201B ELEMENTARY STATISTICS** (4-0) 4  
An introduction to basic ideas in statistics including descriptive statistics, measures of central tendency and dispersion, probability, sampling distributions, estimation, hypothesis testing, regression and correlation, and statistical software applications. Credit will be given for only one of BA 253B, Psych 241B or Math 201B. Fall and winter terms.  
**Prerequisite:** Math 110B or consent of instructor.

- Math 210B CALCULUS FOR BUSINESS** (4-0) 4  
An introductory calculus course for students intending a major in the School of Business Administration. It will include such topics as limits, differential and integral calculus, sequences and series. Emphasis is on applications. Fall and winter terms.  
**Prerequisite:** Math 110B or placement into Math 210B through the Mathematics Placement Examination.

- Math 215B MATHEMATICS FOR THE ELEMENTARY SCHOOL TEACHER** (3-2) 4  
This course is designed primarily for the elementary school teacher. It includes a study of sets; set operations, construction of numeration systems, whole and integer and rational number arithmetic, ratio and proportion, decimals, percent, selected topics in geometry, the metric system, and an introduction to the real number system. Fall and winter terms.

- Math 221B CALCULUS I** (5-0) 5  
Limits, continuity, derivatives and integrals of elementary functions including polynomial, rational, logarithmic and exponential functions. Fall and winter terms.  
**Prerequisites:** Math 111B or placement into Math 221B through the Mathematics Placement Examination.

- Math 222 CALCULUS II** (4-0) 4  
A continuation of Math 221B. Differentiation and integration of trigonometric function, techniques and applications of integration, sequences and series. Fall and winter terms.  
**Prerequisite:** Math 221B.

- Math 223 CALCULUS III** (4-0) 4  
Vectors and multivariable calculus with applications. Fall and winter terms.  
**Prerequisite:** Math 222.

- Math 301B FOUNDATIONS FOR ADVANCED MATHEMATICS** (3-0) 3  
A study of axiomatic systems and the application of logic and set theory to various mathematical structures. This course is often taken concurrently with Math 222 or 223. Winter term.  
**Prerequisite:** Math 221B.

- Math 305B DISCRETE MATHEMATICAL STRUCTURES** (3-0) 3  
Sets, graphs, trees, combinatorics, probability, recursion, algorithms, with application to computer science. Fall term.  
**Prerequisites:** Math 221B or 210B, CSIS 130B, or consent of instructor.

- Math 310 METHODS OF TEACHING MATHEMATICS IN THE SECONDARY SCHOOL** (3-0) 3  
This class will explore elementary concepts in algebra and geometry, and will include methods for teaching these concepts at the secondary level. Students will make several short in-class presentations. Fall term.  
**Prerequisite:** Ed 309.

- Math 311B MATRICES AND LINEAR ALGEBRA** (3-0) 3  
Topics include matrices, determinants, similarity, eigenvalues, eigenspaces, vector spaces, linear transformations and applications. Fall term.  
**Prerequisite:** Math 221B.

**Math 315B REAL NUMBERS AND GEOMETRY (3-0) 3**

This course is intended for those seeking teacher certification at the elementary or junior high school level. Topics will include real numbers, points, lines, planes, the continuum, the role of axioms and proof, and the basic concepts of Euclidean geometry. Fall term of odd-numbered years.

**Prerequisite:** Math 215B.

**Math 316B TOPICS IN NUMBER THEORY (3-0) 3**

Some of the topics to be presented in this course are: modular arithmetic, finite fields, basic prime number theorems, congruences, and combinations. Winter term of even-numbered years.

**Prerequisite:** Math 315B or 221B.

**Math 320 NUMERICAL ANALYSIS (3-0) 3**

An introductory course in developing and using numerical techniques for solving problems in mathematics, the physical sciences, engineering and in other quantitative fields. Topics include approximation of functions by computable functions, zeros of functions, linear algebra and matrix calculations, and difference equations. The use of the computer will be included. Fall term of odd-numbered years.

**Prerequisites:** Math 222 or one of CSIS 150B or CSIS 130B.

**Math 325B HISTORY OF MATHEMATICS (3-0) 3**

The development of selected mathematical concepts will be traced from the Greek era. The course will focus on mathematical creation as a human endeavor done within a cultural context. Fall term of even-numbered years.

**Prerequisite:** Math 111B.

**Math 327 DIFFERENTIAL EQUATIONS (3-0) 3**

An introduction to ordinary differential equations. Topics will include methods of solving first order nonlinear equations, basic theory and methods of solving  $n$ -th order linear equations, including infinite series methods. Further topics will include an introduction to systems of linear ordinary differential equations and the Laplace transform. Applications will be emphasized. Winter term.

**Prerequisite:** Math 223.

**Math 340 COMPUTER-ASSISTED STATISTICAL MODELING (3-0) 3**

Will include topics such as variable classification and the choice of analysis, simple and multivariate regression, extra sum of squares principle, dummy variable, analysis of covariance, residual analysis, transformations and weighted least squares, factor analysis and discriminant analysis. Winter term of odd-numbered years.

**Prerequisites:** Math 201B and CSIS 120B.

**Math 342 MODERN COLLEGE GEOMETRY (3-0) 3**

A course in college geometry which includes topics in Euclidean and non-Euclidean geometries. Winter term of odd-numbered years.

**Prerequisite:** Math 301B.

**Math 350B DESIGN AND ANALYSIS OF EXPERIMENTS (3-0) 3**

This course will study statistical application and analysis of experiments common to a wide range of fields. Topics include latin squares, block designs, factorial designs, response surfaces, coding, method of steepest ascent, balanced incomplete block designs, etc. Fall term of even-numbered years.

**Prerequisite:** Math 201B.

**Math 360B INTRODUCTION TO OPERATIONS RESEARCH (3-0) 3**

This course will include many of the areas of operations research such as linear programming, dynamic programming, network flow problems, transportation-like problems, game theory, queuing theory and others. Winter term of odd-numbered years. (This course is the same as BA 360.)

**Prerequisites:** Math 210B or 221B.

**Math 385 ALGEBRAIC STRUCTURES I (3-0) 3**

A first course in abstract algebra which includes topics from group theory and ring theory. Applications will be discussed. Fall term of even-numbered years.

**Prerequisite:** Math 301B.

**Math 386 ALGEBRAIC STRUCTURES II (3-0) 3**

A continuation of Math 385. Topics include ring theory and field theory. Applications will be discussed. Winter term of odd-numbered years.

**Prerequisite:** Math 385.

**Math 401 PROBABILITY AND STATISTICS I (3-0) 3**

This course covers topics in distribution theory, conditional probability, independence, moment generating functions, limiting distributions, estimation procedures, and hypothesis testing. Fall term of odd-numbered years.

**Prerequisites:** Math 201B and completion of or concurrent enrollment in Math 222.

**Math 402 PROBABILITY AND STATISTICS II (3-0) 3**

A continuation of Math 401. Topics will include order statistics, multivariate distribution, nonparametric statistics, sufficient statistics, methods of multiple comparison, maximum likelihood procedures, and Bayesian procedures. Winter term of even-numbered years.

**Prerequisite:** Math 401.

**Math 422 ADVANCED CALCULUS I (3-0) 3**

Topics include structure of the real number system, elementary topology of the real numbers and of Euclidean spaces, general theory of functions emphasizing limits and continuity and resulting properties, general theory of the Riemann integral and resulting integration properties. Fall term of odd-numbered years.

**Prerequisite:** Math 301B.

**Math 423 ADVANCED CALCULUS II (3-0) 3**

A continuation of Math 422. Topics will include the general theory of convergence, the general theory of differentiation of functions in Euclidean space, and the investigation of special integrals including the theorems of Green, Gauss and Stokes. Winter term of even-numbered years.

**Prerequisite:** Math 422.

**Math 430 COMPLEX VARIABLES (3-0) 3**

This course will cover topics in complex numbers, analytic functions, elementary functions and associated mappings, integrals, series, residues and poles, and conformal mappings. Fall term of even-numbered years.

**Prerequisite:** Math 223.

**Math 496 SENIOR SEMINAR (2-0) 2**

Advanced study and research in selected topics. Will include written and oral presentation of a project involving library research. Winter term.

**Prerequisites:** Senior standing and consent of instructor.

**Math 499 INDEPENDENT STUDY** 1-3  
 Individual research conducted under the supervision of a faculty member. Written and oral presentation of research of research results required if this course is used to satisfy the Math 496/499 graduation requirement. On demand.

**Prerequisite:** Consent of instructor.

## Music

**Mu 100 MUSIC LITERATURE** (0-1) .5  
 Music Literature is a survey, through listening, of the standard works of the 18th, 19th and 20th centuries. Listening assignments will consist of recorded and live performances. Students will be required to attend various recitals and concerts throughout the term. Open to all students. Required for music majors every trimester of residency. Fall and winter terms.

**Mu 101A2 THE MUSICAL EXPERIENCE** (3-0) 3  
 A course in music appreciation designed for the general student. The intent of the course is to prepare students for informed and active listening experiences. Fall and winter terms.

**Mu 103 INSTRUMENTAL, VOCAL AND PIANO CLASS INSTRUCTION (Piano, Voice, Brass, Woodwinds, Percussion, Strings)** (0-2) 1  
 These classes are all designed to provide the student with the basic elements and techniques of performance in each of the media. Piano Class (Mu 103 Piano), is specifically designed for the music major lacking in keyboard skills. Emphases include fluent reading of simple piano music and elementary technique. Successful completion with a grade of A or B satisfies Part I of the Piano Proficiency Requirement. Piano Class is offered fall terms, Voice Class is offered fall and winter terms; Brass, Woodwinds, Percussion & Strings Classes are offered alternate years.

**Prerequisite:** Consent of instructor.

**Mu 104 PIANO CLASS INSTRUCTION II** (0-2) 1  
 Continuation of Mu 103 Piano and mandatory for music majors who desire to complete the Piano Proficiency Requirement in this manner. Emphases include performance of easier piano music and harmonization of simple melodies. Successful completion with a grade of A or B satisfies Part II of the Piano Proficiency Requirement. Winter term.

**Prerequisite:** Consent of instructor.

**Mu 105A2 CONCERT CHOIR** (0-3) 1  
 Thorough study and performance each trimester of larger choral compositions. Open to all students. Course is repeatable. Fall and winter terms.

**Mu 106 CHAMBER CHOIR** (0-2) 1  
 An ensemble specializing in the performance of small scale choral works. By audition only. A maximum of 2 credits in Mu 106/306 is allowable toward graduation. Fall and winter terms.

**Mu 107 SPECIAL CHOIRS** (0-2) 1  
 Requests for developing special choirs will be considered, upon written request to the Department of Music, as adjuncts to any on-campus organization. Under competent, organized supervision these choirs may function and receive 1 credit during any one term. Open to all students. Course is repeatable. Fall and winter terms.

**Mu 109, 209, 309, 409 APPLIED MUSIC** (Piano, Voice, Brass, Woodwinds, Percussion, Strings) 1 or 2

Individual instruction scheduled, at the discretion of the instructor, either privately or in a small class. The course is open to all students. Each of these courses may be repeated once for credit. No student may register for more than two different applied lessons during any one trimester. Students may register for two credit hours only with approval of the music faculty. Two credit hours are required for a Performance Concentration. Students who register for two credit hours will receive longer lessons in proportion to the amount of time spent in preparation.

**Prerequisite:** Placement audition, enrollment in Band, . . . . . Concert Choir or Orchestra (the large ensemble appropriate to the applied area) and consent of instructor.

**Mu 110A2 BAND** (0-3) 1  
 Designed to provide every student who plays a musical instrument the opportunity to pursue his or her musical interests. A variety of musical literature will be provided as well as the opportunity to perform in concert both on campus and on tour. Open to all students. Course is repeatable. Fall and winter terms.

**Mu 111 BRASS ENSEMBLE** (0-2) 1  
 A survey, through performance, of the literature written for this medium. Literature from the baroque period through the contemporary period will be studied and performed. A maximum of 2 credits in Mu 111/311 is allowable toward graduation. Fall and winter terms.

**Prerequisite:** Consent of instructor.

**Mu 112 WOODWIND ENSEMBLE** (0-2) 1  
 A survey, through performance, of the literature composed for woodwind instruments from the Renaissance through avant-garde schools of composition and including the use of ancient instruments where applicable. A maximum of 2 credits in Mu 112/312 is allowable toward graduation. Fall and winter terms.

**Prerequisite:** Consent of instructor.

**Mu 113 STRING ENSEMBLE** (0-2) 1  
 A survey, through performance, of the literature written for this medium. Literature from the baroque period through the contemporary period will be studied and performed. A maximum of 2 credits in Mu 113/313 is allowable toward graduation. Fall and winter terms.

**Prerequisite:** Consent of instructor.

**Mu 116 ACCOMPANYING** (0-2) 1  
 A course designed to provide ensemble and accompanying experience for piano students.

**Prerequisite:** Consent of piano instructor.

**Mu 117A2 SYMPHONY ORCHESTRA** (0-3) 1  
 Offered in conjunction with the San Juan Symphony Orchestra at no extra fee. This course provides an opportunity for the study and performance of major orchestral works. Two hours of rehearsal are held on Tuesday evenings and the third is arranged at the convenience of the instructor and students. Open to all string students; wind and percussion students by audition only. Course is repeatable. Fall and winter terms.

**Mu 118 PERCUSSION ENSEMBLE** (0-2) 1  
 A survey, through performance, of the literature written for this medium. A maximum of 2 credits in Mu 118/318 is allowable toward graduation. Fall and winter terms.

**Prerequisite:** Consent of instructor.

**Mu 119 JAZZ ENSEMBLE** (0-2) 1  
A survey, through performance, of the literature written for this medium. A maximum of 2 credits in Mu 119/319 is allowable toward graduation. Fall and winter terms.

**Prerequisite:** Consent of instructor.

**Mu 120A2 FUNDAMENTALS OF MUSIC** (3-0) 3  
Open to all students. A course in musical literacy intended to help laymen acquire the basic skills necessary to participate fully in musical activities. No prior musical background is assumed. Fall and winter terms.

**Mu 128A2 THEORY AND MUSICIANSHIP I** (5-0) 5  
A course in basic musicianship designed to teach aural, analytical and compositional skills. Daily sight-singing and ear-training activities will supplement study of scales, key, modes, triads, melody, tonality, cadences, functional harmony and basic four-part writing including figured bass. Theory Placement Examination is required for admission. Fall term.

**Mu 129A2 THEORY AND MUSICIANSHIP II** (5-0) 5  
Continuation of Theory and Musicianship I, expanded to include nonharmonic tones, dominant sevenths, secondary dominants and modulation. Formal analysis will include binary, ternary, rondo, theme and variations, chaconne/passacaglia, fugue and sonata-allegro. Winter term.

