

1976-77



**University of
Northern
Colorado**

Undergraduate Catalog

S M T W T F S

JUNE

1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30

JULY

1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31

AUGUST

1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31

SEPTEMBER

1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30

OCTOBER

1 2
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
31

NOVEMBER

1 2 3 4 5 6
7 8 9 10 11 12 13
14 15 16 17 18 19 20
21 22 23 24 25 26 27
28 29 30

S M T W T F S

DECEMBER

1 2 3 4
5 6 7 8 9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31

JANUARY

1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31

FEBRUARY

1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28

MARCH

1 2 3 4 5
6 7 8 9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30 31

APRIL

1 2
3 4 5 6 7 8 9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30

MAY

1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31

NOTE: Courses in this catalog are subject to change without notice.



University of Northern Colorado

General Information	3
Admissions	5
Academic Information	8
Academic Standards	10
Institutional Structure and Programs	13
Graduation Requirements	28
Students Rights and Responsibilities	29
UNC Services	29
Fees and Expenses	40
Payment of Student Accounts ..	43
Degree Programs	44
Course Descriptions	136
Board of Trustees	280
General Administration	280
Faculty	281

THUMB
INDEX



**UNDERGRADUATE CATALOG
1976-77**

Effective dates:
June 1, 1976 to May 31, 1977

PLEASE NOTE: A University Catalog will be provided each new student during the appropriate orientation session. Subsequent catalogs will be available for sale at the University Bookstore.

UNIVERSITY OF NORTHERN COLORADO

UNIVERSITY CALENDAR

1976-77

SUMMER TERM, 1976

Summer Quarter - June 14 - September 17

Monday, June 14 -- Registration and classes begin for one week (June 14-18) and ten week (June 14-August 20) sessions.

Tuesday, June 15 -- Classes begin for ten week (June 14 - August 20) session.

Friday, June 18 -- Last day of classes for one week (June 14-18) session.

Monday, June 21 -- Registration for Eight week (June 21 - August 13) session.

Tuesday, June 22 -- Classes begin for Eight week (June 21 - August 13) session.

Monday, July 5 -- Vacation (no classes)

Friday, August 13 -- Last day of classes for Eight week (June 21 - August 13) session.

Saturday, August 14 -- Commencement -- 10:00 a.m.

Monday, August 16 -- Registration and classes begin for one week (August 16-20), two week (August 16-27), and four week (August 16-September 10) sessions.

Friday, August 20 -- Last day of classes for one week (August 16-20) and ten week (June 14 - August 20) sessions.

Monday, August 23 -- Registration and classes begin for one week (August 23-27) session.

Friday, August 27 -- Last day of classes for one week (August 23-27) and two week (August 16-20) classes.

Monday, August 30 -- Registration and classes begin for one week (August 30 - September 3) and two week (August 20 - September 10) sessions.

Friday, September 3 -- Last day of classes for one week (August 30 - September 3) session.

Monday, September 6 -- Registration and classes begin for one week (September 6-10) session.

Friday, September 10 -- Last day of classes for one week (September 6-10), two week (August 30 September 10) and four week (August 16 - September 10) sessions.

Monday, September 13 -- Registration and classes begin for one week (September 13-17) session.

Friday, September 17 -- Last day of classes for one week (September 13-17) session.

Fall Quarter, 1976

Monday, September 13 -- Lab School Opens

Thursday, September 16 -- University Meetings, Faculty and Staff

Friday, September 17 -- College/School Departmental Faculty Meetings

Sunday, September 19 -- New Undergraduate Students Report

Monday, September 20 -- New Undergraduate Students Orientation and Academic Advising

Tuesday & Wednesday, September 21-22 -- Registration for FALL Term (September 20 - December 10)

Thursday, September 23 -- Classes begin

Friday & Saturday, November 5-6 -- Winter Term Preregistration (No classes)

Friday, November 19 -- Thanksgiving vacation begins after last class

Monday, November 29 -- Classes Resume

Friday, December 10 -- Last Day of Classes

Saturday, December 11 -- Commencement -- 10:00 a.m. (Quarter Ends)

Winter Quarter, 1977

Monday, January 3 -- Registration for Winter Term (January 3 - March 11)

Tuesday, January 4 -- Classes Begin

Friday & Saturday, February 11-12 -- Spring Term Preregistration (No classes)

Friday, March 11 -- Last Day of Classes

Saturday, March 12 -- Commencement -- 10:00 a.m. (Quarter Ends)

Spring Quarter, 1977

Monday, March 21 -- Registration for Spring Term (March 21 - June 3)

Tuesday, March 22 -- Classes begin

Friday & Saturday, April 29-30 -- Fall Term 1977 Preregistration (No classes)

Monday, May 30 -- Memorial Day (No classes)

Friday, June 3 -- Last Day of Classes

Saturday, June 4 -- Commencement -- 10:00 a.m. (Quarter Ends)

A Guide to the 1976-77 UNC Catalog or "How to Survive this Document"

This catalog is published in order to help you gain a clear picture of the University of Northern Colorado and its undergraduate educational programs.

It contains program and course descriptions for those interested in general undergraduate study or in securing the Bachelor of Arts, Bachelor of Music, or Bachelor of Science degree. If you are interested in courses or programs above the bachelor's degree level, you may request a copy of the Graduate School bulletin through the university's Graduate Office.

The undergraduate catalog is divided into 11 sections, each section contains a general content area. Section 1 -- **General Information** contains basic institutional information including the location of the UNC campus, its accreditation and its history. Section 2 -- **Admissions** explains admission procedures, including requirements, deadlines and procedures. Section 3 -- **Academic Information** includes information of interest to students including academic advising, course numbering system, schedule changes and withdrawal procedures. Section 4 -- **Academic Standards** explains policies and requirements that are of interest to undergraduate students, including the university's policy on attendance, credit by examination, probation and dismissal, the university's grading system and residence requirements. Section 5 -- **Institutional Structure and Programs** explains the structure of the university including colleges, schools and departments. It also explains non-degree programs that are either required or available to UNC students. Section 6 -- **Graduation Requirements** explains policies and procedures that affect a student's graduation from the university. Section 7 -- **Students Rights and Responsibilities** explains the university's expectations upon students as well as the university's obligations to students. Section 8 -- **UNC Services** explains services that are either offered by the university or available to UNC undergraduate students. Section 9 -- **Fees and Expenses** outlines the fees students will be expected to pay while attending the University of Northern Colorado. Section 10 **Degree Programs** displays undergraduate degree programs available to students. These programs are listed alphabetically according to the title of the major or minor degree. Consult the index for major and minor programs on page 48. Section 11 -- **Course Descriptions** is a collection of all courses offered by the University of Northern Colorado. Courses are itemized alphabetically according to the course prefix.

The listing of a course or program in the official catalog does not constitute a guarantee or contract that the particular course or program will be offered during a given year. For an exact schedule of fall, winter, and spring classes, consult the Schedule of Classes. The summer schedule is given separately in the Summer Session bulletin.

GENERAL INFORMATION

The University of Northern Colorado is primarily concerned with the needs and welfare of students and directs its major attention to classroom teaching. It seeks to provide all students with a broad general education as well as preparation for selected professions (within the fields of business, education, health services, music, and some related areas) and pre-professions (such as pre-law and pre-medicine). Historically, a principal emphasis has been upon preparing students for careers in education. A growing interest area at the University is Liberal Education through several new programs.

A wide variety of program offerings are organized within eight schools and colleges (College of Arts and Sciences, College of Education, School of the Arts,

School of Business, School of Educational Change and Development, School of Health, Physical Education and Recreation, School of Music, and School of Nursing). Advanced programs are offered through the Graduate School, and an Air Force officers program is available through the Division of Aerospace Studies.

For the convenience of students, the academic calendar is arranged on the quarter system, with new students being permitted to enter at the start of any quarter and to be enrolled continuously through all four quarters. This allows completion of the usual four-year baccalaureate program within three years if the student prefers. The quarters are of approximately equal length, beginning respectively in September, January, March and June.

Location. The university is located in a residential area in the southern part of Greeley, Colorado, a city with a population of about 57,000 situated 30 miles from the front range of the Rocky Mountains. It lies roughly 50 miles north of Denver and 50 miles south of Cheyenne, Wyoming, at an elevation of 4,648 feet above sea level. The climate is dry and relatively mild.

History. The history of the University of Northern Colorado, is closely related to that of the Union Colony, which later became the city of Greeley. The Colony was organized in 1870 by a group of settlers from New York and New England under the leadership of Nathan Meeker and with the encouragement of Horace Greeley, famous publisher of the New York *Tribune*. It was to honor the latter that the name was changed from Union Colony to Greeley.

When the Colony was 18 years old, a movement was begun to establish a normal school to supply teachers for the state. The law creating the first State Normal School was signed on April 1, 1889, and the cornerstone of the original building (Cranford Hall, now demolished) was laid on June 13, 1890. Classes were started October 6, 1890. Certificates were granted upon completion of a two-year course of study.

In 1911, the name was changed by the legislature to Colorado State Teachers College. The institution was then offering four years of collegiate work and granting the Bachelor of Arts degree. Graduate work was first offered in 1913, with master's degrees being conferred at the commencement in June, 1914. In 1929 graduate work was extended to the doctoral level, and in 1934 the first Doctor of Philosophy degree was awarded. Other degrees, including the Doctor of Education, the Specialist in Education, and the Doctor of Arts, were approved later.