**Prerequisite:** Mu 128A2.

**Mu 203 PIANO CLASS INSTRUCTION III** (0-2) 1  
Continuation of Mu 104 and mandatory for music majors who desire to complete the Piano Proficiency Requirement in this manner. Emphases include expanded performance of piano literature and elementary sight-reading. Successful completion with a grade of A or B satisfies Part III of the Piano Proficiency Requirement. Fall term.

**Prerequisite:** Consent of instructor.

**Mu 204 PIANO CLASS INSTRUCTION IV** (0-2) 1  
Continuation of Mu 203 and mandatory for music majors who desire to complete the Piano Proficiency Requirement in this manner. Students will be expected to perform compositions at the level of Clementi: Sonatina, Op. 36 #1; Bartok: Mikrokosmos II; Gillock: Lyric Preludes. Successful completion with a grade of A or B satisfies Part IV of the Piano Proficiency Requirement. Winter term.

**Prerequisite:** Consent of instructor.

**Mu 207 PRACTICUM - ELEMENTARY COMPOSITION** (0-2) 1  
Individual instruction in composition scheduled, at the discretion of the instructor, either privately or in a small class. Students will work independently on assigned projects intended to explore a wide variety of compositional mediums and techniques. Course is repeatable for a maximum of 4 credits.

**Prerequisite:** Consent of instructor.

**Mu 228 THEORY AND MUSICIANSHIP III** (5-0) 5  
Extensive study of chromatically altered chords typical of the 19th century. Harmonic analysis, formal analysis, ear training and compositions incorporating altered chords are primary emphases. Fall term.

**Prerequisite:** Mu 129A2.

**Mu 229 THEORY AND MUSICIANSHIP IV** (5-0) 5  
Exploration of 20th century theoretical and compositional techniques. Examples will include derivatives from the end of the 19th century, nationalist influences, serial and aleatoric music, extended techniques, and electronic music. Winter term.

**Prerequisite:** Mu 228.

**Mu 300 VOCAL ENSEMBLE** (0-2) 1  
A survey, through performance, of the literature for vocal ensemble. A maximum of 2 credits allowable toward graduation. Fall and winter terms.

**Prerequisite:** Consent of instructor.

**Mu 305A2 CONCERT CHOIR** (0-3) 1  
Thorough study and performance of larger choral compositions. Students are expected to take responsible roles in the ensemble such as: soloists, section leaders, conductor/managers, or accompanists. Course is repeatable. Open to all students. Fall and winter terms.

**Mu 306 CHAMBER CHOIR** (0-2) 1  
An ensemble specializing in the performance of small scale choral works. Students are expected to take responsible roles in the ensemble such as: soloists, section leaders, conductor/managers, or accompanists. A maximum of 2 credits in Mu 106/306 is allowable toward graduation. By audition only. Fall and winter terms.

**Mu 310A2 BAND** (0-3) 1  
Designed to provide every student who plays a musical instrument the opportunity to pursue his/her musical interests. A variety of musical literature will be provided as well as the opportunity to perform in concert both on campus and on tour. Students are expected to take responsible roles in the ensemble such as: soloists, section leaders, or conductors/managers. Course is repeatable. Fall and winter terms.

**Mu 311 BRASS ENSEMBLE** (0-2) 1  
A survey, through performance, of the literature written for this medium. Literature from the baroque period through the contemporary period will be studied and performed. Students are expected to take responsible roles in the ensemble such as: soloists, section leaders, or conductors/managers. A maximum of 2 credits in Mu 111/311 is allowable toward graduation. Fall and winter terms.

**Prerequisite:** Consent of instructor.

**Mu 312 WOODWIND ENSEMBLE** (0-2) 1  
A survey, through performance, of the literature composed for woodwind instruments from the Renaissance through avant-garde schools of composition and including the use of ancient instruments where applicable. Students are expected to take responsible roles in the ensemble such as: soloists, section leaders, or conductors/managers. A maximum of 2 credits in Mu 112/312 is allowable toward graduation. Fall and winter terms.

**Prerequisite:** Consent of instructor.

**Mu 313 STRING ENSEMBLE** (0-2) 1  
A survey, through performance, of the literature written for this medium. Literature from the baroque period through the contemporary period will be studied and performed. Students are expected to take responsible roles in the ensemble such as: soloists, section leaders, or conductors/managers. A maximum of 2 credits in Mu 113/313 is allowable toward graduation. Fall and winter terms.

**Prerequisite:** Consent of instructor.

**Mu 314 METHODS AND PRINCIPLES OF TEACHING VOCAL MUSIC** (3-0) 3  
A course designed to provide music majors with contemporary teaching skills and techniques for secondary vocal/choral music, including vocal pedagogy, classroom management, rehearsal preparation, and audition and placement procedures. Fall term of alternate years.

**Mu 315 METHODS AND PRINCIPLES OF TEACHING INSTRUMENTAL MUSIC (3-0) 3**

A course designed to provide music majors with contemporary teaching skills and techniques in the teaching of instrumental music in the public schools, including program development, classroom management, rehearsal preparation and use of audio/visual materials. Fall term of alternate years.

**Mu 316 MUSIC IN THE ELEMENTARY SCHOOL (3-0) 3**

A course designed for both classroom and music teachers to provide practical skills in pedagogy, lesson planning, folk music, dance/movement, musical literacy and classroom management. Attention will be given to the philosophies of Kodaly, Orff and Dalcroze within a laboratory setting often involving elementary-age children from local schools. Winter term and one summer session.

**Mu 317A2 SYMPHONY ORCHESTRA (0-3) 1**

Offered in conjunction with the San Juan Symphony Orchestra at no extra fee. This course provides an opportunity for the study and performance of major orchestral works. Two hours of rehearsal are held on Tuesday evenings and the third is arranged at the convenience of the instructor and students. All string students are invited; wind and percussion students by audition only. Students are expected to take responsible roles in the ensemble such as: soloists, section leaders, or conductors/managers. Course is repeatable. Fall and winter terms.

**Mu 318 PERCUSSION ENSEMBLE (0-2) 1**

A survey, through performance, of the literature written for this medium. Students are expected to take responsible roles in the ensemble such as: soloists, section leaders, or conductors/managers. A maximum of 2 credits in Mu 118/318 is allowable toward graduation. Fall and winter terms.

**Prerequisite:** Consent of instructor.

**Mu 319 JAZZ ENSEMBLE (0-2) 1**

A survey, through performance, of the literature written for this medium. Students are expected to take responsible roles in the ensemble such as: soloists, section leaders, or conductors/managers. A maximum of 2 credits in Mu 119/319 is allowable toward graduation. Fall and winter terms.

**Mu 331A2 MUSIC HISTORY I (3-0) 3**

Study of the history of music from classical antiquity to 1750. Fall term of alternate years.

**Mu 332A2 MUSIC HISTORY II (3-0) 3**

Study of the history of music from 1750 through the 20th century. Winter term of alternate years.

**Mu 333 20TH CENTURY MUSIC (2-0) 2**

A survey of styles and techniques of contemporary composers, including analysis of representative works.

**Prerequisite:** Mu 229 or consent of instructor.

**Mu 337A2E SURVEY OF NON-WESTERN MUSIC (3-0) 3**

This course is designed to acquaint students with the vast amount of music from non-western cultures. Topics include the music of Africa, India, China, Japan, Southeast Asia, South America and the American Indians. Open to all students.

**Mu 349 CONDUCTING I (3-0) 3**

A course in basic instrumental and choral conducting including baton technique, score reading, and various cuing and rhythmic aspects concerned with ensemble control. Fall term of alternate years.

**Prerequisite:** Piano Proficiency Requirement.

**Mu 350 CONDUCTING II (3-0) 3**

Continuation of Conducting I. Conducting techniques in addition to directing larger musical scores and advanced techniques. Winter term of alternate years.

**Prerequisite:** Mu 349.

**Mu 407 PRACTICUM - ADVANCED COMPOSITION (0-2) 2**

Like Mu 207, except students must demonstrate advanced proficiency. Students must receive faculty approval before registering for this course. Course is repeatable for a maximum of 8 credits.

**Prerequisites:** Music faculty approval and consent of instructor.

**Mu 423 ORCHESTRATION (2-0) 2**

A course designed to equip music majors with the skills and techniques of arranging for instrumental ensembles. Fall term of alternate years.

**Prerequisites:** Mu 229 and Piano Proficiency Requirement.

**Mu 424 COMPOSITION (2-0) 2**

This seminar will explore ideas, problems and possible solutions encountered by students working individually in a creative medium.

**Prerequisite:** Mu 229 or consent of instructor.

**Mu 496 SENIOR SEMINAR (2-0) 2**

Advanced study and research in music and musical performance. The student will prepare and perform a senior recital approved by the applied area instructor and the department chair.

**Prerequisites:** Senior standing and consent of instructor.

**Mu 499 INDEPENDENT STUDY 1-3**

Individual research conducted under the supervision of a faculty member. Offered on demand.

**Prerequisites:** Approval of instructor and department chair.

## Philosophy

**Phil 141C INTRODUCTION TO PHILOSOPHY (4-0) 4**

An introduction to the philosophical enterprise through discussion and analysis of representative readings from the history of philosophy. Issues considered include the nature of reality, the relation of mind and body, the possibility of proving that God exists, the nature and origin of morality and of beauty, and the relation of knowledge to experience. Fall and winter terms.

**Phil 171C CONTEMPORARY MORAL ISSUES (3-0) 3**

An examination of the relation between different ethical points of view and the handling of the personal, social, political, ecological and global problems we face today. Summer term.

**Phil 251C MORAL PHILOSOPHY (4-0) 4**

A broad review of the history of attempts since classical Greece to identify morality and to establish standards for making and assessing moral judgments. Alternate winter terms.

**Phil 252C ENVIRONMENTAL ETHICS (4-0) 4**

This course offers an overview of world environmental problems, focuses on conceptual investigations into their historical, social, political and cultural sources, examines various methods of resource conservation, and finally attempts to envision a philosophy of nature based on a "land ethic." Fall term.

**Phil 261C PHILOSOPHY OF RELIGION (4-0) 4**

An examination of different philosophical approaches to problems raised by religion. Readings are selected from sources representing widely differing points of view, e.g., those of phenomenology, feminism and liberation theology. Alternate fall terms.

**Phil 271B LOGIC (4-0) 4**

A broad treatment of different methods of assessing the validity of deductive and inductive arguments. The course covers syllogistic logic, elementary truth-functional logic, quantification and brief discussions of informal logic and of inductive logic. Fall, winter and summer terms.

**Phil 274C EARLY FOUNDATIONS OF PHILOSOPHY (4-0) 4**

An examination of the history of philosophy from the origins of scientific thought in Asia Minor through the synthesis of Christianity and Greek philosophy in the thought of St. Augustine and the medieval scholastics. A major emphasis of the course will be the systems of Plato and Aristotle, which provide many of the roots of modern thought. This course is a suitable beginning course in philosophy. Alternate fall terms.

**Phil 320E INDIGENOUS WORLDVIEWS (4-0) 4**

A survey of selected regional belief systems outside the major religious traditions treated in Phil 321E. Emphasis is on philosophical foundations of religious cultures native to the Americas, Africa, Asia, Australia and Old Europe. Special attention is given to the mythic and other symbolic expressions of archaic consciousness in contemporary societies. Alternate fall terms.

**Phil 321E WORLD RELIGIONS (4-0) 4**

A study of the nature and history of the major contemporary religions of the world. Summer and alternate fall terms.

**Phil 328C PHILOSOPHY OF SCIENCE (4-0) 4**

An examination of the scope, structure, methodology and spirit of science with special attention to such topics as the relation between the presuppositions and the conclusions of science, the nature of scientific revolutions and the social responsibilities of the scientist. Alternate fall terms.

**Prerequisite:** 4 credits in philosophy other than Phil 271B or consent of instructor.

**Phil 361C PHILOSOPHY OF ART (4-0) 4**

An examination of the nature and purposes of art through the study of several traditional and contemporary philosophies of art such as those of Plato, Aristotle, Marx, Tolstoy, Collingwood and Merleau-Ponty. Topics include the nature of the art object, the distinction between art and craft, the role of imitation, representation, expression and creativity, the social function and responsibility of the artist, and the nature of aesthetic experience. Alternate winter terms.

**Phil 363C PHILOSOPHY OF HISTORY AND CULTURE (4-0) 4**

An examination of the nature and methodology of historical knowledge and various conceptions of culture through the study of several traditional and contemporary philosophies of history and culture. Readings will include recent work from Africa and the Americas as well as traditional European perspectives. Alternate winter terms.

**Prerequisite:** 4 credits of philosophy other than Phil 271B or consent of instructor.

**Phil 371C THEORIES OF HUMAN NATURE (4-0) 4**

An examination of various theories of the nature of human nature with readings from both classical and contemporary authors. Special attention will be given to how presuppositions about human nature underlie conceptions of knowledge and theories of education. Alternate winter terms.

**Prerequisite:** 4 credits of philosophy other than Phil 271B or consent of instructor.

**Phil 375C MODERN FOUNDATIONS OF PHILOSOPHY (4-0) 4**

An examination of the history of philosophy from the Renaissance through the 20th century. Continental Rationalism and British Empiricism are studied not only on their own terms but in relation to the Kantian synthesis. The Kantian philosophy, in turn, together with much 19th century thought, is shown to be a necessary background for understanding the major philosophical issues of the 20th century. Alternate winter terms.

**Prerequisite:** 4 credits of philosophy other than Phil 271B or consent of instructor.

**Phil 377C CONTEMPORARY EUROPEAN PHILOSOPHY (4-0) 4**

An examination of trends and issues in 20th century continental philosophy. Readings will focus on the development of phenomenology and existentialism, and on their contributions to existential Marxism, structuralism and deconstructionism. Winter term.

**Prerequisite:** 4 credits in philosophy other than Phil 271B or consent of instructor.

**Phil 378C CONTEMPORARY ANGLO-AMERICAN PHILOSOPHY (4-0) 4**

An examination of trends and issues in 20th century analytic philosophy. Alternate fall terms.

**Prerequisite:** 4 credits in philosophy other than Phil 271B or consent of instructor.

**Phil 381C THEORIES OF REALITY (4-0) 4**

An examination of traditional and contemporary attempts to understand the nature of reality. Alternate fall terms.

**Phil 451 STUDIES IN GREAT PHILOSOPHERS (4-0) 4**

An examination in depth of the writings of a major philosopher such as Plato, Aristotle, Kant, Marx, Heidegger or Sartre. This course may be repeated as long as the topics are different. Fall terms.

**Prerequisite:** 4 credits in philosophy other than Phil 271B or consent of instructor.

**Phil 496 SENIOR SEMINAR (4-0) 4**

Advanced study and research in selected topics. Offered on demand.

**Prerequisite:** Senior standing and consent of instructor.

**Phil 499 INDEPENDENT STUDY 1-4**

Individual research is conducted under the supervision of a faculty member. Offered on demand.

**Prerequisite:** 12 credits in philosophy and approval of instructor.

## Physics

### Phys 132B PHYSICS (3-0) 3

An introductory course in physics covering the basic concepts of mechanics, including motion, energy, fluids and materials. Calculus is not used. The course is intended to meet college physics requirements and also satisfy the curiosity of all students whose major interest is not in engineering, physical science or mathematics. Students who take Phys 162 will not receive credit toward graduation for Phys 132B. Fall and winter terms.

**Prerequisites:** High school algebra and trigonometry.

### Phys 162B PHYSICS FOR SCIENCE AND ENGINEERING (3-0) 3

An introductory course in physics covering the basic concepts of classical mechanics including motion, energy, fluids and materials. Differential and integral calculus is used throughout the course. Phys 162 is required of engineering students and strongly recommended to all general science majors. Fall and winter terms.

**Prerequisite:** Math 221B, 222 should be taken concurrently.

### Phys 211BL INTRODUCTORY PHYSICS LABORATORY (0-2) 1

An introductory physics laboratory including experiments in mechanics, heat and sound. Phys 211BL is required of engineering students and strongly recommended to all general science majors. Fall term.

**Prerequisite:** Phys 132B or 162B.

### Phys 212BL INTRODUCTORY PHYSICS LABORATORY (0-2) 1

An introductory physics laboratory including experiments in optics, electricity, electronics and magnetism. Phys 212BL is required of engineering students and strongly recommended to all general science majors. Winter term.

**Prerequisites:** Phys 132B or 162B and 211BL.

### Phys 232B PHYSICS (3-0) 3

An introductory course in physics covering the basic concepts of heat and thermodynamics, wave motion, optics and sound. Calculus is not used. Students who take Phys 262 will not receive credit toward graduation for Phys 232B. Fall term.

**Prerequisite:** Phys 132B.

### Phys 233B PHYSICS (3-0) 3

An introductory course in physics covering the basic concepts of electricity and magnetism and selected topics in relativity and atomic and nuclear physics. Calculus is not used. Students who take Physics 263B will not receive credit toward graduation for Phys 233B. Winter term.

**Prerequisite:** Phys 132B.

### Phys 262B PHYSICS FOR SCIENCE AND ENGINEERING (3-0) 3

An introductory course in physics covering the basic concepts of heat and thermodynamics, wave motion, optics and sound. Phys 262 is required of engineering students and strongly recommended to all general science majors. Fall term.

**Prerequisites:** Phys 162B and Math 222.

### Phys 263B PHYSICS FOR SCIENCE AND ENGINEERING (3-0) 3

An introductory course in physics covering the basic concepts of electricity and magnetism and selected topics in relativity, atomic and nuclear physics. Phys 263B is required of engineering students and strongly recommended to all general science majors. Winter term.

**Prerequisites:** Phys 162B and Math 222.

### Phys 301 INTRODUCTION TO ELECTRONICS (3-0) 3

A survey course of the theory and design of various electronic circuits and devices used in scientific instrumentation. Winter term, alternate years.

**Prerequisite:** Phys 263B.

### Phys 320 MODERN PHYSICS (3-0) 3

A study in the modern theories of atomic and nuclear physics that have developed since 1900. An introduction to special relativity and elementary quantum mechanics is included. Fall term, alternate years.

**Prerequisites:** Phys 233B or 263B and Math 222.

### Phys 340 OPTICS (3-3) 4

A study of classical and modern theories of geometrical and physical optics including matrix methods for optical systems, diffraction theory, and an introduction to Fourier optics. Fall term, alternate years.

**Prerequisites:** Phys 233B or 263B and Math 222.

### Phys 354 THEORETICAL MECHANICS (3-0) 3

The theoretical formulation of the kinematics and dynamics of particles and rigid bodies with an introduction to Lagrangian and Hamiltonian mechanics. An introduction to vector and tensor analysis is also included. Winter term, alternate years.

**Prerequisites:** Phys 233B or 263B and Math 223.

### Phys 361 PRINCIPLES OF ELECTRICITY AND MAGNETISM (4-0) 4

The mathematical theory of static electric and magnetic fields, time-dependent fields and electromagnetic radiation. Offered on demand.

**Prerequisites:** Phys 233B or 263B with Math 327 taken concurrently.

### Phys 370 HEAT AND THERMODYNAMICS (3-0) 3

A study of classical thermodynamics which includes the first and second laws of thermodynamics and their application in energy conversion. On demand.

**Prerequisites:** Phys 232B or 262B and Math 223.

### Phys 380 ADVANCED PHYSICS LABORATORY I (0-3) 1

Work will stress experiments in modern physics with emphasis on electronic instrumentation and subsequent data analysis. Offered on demand.

**Prerequisite:** Phys 320 taken concurrently or equivalent.

### Phys 381 ADVANCED PHYSICS LABORATORY II (0-3) 1

Work will stress experiments in electricity and magnetism with emphasis on data collection and analysis. Offered on demand.

**Prerequisite:** Phys 361 or concurrent enrollment.

### Phys 400 SCIENCE AND HUMAN VALUES (2-0) 2

A course designed to investigate the interaction between science and the world community. The course will be conducted on a seminar basis with interdisciplinary instructors and/or invited instructors from other areas of the College. Scientific, social and human values will be discussed. Offered on demand.

**Prerequisite:** At least 6 credits in the natural sciences.

### Phys 420 QUANTUM MECHANICS I (3-0) 3

An introduction to Schrodinger's formulation of wave mechanics including potential wells, harmonic oscillators, and energy and momentum operators. Offered on demand.

**Prerequisites:** Phys 233B or 263B and Math 223.



**Phys 421 QUANTUM MECHANICS II (3-0) 3**  
A continuation of the study of quantum systems via approximation techniques, theory of many electron atoms, identical particles and spin. Offered on demand.  
**Prerequisite:** Phys 420.

**Phys 454 ADVANCED TOPICS IN PHYSICS 1-4**  
Advanced material in various areas of physics at the senior level. The course will treat one area of physics, such as nuclear physics, thermal physics, statistical physics or solid state physics. Class schedules will indicate the area. Offered on demand. This course may be repeated for credit if topics are different.  
**Prerequisite:** Advanced standing in physics.

**Phys 496 SENIOR SEMINAR (2-0) 2**  
Advanced study and research in selected topics. Offered on demand.  
**Prerequisites:** Senior standing and consent of instructor.

**Phys 499 INDEPENDENT STUDY 1-3**  
Individual research is conducted under the supervision of a faculty member.  
**Prerequisite:** Consent of instructor.

## Political Science

**PS 101D INTRODUCTION TO POLITICAL SCIENCE (3-0) 3**  
An introduction to the study of politics; an examination of the relationship of man and government; and a study of the nature of the state, of the forms of rule evolved from the past, and of contemporary political systems. Fall and winter terms.

**PS 110D U.S. NATIONAL GOVERNMENT (3-0) 3**  
A study of the policies, procedures, politics and problems of the U.S. national government. Fall and winter terms.

**PS 120D STATE AND LOCAL GOVERNMENT (3-0) 3**  
A study of the history, nature, organization and operation of state and local government in the United States. Fall and winter terms.

**PS 241D INTRODUCTION TO CRIMINAL JUSTICE SYSTEMS (4-0) 4**  
The nature of crime, the role of police, attorneys, courts and corrections in our criminal justice system.

**PS 250 INTRODUCTION TO POLITICAL ANALYSIS (3-0) 3**  
Analysis of contemporary behavioral theories of politics and preparation for critical reading of professional literature. Winter term.  
Majors should enroll in sophomore year.  
**Prerequisite:** PS 101D.

**PS 280DE INTRODUCTION TO COMPARATIVE POLITICS (4-0) 4**  
A comparative study of the political systems of selected modern states, including examples of democratic, communist and developing societies. An emphasis is placed on the historical, social and economic environments as well as on political structures, participation, policymaking and evaluating the effectiveness of political action.

**PS 300D RELIGION AND POLITICS (3-0) 3**  
Exploration across different social settings and political cultures of how, and with what consequences religion and politics interact. Selected topics will include religious groups in the United States, religion and the law, Islam, religion in socialist nations and religion in Latin America (Catholicism and African, indigenous and folk religions).

**PS 301 LOCAL GOVERNMENT INTERNSHIP 8-16**  
Practical half-time or full-time work at the regional, county or municipal government level. Requires a detailed journal and completion of a research paper on a local government topic. May be repeated once for a total of 16 credits provided that the internship is taken with different agencies. Fall, winter and summer terms, on demand.  
**Prerequisites:** Three courses selected from PS 101D, 110D, 120D, 241D, 310D, 330D and consent of instructor.

**PS 305D ENVIRONMENTAL POLITICS (3-0) 3**  
This course focuses on the politics of conflict between national growth, resource availability and environmental values. It introduces students to basic political issues of growth and environment at both domestic and global levels. Winter term.  
**Prerequisite:** PS 110D or equivalent.

**PS 310D U.S. PARTY AND INTEREST GROUP POLITICS (3-0) 3**  
An inquiry into the dynamics of political activity in the United States. Special emphasis is given to the electorate, candidates, nominations, campaigns, election results, the declining roles of major parties, the history of third parties, campaign financing, and the roles of the news media, political action committees, political consultants, news media experts, pollsters, pressure groups and lobbyists.  
**Prerequisite:** PS 110D or 120D or consent of instructor.

**PS 320D INTERNATIONAL POLITICS (3-0) 3**  
An examination of the international struggle for power, with special emphasis on nationalism, economic objectives, armaments, multinational corporations and the Third World. Alternate winter terms.  
**Prerequisite:** PS 101D.

**PS 330D PUBLIC ADMINISTRATION (3-0) 3**  
Role of administration in government policymaking and implementation. Course uses case study method from a variety of policy areas.

**PS 337D U.S. FOREIGN POLICY (3-0) 3**  
A study of the United States' foreign policy from the American Revolution to the present day, with emphasis on current policy and how it is made. Fall term.

**PS 340D CONSTITUTIONAL LAW: BILL OF RIGHTS (3-0) 3**  
Rights of citizens as elaborated through the Bill of Rights and Fourteenth Amendment to include freedom of speech and press, freedom of religion, privacy, discrimination and criminal rights. Recommended for political science majors and advanced general students.

**PS 341D CONSTITUTIONAL LAW: FEDERALISM AND THE SEPARATION OF POWERS (3-0) 3**  
Powers and limitations of the national judiciary, Congress, the presidency, war powers, and the federal relationship of national government and state governments.

**PS 350 STATE LEGISLATIVE INTERNSHIP 16**  
Practical, full-time work in the Colorado General Assembly as a legislative intern. Each student works for a lawmaker in either the State Senate or the State House of Representatives. Requires the keeping of a detailed journal and the completion of a research paper. Winter term.  
**Prerequisites:** PS 101D, 110D, 120D, 310D and consent of instructor.

**PS 370DE LATIN-AMERICAN POLITICS (3-0) 3**  
An inquiry into specific political problems shared by many nations in contemporary Latin America. Emphasis will be placed on such issues as forms of government, i.e., populism, military dictatorships, Bureaucratic-authoritarianism, economic development and social movements. Fall term.

**PS 380DE COMPARATIVE COMMUNIST SYSTEMS (3-0) 3**

A comparative study of the dynamics of modern communist systems focused on the Soviet Union and People's Republic of China, including dimensions of continuity and change in pre- and post-communist environments. Similarities and differences are analyzed, along with an examination of factors working for and against increased decentralization. Alternate winter terms.

**PS 400DE NATIVE AMERICAN LAW AND POLITICS (3-0) 3**

A study of political and legal issues which involve American Indians, both from a historical and contemporary perspective.

**PS 421D THE AMERICAN PRESIDENCY (3-0) 3**

Study of the American presidency, including historical development and current structure, organization, behavior, processes and policy implications; examination of executive bureaucracy. Fall term.

**Prerequisite:** PS 101D, 110D or consent of instructor.

**PS 422D LEGISLATIVE PROCESS (3-0) 3**

Study of American legislatures at the federal and state level including structural, behavioral and policy implications of the legislative process in contemporary American government. Winter term.

**Prerequisite:** PS 101D, 110D or 120D or consent of instructor.

**PS 423 LAW AND THE JUDICIAL PROCESS (3-0) 3**

Study of American legal theory and its applications by the American court system at federal and state level. Includes judicial behavior, lawyers and judicial policies. Fall term.

**Prerequisite:** PS 110D or PS 241D.

**PS 450 NATIONAL GOVERNMENT INTERNSHIP 16**

Practical, full-time intern work in Washington, D.C., in the national government. Requires the keeping of a detailed journal and the completion of a research paper. Fall, winter and summer terms, on demand.

**Prerequisites:** PS 101D, 110D, 422D and consent of instructor.

**PS 460D AMERICAN POLITICAL THOUGHT (3-0) 3**

The origins and evolution of American political ideas; analysis of central themes from a contemporary perspective. Readings in the works of Jefferson, Hamilton, de Tocqueville, Thoreau, Booker T. Washington, Charlotte Perkins Gilman, Boorstin, Bellah and others. Fall term.

**PS 486D ANCIENT POLITICAL THOUGHT (3-0) 3**

A study of political philosophy from the earliest times to the 16th century. Readings in the works of philosophers including Plato, Aristotle, Machiavelli and others. Fall term.

**Prerequisite:** PS 101D.

**PS 487D MODERN POLITICAL THOUGHT (3-0) 3**

An examination of the main currents of political philosophy from the 17th century to the present. Readings in the works of philosophers including Hobbes, Locke, Rousseau, Marx and others. Winter term.

**Prerequisite:** PS 486D.

**PS 496 SENIOR SEMINAR (3-0) 3**

Advanced study and research in selected topics.

**Prerequisites:** PS 250, senior standing and consent of instructor. PS 486D recommended.

**PS 499 INDEPENDENT STUDY 1-3**

Individual research is conducted under the supervision of a faculty member. Offered on demand.

**Prerequisite:** Approval of the instructor and the department chair.

**Psychology****Psych 157D INTRODUCTION TO PSYCHOLOGY (3-0) 3**

An introduction to the scientific study of behavior, including the concepts of learning, motivation, perception, emotions, personality and sexuality. Abnormal, social, developmental and physiological psychology will also be discussed.

**Psych 218 PSYCHOLOGICAL FOUNDATIONS OF EDUCATION (3-0) 3**

An introduction to the psychological principles relevant to education.

**Prerequisite:** Psych 157D.

**Psych 233D PERSONALITY (3-0) 3**

This course provides an introduction to the major theories of personality, including psychoanalytic, learning, humanistic, biological, cognitive and trait theories. Emphasis will be placed on an understanding of personality structure and the ways that personality is manifested in behavior.

**Prerequisite:** Psych 157D.

**Psych 241B BASIC STATISTICS FOR PSYCHOLOGISTS (3-0) 3**

An introduction to the collection, organization and analysis of data from human and animal populations. Methods of sampling, treatment of data and reporting are covered. Descriptive statistics and statistical inference are taught, as are the decision factors and error analysis.

**Psych 242 PSYCHOLOGICAL TESTING (3-0) 3**

A course designed to introduce the student to the area of psychological tests and measurements, providing training in the concepts and applications of intelligence tests, personality inventories, and projective techniques, as well as aptitude and interest scales.