In 1935 the name of Colorado State College of Education was adopted to recognize the fully developed graduate program as an integral part of the institution. Another name change took place in 1957, when the legislature shortened the name to Colorado State College. Meanwhile, professional programs in such fields as business, medical technology, music, and nursing had been developing. In recognition of the institution's broadened functions and extensive undergraduate and graduate programs, the name was changed to the University of Northern Colorado in May, 1970.

On July 1, 1973, legislation creating a separate governing board for the University of Northern Colorado became effective. The University, formerly one of several institutions of higher education controlled by the Trustees of State Colleges in Colorado, is now governed by the Trustees for the University of Northern Colorado, a board of seven members appointed by the Governor of the State. Funds for its operation are derived from appropriations of the state legislature, student tuition and fees, special federal grants, and various private gifts.

Accreditation and Affiliation. The university is a member of and accredited by the North Central Association of Colleges and Secondary Schools (since 1916).

Various of its academic programs have special accreditation by the following: American Chemical Society (1968), Colorado State Board of Accountancy (1967), Colorado State Board of Nursing (1965), National Association of Schools of Music (1967), National Council for Accreditation of Teacher Education (1960), and National League of Nursing (1966).

The institution holds membership in the American Association of Colleges for Teacher Education, the American Association of State Colleges and Universities, the American Council on Education, the Council of Graduate Schools in the United States, the Midwest Conference on Graduate Study and Research, the Western Association of Graduate Schools, and other educational organizations.

Campus. The physical facilities of the university consists of 17 academic buildings, 23 residence halls and apartments for students, and a number of other permanent or temporary buildings used for various miscellaneous purposes, such as service buildings, faculty apartments, athletic facilities, faculty offices, and sorority or fraternity houses. The campus of approximately 240 acres is situated one mile south of the main Greeley business district and is divided into three areas: East Campus, Central Campus, and Darrell Holmes Campus. Residence halls for men and women are located on the East and West campuses and residences for women on the Central Campus. University-owned apartments for married students and families are on the East Campus. Besides athletic fields for the major outdoor team sports on the East Campus, there are extensive recreational and sports areas on all three campuses.

All but two buildings on the Darrell Holmes Campus have been built within the last 10 years, and further development is planned for this area. A major addition in 1970 was the new James A. Michener Library. The new Candelaria Hall houses the arts and sciences and Lawrenson Hall, the 17-story apartment-style dormitory, opened in 1972. The Butler-Hancock Physical Education facility opened in January of 1975.

The University also owns a mountain campus of 80 acres and five buildings near the city of Estes Park and another 80-acre tract south of Greeley.

ADMISSIONS

Admission Policy

A high school graduate or a person holding a high school equivalency certificate may be admitted to the University of Northern Colorado if the transcript of his high school record accompanying his application indicates he has the academic ability to do college work successfully. All applications for admission normally must be received one month prior to registration. Individuals are encouraged to submit applications as early as possible, since enrollments may be limited due to UNC's capped enrollment.

Minimal requirements for freshman admission are:

1. Graduation from an accredited high school with a minimum of 15 secondary school units. Graduates from high schools not accredited will be examined for admission purposes.
2. Of the 15 units required, 10 must be chosen from the following academic fields: English (minimum of three units), foreign languages, mathematics, science and social studies.
3. Rank in the upper one-half of the high school graduating class or scores above the national average on the American College Test.

All new students are required to submit scores from the American College Test (ACT). Entrance examination results should be submitted as early as possible so admission status can be determined without delay. Information regarding the ACT examination may be obtained from high school principals or counselors.

The committee on Admissions uses additional information such as secondary school grades, trend in quality of high school performance, and principal or counselor recommendations, as well as recommendations from officials of reputable community agencies, in assessing the probability of satisfactory performance in the

academic program of the university.

A person 18 years of age or over who is not a high school graduate may be admitted to a degree program if the results of the GED examination taken at least one month prior to the day of registration show he has the academic ability to do college work successfully.

Freshman Admission Procedures. 1. An application for admission may be obtained from a high school principal or counselor. Out-of-state students write to the Office of Admissions, the University of Northern Colorado.

2. Fill in the Application for Admission and have the high school office attach a transcript and send it to the Office of Admissions. Applications may be filed any time after the beginning of the senior year in high school and normally not later than 30 days prior to registration day. Individuals are encouraged to submit applications as early as possible, since enrollments may be limited because of UNC's capped enrollment.

The application must be accompanied by a \$10.00 transcript and evaluation fee. This fee is non-refundable.

3. Take the American College Test (ACT).

4. Upon receipt of the application, the university will inform you of your admission status and will send you a form for reserving a room in a university residence hall.

Information regarding the University Orientation/Pre-Registration Program will be mailed prior to the opening of the University to those applicants entering each quarter.

Freshman Admissions Timetable. Applications may be filed at any time during the senior year in high school but normally not later than 30 days prior to registration day. Individuals should submit applications as early as possible, since enrollments may be limited due to UNC's capped enrollment. The application must be accompanied by a \$10.00 transcript and evaluation fee, which is non-refundable. The American College Test (ACT) is required and should be taken early enough so that the test results may be considered at the time the application is filed. An October or December test date is recommended. Junior year test scores will be accepted. Applicants for financial aid must submit the Family Financial Statement of the American College Testing Program in order to be considered for financial aid. All financial aid materials must be received by the Financial Aid Office prior to March 31. The aid applicant is, therefore, encouraged to complete the Family Financial Statement prior to the end of February. This form is used for consideration for scholarships, student loans and grants. A student must have been officially admitted to the university before the offer of scholarships or financial aid package becomes final.

Transfer Admissions. A student transferring from another college or university may be admitted if he has a "C" average academic record and is in good standing at the college or university from which he is transferring. His application must be received one month prior to registration. Individuals are encouraged to submit applications as early as possible, since enrollments may be curtailed because of UNC's capped enrollment.

Transfer Credit. Students graduating from a junior college or transferring two years of college work may have to spend more than two years at the University of Northern Colorado to complete the requirements for graduation in certain major fields. If the junior college program corresponds to the requirements of the first two years in the same plan of study at the University of Northern Colorado, graduation in two additional years is possible in most cases. Credit earned at a junior college after completion of the sophomore year or beyond 96 quarter hours of credit will not be transferable.

Students transferring to the university from junior or community colleges who

have completed equivalent programs in general education, as determined by the university admissions office, will receive full credit for such work and are excused from further general education requirements.

The University of Northern Colorado *does not* accept credit from other colleges and universities in which grades below "C" have been earned.

Since 1949 the University of Northern Colorado has accepted in transfer a maximum of 90 quarter hours of academic credit plus 6 physical education credits, if and when a complete and official transcript shows that a prospective transfer student has been granted an Associate of Arts degree from an accredited college. (Credit for "D's" is accepted in this instance if such grades are an integral part of the Associate of Arts degree.)

Many specialized courses do not transfer to the University of Northern Colorado.

Any college work earned more than 15 years prior to the time the baccalaureate degree is granted at the University of Northern Colorado may be applicable toward a degree at the discretion of the major and minor departments.

Previous grade point averages are used for admission purposes only and are not carried forward to the student's academic record at the University of Northern Colorado. The student will begin a new University of Northern Colorado grade point average which will not be combined with any previous grade point average earned.

The University of Northern Colorado allows no transfer of credit from non-accredited colleges and universities outside the State of Colorado.

Transfer of credit may be allowed transfer students from non-accredited institutions of higher learning in Colorado if these institutions have been rated "C" or above in the Report of Credit Given by Educational Institutions, American Association of Collegiate Registrars and Admission Officers. This acceptance will be individually determined in accordance with existing policies of the University of Northern Colorado.

Transcripts from other colleges and universities that contain credit necessary for completion of degree requirements at the University of Northern Colorado must be received by the University prior to the quarter of graduation.

Credit for Military Service School Experience. Certain credit may be awarded to veterans of military service who have attended military service schools. This credit is evaluated by the Office of Admissions according to suggested guidelines by the American Council on Education.

Transfer Procedures. File with the Office of Admissions, the University of Northern Colorado (a) An Application for Admission including high school record; (b) two official transcripts of all credits earned at other colleges or universities; (c) an application for transfer of credit; (d) a report of health examination.

The application must be accompanied by a \$10.00 transcript and evaluation fee. This fee is non-refundable.

In order to insure an evaluation for admission, these materials must normally be sent to the Office of Admissions, the University of Northern Colorado, 30 days in advance of the quarter for which the transfer student wishes to enroll. Individuals are encouraged to submit applications as early as possible, since enrollments may be limited because of UNC's capped enrollment. Necessary forms may be obtained from the Office of Admissions, and the letter of inquiry should state specifically that the student is an undergraduate transfer student. (*Graduate Students: Please consult the Graduate Catalog for details concerning graduate students.*)

Transfer Student Admissions Timetable. All applications and two official transcripts from each college or university attended must normally be filed 30 days prior to the quarter for which the transfer student wishes to enroll. Individuals are encouraged to submit applications as early as possible, since enrollments may be limited due to UNC's capped enrollment. The application must be accompanied by a \$10.00 transcript and evaluation fee, which is non-refundable. *All undergraduate*

students, whether full- or part-time, must make application for admission and be officially admitted in order to take course work. There is no "unclassified" or "special student" status for undergraduate students.

International Students. English Proficiency: The Test of English as a Foreign Language (TOEFL) is required by the University of Northern Colorado for all students with a native language other than English. The TOEFL test is given periodically at testing centers throughout the world. Arrangements to take this test can be made by writing to the following address:

Test of English as a Foreign Language
Educational Testing Service
Princeton, New Jersey, U.S.A. 08540

The application for admission and all credentials including the TOEFL score, must be mailed in time to reach the University of Northern Colorado no later than 90 days prior to registration day. Individuals are encouraged to submit applications as early as possible, since foreign enrollments may be curtailed because of limited facilities.

Medical Examination. Prior to final admission and following a medical examination by a qualified medical practitioner, a student shall submit to the Student Health Service of the University a health report in a form which is acceptable to the staff of the Student Health Service indicating the health status of the student. Such information is necessary to provide better medical care while attending the University, to insure the health of others in the community and to assist the student in progressing toward his educational goals.

Additional Admission Requirements to Programs. Some programs require previous experience, course work, or different procedures prior to acceptance into those programs. Students should consult the appropriate department or the program description located between pages 44 and 135 in this catalog.

Personal and Social Qualities. A student seeking admission to the University of Northern Colorado is expected to possess personal and social qualities befitting the curriculum he wishes to study, in keeping with the objectives and traditions of the university, and desirable for the vocation he or she plans to enter. After admission to the university, the student is expected to develop and express these qualities in the classroom, at social and athletic events, in residence, and in community affairs both on and off campus.

A student is expected to have such speech skills as will enable that person to progress satisfactorily in the chosen curriculum and to perform adequately when in a later vocation.

ACADEMIC INFORMATION

Academic Advising. It is the firm expectation that all students at the University will work with faculty members in defining and developing their academic programs. While some academic departments do not require their students to obtain advisement prior to each quarter's registration, all faculty of the University are expected to be available to advise students.

Students should check with the chairman of their department to be assigned a faculty adviser. Students who have not yet declared a major should contact the Dean of Students Office to be assigned an adviser.

Academic Credit. The normal undergraduate course load for a quarter is 15 hours of academic credit. During the Early and Preregistration period, students may register for a maximum of 18 academic credit hours. During registration and

ending with the last day for adding courses, students who have a 2.75 or higher cumulative grade point average may enroll for additional hours with approval from the office of the Dean of Students. It is recommended that students desiring to take more than 18 hours seek prior departmental academic counseling. Students who have less than a 2.75 cumulative grade point average may not take in excess of 18 academic hours. Exceptions may be made to the policy for legitimate hardship cases by the Dean of Students Office.

All credit toward graduation is computed in "quarter credit hours." The term "one quarter hour" means a course is offered for one hour, one day a week through a quarter of approximately ten weeks.

Courses offered during Fall, Winter, Spring and Summer quarters will carry the credit designated in the catalog. Students may register for "No Credit," however, they must pay the appropriate tuition and fees. No audit or visitors cards are issued.

Course Numbers. The course numbers are divided into three groups:

1. Lower Division: (a) 100 level courses for freshman students; (b) 200 level courses for sophomore students.

2. Upper Division: 300-499 level courses for junior and senior students.

3. Graduate Division: 500-700 are graduate courses. (a) Qualified juniors and seniors may be admitted to 500 level courses by special permission; (b) No undergraduates may be admitted to 600 or 700 level courses. Courses using department prefixes or ID prefix numbered 198, 298, 398, 498, 598, 698, or 798 are new or experimental courses which have been approved through proper university procedures but in which action was not completed in time for publication in the current catalog. The course will be designated by title and a course description will be published in the subsequent catalog under the appropriate department with a different assigned number. Cross reference may be made by checking identical titles. Distinction of each course will be made by title as is the case for designating workshops.

In the case of the School of Educational Change and Development, the school will maintain files of all course descriptions for SECD courses ending in "98."

Course Work May Count for Next Degree. Students in the last quarter of academic study for one degree may register for graduate courses which are in excess of the requirements for that degree when application for admission to the next higher degree program has been filed prior to the final quarter. If a student is admitted, he or she *must* complete a Petition to Count Work on the Next Higher Degree in the quarter *prior* to enrolling in the course(s). Students will be held for final examinations in the courses taken for the next higher degree.

Late Enrollment. No student will be permitted to enroll in a course after the first week of the Fall, Winter, Spring and Summer quarters.

Schedule Changes. Students may change their schedule by the drop-add procedure at the Records Office. No classes may be added to a student's schedule after the first full week of classes.

Schedule of Classes. The university publishes a Schedule of Classes which lists courses being offered during Fall, Winter and Spring Quarters. Courses offered in the Summer Quarter are listed in the Summer Bulletin.

Withdrawal from Class. When a student registers for a class, that student is considered to be a member of that class. If the student should wish to withdraw from the class, he or she must first obtain a withdrawal form from the Records Office and obtain the signature of the faculty member teaching the class. If the faculty member refuses to sign the withdrawal form, the student should contact the Dean of Students Office. The last day to withdraw from a course is the mid-point of the course. Withdrawal deadlines for each quarter are posted in the Schedule of Classes.

A faculty member can withdraw a student who does not attend the first two class meetings. It is the student's responsibility to notify the instructor if he or she cannot attend the first two meetings. Since not all instructors will exercise this option, a student cannot rely on this process to be withdrawn from a class.

Complete Withdrawal from the University. Students who wish to completely withdraw from school during the quarter must initiate the withdrawal in the Dean of Students Office in Frasier Hall or the Student Services Center in the University Center. Faculty members and their offices must also have official notification of the withdrawal.

Individual Studies. Individual studies are available in most disciplines. This type of study involves a great amount of self-directed study on the part of the individual student under the guidance of an instructor.

The following policies concerning registration apply:

1. The study must be limited to four hours per quarter.
2. The approved ID/IS registration form used may be obtained in the Registrar's Office. The applicant must have the approval evidenced by signature of the instructor who will direct the study, the student's adviser, and the department chairman of the department in which the study is to be done. It is suggested that students consult their instructor prior to the day of registration.

ACADEMIC STANDARDS

Academic Appeals Board. The purpose of the Academic Appeals Board is to provide the student with easily implemented means for appealing any academic decision which he considers unwarranted or capricious. Before initiating these procedures, or between any of the appeals steps outlined below, the student may and is encouraged to seek advice from his academic adviser or from any of the Deans in the Dean of Students Office.

It is further recommended that prior to submitting an appeal to the Academic Appeals Board an attempt at mediation between student and instructor be pursued with the aid and advice of the university ombudsman. It is assumed at this stage the ombudsman could serve as an impartial third party.

Procedure:

Step 1 -- The student who has a specific academic problem should first discuss such a problem with the instructor of the class where the problem originated.

Step 2 -- If the student does not feel that his initial conference with the instructor has resolved the problem, he or she should then request a conference with the instructor's Department Chairman. (If the instructor involved is the Department Chairman, the student should schedule his Step 2 conference with the instructor's Academic Dean.) In matters concerning departmental policy, the student should take his problem directly to the Department Chairman.

Step 3 -- If the student is not satisfied with the results of Step 2 conference, he or she may appeal his case to the Academic Appeals Board, filing a written request for a hearing through the office of the Vice-President for Academic Services.

Academic Standing. The scholastic standing of all students is computed on the basis of courses attempted at this university only. For determining scholarship rank in the awarding of honors, the honor point system is used. The honor point average is a quotient obtained by dividing the total number of honor points earned by the total number of hours attempted (that is, those for which grades of "A", "B", "C", "D", or "F" are recorded). All grades earned by a student at the University of Northern Colorado become a permanent part of the student's academic record and are computed in the cumulative average. If a student repeats a course previously

taken at the University of Northern Colorado, both the first and second grade received remain on the record and are computed in the cumulative average.

An undergraduate either currently or formerly enrolled is either:

1. In good standing
2. On probation
3. Suspended

"Good standing" signifies that the student is eligible to return and continue his studies at the University of Northern Colorado. It covers good standing in respect to both grades and conduct.

"Probation" is an intermediate status between good standing and suspension or dismissal and refers to any student whose university achievement does not meet scholastic conditions as set forth on the following pages.

Academic probation is meant to be a warning to the student and is not intended as a penalty. No notation is made on the official transcript.

"Suspended" represents an involuntary separation of the student from the university. It implies and may state a time limit when a student's return is acceptable.

Attendance. Regular attendance in all classes will be assumed and encouraged. The instructor will determine the relationship between class attendance and the objectives of his class and the way in which he or she will evaluate attendance as a factor in the achievement of the student. A student may be withdrawn by the instructor if that student does not attend the first two class meetings.

The instructor has the responsibility to inform students of policies as these policies relate to the students' grades. The student also has the responsibility of knowing the policies in each course.

Class Status. A minimum cumulative grade point average of 2.00 is required for graduation.

A student is a freshman until he has successfully completed 45 quarter hours of course credit, and is a sophomore after successfully completing 45 quarter hours of credit until he or she has successfully completed 90 quarter hours of course credit. A student is a junior after successfully completing 90 quarter hours of credit until he or she has successfully completed 135 quarter hours of credit. A senior is a student who has successfully completed 135 quarter hours until graduated with a baccalaureate degree. When applying for a student teaching assignment, a student must have a cumulative grade point average of 2.30 and a 2.30 average in the area in which he or she plans to student teach.