**Prerequisite:** Psych 241B.

**Psych 254D LIFE SPAN HUMAN DEVELOPMENT (3-0) 3**

This course applies psychological principles to human perspectives of development. The first portion of the course is devoted to studying principles, processes, theories and research methodology. The second part applies these concepts to each stage of the human life span from conception through aging and death and dying, with emphasis on child, preadolescent and adolescent development. Community resources are used for field trips, guest speakers, etc., throughout the second part of the course.

**Prerequisite:** Psych 157D.

**Psych 283D HISTORY OF PSYCHOLOGY (3-0) 3**

A study of the philosophical and scientific antecedents of modern psychology together with a review of the classical psychological systems and theories from ancient times to the present.

**Prerequisite:** Psych 157D.

**Psych 296 PSYCHOLOGICAL RESEARCH METHODS (3-2) 4**

Introduction to the basic assumptions, concepts and methodology of experimental and non-experimental psychological research. Includes the study of scientific principles, critical evaluation of published research, and discussion of research ethics. Technical topics such as operational definitions, independent and dependent variables, measurement, techniques of observation and experimental design are presented. The laboratory is designed to provide skill in implementing experiments in a variety of psychological fields.

**Prerequisites:** Psych 157D and Psych 241B.

**Psych 327 PHYSIOLOGICAL PSYCHOLOGY (3-2) 4**

Study of basic neuroanatomy, neurophysiology, biochemical and other physiological variables in the prediction and understanding of behavior. Usually offered in winter term.

**Prerequisite:** Psych 296.

**Psych 328D INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY (3-0) 3**

This course explores the ways that psychology can help us to understand the behavior of people in the workplace. It includes study of the motivation and development of the individual employee as well as the group dynamics of the organization in which the employee functions. Equal emphasis will be placed upon understanding relevant psychological theory and learning how to apply psychology in practical situations.

**Prerequisite:** FCS.

**Psych 330 ANIMAL BEHAVIOR (2-4) 4**

This course emphasizes techniques of observation of animal behavior, particularly in the field. Techniques of description, analysis, classification of behavior, and critical analysis of theories of animal behavior, especially communication among mammals, will be presented. The weekly lab is usually a field trip. Offered in the winter term.

**Prerequisite:** Psych 296.

**Psych 340D CREATIVITY (4-0) 4**

An interdisciplinary inquiry course exploring biopsychosocial expressions of creative process through study of theory and applications to current social issues. Areas for exploration include the creative brain, paradigm shifts, the creativity of change, and specific student interest in creativity through movement, visual arts, improvisation, free writing and dialogue.

**Prerequisites:** SCS and consent of instructor.

**Psych 365 PSYCHOLOGY OF LEARNING (3-2) 4**

The conditions of learning in animals and humans as found in the experimental literature. Usually offered in the fall term.

**Prerequisite:** Psych 296.

**Psych 372D LANGUAGE, MIND AND BRAIN (3-0) 3**

This interdisciplinary course focuses on the unconscious processes occurring in our minds that allow us to understand and produce language. Topics include animal communication, evolution of language, dyslexia, use of sign language, bilingualism, childhood language acquisition, language comprehension by computers, language disorders caused by brain damage, and hemispheric differences in language processing.

**Prerequisites:** SCS and junior or senior standing.

**Psych 375D MULTICULTURAL PSYCHOLOGY (4-0) 4**

This course will present an overview of multicultural viewpoints in clinical and research psychology. Predominant western European psychological theory will be compared and contrasted with thinking from non-Western constructs and ideology. Multiculturalism as a psychology of people will be explored from a global perspective and from the perspective of various ethnic and minority groups within the United States. Students will attempt to integrate culturally diverse thinking and research to explore ways to increase cultural sensitivity and tolerance of difference in community, workplace and human service contexts.

**Prerequisites:** SCS and Psych 157D.

**Psych 387 ABNORMAL PSYCHOLOGY (3-0) 3**

A study of the historical and contemporary perspectives in the broad range of behavior disorders. Theoretical and applied approaches to the treatment of disturbed persons and the use of the DSM III classification system.

**Prerequisite:** Psych 296 or consent of instructor.

**Psych 392 FOUNDATIONS OF CLINICAL PSYCHOLOGY (3-0) 3**

The course provides a foundation in the applications of psychological theory and research, toward a variety of intra-psychic, interpersonal and organizational problems in our society. Fall term. This course does not count for general distribution.

**Prerequisites:** Psych 157D, junior standing and consent of instructor.

**Psych 393D HEALTH PSYCHOLOGY (3-0) 3**

A study of the specific educational, scientific, and professional contributions of the discipline of psychology to the promotion and maintenance of health, the prevention and treatment of illness, and the identification of etiologic and diagnostic correlates of health, illness and related dysfunction. The topics include psychosomatic illness, the family and health, well being, the training of health care professionals and sport psychology. This course does not count for general distribution.

**Prerequisites:** Psych 157D, junior or senior standing, and consent of instructor.

**Psych 394 FIELD SCHOOL IN CLINICAL PSYCHOLOGY 6**

A one-month participation with a psychiatric team at a state hospital for mentally disturbed persons. Experiences include admission interviews, staffings, diagnostic techniques, treatment planning and implementation including occupational and recreational therapy. First summer term.

**Prerequisite:** Psych 387. Recommended, Psych 242.

**Psych 395 SEMINAR + PRACTICUM IN CLINICAL PSYCHOLOGY (3-0) 3**

The course provides an opportunity for students to engage in a supervised practicum in cooperation with an area health or human service organization. Weekly seminars will deal with professional issues and ethics common to all settings. This course does not count for general distribution.

**Prerequisites:** Psych 392 or Psych 393 and consent of instructor.

**Psych 396 ADVANCED RESEARCH METHODS (3-2) 4**

An advanced course in the methods and tools of research including historical, case study, descriptive, field, observational, experimental, and quasi-experimental designs. Emphasis is on the design of psychological research, data collection techniques, statistical analysis and interpretation. Each student will conduct an independent research project and will give formal written and oral presentations of the results.

**Prerequisite:** Psych 296.

**Psych 420 COUNSELING SKILLS (4-0) 4**

This course develops various counseling skills, processes, and abilities in students through academic and applied instruction.

**Prerequisites:** Psych 233, Psych 387, SCS and consent of the instructor.

**Psych 425 SOCIAL PSYCHOLOGY (3-2) 4**

This course provides an introduction to the many ways in which our thoughts, emotions and behavior are influenced by the people around us. We will explore topics such as aggression, attitude change, group dynamics, and self-presentation. Emphasis will be placed upon theories of social behavior and the scientific research that supports them.

**Prerequisite:** Psych 296.

**Psych 426 SENSATION AND PERCEPTION (3-2) 4**

This course explores the chemistry, physics and physiology of sensation and the cognitive psychology of perception from an information-processing point of view. Students use the laboratory to gain experience in research using standard experimental paradigms. Usually offered in the fall term.

**Prerequisite:** Psych 296.

**Psych 441 HUMAN MEMORY AND COGNITION (3-2) 4**

An overview of attention, memory, mental imagery, general knowledge, concept formation, problem-solving, language, intelligence, and other high level mental processes. The laboratory is designed to give students experience in research using standard cognitive psychology paradigms. Usually offered in the winter term.

**Prerequisite:** Psych 296.

**Psych 496 SENIOR SEMINAR (3-0) 3**

Advanced study and research in selected topics. Fall and winter terms.

**Prerequisites:** Psych 396, senior standing and consent of instructor.

**Psych 499 INDEPENDENT STUDY 1-3**

Individual research is conducted under the supervision of a faculty member.

**Prerequisite:** Consent of instructor.

## Sociology/Human Services

**Soc 100D SOCIAL ISSUES (4-0) 4**

This introductory course seeks to examine the extent to which the crisis of institutions creates personal problems in our everyday lives. Conversely, it will explore the degree to which our personal troubles foster institutional contradictions. Topics for study may include the workplace, the environment, inequality, sexism, racism, health care, criminal justice, education, alienation and social services. Fall and winter terms, freshman year.

**Soc 200D SOCIAL CHANGE AND HUMAN SERVICES (4-0) 4**

This course is designed to facilitate critical understanding of, and commitment to, processes of social change in modern society. Using historical and theoretical analysis of social change efforts, students are encouraged to embrace and develop models of change that take seriously the personal and social dimensions of human struggle. The role and responsibility of human service agencies in social change/community development is also considered. Field work is required.

**Soc 210 SOCIOLOGICAL INQUIRY AND RESEARCH METHODS (4-0) 4**

This course is an introduction to quantitative methods used in social science. The appropriateness and application of various methods will be emphasized. Data collection, reduction, analysis and interpretation will be covered. The course will include an introduction to computer applications and the use of descriptive and inferential statistics in research. Emphasis will also focus on interviewing, participant-observation and ethnographic approaches to data collection, and the development of descriptions and interpretations of social settings. To be taken in the sophomore year.

**Soc 275D FAMILIES, MARRIAGES AND OTHER SEX-ROLE SYSTEMS (4-0) 4**

Analysis of changing patterns of family life and sex roles in contemporary society, of the social sources of these changes, and of their societal and individual consequences. Taught every other year.

**Soc 279D ETHNICITY, GENDER AND CLASS IN THE SOUTHWEST (4-0) 4**

A descriptive analytic inquiry into the historical, social and economic position of the Hispanics, Native Americans and women of the Southwest. Taught every other year.

**Soc 280D POPULAR CULTURE AND MASS COMMUNICATION (4-0) 4**

An inquiry into both the production and the consumption of popular culture. Attention will be paid to cultural power as a force for domination as well as a condition for collective affirmation and struggle. Topics include, popular music, radio and television programs, news media, comic strips and pulp fiction. Alternate fall terms.

**Soc 300D THEORIES OF SOCIAL AND PERSONAL LIFE (4-0) 4**

This course will critically examine the classical and contemporary theories of self and society. The major paradigms of functionalism, Marxism, symbolic interactionism, structuralism, ethnomethodology and critical theory will be evaluated.

**Soc 301DE COMPARATIVE SOCIETIES (4-0) 4**

A comparative study of the social structures of selected countries and regions within the first, second and third worlds. Comparisons will be made of societies within selected regions as well as their relationships to U.S. society. Selected countries and regions will include: Cuba and the Caribbean, the Andean countries, China, Japan, etc.

**Soc 310D ECOLOGY AND SOCIETY (4-0) 4**

This course will examine environmental issues and the natural world from a cultural and socio-economic perspective. It will attempt to study the ideas, conceptions, practices and beliefs that relate people to the land and their collective environment. Finally, it will look at environmental concerns from the perspective of workers, minorities, and rural and urban communities both in America and worldwide.

**Soc 320 COMMUNITY SERVICE PRACTICUM 4-8**

This course provides the student with experience in applied sociology. Students will be involved in human services, applied social research or other activities approved by the advisor and practicum coordinator. The emphasis is upon gaining experiential knowledge through active participation in sociological practice and sharing this in a classroom experience. Practicum may be taken for 4 or 8 credits per term and for a maximum of 12 credits. A maximum of 8 credits can be applied toward the major in sociology.

**Prerequisite:** Soc 200D or consent of the instructor.

**Soc 330D MIND, SELF AND SOCIETY (4-0) 4**

An examination into the ways in which society influences the self and the individual produces society. The relationship between consciousness and social structure will be discussed. Theoretical focus may include symbolic interactionism, ethnomethodology and/or a Marxist perspective. Taught every other year.

**Soc 340D RELIGION AND SOCIAL LIFE (4-0) 4**

An examination of, principally, contemporary religious phenomena from the viewpoint of social science. The course will also examine the significance of religious studies in the development of reasoning about society. Taught every other year.

**Soc 345A1 ART AND SOCIETY (4-0) 4**

An inquiry into the relationship between any historically specific art and the social setting in which it was created. The idea that art is a way of seeing a world view, or a theoretic will be explored. The focus of the course may be literature, the visual arts, music, theater or film. Taught every other year.

**Soc 353D MEDICAL SOCIOLOGY (4-0) 4**

A study of the social practices and beliefs which define and constitute the phenomena of health and illness. The current health care delivery system, including professional roles, patient participation, administration, medical education and planning, will be critically reviewed, and alternatives will be explored. This course is recommended for pre-health majors as well as social science majors.

**Soc 361D DEVIANCE (4-0) 4**

An examination of the traditional versions of deviance followed by modern critiques which emphasize "labeling" and the more phenomenological approaches to understanding human conduct.

**Soc 362D CRIMINOLOGY AND CRIMINAL JUSTICE (4-0) 4**

An examination of the major "positivist" theories of crime and criminality (individual, familial, subcultural) followed by the modern critique of positivist criminology emphasizing the part played by the administration of criminal justice as an integral part of the characterizing and structuring of crime.

**Soc 363D JUVENILE DELINQUENCY (4-0) 4**

A review of contemporary thinking about the development of juvenile delinquency and the linkages between juvenile delinquency and the administration of juvenile justice. Taught every other year.

**Soc 375D SOCIOLOGY OF EDUCATION (4-0) 4**

Study of the organization and practices of educational institutions and of the transformation these institutions are now undergoing. Special attention to the nature of these changes and their impact on the learning process as well as their consequences for the larger society will be explored. Taught every other year.

**Soc 376D LANGUAGE AND SOCIAL BEHAVIOR (4-0) 4**

A concentrated look at the social function of language use in society. The extent to which languages create social reality will receive scrutiny. Particular topics may include language and social class, language and sex, linguistic politics, language and culture, or language cognition and development. Taught every other year.

**Soc 380D WORK AND AUTHORITY IN SOCIETY (4-0) 4**

This course will explore the extent to which meaningful work is possible in any society. It will seek to account for the forms of authority in work and describe the impact that hierarchical structures have on the individual. Taught every other year.

**Soc 421 CONTEMPORARY SOCIAL ANALYSIS IN THE SOUTHWEST (4-0) 4**

A seminar in the application of theories of social change, social knowledge, and research into regional issues in the Southwest. Topics may vary but will critically address issues of water, energy, agriculture, urbanization, inequality, public morality, politics, education and community. Taught annually, senior year.

**Prerequisite:** Soc 320.

**Soc 496 SENIOR SEMINAR (4-0) 4**

Advanced study and research in selected topics. The student will prepare and submit a senior seminar research paper to qualify for graduation.

**Prerequisite:** Soc 421 or concurrent registration.

**Soc 499 INDEPENDENT STUDY 1-4**

Tutorial or individual research conducted in consultation with a member of the sociology/human services faculty. Topic must be clearly defined in a written contract between student and faculty member.

## Sophomore Composition Seminars

In the Sophomore Composition Seminars students continue to strengthen their communication skills. Library, laboratory or field work require more sophisticated research techniques than those required in the Freshman Composition Seminars. Students use primary resources as well as other kinds of materials in preparation of expository papers and oral presentations. Students also complete a research paper.