Credit by Examination. The University of Northern Colorado offers hour credit and/or course exemption by examination for certain courses designated by the various departments. The university recognizes the College Entrance Examination Board's Advanced Placement Program, the College Level-Examination Program (CLEP), and offers the opportunity to challenge certain general education courses on the campus. Successful challenges provide exemption from courses, but the awarding of credit for specific courses is at the option of the school or department.

No student may challenge by examination a course for which he or she is enrolled or registered. A student may only challenge by examination once unless approval is granted by the dean of the school or college in which the course is offered. Information regarding credit by examination may be obtained by writing to the Office of Admissions. Score reports should be forwarded to the Office of Admissions for evaluation. A fee is charged for each examination given. Credit by examination is administered at the Counseling Center located in Gray Hall.

Regulations Governing Academic Probation and Dismissal. A student will be placed on academic probation if that student fails to attain the designated quarter or cumulative average within the following classifications:

For students with fewer than 90 quarter hours of credit (including transfer credit):

Freshman students are required to maintain a cumulative grade point average of 1.50 during the freshman year and attain a 1.75 cumulative grade point average by the close of the freshman year. A freshman student achieving less than 1.75 in any quarter will be placed on academic probation for the succeeding quarter. Any freshman student attaining less than 1.50 in any quarter or less than 1.75 at the end of the freshman year may be suspended.

Sophomore students are required to maintain a minimum cumulative grade point average of 1.75 during the sophomore year and must attain a cumulative grade point average of 2.00 by the close of their sophomore year. A sophomore achieving less than 2.00 in any quarter will be placed on academic probation for the succeeding quarter. Any sophomore attaining less than 1.75 in any quarter or less than 2.00 at the close of the sophomore year may be suspended.

For students with more than 90 quarter hours of credit (including transfer credit):

Junior or senior students will be placed on academic probation whenever their cumulative or quarterly average is less than 2.00 based on the courses taken at this university. Any junior or senior student attaining less than 1.75 in a quarter or less than 2.00 cumulative during the junior and senior year may be suspended.

Academic Suspension. Academic suspension may result in the failure to remove probationary status or in the failure to attain or maintain the minimum quarterly or cumulative grade average as listed in the preceding paragraphs.

A student placed on academic suspension may not enroll at the University of Northern Colorado without approval of the Committee on Scholastic Standing. Such students may not seek such approval until after the lapse of one academic quarter.

Readmission of Students Who Have Been Dismissed for Academic Reasons.

A student who has been required to withdraw from the university for academic reasons and is petitioning for readmission must account definitely for the expenditure of the time in a profitable way since leaving the university and should give good reasons for believing that he or she will improve upon the previous record if readmitted. Such a student is not eligible to be considered for readmission until after the lapse of at least one quarter, not counting the summer quarter. Petition for readmission must be made in writing to the Associate Dean of Students, the University of Northern Colorado. This is a letter of petition, not a formal application for readmission. A student who has attended another institution(s) since enrollment at the University of Northern Colorado must furnish an official transcript from each institution attended.

Grading System. Alphabetical grades are used: "A" indicates superior work; "B" indicates work above average; "C" indicates average work; "D" indicates work below average, but passing; "F" indicates failure. Other marks used are "I" incomplete; "W" approved withdrawal; "TF" unapproved withdrawal. An "I" must be removed by the end of the succeeding quarter. If the Incomplete is not removed by the end of the succeeding quarter, it will remain as an Incomplete on the transcript. If the student wishes to receive credit for the course in which he has received an Incomplete after the lapse of one quarter, he must again enroll in that course. "NR" indicates no record and means that the thesis or dissertation has not been completed. A grade of "S" or "U" indicates satisfactory or unsatisfactory work.

No student's grade can be changed after the first two weeks of the quarter following the receipt of the original grade by the Records Office.

Computing Grade Averages. Prior to September, 1966, the university computed grades on a five-point system. After the above date, grades are computed on a four-point system. Each of the letters of the marking system has a numerical value. The letter "A" has a value of four (4) points; "B" has a value of three (3) points; "C"

has a value of two (2) points; "D" has a value of one (1) point; and no points are given for an "F". If all the student's marks were "C's," he would have a grade point average of 2.00. If one-half of his marks were "C's," and the other half "D's," the numerical value of his grade average would be 1.50. A grade of "S" does not carry any points nor is such a grade computed in the grade point average. However, the credit hours do count toward credits earned. In order to compute a grade point average, divide the total number of hours attempted into the total number of honor points.

Proficiency Examinations. Proficiency examinations in certain required courses in a student's major or minor may be taken to determine whether or not the student may be excused from these courses and in some cases to provide evidence for teacher certification.

Residence Requirements. At least 45 quarter hours of credit must be earned in courses taken on the campus at Greeley to meet the minimum residence requirement for an undergraduate degree including some work in the major field to be determined by the college, school or department. Course work taken off the campus, both correspondence and off-campus courses, cannot be counted as residence credit in meeting the requirement of 45 quarter hours of credit which must be earned in classes on the University of Northern Colorado campus. In addition, 30 of the last 45 credit hours of a degree program must be earned while enrolled in on-campus courses at the University of Northern Colorado.

Recognition of Academic Excellence

Dean's List of Distinction. Students who have achieved 3.75 or above while carrying 12 hours or more for three consecutive quarters during the academic year will be included on the Dean's List of Distinction.

Dean's Honor Roll. Students who have achieved 3.50 to 3.75 while carrying 12 hours or more for three consecutive quarters during the academic year will be included on the Dean's Honor Roll.

Graduation with Honors. A student may be graduated with honors on the basis of his cumulative grade point average. The GPA's will be designated as follows:

1. The top two percent of the graduating class: *Summa Cum Laude*
2. The next two percent of the graduating class: *Magna Cum Laude*
3. The next two percent of the graduating class: *Cum Laude*

COLLEGES, SCHOOLS, DEPARTMENTS AND PROGRAMS OF INSTRUCTION

COLLEGE OF ARTS AND SCIENCES

Robert O. Schulze, Dean
John A. Beel, Associate Dean

The College of Arts and Sciences offers courses in various departments leading to the Bachelor of Arts degree. The offerings are designed to give broad, diversified educational opportunities and at the same time to provide the ground work for preparation in professions such as law, medicine, and teaching.

Each student regularly admitted to the College of Arts and Sciences is required to complete General Education as specified earlier in this catalog. He must also select a major subject for concentration and must meet all the requirements of his

major department. Those wishing to be recommended for certification to teach in secondary schools must also complete at least 31 quarter hours of Professional Teacher Education courses as prescribed by the College of Education during their junior and senior years.

Academic Departments

Anthropology Department

Kenneth R. Ayer, Chairperson

Professors: Fay, B. Mickey

Associate Professor: J. Mickey

Assistant Professors: Ayer, Haug, Higgins, Kettel, Lutz, Wanner

Instructor: Denning

Biological Sciences Department

Ronald K. Plakke, Chairperson

Professors: Buss, Gapter, Lindauer, Plakke, Rich, Richards, Schmidt, Thomas, Thorpe

Assistant Professors: Fitzgerald, Harmon, Heimbrook, Peeples

Black Studies Department

Dorothe T. Clark, Chairperson

Assistant Professor: Clark

Chemistry Department

William G. Koch, Chairperson

Professors: Beel, Fields, James, Koch, Schreck, Tomasi, Woerner

Associate Professors: Kovar, Meilahn, Pringle

Communication Department

Richard J. Crawford, Chairperson

Professors: Crawford, DeBoer, Holley

Assistant Professors: Camp, Hess, Karre, Ross, Schuetz, Smith, Warnemunde

Instructors: Rood, Trapp

Earth Sciences Department

Richard A. Slater, Chairperson

Associate Professors: Cobb, Dietz, Matthews, Shropshire

Assistant Professors: Hackett, Hopkins, Slater

Economics Department

Orvel L. Trainer, Chairperson

Professor: Trainer

Associate Professor: Anderson

Assistant Professors: Garrison, Mahanty

Instructors: Rivera, St. Aubyn

English Department

Forrest Frease, Chairperson

Professors: Boyle, Carriar, Cross, C. Frease, F. Frease, Harrison, Huff, Jones, Starr

Associate Professors: Brand, Brewer, Finnegan, E. Kearns, Myers, Princic, Rea, N. Wilson

Assistant Professors: Agan, Applegate, F. Bowles, Doyle, Kiefer, Lackie, Loftis, Luere, C. Meyer, Peercy, Santos, Stallings, Varner, S. Wilson, Witwer

Environmental Studies Program

Diane C. Drigot, Coordinator

Foreign Language Department

Glenda J. Brown, Chairperson

Professor: Graham

Associate Professors: Brown, Keppeler

Assistant Professors: Ensz, Freyre, Haughton, Hoffman, Lange, Owechko, Sandstedt

Instructors: Cadol, Malnati

The Department of Foreign Language offers teaching and non-teaching majors and minors in French, German, and Spanish, and a minor in Russian.

Geography Department

Steven L. Scott, Chairperson

Professor: Lehrer

Associate Professors: Dietz, Kearns

Assistant Professors: Collins, Francis, Scott, Cole, Foster

History Department

Stephen T. Powers, Chairperson

Professors: Arnold, Boeck, Byerly, Cornebise, Larson, A.R. Reynolds, Rothaus

Associate Professors: Knott, Powers, Rowe

Assistant Professors: Clough, Edgerton, Lonsdale, Worrall

Instructor: Mrs. A. Reynolds

Mathematics Department

Donald D. Elliott, Chairperson

Professors: Cavanagh, Elliott, Fisch, Johnson, Popejoy, D. Schmidt

Associate Professors: Bosch, Fuelberth, Heiny, Johnston, McNerney, Richardson, Schweers, Tolar

Assistant Professors: Anders, Rumford

Mexican American Studies Department

Carlos Leal, Chairperson

Assistant Professors: Leal, Sandoval

Philosophy Department

Frank A. Morelli, Chairperson

Associate Professor: Morelli

Assistant Professors: Dhar, Hodapp

Physics Department

Wallace Aas, Chairperson

Professors: Aas, Fry, Hamerly

Associate Professor: Ellingson

Assistant Professor: Fadner

Political Science Department

Richard Perchlik, Chairperson

Professors: Christensen, Perchlik

Associate Professors: Bookman, Knapp, Mazurana

Assistant Professor: Watson

Science Education Department

Leslie W. Trowbridge, Chairperson

Professors: Crockett, Olson, Sund, Trowbridge

Sociology Department

Robert B. Stein, Chairperson

Professor: Schulze

Associate Professors: Cleere, Kamal, Quammen, Stein

Assistant Professors: Jennison, Murphy, O'Connor, Trahan, Vonk, Willoughby

Instructors: Hey, Jones, Marshall, Oreskovich

Theatre Arts Department

John W. Willcoxon, Chairperson

Professors: Girault, J. Willcoxon

Associate Professor: Norton

Assistant Professors: Hemingway, Johnson, Van Loo

COLLEGE OF EDUCATION

Bruce W. Broderius, Dean

Richard L. Bear, Associate Dean

Robert Johnson, Assistant Dean: Secondary Education

The College of Education is a professional college offering specialized degree programs in education for the preparation of elementary and secondary school teachers, educational media personnel, and other education specialists for the schooling processes. These programs include offerings on the undergraduate level leading to the Bachelor of Arts and Bachelor of Science degrees.

The College of Education provides all prospective teachers accepted in the Professional Teacher Education Program with the professional core of subjects and experiences for the development of professional competencies requisite to successful teaching. Additionally, it provides selected components of the general education program.

Academic Departments

College Student Personnel Administration

Norman Oppelt, Chairperson

Professor: Oppelt

Curriculum and Instruction

Joe Nichols, Chairperson

Professors: Broderius, Morrison, Nichols, Stoffler

Associate Professors: Krosky, Rosales

Educational Administration

Arthur R. Partridge, Chairperson

Professors: Luketich, Partridge, Ritter, Saffell, Schroeder, Wilsey

Associate Professor: D. Montgomery

Educational Field Experiences

Robert C. Richardson, Director

Professors: Harkness, Fielder, Richardson

Associate Professors: G. Burns, Erickson, Febinger, J.M. Johnson, Warner, Weltner

Assistant Professors: Cochrane, Cox, Ousley, Taggart

Instructor: Rose

Educational Media Department

D. Harold Bowman, Chairperson

Professors: Bowman, Cyphers

Associate Professors: Green, Seager

Assistant Professor: Gibbons

Instructor: Duckett

Elementary Education and Reading Department

Alvin O. Mosbo, Chairperson

Douglas S. Burrton, Assistant Chairperson

Professors: D. Brown, Claybaugh, Glaser, Kelly, Lewis, Lowry, Mosbo, Nebel

Associate Professors: W. Arnold, A. Burrton, D. Burrton, Henry, E. Wolfe

Assistant Professors: J. Cordova, Good, M. Nelson, Pavlik

Instructors: P. Brown, Shivley

Foundations of Education Department

Franklin D. Cordell, Chairperson

Professors: Cordell, Turner, Usher

Associate Professors: Glassman, Jacobs, Roat

Assistant Professor: Clute

Higher Education Department

Kenneth Hogan, Chairperson

Professor: Hogan

Psychology, Counseling and Guidance Department

Darrell E. Anderson, Chairperson

Professors: D. Anderson, Bear, Clevenger, Koplitz, Luker, Lutey, Montgomery, Praul, Schenkman, Shaw

Associate Professors: Blake, Goff, Osorno, Poston, Rave, Stutler, S. Thornburg, Welch

Assistant Professors: Bakewell, Bolocofsky, Copeland, Gallegos, Marks, Morris, Norton, Obrzut, Ramirez, Severson, H. Thornburg, Ward, Zellner

Research and Statistical Methodology Department

Samuel Houston, Chairperson

Professors: B. Heimerl, Houston, Schmid

Assistant Professors: Lynch, Shaw

**SCHOOL OF SPECIAL EDUCATION
AND REHABILITATION**

Daniel C. McAlees, Dean

Willard G. Jones, Associate Dean

Professors: Bitter, Eldredge, Gearheart, Jones, O. Kolstoe, Lundeen, McAlees, Napier, K. Owens, Wolfe

Associate Professors: Bowen, Cronin, Gay, Hull, B. Kolstoe, Lane, Millsagle, Reinert, Tuttle, Weishahn, Wright.

Assistant Professors: Austin, Baker, Bliler, Carvajal, DeRuiter, Kappan, Kozisek, Livingston, Miller, Olson, Resnick, Traynor, Uhrig, Underwood

Instructors: Kaley, Reed

SCHOOL OF THE ARTS

William R. Erwin, Jr., Dean

The School of the Arts offers a four-year program of studies on the undergraduate level in the areas of Fine Arts, Home Economics, and Industrial Arts. All the departments offer majors which lead to preparation for the teaching profession and also for non-teaching pursuits.

Academic Departments

Fine Arts Department

Robert B. Turner, Chairperson

Professors: Ball, D. Johnson, Schumacher

Associate Professors: Barucchieri, Blubaugh, Cordiner, Moody, Turner

Assistant Professors: Haas, Luster, Macfarlane, Munson, Myers, Shin, Welsh
Instructors: Carter, Coronel, B. Johnson

Home Economics Department

Marilyn Burns, Chairperson

Associate Professors: Burns, Sorensen, Taylor, Walters, Wirick

Assistant Professors: Egeness, Krosky, Peiffer, Ranum

Instructor: Grable

Industrial Arts Department

Robert G. Hammond, Chairperson

Professors: Erwin, Hammond, Jelden, Johnson, Lubbers, Olson, Roy

Associate Professor: Kruger

Assistant Professor: Morimoto

SCHOOL OF BUSINESS

Ramon P. Heimerl, Dean

The School of Business has two primary objectives: (1) to develop professional competence in functional areas of business administration for those students who will assume responsibilities for leadership in business and (2) to develop professional competence in subject matter areas for those students who will assume responsibilities for leadership in the teaching profession.

To accomplish these objectives, the School of Business offers a four-year program of studies leading to the Bachelor of Science degree in business administration and a four-year program of studies leading to a Bachelor of Arts degree in business teacher education and journalism.

Academic Departments

Accounting

Business Teacher Education

Finance and Insurance

General Business

Management

Marketing

Journalism

Professors: Damgaard, Duff, Heimerl, Kennedy, Teglovic, Waterman, Yetka-Byrnes

Associate Professors: Anderson, Bohrer, Clithero, Halldorson, Harris, McConnell, Palmer, Robins, W. Stewart

Assistant Professors: Allen, Beall, Brown, DeBoer, Dierks, Donnel, Douglas, Fletcher, Folger, Gottko, Hansen, Hoffman, Holmboe, Levenson, Massin, Melanson, Saam, Seymour, Van Hook

Instructors: Elton, J. Stewart

SCHOOL OF EDUCATIONAL CHANGE AND DEVELOPMENT

The School of Educational Change and Development provides students who desire to pursue an individually designed program the opportunity to do so. Consult the program description for further information about the School of Educational Change and Development.

SCHOOL OF HEALTH, PHYSICAL EDUCATION AND RECREATION

Robert A. Montgomery, Dean

The four primary functions of the School of Health, Physical Education and Recreation are:

1. The professional preparation of teachers, coaches, supervisors, and administrators of Health and Physical Education.
2. The professional preparation of recreation leaders and administrators.
3. The professional preparation of Allied Health Specialists.
4. The provision of activity classes as a service to the general education of students.

Academic Departments

Health and Safety Education

Physical Education (Men)

Physical Education (Women)

Recreation

Professors: Barham, Behling, Everett, Lindahl, Malumphy, Rossi, Sage, Shirley, Steffy, Van Anne

Associate Professors: Blasi, Cody, Cooke, Heiss, McKain, Parkos, Peterson, Phillips, Van Dinter, Wright

Assistant Professors: Benich, Fri, Hedberg, LaBonde, McMillen, Mosser, Petroff, Rodriguez, Rollins

Instructors: Bauer, Carlisle, Cogley, Conn, Harrison, Howard, James, Larkin, Libera, Magafas, Minton, Tresvan

Affiliate Professors: Cloyd Arford, M.D., Nathan Clifford, M.D., Donald Cook, M.D., James Wheeler, M.D.

SCHOOL OF MUSIC

James E. Miller, Dean

Robert S. James, Administrative Assistant Dean

The School of Music is a professional school offering preparation for the teacher of music at all levels of education and for those interested in performance or theory and composition. It also provides courses for the student interested in music as part of his general and cultural education. Faculty and students in the School of Music take a leading part in the cultural activities on the campus. The School of Music is a full member of the National Association of Schools of Music.