The Sophomore Composition Seminar topic is selected by the student from a variety of topics offered in a wide range of disciplines. Students should select a topic in which they are interested, but one which differs from their Freshman Composition Seminar topic. Credit cannot be given for a Sophomore Composition Seminar taught by the same professor who taught the student's Freshman Composition Seminar.

## Southwest Studies

**SW 100 FUNDAMENTALS OF NAVAJO LANGUAGE I (3-0) 3**

A course in the basic fundamentals of the Navajo language on the oral-aural approach. A native speaker is the instructor and much use is made of tapes, etc.

**SW 101A1 NAVAJO LANGUAGE II (3-0) 3**

Continuation of Navajo I. Whereas Navajo I emphasized speaking, this course will center on reading and writing the Navajo language.

**Prerequisite:** Navajo I or consent of instructor.

**SW 115 NATIVE AMERICAN NEWSLETTER (3-0) 3**

For lower-division students with good writing skills. Students will prepare six stories for publication in the *Intercultural News*, gaining basic skills in newswriting for a specific readership, Macintosh computer format, photo taking and news layout and design. Coursework will include concepts pertinent to contributing to communications in "Indian country."

**SW 123CE AMERICAN INDIAN HISTORY (3-0) 3**

The history of Indians of the United States from contact to the present. This course is the same as Hist 123CE.

**SW 131C SOUTHWEST HISTORY AND CULTURE (3-0) 3**

A broad introduction to Southwestern history and cultures with lectures on history, archaeology, literature, art and other related topics.

**SW 135E THE SOUTHWEST I (3-0) 3**

The course will feature an interdisciplinary approach for examining the uniqueness of the Southwest. Students will examine the geological, biological, historical and cultural diversity of the Southwest. Major problems confronting this region will be explored.

**SW 136 THE SOUTHWEST II (4-0) 4**

A continuation of The Southwest I with an emphasis on contemporary conditions. This course satisfies the Freshman Composition Seminar requirements.

**Prerequisite:** SW 135E.

**SW 154A2 INDIAN ARTS AND CRAFTS I (0-6) 3**

This course is the same as Art 154A2. For description of course, see Art. Fall and winter terms.

**SW 155A2 INDIAN ARTS AND CRAFTS II (0-6) 3**

This course is the same as Art 155A2. For description of course, see Art. Fall and winter terms.

**SW 265A2 ART HISTORY OF THE SOUTHWEST (3-0) 3**  
 This course is the same as Art 265A2. For description of course, see Art.

**SW 280DE NATIVE AMERICAN IN THE MODERN WORLD (3-0) 3**  
 An advanced study of contemporary affairs that involve the American Indian. The historical beginnings, development and current significance of issues will be studied.

**SW 315 NATIVE AMERICAN NEWSWRITING (3-0) 3**  
 For upper-division students with good writing skills. In addition to the requirements for the SW 115 level course, students will work with and edit stories for students in the 115 class.  
**Prerequisite:** SCS and consent of instructor.

**SW 317A1 HISTORY OF AMERICAN INDIANS IN FILM 3-0) 3**  
 An analysis of the treatment of American Indians in film. It also will relate film images to images in literature and other media.  
**Prerequisite:** SCS.

**SW 322CE AMERICAN INDIAN PHILOSOPHIES (3-0) 3**  
 The course will look at the various aspects of American Indian philosophies and the manifestations of those philosophies. The course will study both traditional philosophies and those which have been changed through contact with American society.  
**Prerequisite:** SCS.

**SW 323CE SOUTHWEST INDIAN HISTORY (3-0) 3**  
 Studies the history and culture of Native American groups in the Southwest. This course is the same as Hist 380C.  
**Prerequisite:** SCS.

**SW 326C WEST AND SOUTHWEST IN FILM AND FICTION (3-0) 3**  
 An analysis of the treatment of the West and Southwest in film and fiction.  
**Prerequisite:** SCS.

**SW 340 ARCHIVAL THEORY AND PRACTICE (4-0) 4**  
 The tools and approaches taught in this course should be useful to anyone who aims at making a difference in today's information age. In addition to learning organizational principles from the archival profession, students will examine and implement effective and efficient ways of storing, accessing, and selectively preserving data. Classes are supplemented by archival work in the Center of Southwest Studies.  
**Prerequisite:** SCS.

**SW 341 ORAL HISTORY: THEORY AND PRACTICE (3-0) 3**  
 This course uses interactive listening to provide an understanding of the theory and practice of producing oral histories. It will benefit a budding historian, anthropologist, folklorist, sociologist, or archivist, and anyone wanting to improve listening skills and desiring to preserve an otherwise undocumented aspect of our past. Participants practice oral history interviewing and transcription. The final product is a transcribed oral history interview of sufficient historical research value to warrant inclusion in the Center of Southwest Studies collection.  
**Prerequisite:** SCS.

**SW 355C DEVELOPMENT OF UNITED STATES INDIAN POLICY (3-0) 3**

This course traces the development of United States policy towards the American Indians. Beginning with the policies inherited from European colonizers, the federal government developed expedient policies to balance the desires of its own citizens with the Indian peoples' legal rights and hopes for continued tribal survival. The course documents the opposing concepts of assimilation and segregation which have led to the present philosophy of pluralism and self-determination in United States Indian policy.

**Prerequisite:** SCS.

**SW 360A1E MESOAMERICAN ART HISTORY (3-0) 3**

This course is the same as Art 365A1E. See Art 365A1E for course description.

**Prerequisite:** SCS.

**SW 365C HISPANIC CIVILIZATION (3-0) 3**

Contributions of Spain and Portugal to the building of western civilization. Topics include: Great Age of Exploration, Golden Age of Spanish-Portuguese Civilization, Masterworks of Literature and History of Ideas. Offered on demand.

**Prerequisite:** SCS.

**SW 375 HISPANIC-AMERICAN CIVILIZATION (3-0) 3**

The literature, culture, thought, art, anthropology, history, geography and contemporary position of Hispanic-American civilization. Offered on demand.

**Prerequisite:** SCS.

**SW 381A1 CHICANO LITERATURE (3-0) 3**

This course is the same as ML 331. See ML 331 for course description.

**Prerequisite:** SCS.

**SW 383C SOUTHWEST HISTORY TO 1868 (3-0) 3**

This course will cover the Spanish, Mexican and early territorial periods in the Southwest, concluding with the end of the Civil War and the Navajo treaty of 1868. This course is the same as Hist 380.

**Prerequisite:** SCS.

**SW 384C SOUTHWEST HISTORY, 1868 TO PRESENT (3-0) 3**

This course will cover the political, social and economic history of the Southwest from 1868 to the present. This course is the same as Hist 380C.

**Prerequisite:** SCS.

**SW 385E CONTEMPORARY NATIVE AMERICAN NOVELS (3-0) 3**

This course is the same as Engl 385E. See Engl 385E for course description.

**Prerequisite:** SCS.

**SW 386E NATIVE AMERICAN AUTOBIOGRAPHY (3-0)**

This course is the same as Engl 386E. See Engl 386E for course description.

**Prerequisite:** SCS.

**SW 402A1 CONTEMPORARY ART AND LITERATURE OF THE SOUTHWEST (3-0) 3**

The course will conceptualize the Southwestern artist in terms of spirit and place, or broadly speaking, the effect the landscape has upon art and the artist. In addition the course will focus on critical issues such as marketing of ethnicity, repatriation, looting of archaeological sites and the artifact black market, curating major exhibits, and displaying of and writing about the sacred.

**Prerequisite:** SCS.

**SW 481C COLORADO HISTORY (3-0) 3**

The history and peoples of Colorado from the preterritorial days through the present.

**Prerequisite:** SCS.

**SW 482C MINING IN THE AMERICAN WEST (3-0) 3**

From the days of the Spanish to today, a history of mining and its impact, with special emphasis on the Southwest.

**Prerequisite:** SCS.

**SW 496 SENIOR SEMINAR (3-0) 3**

Senior seminar in Southwest Studies.

**Prerequisite:** SCS.

**SW 499 PROBLEMS IN SOUTHWEST STUDIES 3**

A senior-level individual research project based on the needs and interests of the individual. Offered on demand.

**Prerequisite:** SCS and consent of committee director.

**Spanish**

**ML 115 ELEMENTARY SPANISH I (4-0) 4**

A course in grammar, prose composition, reading and conversation. Fall and winter terms.

**ML 116A1 ELEMENTARY SPANISH II (4-0) 4**

Continuation of ML 115. Fall and winter terms.

**Prerequisite:** ML 115 or consent of instructor.

**ML 117 CONVERSATION I - SPANISH (1-0) 1**

Instruction in everyday conversation. Optional.

**Prerequisite:** Students must be enrolled in ML 115 or consent of instructor.

**ML 119 CONVERSATION II - SPANISH (1-0) 1**

Continuation of ML 117. Optional.

**Prerequisite:** ML 116A1 or consent of instructor.

**ML 118 SPANISH FOR NATIVE SPEAKERS (4-0) 4**

Course is designed for students who have been raised in a Spanish speaking or bilingual environment. It will build on their abilities in comprehension and speaking in order to prepare them in reading, prose composition, speaking and grammar.

**ML 215 INTERMEDIATE SPANISH I (3-0) 3**

A course in second-year Spanish with emphasis on grammar review, reading and conversation. Fall and winter terms.

**Prerequisite:** ML 116 or consent of instructor.

**ML 216 INTERMEDIATE SPANISH II (3-0) 3**

Continuation of ML 215. Fall and winter terms.

**Prerequisite:** ML 215 or consent of instructor.

**ML 319 ADVANCED SPANISH CONVERSATION (3-0) 3**

A course designed to develop a high level of proficiency in spoken Spanish. Language functions are practiced in the context of practical every day situations as well as discussions on current issues and events through interaction.

**Prerequisite:** ML 216 or equivalent, or consent of instructor.

**ML 320 SPANISH STYLISTICS AND ADVANCED COMPOSITION (3-0) 3**

A course designed to increase the student's writing skills in Spanish through the use of original essays, descriptions, compositions, letters and the organization and delivery of research papers. Also, the course helps students achieve a degree of elegance in style through the study of the figures of rhetoric used by important hispanic authors.

**Prerequisite:** ML 216 or 319.

**ML 321E SURVEY OF HISPANIC AMERICAN LITERATURE I (3-0) 3**

A course in the literature of Colonial Spanish America from 1492-1824, with an emphasis on pre-Columbian literature, chronicles of discovery, travel and conquest, the 17th century poetry, roots of national literature and folklore, and literature of the Wars of Independence. Fall term.

**Prerequisites:** ML 319, 320.

**ML 322E SURVEY OF HISPANIC AMERICAN LITERATURE II (3-0) 3**

A course dealing with the Romantics, Realists, Modernists, and Naturalists of the 19th century Spanish American republics. Also, the literature of the 20th century emphasizing the Mexican Revolution and contemporary Spanish American writers will be included. Winter term.

**Prerequisite:** ML 321 or consent of instructor.

**ML 325 SURVEY OF SPANISH LITERATURE I (3-0) 3**

A survey of the literature of Spain from the 10th to 18th centuries. Fall term.

**Prerequisite:** ML 319 and 320 or consent of instructor.

**ML 326 SURVEY OF SPANISH LITERATURE II (3-0) 3**

A survey of the literature of Spain from 1824 to the present. Winter term.

**Prerequisite:** ML 325 or consent of instructor.

**ML 331E CHICANO LITERATURE (3-0) 3**

A course on the essays, novels, poetry and theater of Chicanos in the Southwest. Literature is included from both rural and urban areas with an emphasis on contemporary literature.

**Prerequisite:** ML 216 or consent of instructor.

**ML 345 HISPANIC CULTURE AND CIVILIZATION I: SPAIN (3-0) 3**

An integrated, interdisciplinary study in Spanish of the culture of Spain as reflected in its language, philosophy, psychology, religions and the arts (literature, architecture, painting, sculpture, music, etc.). Folklore, customs, values and traditions will be emphasized. This course gives students an appreciation of the ways of life and attitudes of contemporary Hispanic people. Fall term.

**Prerequisite:** ML 216 or consent of instructor.

**ML 346E HISPANIC CULTURE AND CIVILIZATION II: LATIN AMERICA (3-0) 3**

An integrated, interdisciplinary study in Spanish of the cultures of Latin America as reflected in their language, philosophy, psychology, religions and the arts (literature, architecture, painting, sculpture, music, etc.). Folklore, customs, values and traditions will be emphasized. This course gives students an appreciation of the ways of life and attitudes of contemporary Hispanic people. Winter term.

**Prerequisite:** ML 216 or consent of instructor.

**ML 425 LITERATURE OF THE GOLDEN AGE IN SPAIN (3-0) 3**  
 Reading the masterworks of Spain's Golden Century, with emphasis on Miguel de Cervantes, writings of the Spanish mystics and the picaresque novel. Alternate years.

**Prerequisites:** ML 319, 320, 325 or 326, or consent of instructor.

**ML 426 20TH CENTURY SPANISH LITERATURE (3-0) 3**  
 A course on the novels, plays, essays and poetry of 20th century Spanish authors. Emphasis on Unamuno, Baroja, García Lorca, Gironella, literature of the Spanish Civil War and contemporary authors of Spain. Alternate years.

**Prerequisites:** ML 319, 320, 325 or 326, or consent of instructor.

**ML 427E HISPANIC AMERICAN NOVEL AND POETRY (3-0) 3**  
 A course on the novels of the Pampa, the Llanos, the Jungle, the Sierra and the City, as well as the poetic masterworks of Spanish America. Also included are the contemporary psychological novel, the novels of social and political reform, and contemporary poetry. Alternate years.

**Prerequisites:** ML 319, 320, 321 or 322, or consent of instructor.

**ML 429E MEXICAN LITERATURE (3-0) 3**  
 A survey of Mexican literature with emphasis on the works of the Revolution of 1910 and contemporary Mexican authors. Alternate years.

**Prerequisites:** ML 319, 320, 321 or 322, or consent of instructor.

**ML 496 SENIOR SEMINAR IN SPANISH (3-0) 3**  
 Advanced study and research in selected topics. Offered on demand.

**Prerequisites:** Senior standing and consent of instructor.

**ML 499 INDEPENDENT STUDY IN SPANISH, FRENCH OR GERMAN 1-3**  
 Individual research conducted under the supervision of a faculty member. Offered on demand for seniors only.

**Prerequisites:** Approval of department chair and senior standing.

## Special Topics

**SPECIAL TOPICS 190 1-6**  
 This is not a fixed course but is a designation to take advantage of special opportunities and topics. It can be offered in any area with the consent of the school dean and the Vice President for Academic Affairs. From 1 to 6 credits may be earned.

**SPECIAL TOPICS 191 3-6**  
 This is not a fixed course but is a designation to take advantage of special opportunities and topics which meet the purpose of one of the groups under the General Studies Program. It can be offered in any area with consent of the school dean, the Vice President for Academic Affairs, and curriculum committee. Credit may vary from 3 to 6 credits.

**SPECIAL TOPICS 390 1-6**  
 Same as Special Topics 190 except that this course is taught at the upper-division level.

**SPECIAL TOPICS 391 3-6**  
 Same as Special Topics 191 except that this course is taught at the upper-division level.

## Theatre

**Thea 100 DRAMATIC THEATRE (0-9) 1-3**

A continuing practicum in public theatrical communication. Each term a major production requiring five to six weeks (about 140 hours) of rehearsal and public performance time is offered as a keynote to the work of The Theatre Company at Fort Lewis College. Open to freshman and sophomore students and may be repeated for a total of 6 credits. Enrollment by audition. Fall term.

**Thea 101A2 INTRODUCTION TO THEATRE (3-0) 3**

A general introduction to theatre arts. Work includes viewing and discussing live theatre performances, both on campus and in the community. Interpretive techniques include an understanding of both physical methods and the function of theatre in its society and in its cultural and artistic context. Fall and winter terms.

**Thea 121 SPEECH COMMUNICATION (3-0) 3**

Through closely supervised activities in various speech forms, the student develops skills necessary to deal successfully with various speaking situations. Fall and winter terms.

**Thea 125A2 ACTING I (3-0) 3**

This course will introduce the student to the basic principles and techniques of acting through intensive scene study and selected readings from major writings in the field. Fall term.

**Thea 126 INTRODUCTION TO THEATRICAL DANCE (3-0) 3**

A course in the basics of dance -- tap, modern, folk, jazz and ballroom -- which emphasizes the performance aspects of dance. Students will find outlets for creative expression in choreography and performance. Fall term.

**Thea 170 DRAMATIC VISION AND SOCIAL CONTEXT (TITLE OF WORK OF ART) (1-0) 1**

A close discussion of the vision of human life in a single work of dramatic art as the work expresses and emerges from its particular environment. This course and Thea 370 may be repeated for a total of 8 credits. Open to freshman and sophomore students. Offered on demand.

**Thea 175 THEATRE ENSEMBLE PERFORMANCE (0-6) 3**

Rehearsal and performance of a dramatic work for the public. Enrollment by audition. Repeatable for a total of 6 credits. Fall and winter terms.

**Thea 176 DANCE PERFORMANCE (0-6) 3**

A dance class the final production of which will be a dance concert. Freshmen and sophomores enrolled will develop, rehearse and perform for the public a new work choreographed by faculty or visiting guest artist. Enrollment by audition. Repeatable for a total of 6 credits. Winter term.

**Thea 200 MUSIC THEATRE (0-9) 1-3**

A continuing practicum in public theatrical communication. Each term a major production requiring five to six weeks (about 140 hours) of rehearsal and public performance time is offered as a keynote to the work of The Theatre Company of Fort Lewis College. Open to freshman and sophomore students and may be repeated for a total of 6 credits. Enrollment by audition. Winter term.

**Thea 210A2 MOVIE REVIEWS (3-0) 3**

Students will see a variety of films - about a dozen - and analyze them in both written and oral critiques. Elements of plot, character, theme, soundtrack, dialogue and the technology of the film will be studied. The focus is on what the film maker is trying to say and how well she or he achieves the goal.



- Thea 222 CREATIVE DRAMATICS (3-0) 3**  
Endeavors to develop creativity and imagination through theatre. While especially useful to those working with youngsters, these techniques which foster self-awareness and expression can be used by anyone. Students may conduct workshops with school children in Durango. Offered on demand.
- Thea 223 CHILDREN'S THEATRE (0-9) 3**  
A course whose purpose is to produce a children's play. All aspects of the production will be handled by the class, which also will perform the play for child audiences in the Durango area. Offered on demand.
- Thea 230 THEATRE DESIGN AND TECHNOLOGY (3-0) 3**  
This course will introduce the student to the centrality of design in the theatrical art and the ways that design is executed in the production. Emphasis will be placed on scenic design and construction, light design, and application and prop design and construction.
- Thea 232 THEATRICAL COSTUME AND MAKE-UP (3-0) 3**  
The principles of costume design and construction and the theory and application of theatrical make-up. Offered on demand.
- Thea 250A2 INTRODUCTION TO DRAMATIC LITERATURE (3-0) 3**  
This course will introduce the student to the major concepts of Dramatic Literature and explore those concepts in significant plays from Ancient Greece to the present day. Winter term.
- Thea 280A2 INTERDISCIPLINARY STUDIES (3-0) 3**  
A group of plays are studied in this course through another discipline e.g., political science, philosophy, archaeology, sociology or theology. The insights so offered are then applied back to the text so as to better understand the play and period from which it comes. Suitable elective course for English majors. Offered Fall term, on demand.
- Thea 300 DRAMATIC THEATRE (0-9) 1-3**  
A continuing practicum in public theatrical communication. Each term a major production requiring five to six weeks (about 140 hours) of rehearsal and public performance time is offered as a keynote to the work of The Theatre Company of Fort Lewis College. Open to junior and senior students and may be repeated for a total of 6 credits. Enrollment by audition. Fall term.
- Thea 302A2 THEATRE HISTORY (3-0) 3**  
This course will provide an overview of the history of the Theatre from ancient times to the present day. The course will focus on the social and cultural role played by the theatre throughout history and the kinds of spaces and theatrical practices developed as a result of those needs. Fall term.
- Thea 365 ACTING II (3-0) 3**  
An acting course designed to acquaint the more experienced student actor or actress with in-depth work in one or more acting methods. Required for theatre majors. Winter term.  
**Prerequisite:** Thea 125A2.
- Thea 366 DANCE TECHNIQUE (3-0) 3**  
An advanced dance class in a particular dance form and technique, e.g., Modern Dance; Graham Technique; Jazz; Luigi Technique. Winter term.  
**Prerequisite:** Thea 126.
- Thea 369A2 PLAYWRITING (3-0) 3**  
In "Playwriting," students will examine dramatic plots, character, dialogue, exposition, setting, theme, new and traditional forms and other elements of drama through a series of exercises and writing practices. They will read a number of contemporary plays and attend local performances; finally, they will write a producible one act play.
- Thea 370 DRAMATIC VISION AND SOCIAL CONTEXT: (TITLE OF WORK OF ART) (1-0) 1**  
A close discussion of the vision of human life in a single work of dramatic art as the work expresses and emerges from its particular environment. This course and Thea 170 may be repeated for a total of 8 credits. Open to juniors and seniors. Offered on demand.
- Thea 375 THEATRE ENSEMBLE PERFORMANCE (0-6) 3**  
Rehearsal and performance of a dramatic work for the public. Open to juniors and seniors. Enrollment by audition. Repeatable for a total of 6 credits. Fall and winter terms.
- Thea 376 DANCE PERFORMANCE (0-6) 3**  
A dance class whose final production will be a dance concert. Juniors and seniors enrolled will develop, rehearse and perform for the public a new work choreographed by faculty or visiting guest artist. Enrollment by audition. Repeatable for a total of 6 credits. Winter term.
- Thea 381A2 PLAYS: (THEME OR TOPIC) (3-0) 3**  
A study of plays chosen from the entire canon of dramatic literature which relate to a specific theme or topic. The theme or topic is changed regularly, e.g., war, women, marriage, the family, work. Suitable option course for English majors. Offered on demand.
- Thea 400 MUSIC THEATRE (0-9) 1-3**  
A continuing practicum in public theatrical communication. Each term a major production requiring five to six weeks (about 140 hours) of rehearsal and public performance time is offered as a keynote to the work of The Theatre Company of Fort Lewis College. Open to junior and senior students and may be repeated for a total of 6 credits. Enrollment by audition. Winter term.
- Thea 401 ADVANCED STUDIES (2-3) 3**  
Advanced study in theatrical style, dramatic literature, management, dance, directing or choreography. Offered on demand.
- Thea 403A2 MODERN DRAMA, 1875-1956 (3-0) 3**  
A look at the major trends of modern drama from 1875 to 1956. The course will look at, among other things, the "ism's" of Realism, Naturalism, Symbolism, Expressionism, Surrealism and Absurdism. Also studied will be the trends in modern theatre toward DocuDrama, Epic Theatre and Political Theatre. This course is suitable for Theatre Option majors, English majors and other students interested in how the major movements of the 20th century were explored in dramatic and theatrical form. This course could be used as a substitute "Topics Course" for students taking an English major. Alternate winter terms.
- Thea 405A2 CONTEMPORARY DRAMA 1956-PRESENT (3-0) 3**  
This course studies the development of Modern Drama from 1956 to the present. Major European and American trends will be explored and the course will attempt to define the current state of English language theatre. This course could be used as a substitute "Topics Course" for students taking an English major. Alternate Winter terms.
- Thea 496 SENIOR SEMINAR 2-3**  
Advanced study and research in selected topics. Offered on demand.  
**Prerequisite:** Senior standing or consent of instructor.

**Thea 499 INDEPENDENT STUDY** 1-3  
Individual research is conducted under the supervision of a faculty member. Offered on demand.  
**Prerequisite:** Approval of Theatre Department chair.

### **Transitional Studies**

#### **TRST - TRANSITIONAL STUDIES**

As the title implies, Transitional Studies courses are designed to assist students in their transition from high school to college. The classes, taught by the staff of the Learning Assistance Center, do not give students credit towards graduation, but do carry credit which can be applied to financial aid and housing requirements. With the exception of the English as a Second Language Classes, students receive a grade of S (Satisfactory) or NC (No Credit).

**TRST 91 THE WRITING PROCESS** (3-0) 0  
Designed to improve the composition skills of students who have weak backgrounds in writing. The course focuses upon pre-writing, logic, paragraph organization, and essay structure, and includes frequent one-on-one critique sessions with the instructor.

**TRST 92 INTERMEDIATE ALGEBRA** (2-1) 0  
Designed to provide review and instruction in college preparatory mathematics for students with deficiencies in or apprehensions about required entrance level mathematics courses. The course will cover such topics as algebraic expressions, manipulation of signed numbers, solving equations and inequalities, algebraic fractions, polynomials, exponents, radical expression and graphing. Students who wish to enroll in this course should have successfully completed at least the equivalent of Algebra I.

**TRST 95 LEARNING SKILLS** (2-0) 0  
Designed to develop the thought processes, habits and skills students need in order to succeed in college. Subjects covered include time management, notetaking, concentration, textbook reading, test taking, memory development and college policies.

**TRST 101 ESL COMPOSITION** (3-0) 0  
Designed to prepare students for whom English is a second language to write acceptable college essays. Subjects covered include prewriting, thesis development, sentence development, paragraph development, grammar review, punctuation review, logic and vocabulary development.

**TRST 102 ESL STUDY SKILLS** (3-0) 0  
Designed to be taken in conjunction with TRST 101. The course develops in students for whom English is a second language the thought processes, habits and skills necessary to succeed in college. Subjects covered include notetaking, textbook reading, questioning, test taking and classroom etiquette.

### **Women's Studies**

(See Page 97.)

# ADMINISTRATION AND FACULTY

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## THE STATE BOARD OF AGRICULTURE\*

	Address	Term Ends
A. GARY AMES	Denver	1995
OWEN "BRAD" BUTLER	Denver	1995
CHUCK MABRY	Fort Collins	1996
WILEY Y. DANIEL	Denver	1993
JAMES R. ISGAR	Durango	1996
PATRICIA D. KELLY	Pueblo	1994
ROMAINE PACHECO	Denver	1993
WALTER L. PRICE	Boulder	1993
JOHN R. STULP, JR., President	Lamar	1994

\*In addition, a faculty representative and a student representative are elected annually from each institution under the jurisdiction of the State Board of Agriculture as non-voting members.

## COLORADO STATE UNIVERSITY SYSTEM

ALBERT C. YATES, Chancellor, CSU System and President,  
Colorado State University

JOEL M. JONES, President, Fort Lewis College

ROBERT C. SHIRLEY, President, University of  
Southern Colorado

## ADMINISTRATIVE CABINET

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Special Assistant to the President

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BRUCE GRIMES, Director of Athletics

## ADMINISTRATIVE PERSONNEL

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JAMES K. ASH, Director of Cooperative Education

LYNN BERLINER, Director of College Union and Student Activities

WILLIAM C. BOLDEN, Director of Housing

CLIFFORD B. CAPP, Acting Director of Division of Intercultural Studies

CONRAD L. CHAVEZ, Administrator of Financial Aid

RICHARD N. ELLIS, Director of Center of Southwest Studies

DAVID EPPICH, Special Assistant to the President

MARCIA FRANZEN, Personnel Administration Officer

GARY E. GOOLD, Director of Budget

BRUCE GRIMES, Director of Athletics

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DANIEL P. HOFF, Physician's Assistant  
and Manager of Student Health Center

MERLE E. JOOSTEN, Manager, Administrative Computing

KAREN LEONE, Director, Conferences and Institutes

ROBERT P. LUNDQUIST, Director, Learning Assistance Center

AL MAGES, Director of Physical Plant and College Engineer

SUSAN K. MCGINNESS, Director of Counseling  
and Student Development Center

WILLIAM NEWMAYER, Bookstore Manager

JOSEPH P. PERINO, Director of Facilities Planning  
and Contracts and Grants Administrator

BETTY PERRY, Dean of Student Affairs

SHERI R. ROCHFORD, Director of Admission and Alumni Relations

SUSAN A. SMITH, Registrar

HARLAN L. STEINLE, Dean of Admission and Development  
and Special Assistant to the President

SHARON A. TABER, Director of the Library

ALLYN TALG, Director of Career Services

DEBORAH V. URODA, Director of College Relations

RICHARD C. WILLIS, Director of Financial Aid

JOE E. WOLCOTT, Director of Security and Safety

CRAIG E. YOUNG, Director of Computing and Telecommunications

JANE ZIMMERMAN, Director of Continuing Education

VACANT, Controller

## Academic Faculty

1993-94

\* Date after title denotes when appointment began at Fort Lewis College.