Academic Departments

Brass and Percussion

History and Literature

Music Education

Piano and Organ

Strings

Theory and Composition

Voice

Woodwind

Brass and Percussion Department: Edwin Baker, Chairperson

History and Literature Department: James Upton, Chairperson

Music Education Department: Dwight Nofziger, Chairperson

Piano and Organ Department: Walter Schenkman, Chairperson

String Department: Daniel Mellado, Chairperson
Theory and Composition Department: Dale Dykins, Chairperson
Voice Department: Claude Schmitz, Chairperson
Woodwind Department: Loren Bartlett, Chairperson
Professors: Baker, Bartlett, Dykins, Evans, Himmel, King, J. Miller, Nofziger, Schenkman, Schmitz, Skinner, Walker
Associate Professors: Copley, Ehle, Goes, Graham, James, Linscome, Mickens, K. Miller, Pfund, Rhoads, Upton
Assistant Professors: Bourassa, Cypret, D'Aurelio, Jamieson, Lehnert, Mellado, Murray, Robinson, R. Smith, W. Smith.
Instructors: Coppom, Haun, Herrick.

SCHOOL OF NURSING

Phyllis Drennan, Dean

The School of Nursing offers a twelve-thirteen quarter program leading to the degree Bachelor of Science in Nursing. The purpose of the program is to prepare qualified students for practice as professional nurses and to provide the foundation for graduate study in nursing.

The School is accredited by the National League for Nursing and by the Colorado State Board of Nursing. Graduates are eligible to write the Colorado State Board of Nursing examination for licensure as registered nurses.

Professor: Drennan

Associate Professors: Payton, Sawatzky, Thompson

Assistant Professors: Babich, Biegel, Bossart, Hallan, Harboe, Heckman, Hurlock, Swingle, Yelton, Zaweckis

Instructors: Baird, Beaudoin, Bradley, Comer, Freeburn, Madore, Malkiewicz, Perry, Tanner, Tracy

DIVISION OF AEROSPACE STUDIES

Lt. Col. Neil H. Keddington, Chairperson

Both four year and two year Air Force ROTC programs are in use at the University of Northern Colorado. Candidates are educated to assume duties as Air Force Second Lieutenants upon graduation from the university. AFROTC graduates normally go on active duty with the USAF soon after completion of AFROTC. Initial assignments may include flying training for pilots and navigators, missile training, or other technical or management training depending on the individual's assignment.

Assistant Professors: Lt. Col. James R. Clark, Capt. David W. Winters

DIVISION OF STUDENT PERSONNEL

The Division of Student Services assists students in all classroom and non-class activities and provides academic support services necessary to carry out the goals of the University. Faculty members assigned to Student Services work in the following areas: The Dean of Students Office, Admissions, Registrar and Records, Housing, Food Services, Counseling, Outreach Counselor, Financial Aids, Placement, Health Services, The Center for Human Enrichment, The University Center, Student Activities, and Special Resources for Disabled Students. The Division of Student Services assists students in testing the formal classroom experience against the real world. The mission of the office, then, is to assist the student in the acquisition of an education and help the student remove barriers which would interfere with his educational progress within the university environment.

DEAN OF STUDENTS OFFICE

The Associate Vice President of the University and Dean of Student Services coordinates all of the activities of the departments in the area of Student Services. The area of responsibilities in the Dean of Students Office involves student development; general areas of student problems; policy investigation and student life; group advising; individual counseling; administration of academic standards; undeclared major advising program; and cooperative programming with other administrative, faculty, and student groups.

STUDENT SERVICES CENTER

Located in Room 206 of the University Center, the Student Services Center is a place where you can get questions answered, problems resolved, and materials provided to you from all of the Student Service Offices (Dean of Students, Registrar, Financial Aids, Counseling, Placement, Health, Admissions, Housing, Center for Human Enrichment and Veterans Affairs).

THE CENTER FOR NON-TRADITIONAL AND OUTREACH EDUCATION

Robert O. Singer, Associate Dean and Director

Richard J. Wood, Associate Director

Clarence O. Haeker, Director of Off-Campus Classroom Instruction

Bobbe L. Davey, Assistant Director of Off-Campus Classroom Instruction

John A. Ketchum, Director of Administrative Services

James R. Cobb, Coordinator for Program Development and Independent Study

The Center houses all off-campus programs in one administrative unit. Through it, the University offers:

- a. off-campus classes
- b. independent study courses
- c. adult education courses
- d. external degree programs

Off-campus classes are given in various parts of the state primarily as a service to public school teachers and school systems. Multi-media learning packages and correspondence courses are provided for the convenience of students wishing to earn university credits who cannot attend classes either on or off the campus. Certain courses are delivered in cooperation with the mass media. Adult education courses allow professional people to earn non-academic credit in courses designed to improve job performance. Whenever feasible, the Center also tailors, for schools in Colorado, external degree programs.

In addition, the Center exercises academic management and coordination for the *Center for Special and Advanced Programs (CSAP)*, which has been created to meet the educational needs of the employed adult. Its programs are delivered at established instate and outstate sites, and are designed to enable students to obtain degrees without undue interference with full-time employment.

Periodically, the Center, through the College of Education, also offers classes or workshops on campus dealing with the whole field of non-traditional education.

Outreach Independent Study. University of Northern Colorado policy states that a student may earn and apply a maximum of 45 quarter hours of credit through correspondence courses, learning package courses or extension courses toward a

bachelor's degree. This includes University of Northern Colorado Outreach independent study courses and correspondence and extension work transferred from other colleges and universities. Independent study courses must be completed, graded and recorded the quarter before the student expects to graduate.

Students who are not pursuing nor applying Outreach independent study credits toward a University of Northern Colorado degree are not limited in the number of credits they may earn. Students who plan to use credits earned through UNC Outreach independent study courses toward a degree at another university or college are advised to consult with the proper officials at the institution granting the degree to be sure the credit is acceptable.

Students must obtain a current copy of the Independent Study Bulletin or the Off-Campus Bulletin for complete information and regulations concerning Outreach independent study and off-campus courses.

GENERAL EDUCATION REQUIREMENTS

All students pursuing work for the bachelor's degree must complete satisfactorily (1) at least 60 quarter hours of courses designated as General Education (42 quarter hours of courses in the Bachelor of Music, Nursing, and Medical Technology) and (2) all courses required by the school or department in which a student elects a major. (See Majors and Minors, see page 44.) In addition, students may select other courses to meet the minimum requirement for graduation of 180 quarter hours. A faculty adviser from the department of the student's major subject is assigned to assist in program planning.

Courses must be chosen from each of the following categories as specified:

Category 1*, Communications. Two courses are required: English (language or linguistics), Communications, Foreign Languages, Journalism, Mathematics.

Category 2*, Professional and Applied Studies. Two courses are required: Aerospace Studies, Business, Fine Arts, Health, Home Economics, Industrial Arts, Music, Nursing, Physical Education, Recreation, Theatre.

Category 3*, Social and Behavioral Sciences. Three courses are required: Anthropology, Economics, Geography, Political Science, Psychology, Sociology.

Category 4*, Humanities and Integrative Studies. Three courses are required: Black Studies, English (literature), History, Humanities, Philosophy, Interdisciplinary Studies, Mexican American Studies.

Category 5*, Sciences. Three courses are required: Astronomy, Biology, Botany, Chemistry, Earth Science, Environmental Studies, Geology, Meteorology, Oceanography, Physics, Zoology.

Instructor Course Units (ICU's). Two courses are required: ICU's are categorized into the five areas named above (Communications, Professional and Applied Studies, Social and Behavioral Sciences, Humanities and Integrative Studies, Sciences) and may be used to meet the requirements of any of the respective areas as well as that of the ICU. The two required ICU's should be taken under two different instructors.

Courses required or counted toward the student's major (including prerequisites) will not be considered as part of the general education program.

Courses required in the Professional Teacher Education (PTE) core and courses dealing with pedagogical principles and methodology will not count toward meeting general education requirements.

Courses in general education may be taken in all four undergraduate years.

*General Education Courses may be found in the course description section of this catalog. Following is an example of the designation used to identify the General Education category in the course description section:

3-SOC 478. URBAN SOCIOLOGY.

3: General Education Category

SOC 478: Course Prefix and Course Number

Other courses may be elected from departments outside the major to meet the minimum requirement of sixty (60) quarter hours in general education, (42 quarter hours for a student completing a Bachelor of Music, Nursing degree, or Medical Technology).

Junior College Transfers. Students transferring to the university from junior or community colleges who have completed equivalent programs in general education, as determined by the university admissions office, will receive full credit for such work and are excused from further general education requirements.

HONORS PROGRAM

Forrest W. Frease, Director

Admission Requirements. A student who has completed 45 quarter hours of course work at the University of Northern Colorado and who shows evidence of outstanding academic ability may be invited to participate in the honors program on the basis of departmental recommendation.

Transfer students who have completed 45 quarter hours of work and who wish to participate in the honors program may apply for admission after the first, second, or third quarter of work at the University of Northern Colorado. These students must be recommended by two faculty members in their field and must possess a 3.25 cumulative grade point average or better.

A student who completed 45 quarter hours of work at the University of Northern Colorado and has attained a 3.25 cumulative grade point average may apply for admission to the honors program at any time during the sophomore year. Recommendations from two faculty members in the specific discipline should accompany the request. All applications are reviewed by the director of the honors program and the department or school concerned.

Program Enrichment. The program of an honors student is individually planned. An honors student, therefore, may be excused from certain required courses, except those which may be necessary for teacher certification.