- ADAMS, EVANS JOSEPH, *Associate Professor of Computer Science* (1990)\*  
 B.S., Nicholls State University, 1977  
 M.S., University of Southwestern Louisiana, 1979  
 Ph.D., University of Southwestern Louisiana, 1982
- ALCAZAR, REINALDO M., *Associate Professor of Modern Language* (1983)  
 B.A., University of Northern Colorado, 1965  
 M.A., University of Colorado, 1970  
 Ph.D., University of Colorado, 1976
- ANGUS, EDWARD L., *Professor of Political Science* (1981)  
 A.B., University of Kentucky, 1961  
 M.A., Pennsylvania State University, 1963  
 Ph.D., Pennsylvania State University, 1970
- ANZIANO, MICHAEL CURRAN, *Associate Professor of Psychology* (1993)  
 B.A., University of Denver, 1971  
 M.A., University of Colorado, Denver, 1978  
 Ph.D., University of Colorado, Boulder, 1984
- ASH, JAMES K., *Director of Cooperative Education and Assistant Professor of History* (1970)  
 B.A., University of California/Berkeley, 1967  
 M.A., Harvard University, 1970
- ATENCIO, LEONARD D., *Professor of Economics* (1968)  
 B.A., Fort Lewis College, 1964  
 Ph.D., Kansas State University, 1969
- BARTLETT, WILLIAM R., *Professor of Chemistry* (1978)  
 B.A., Luther College, 1965  
 Ph.D., Stanford University, 1969
- BEDOR, DONNA AGNES, *Librarian and Assistant Professor* (1990)  
 B.A., Mt. Angel College, 1961  
 M.L.S., University of Denver, 1965
- BELL, GREGORY W., *Professor of Mathematics* (1978)  
 B.A., University of Utah, 1969  
 M.A., University of Michigan, 1972  
 Ph.D., University of Michigan, 1976
- BERRIER, DEBORAH LANE, *Assistant Professor of Mathematics* (1989)  
 B.S., New Mexico State University, 1977  
 M.S., Virginia Polytechnic Institute, 1980  
 M.S., Clemson University, 1986  
 Ph.D., Medical University of South Carolina, 1989
- BIRD, G. LEONARD, *Professor of English* (1969)  
 B.A., San Diego State College, 1961  
 M.A., University of Utah, 1963  
 Ph.D., University of Utah, 1969
- BLAIR, ROBERT W., JR., *Professor of Geology* (1973)  
 B.S., University of New Mexico, 1966  
 Ph.D., Colorado School of Mines, 1975
- BLUE, THOMAS RALPH, *Assistant Professor of Management* (1990)  
 B.S., University of Nevada/Las Vegas, 1971  
 Ph.D., Case Western Reserve University, 1986
- BOCK, JOANNE, *Assistant Professor of Art* (1991)  
 B.A., The College of New Rochelle, 1962  
 M.A., The Catholic University of America, 1968  
 M.A., State University of New York, 1970  
 Ph.D., University of Michigan, 1986
- BOYKIN, NANCY JO, *Assistant Professor of Marketing* (1991)  
 B.S., Louisiana Tech University, 1980  
 M.B.A., Louisiana Tech University, 1982  
 Ph.D., University of North Texas, 1993
- BREW, DOUGLAS, *Professor of Geology* (1980)  
 A.B., Dartmouth College, 1957  
 M.S., Cornell University, 1963  
 Ph.D., Cornell University, 1965
- BRODY, JEAN ELLEN, *Assistant Professor of Theatre* (1992)  
 B.A., Yale College, 1979  
 M.F.A., Yale University, 1983  
 D.F.A., Yale University, 1991
- BROWN, ALANE SUSAN, *Assistant Professor of Psychology* (1990)  
 B.A., Brandeis University, 1981  
 M.A., Princeton University, 1988  
 Ph.D., Princeton University, 1990
- BRUNVAND, AMY C., *Librarian and Assistant Professor* (1988)  
 B.S., University of Utah, 1986  
 M.L.S., University of Pittsburgh, 1987
- BUNCH, KENYON DALE, *Assistant Professor of Political Science* (1993)  
 B.S.E., Central Missouri State University, 1970  
 M.S., Lincoln University, 1977  
 Ph.D., University of Missouri/Columbia, 1985
- BURN, KAREN SUE, *Assistant Professor of Business Administration* (1990)  
 B.B.A., Southern Methodist University, 1970  
 J.D., University of Denver, 1974
- BURNS, SAMUEL A., *Director, Office of Community Services and Professor of Sociology/Human Services* (1972)  
 B.A., University of San Francisco, 1963  
 Ph.D., University of Colorado, 1985
- BYRD, SHERELL KUSS, *Assistant Professor of Biology* (1992)  
 B.A., Western State College, 1980  
 M.S., University of Oregon, 1983  
 Ph.D., University of Oregon, 1987
- CAMPBELL, JOHN A., *Professor of Geology* (1980)  
 B.G., University of Tulsa, 1955  
 M.S., University of Colorado, 1957  
 Ph.D., University of Colorado, 1966

- CANO-MONTENEGRO, MIGUEL FEDERICO, *Professor of Modern Language* (1974)  
B.S., University of Mexico, 1956  
B.S., St. Louis University, 1963  
M.A., St. Louis University, 1966  
Ph.D., St. Louis University, 1973
- CAPP, CLIFFORD B., *Assistant Professor of Mathematics* (1970)  
B.S., Colorado State University, 1962  
M.S., Colorado State University, 1969
- CARRASCO, LOURDES M., *Professor of Modern Language* (1983)  
B.A., University of California/Santa Barbara, 1968  
M.A., University of California/Santa Barbara, 1970  
Ph.D., Michigan State University, 1979
- CAVE, JOHN E., *Dean, School of Business Administration and Professor of Business Administration* (1990)  
B.S., University of Minnesota, 1966  
M.S., University of Minnesota, 1970  
Ph.D., University of Minnesota, 1975
- CHEESEWRIGHT, GORDON PAUL, *Assistant to Vice President for Academic Affairs and Professor of English* (1988)  
B.A., Principia College, 1964  
M.A., University of California/Los Angeles, 1969  
Ph.D., University of California/Los Angeles, 1972
- CHEW, BEVERLY R., *Associate Professor of Psychology* (1989)  
A.B., Bryn Mawr College, 1974  
A.M., Harvard University, 1980  
Ph.D., Harvard University, 1983
- CLAY, JAMES P., *Professor of Business Administration/Economics* (1982)  
B.A., University of Colorado, 1966  
M.A., Kansas State University, 1968  
Ph.D., Kansas State University, 1974  
C.M.A., 1982
- COBURN, MARK DAVID, *Professor of English* (1971-1983, 1989)  
A.B., University of Chicago, 1963  
M.A., Stanford University, 1967  
Ph.D., Stanford University, 1969
- COE, WILLIAM, *Professor of Philosophy* (1971)  
A.B., Dartmouth College, 1957  
M.A., Vanderbilt University, 1959  
Ph.D., Pennsylvania State University, 1967
- COLEMAN, JEREMY J., *Professor of Business Administration* (1983)  
B.S., Princeton University, 1963  
M.P.A., Harvard University, 1969  
D.B.A., George Washington University, 1974
- COLGAN, JOSEPH C., *Professor of Accounting* (1981)  
B.A., Kearney State College, 1960  
M.B.A., University of Denver, 1966  
Ph.D., North Texas State University, 1981  
C.P.A., Colorado, 1967
- COLLIER, JAMES D., *Associate Professor of Geology* (1982)  
B.A., Carleton College, 1976  
Ph.D., Colorado School of Mines, 1982
- CONDIE, JOHN MacPHERSON, *Assistant Professor of Biology* (1989)  
B.S., Northeast Missouri State University, 1974  
Ph.D., University of Minnesota, 1984
- COOK, ROY ALLEN, *Associate Professor of Business Administration* (1989)  
B.B.A., Southwest Texas State, 1971  
M.B.A., Sam Houston State University, 1972  
D.B.A., Mississippi State University, 1989
- COOPER, ANNETTE J., *Associate Professor of Mathematics* (1986)  
B.S., Southwestern State College, 1963  
M.N.S., Oklahoma University, 1970  
Ed.D., Oklahoma State University, 1977
- CORMAN, LAWRENCE S., *Associate Professor of Business Administration* (1982)  
B.A., Texas Tech University, 1976  
M.S., Texas Tech University, 1977  
Ph.D., University of North Texas, 1989
- COSTELLO, JAMES M., *Professor of Physics* (1985)  
B.A., Doane College, 1959  
M.S., University of Nebraska, 1963  
Ph.D., University of Nebraska, 1967
- CRAWFORD, GERALD, *Associate Professor of Physics* (1988)  
B.A., Gustavus Adolphus College, 1979  
M.S., University of Oregon, 1980  
Ph.D., University of Oregon, 1983
- CROSS, JAMES S., *Assistant Professor of Exercise Science and Head Men's Basketball Coach* (1988)  
B.S., Springfield College, 1974  
M.S., Queens College, 1983
- CROWDER, JOHN, *Librarian and Professor* (1973)  
B.A., University of Colorado, 1969  
M.A., University of Denver, 1973
- DARE, BYRON, *Professor of Political Science* (1984)  
B.A., University of Southern California, 1973  
M.A., University of Southern California, 1974  
Ph.D., University of Southern California, 1983
- DAUFIN, EVIE-KAIULANI (E-K), *Assistant Professor of English* (1992)  
B.A., Morgan State University, 1980  
M.A., Ohio State University, 1981  
Ph.D., Ohio State University, 1985
- deGRAW, THERESA JANE., *Assistant Professor of Teacher Education* (1990)  
B.S., Indiana State University, 1969  
M.S., Indiana State University, 1984  
Ph.D., Indiana State University, 1990
- DEVER, JOHN E., JR., *Professor of Biology* (1967)  
B.S., Rutgers University, 1960  
M.S., Oregon State University, 1962  
Ph.D., Michigan State University, 1967
- DODDS, WILLIAM BRUCE, *Associate Professor of Marketing* (1992)  
B.S., Clarkson University, 1970  
M.S., Clarkson University, 1971  
Ph.D., Virginia Polytechnic Institute, 1985

DOLPHIN, ROBERT, JR., *Vice President for Business and Finance and Professor of Finance* (1984)

B.S., Indiana University, 1960  
M.B.A., Indiana University, 1961  
D.B.A., Michigan State University, 1964

DUKE, PHILIP G., *Associate Professor of Anthropology* (1980)

B.A., Cambridge, England, 1976  
M.A., University of Calgary, Canada, 1978  
M.A., Cambridge, England, 1982  
Ph.D., University of Calgary, Canada, 1982

ECKENRODE, THOMAS R., *Professor of History* (1969)

A.B., St. Vincent College, 1958  
M.A., University of Colorado, 1964  
Ph.D., St. Louis University, 1970

EL-HAKIM, OMNIA I., *Professor of Engineering* (1985)

B.S., Ein Shams University, Egypt, 1966  
M.S., Cairo University, 1977  
Ph.D., Colorado State University, 1984

ELLINGSON, JACK A., *Professor of Geology* (1970)

B.S., University of Washington, 1958  
M.S., University of Washington, 1959  
Ph.D., Washington State University, 1968

ELLIS, RICHARD N., *Director, Center of Southwest Studies and Professor of History* (1987)

B.A., University of Colorado, 1961  
M.A., University of Colorado, 1963  
Ph.D., University of Colorado, 1967

ELLISON, J. TODD, *Archivist and Assistant Professor* (1991)

B.A., Middlebury College, 1977  
M.A., University of Maryland, 1986  
M.L.S., University of Maryland, 1986

ENGMAN, VIRGINIA A., *Professor of Education* (1978)

B.A., SUNY, Oswego, 1972  
M.S., SUNY, Oswego, 1973  
Ph.D., Arizona State University, 1978

ESTLER, RON C., *Professor of Chemistry* (1982)

B.A., Drew University, 1972  
M.A., Johns Hopkins University, 1974  
Ph.D., Johns Hopkins University, 1976

FINE, KATHLEEN S., *Associate Professor of Anthropology* (1983)

B.A., DePauw University, 1974  
M.A., University of Illinois, 1980  
Ph.D., University of Illinois, 1986

FITZGERALD, JAMES, *Associate Professor of Sociology/Human Services and Modern Language* (1971-75, 1988)

B.A., University of Notre Dame, 1961  
M.A., University of Wyoming, 1966  
Ph.D., University of Colorado, 1983

FRANKENBERG, III, WILLIAM GRANT, *Assistant Professor of Teacher Education* (1990)

B.S., University of Oklahoma, 1979  
M.S., Oklahoma State University, 1985  
Ed.D., Oklahoma State University, 1990

FRY, MICHAEL FORREST, *Assistant Professor of History* (1990)

B.A., Westminster College, 1977  
M.A., Westminster College, 1980  
Ph.D., Tulane University, 1988

GARCIA, REYES ROBERTO, *Associate Professor of Philosophy* (1988)

B.A., University of Colorado, 1974  
Ph.D., University of Colorado, 1988

GIBBS, RICHARD A., *Professor of Mathematics* (1971)

B.A., Michigan State University, 1964  
M.S., Michigan State University, 1965  
Ph.D., Michigan State University, 1970

GIERSCH, MARVIN L., *Professor of Education and Exercise Science* (1970)

B.S., Fort Hays Kansas State College, 1959  
M.S., Baylor University, 1960  
Ed.D., University of Northern Colorado, 1970

GOFF, J. LARRY, *Professor of Business Administration* (1985)

B.A., University of Oklahoma, 1960  
J.D., University of Oklahoma, 1972  
M.A., Adams State College, 1989

GORDON, DONALD R., *Associate Professor of Anthropology* (1975)

B.A., California State University/San Francisco, 1964  
M.S., University of Oregon, 1969  
Ph.D., University of Oregon, 1974

GREATHOUSE, JOHN R., *Associate Professor of Agriculture* (1986)

B.S., Kansas State University, 1980  
M.S., Kansas State University, 1982  
Ph.D., Colorado State University, 1985

GREFSRUD, GARY W., *Professor of Mathematics* (1971)

B.S., Montana State College, 1960  
M.S., Montana State University, 1962  
Ph.D., Montana State University, 1971

HAAS, WILLIAM JOSEPH, *Assistant Professor of History* (1991)

B.L.S., Boston University, 1976  
A.M., Harvard University, 1978  
Ph.D., Harvard University, 1991

HAI, WEN, *Assistant Professor of Economics* (1992)

B.A., Peking (Beijing) University, 1982  
Ph.D., University of California/Davis, 1991

HALE, JOHN F., *Professor of Business Administration and Psychology* (1970)

A.B., Brown University, 1957  
M.A., Brown University, 1959  
Ph.D., Carnegie-Mellon University, 1963

HAMILTON, RODNEY D., *Professor of Chemistry* (1969)

B.S., Marietta College, 1960  
Ph.D., Indiana University, 1964

HARRINGTON, ROBERT P., *Assistant Professor of Accounting* (1990)

B.S., University of Florida, 1967  
M.B.A., Old Dominion University, 1978  
Ph.D., Virginia Polytechnic Institute and State University, 1985

- HARTSFIELD, LARRY K., *Professor of English* (1984)  
B.A., Abilene Christian University, 1974  
M.A., Southern Illinois University, 1976  
Ph.D., University of Texas, 1982
- HAYES, WILLIAM E., *Assistant Professor of Exercise Science and Head Softball Coach* (1971)  
B.S., University of New Mexico, 1962  
M.A., University of New Mexico, 1968
- HORWATH, RITA JEAN, *Assistant Professor of Political Science* (1989)  
B.A., Fort Lewis College, 1986  
M.A., University of Wisconsin/Madison, 1988  
J.D., University of Wisconsin/Madison, 1990
- HUANG, HAO, *Assistant Professor of Music* (1993)  
B.A., Harvard University, 1978  
M.M., Juilliard School of Music, 1981  
D.M.A., State University of New York, 1985
- HUNT, DAVID J., *Associate Professor of Art* (1978)  
B.A., Brigham Young University, 1967  
M.A., Brigham Young University, 1969
- HUNTER, DOREEN, *Professor of History* (1980)  
B.A., Stanford University, 1960  
M.A., University of California/Berkeley, 1961  
Ph.D., University of California/Berkeley, 1969
- INGLETT, BETTY JEAN, *Assistant Professor of Psychology* (1991)  
B.A., Arkansas Tech University, 1984  
M.A., University of Nebraska, 1988  
Ph.D., University of Nebraska/Omaha, 1993
- IVERSON, MARTHA SUSAN, *Assistant Professor of Physics* (1992)  
B.A., University of Colorado, 1971  
Ph.D., University of Colorado, 1976
- JAMIESON, DAVID W., *Associate Professor of Biology* (1978)  
A.B., Humboldt State University, 1966  
M.A., Humboldt State University, 1969  
Ph.D., University of British Columbia, 1976
- JONES, JANET LEE, *Assistant Professor of Psychology* (1990)  
B.A., Pomona College, 1984  
M.A., University of California/Los Angeles, 1985  
Ph.D., University of California/Los Angeles, 1989
- JONES, JOEL M., *President and Professor of English and Intercultural Studies* (1988)  
B.A., Yale University, 1960  
M.A., Miami University, 1963  
Ph.D., University of New Mexico, 1966
- JONES, ROLAND C., *Professor of English* (1967)  
B.A., University of Michigan, 1956  
M.A., Northern Arizona University, 1963  
Diploma for Advanced Graduate Studies, Michigan State University, 1970
- JUDGE, W. JAMES, *Professor of Anthropology*, (1990)  
B.A., University of New Mexico, 1961  
Ph.D., University of New Mexico, 1970
- JUNG, MARCELYN BETH, *Instructor of Exercise Science and Head Volleyball Coach* (1990)  
B.A., Fort Lewis College, 1981  
M.S., Illinois Benedictine College, 1990
- KELLY, REECE, C., *Professor of History* (1971)  
B.A., Eastern Washington State College, 1964  
M.A., University of Washington, 1967  
Ph.D., University of Washington, 1973
- KENDALL, DEBORAH MARIE, *Assistant Professor of Biology* (1987)  
B.S., Colorado State University, 1975  
M.S., University of Colorado, 1981  
Ph.D., Colorado State University, 1987
- KHANNA, MUKTI, *Assistant Professor of Psychology* (1991)  
B.A., Stanford University, 1983  
Ph.D., University of Tennessee, 1989
- KLAGES, JAMES L., *Assistant Professor of Music* (1991)  
B.M., State University of New York/Fredonia, 1978  
M.M., Indiana University, 1983
- KNIGHT, GARY D., *Professor of Education* (1972)  
B.S., East Central State College, Oklahoma, 1962  
M.T., East Central State College, Oklahoma, 1964  
Ed.S., Eastern New Mexico University, 1970  
Ed.D., University of New Mexico, 1972
- LANG, LILLIAN B., *Professor of English* (1973)  
B.A., Portland State University, 1961  
M.A., University of California/Santa Barbara, 1967  
Ph.D., University of California/Santa Barbara, 1976
- LANGWORTHY, WILLIAM C., *Vice President for Academic Affairs and Professor of Chemistry* (1983)  
B.S., Tufts University, 1958  
Ph.D., University of California/Berkeley, 1962
- LEAVITT, DINAH L., *Professor of Theatre* (1978)  
B.A., University of Mississippi, 1969  
M.A., University of Mississippi, 1970  
Ph.D., University of Colorado, 1978
- LEFTWICH, MARILYN STACEY, *Assistant Professor of Psychology* (1993)  
B.S., University of Alabama, 1964  
M.S., Florida State University, 1970  
Ph.D., Florida State University, 1973
- LEHMAN, DALE E., *Associate Professor of Economics* (1983)  
B.A., State University of New York at Stony Brook, 1972  
M.A., University of Rochester, 1975  
Ph.D., University of Rochester, 1981
- LEYERLE, BETTY J., *Professor of Sociology/Human Services* (1984)  
B.A., Brooklyn College, 1970  
M.A., Brooklyn College, 1975  
Ph.D., City University of New York, 1981
- LIKES, ROBERT N., *Professor of Physics* (1974)  
B.A., Wayne State College, 1960  
M. Sci.Ed., University of Utah, 1965  
Ph.D., University of Wyoming, 1973



LINDSEY, J. PAGE, *Professor of Biology* (1978)

B.A., Hendrix College, 1970  
M.S., University of Arizona, 1972  
Ph.D., University of Arizona, 1975

LINTON, NORMAN, *Professor of Sociology/Human Services* (1973)

B.A., Reed College, 1958  
M.A., University of Oregon, 1960  
Ph.D., University of California/Berkeley, 1972

LUM, DENNIS W., *Associate Professor of Sociology/Human Services* (1975)

B.A., University of Nevada/Reno, 1966  
M.A., University of Nevada/Reno, 1971  
M.A., University of California/San Diego, 1973

LYNCH, VERNON E., JR., *Professor of Economics* (1972)

B.A., University of Texas/Austin, 1965  
M.A., University of Texas/Austin, 1967  
Ph.D., University of Arizona, 1976  
C.P.A., Colorado, 1988

MACK, LINDA S., *Associate Professor of Music* (1982)

B.M.E., Illinois State University, 1975  
M.S., University of Illinois, 1980  
Ed.D., University of Illinois, 1982

MacKEEFE, DEBORAH A., *Professor of Modern Language* (1972)

Degre Supérieur, Sorbonne, 1965  
B.A., University of Arizona, 1966  
M.A., University of Arizona, 1969  
Ph.D., University of Arizona, 1972

MANN, ROCHELLE G., *Associate Professor of Music* (1987)

B.M.E., Indiana University, 1975  
M.S., Indiana University, 1980  
D.M.A., Arizona State University, 1991

MARTIN, KATHRYN SARELL, *Assistant Professor of Theatre* (1993)

B.A., Mary Washington College, 1981  
M.S., James Madison University, 1983

MAY, DONALD R., *Assistant Professor of Engineering* (1984)

B.S., Colorado State University, 1978  
M.S., Colorado State University, 1982

McHUGH, NEIL, *Associate Professor of History* (1984)

B.A., University of Kentucky, 1972  
M.A., Indiana University, 1974  
Ph.D., Northwestern University, 1986

McKINNEY, ALICE LOUISE, *Librarian and Assistant Professor* (1990)

B.S., Northern Arizona University, 1976  
M.L.S., Louisiana State University, 1985

McKNIGHT, REED, *Professor of Accounting* (1981)

B.S., University of Idaho, 1969  
M.B.A., Washington State University, 1971  
Ph.D., University of Oregon, 1981  
C.P.A., Montana, 1974

MEHS, DOREEN M., *Assistant Dean, School of Arts and Sciences and Professor of Chemistry* (1973)

B.A., Harpur College, SUNY Binghamton, 1966  
M.A. State University of New York, Binghamton, 1972  
Ph.D., University of New Mexico, 1980

MEMON, IQBAL A., *Assistant Professor of Business Administration* (1988)

B. Com., University of SIND, 1971  
M. Com., University of SIND, 1973  
M. Phil., University of SIND, 1979  
M.B.A., Illinois State University, 1979  
D.B.A., Mississippi State University, 1984

MILLS, JAMES W., *Professor of Chemistry* (1973)

A.B., Earlham College, 1963  
Ph.D., Brown University, 1967

MILOFSKY, ROBERT ERIC, *Assistant Professor of Chemistry* (1992)

B.S., Bates College, 1987  
Ph.D., University of Colorado, 1991

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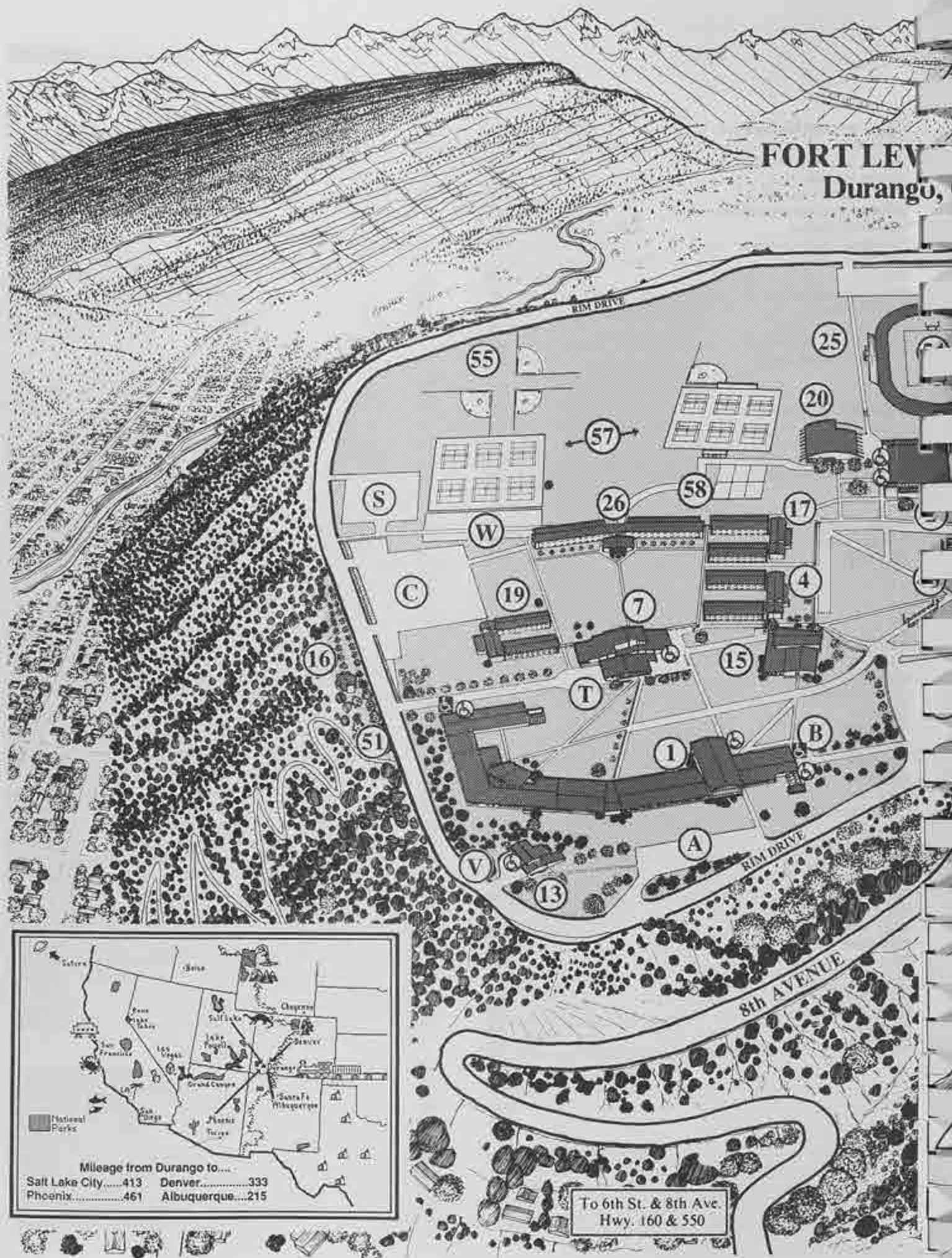
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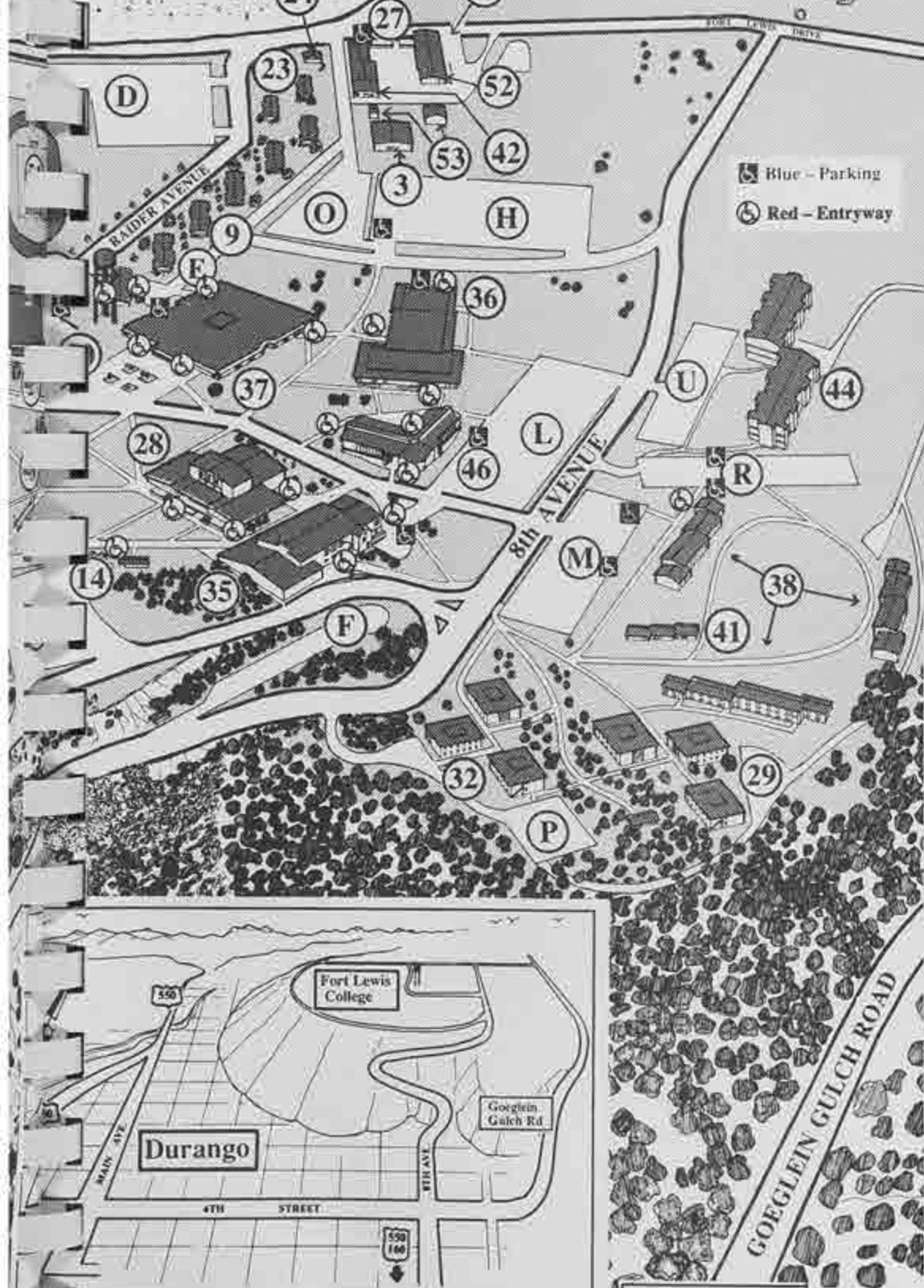


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