Sophomore Honors. During the sophomore year, each academic department participating in the honors program offers a special course each quarter designated for honors students only. The course title for each department is: Honors 251: Sophomore Honors Seminar. The course carries one to three hours of credit. The content and activities of the course vary from one department to another. Each academic department provides the kind of activity which will enrich the educational experience of the honor student in his particular discipline. Basically, the course is structured in terms of the student's needs and interests.

Junior Honors. In the junior year each honors student enrolls in Honors 351: Junior Honors Project. The aim of the course is to increase the student's familiarity with the literature of his field and/or the current issues in his field. The department, school, or college concerned may assign the student to an individual professor or to a seminar group. This course carries regular university credit at the rate of one to three hours each quarter.

Senior Honors. In the senior year each honors student enrolls in Honors 451: Senior Honors Research Project or Thesis. The course carries one to three hours of credit each quarter. During the senior year the student will gain assistance with his project or thesis from a professor of his own choosing or from a professor assigned to him by the department. The professor advises the student concerning different aspects of his subject or project for study, the result of which shall be an acceptable written report handed in at least three weeks before the honors student is to be graduated.

International Education and Exchange Programs. Honors students are encouraged to investigate the opportunities provided by the University to study in foreign countries. Students interested in such an educational experience may obtain detailed information at the Office of International Education.

Student Review. Cumulative grade averages of honors students shall be reviewed at the end of each academic year. An honors student shall be expected to register for a full-time program and to maintain better than a 3.25 cumulative average as well as a comparable average in the major and minor fields.

Graduation with Honors. Graduating seniors completing the required honors work as specified by the various departments, schools, or colleges will be graduated "With Honors." To be graduated with honors, each student must complete a thesis or a creative project. Participants in the honors program who graduate in the upper six percent of their class will be graduated with the appropriate designation.

Each honors student is required to submit the title of his honors thesis or project to the office of the director of the honors program 12 weeks before his graduate date.

Special designations are given students who are graduated in the upper six percent of their class. The top two percent will be graduated *Summa Cum Laude*, the next two percent will be graduated *Magna Cum Laude*, and the next two percent will be graduated *Cum Laude*.

INTERNATIONAL EDUCATION : AND EXCHANGE PROGRAMS

The Office of International Education, Carter 209, offers many services to students from other nations or to American students seeking to study in foreign countries or in exchange programs with other American campuses.

Students from other countries are provided assistance in matters of program planning, immigration laws, housing, vacation-time, visits, campus activities, and community-home sponsors.

American students may seek advice and assistance in their quests to qualify for and obtain scholarships or grants to study abroad. Application forms are processed through the Office of International Education. Among the scholarships and grants available are the Fulbright-Hays, Rhodes, George C. Marshall Memorial Fund, The American-Scandinavian Foundation Fellowships and others.

The American Association of State Colleges and Universities (of which UNC is a member) is developing study centers in various parts of the world. At the present time UNC students may apply through the Office of International Education, for up to one year's study as part of their UNC degree program in the AASCU centers in Montreal, Canada; Puebla, Mexico; Bahia, Brazil; and Madras, India. Additional centers will be operating in the next few years in other parts of the world.

Several departments offer Study/Travel programs, usually of one quarter's duration. Credit varies with the program. In most cases one or more weeks are spent in academic preparation on campus before leaving on the travel phase of the program.

UNC Program in Florence, Italy: Studies in Comparative Arts. Beginning in summer 1974, the University officially inaugurated a study abroad program in Florence, Italy--the heart of the Renaissance. Originally a program centered in the Department of Fine Arts, the program quickly included the Departments of Humanities and Anthropology because of their close relationship to the meaning of the Renaissance period. From time to time and as conditions permit, courses which relate well to the core program may be offered by other departments. For further information on the program and courses offered, see the appropriate department section and course listings or contact the Florence Program Office, 351-2651 or the Office of International Education, 351-2396.

LABORATORY SCHOOL

The Laboratory School is a department of the College of Education with a comprehensive elementary/secondary educational program for grades kindergarten through high school. The elementary school student population is 75 pupils in the primary continuum (grades K-2), 75 pupils in the intermediate continuum (grades 3-5), 150 students in the middle school continuum (grades 6-8), and 300 students in grades 9-12. The primary role and mission of the Laboratory School is to provide a clinical experience for the pre-student teacher. This experience enables the pre-student teachers to be actively involved in the classroom environment of the elementary/secondary students before they enter the field as student teachers. Information on the Teacher Education program may be obtained from the Assistant Director for Teacher Education, telephone 351-2196. Information on enrollment procedures and fees for the elementary/secondary students may be obtained from the Director of the Laboratory School, telephone 351-2116.

PRE-PROFESSIONAL COURSES

Courses applicable to pre-law, pre-medicine, pre-dentistry, and pre-engineering are designed for students interested in beginning their course work at the University of Northern Colorado. Variations in course requirements for these areas are made to conform to the requirements of the college the student will attend to complete his academic work. Students interested in pre-law should consult with Dr. R.O. Schulze, Dean of Arts and Sciences, or Dr. Richard Seymour, School of Business. For guidance within the areas of pre-medicine and pre-dentistry, students should see Dr. Gordon Tomasi, Professor of Chemistry and Chairman of the Pre-Med Advisory Committee. Students interested in pre-engineering should see Mr. Wallace Aas, Chairman, Department of Physics.

PROFESSIONAL TEACHER EDUCATION

Only students of definite professional promise are admitted to the Professional Teacher Education (PTE) program and allowed to pursue teacher education curricula at an advanced level. Admission to and graduation from a teacher education program as based upon scholarship (2.30 gpa), personality, character and the physical characteristics requisite to successful teaching.

Application to the PTE Program should be made at the beginning of the quarter and must be turned in before the second Friday of that quarter. It takes the remainder of the quarter to process applications.

As soon as a student has acquired no fewer than 45 quarter hours, he or she should make written application to the Professional Teacher Education Committee requesting formal admission to the PTE program. The necessary application forms are available in the College of Education Office in McKee Hall. The application forms require a declaration of major to be pursued as recommendation for certification can be obtained in the major area only. Departmental endorsement for admission must be sought for each major declared, so if the student has a double major, adds or changes teaching areas, new application must be made for permission to pursue curricula in each area.

Transfer students may apply for admission to the PTE program during their first quarter on campus provided they have transferred in 45 quarter hours of acceptable course work and possess a 2.30 gpa (minimum) at the previously attended University. If a transfer student has transferred in 60 or more quarter hours of acceptable course work and possesses a 2.30 gpa (minimum) at the previously attended University, he is given one quarter of tentative admission to PTE and formal standing will be determined the second quarter, provided he has made formal PTE application during his first quarter on campus.

Any student admitted to the PTE program who is placed on academic probation or suspension by the University is automatically afforded the same status with respect to the PTE program. Students suspended and later readmitted to the University must reapply for admission to the PTE program.

Any student who has had his admission to PTE revoked or who has been denied admission, may request a hearing from the Chairman of the Professional Teacher Education Committee. The hearing shall be scheduled within ten days of the date the request is filed, provided the University is in session at that time. The results of the hearing held by the Review Sub-Committee of the Professional Teacher Education Committee shall then be transmitted in writing to the student within 24 hours. If the results are not satisfactory to the student, he may then submit his request for a hearing before the Professional Teacher Education Committee. The student shall be notified in writing within 24 hours of the next scheduled Committee meeting and will be requested to appear in person for presentation of his case. The results of the hearing shall then be transmitted in writing to the student within 24 hours. If the student so desires, he may continue his appeal to the Academic Appeals Board by contacting the Academic Vice President of the University.

The professional education courses which are listed below are open only to students who have been formally admitted to the PTE program on full admission or probationary status. Transfer students may receive some exceptions on the basis of evaluation of transcripts from previously attended colleges or universities.

Course No.	Course Title	Hours	Credit
EDF 365	Basic Concepts of Education		5
EDF 485	Philosophy of Education		3
EDFE 360	to 379 - Introduction to Teaching (appropriate to specialization or an equivalent observation/participation experience as prescribed by the academic department)		2
	Methods of Teaching (appropriate to specialization)		3
PSY 349	Educational Psychology		5
EDFE 420	to 470 - Supervised Teaching for initial teacher certification		18

"In addition to the above requirements, all persons requesting a UNC recommendation for certification after July 1, 1975, will be required to be competent to work with the moderately and mildly handicapped child in the regular classroom.

The following are required:

EDSE 401	Handicapped Students in the Regular Classroom
and	
EDSE 402	Working With Handicapped Students in the Elementary School
or	
EDSE 403	Working With Handicapped Students in the Secondary School

Exception: the above competencies may be gained by an approved departmental equivalency."

PTE Option: Teacher Year Alternative. Any student interested in the Teacher Year Alternative may apply for this special program in the PTE Office, McKee 518 after completion of a minimum of 30 hours of course work to include 4 hours credit in EDFE 270, Teacher Aid Work: This option involves an integrative team taught and field based program jointly planned by students and faculty. The program will run for three consecutive quarters with students receiving approximately 15 hours of PTE course credit per quarter. Student teaching is included. Students applying for the Teacher Year Alternative will be expected to satisfy all PTE admission requirements with the exception of the need for 45 hours of completed credit.

There must be satisfactory completion of courses designated by the school or department concerned to earn recommendation for student field work, graduation, and certification. For transfer students, this may also be on the basis of the evaluation of transcripts from previously attended colleges and universities. Students are also evaluated on other criteria besides scholarship by their major department. They are judged on personality, physical and moral characteristics, interest and reliability. The major department has the authority to hold back a student if he is not qualified in any or all of these areas. This is why each and every student should seek the guidance of his adviser throughout his entire teaching program.

If at any time after admission to the PTE program, a department or school wishes to revoke endorsement of a candidate, a statement of desire for removal of the candidate must be presented to the Professional Teacher Education Committee for its consideration.

Supervised Teaching for Certification. Assignments are made in cooperating schools in the state and out of state with the approval of the Director of Educational Field Experiences upon recommendation by the student's department and the Professional Teacher Education Committee.

Students applying for assignments should be prepared to finance one quarter's work outside commuting distance from the campus. Although consideration is given to each student's individual circumstances, students should be prepared to move to the areas of the assignment regardless of marital status, campus or community commitments.

The minimum field experience requirement for graduation with institutional recommendation for a teaching certificate is 18 quarter hours of student field work. A minimum of nine hours of student field work must be in a major field.

If a student needs a required course which is scheduled only during the quarter in which the student will be doing full-time off-campus student field work, he or she will be exempted from that requirement. Exemption from a course does not reduce the number of hours required for graduation, however.

Students receiving 18 hours of credit in the field may not enroll for any other UNC courses during that quarter.

The following requirements must be completed before the beginning of student field work:

1. Admission to the PTE program in the major(s) in which the student will be doing student field work.

2. Met all specific departmental requirements for field experience.

3. Be cleared by the UNC Health Service.

In addition, all applicants are urged to elect EDFE 270 and EDFE 380 before accepting a field assignment.

Application for Student Field Experience. To apply for student field experiences, a student may obtain detailed information and application forms at any time in the Educational Field Experiences office, McKee 27. The Continuous Application and Placement System calls for the student to proceed with his own screening process. If the student wishes placement in a particular quarter, he or she must submit an application and required documentation in accordance with the following schedule:

for Fall and Summer placement: no later than May 1.

for Winter placement: no later than November 1.

for Spring placement: no later than February 1.

Students interested in internships and/or other types of extended field experiences which combine both credit and pay should contact the Area Coordinators in the Department of Educational Field Experiences for information concerning the various options.

VOCATIONAL TEACHER EDUCATION

Students who plan to seek a teaching career in Vocational Education in Colorado must meet credentialing requirements set forth by the Colorado State Board for Community Colleges and Occupational Education as published in the State Plan. The University of Northern Colorado is recognized by this State Agency for the training of Vocational teachers in Business and Office Education, Distributive Education, Home Economics Education, and Health Occupations Education. Students should refer to the following section of this Catalog for detailed information

related to specific Vocational Teacher Education Program Areas.

Business and Office Education, page 55.

Distributive Education, page 56.

Home Economics Education, page 85.

Health Occupations Education, page 134.

Several generic Vocational Teacher Education Courses are taught at the undergraduate level; refer to Vocational Teacher Education, page 134.

Credentialing Requirements. Every program has two elements with its program credentialing requirements: (1) Work Experience; (2) Formal Education. Each student should consult the professor within the particular program area to get detailed information concerning credentialing requirements. To apply for a Colorado Vocational Education Credential, see the Vocational Credentialing Officer in Room 531 McKee Hall.

GRADUATION REQUIREMENTS

1. A student must meet the General Requirements, Professional Education (if applicable), major and minor requirements as required by the academic schools or departments of the university.

2. A student must have earned 180 quarter hours of credit.

3. A student must have a minimum residence of 45 quarter hours on the University of Northern Colorado campus. In addition, 30 of the last 45 credit hours of a degree program must be earned while enrolled in on-campus courses at the University of Northern Colorado.

4. Forty-five quarter hours of correspondence and/or extension courses from the University of Northern Colorado and/or any other institution is the maximum that will be accepted toward graduation. All correspondence courses and/or transfer work must be completed, received, graded, and recorded prior to the quarter of graduation.

5. Transcripts from all colleges and universities that contain credit necessary for completion of degree requirements must be received by the Registrar prior to the quarter of graduation.

6. A student must have a University of Northern Colorado cumulative grade point average of at least 2.00.

7. The student must apply for graduation, and the application be processed and evaluated by the Registrar's Office and the major and minor schools or departments. Application for graduation must be made upon completion of 135 quarter hours of academic credit applicable to the degree from the University of Northern Colorado. No applications for graduation will be accepted after 4:00 p.m. Friday of the second week of the quarter in which the student expects to graduate.

8. The university catalog used on first classification may be used for a period of six years. After six years students must re-apply for graduation, have their records re-evaluated and must meet all requirements in the current catalog.

9. Requirements for graduation are checked in accordance with the requirements in one particular university catalog--that is, a student may not choose a major from one catalog and a minor from another catalog.

10. Participation in Graduation Exercises is a requirement for graduation. It is compulsory for all graduating students to participate in Graduation Exercises unless formally excused. Graduating students may obtain forms in the Registrar's Office for requesting an excuse from Graduation Exercises.

11. Any college work earned more than 15 years prior to the time the baccalaureate degree is granted at the University of Northern Colorado may be applicable toward a degree at the discretion of the major and minor departments.

12. It is the student's obligation to keep the Registrar's Office informed at all times of any change in graduation plans, such as, change in the proposed quarter of graduation after the application was filed or change of address.

Second Baccalaureate Degree. To qualify for a second baccalaureate degree, students must complete at least three additional quarters of academic work, with a minimum of 45 quarter hours taken after the first degree has been completed. Students must maintain an average of "C" (2.00) or better in the courses taken for the second baccalaureate in order to receive the degree. Students with questions concerning a second baccalaureate degree should confer with the Registrar, Director of Admissions, and/or the Chairman of the Department in which the degree will be taken.

ACADEMIC FREEDOM, RIGHTS AND RESPONSIBILITIES OF STUDENTS

Policies and Procedures have been established which reflect the University's concern for student freedom, rights, and responsibilities. Essentially, students can expect protection of freedom of expression, protection against improper disclosure and beliefs and associations, protection against improper academic evaluation, and protection of the student's right to due process in academic and disciplinary proceedings. The students can also expect to be held responsible for his performance and conduct in the classroom, on the campus, and in the community.

For further information, students may obtain a copy of the *Academic Freedom, Rights and Responsibilities of Students* document from the offices of the Dean of Students or Campus Ombudsman.

Citizenship Standards

University of Northern Colorado students neither gain nor lose any of the rights or responsibilities of other citizens by virtue of their student status. They are subject to the same federal, state, and local laws as non-students, and they are the beneficiaries of the same safeguards of individual rights as non-students.

Students have equivalent responsibility with the faculty for study and learning and for conducting themselves with academic integrity in a manner compatible with the university's function as an educational institution. The university expects its students, as well as its faculty and staff, to respect the rights and privileges of other people and their freedom to teach and to learn without disruption.

Specific rights, responsibilities and codes of conduct are listed in the following university documents: Administrative Handbook; Freshman Handbook; Statement of Academic Freedom, Rights and Responsibilities of Students; Residence Hall Contract and Handbook; and Statement of Vehicle Regulations. Information concerning students' rights and responsibilities are communicated through administrative, faculty and/or student committees, groups and organizations of the university community by meetings, publications and contracts. It is the student's obligation to conduct himself as a responsible citizen and to abide by the university's stated rules and regulations. In developing responsible student conduct, counseling, guidance, and admonition, as well as disciplinary proceedings, are used. Student conduct involving minor infractions of university regulations will subject the student to disciplining probationary action by the university. Student conduct involving major infractions of university regulations will subject the student to suspension or expulsion from the institution.

UNC SERVICES

Counseling Center. Counseling services are available free of charge for all students of the university. Well-qualified counseling psychologists provide assistance to students in dealing with a wide variety of problems.

In our complex society, students are beset by many situations which may require the thoughtful and understanding consideration of a counselor. Concerns commonly discussed by students who come to the Counseling Center include:

1. Personal problems
2. Academic planning
3. Career planning
4. Marriage counseling
5. Personality and vocational tests
6. Study skills problems

The Center staff also sponsor encounter and personal growth groups, life planning seminars, marriage enrichment workshops, test and speech anxiety reduction programs, Career Planning Workshops, Assertive Training, 48-Hour Weekend Marathons, Relaxation Groups, and others as requested.

All Counseling Center files are confidential.

Students in need of immediate assistance can usually see a counselor within a few minutes, but making an appointment assures the student of being seen at a particular time. The Counseling Center is located in Gray 103. Phone, 351-2496.

Financial Aids

The University of Northern Colorado offers a wide variety of financial aids for deserving and needy students. These awards are designed to assist needy students in meeting the financial requirements of their education.

The availability of financial assistance is subject to the financial resources available to the University.

All students seeking financial assistance are required to submit an ACT Family Financial Statement (FFS) and the ACT Institutional Data Sheet (IDS). The FFS must be mailed to American College Testing Program in Iowa City and the IDS mailed to the University Financial Aid Office. The deadline date for receipt of the IDS from the student and the processed FFS from ACT in Iowa City is March 31, 1976. Applications received after March 31st will be considered late applications and processed pending availability of funds. Due to processing time of the FFS in Iowa City, the student should complete the ACT FFS prior to the end of February to insure that the processed FFS is received by the Aid Office prior to the March 31st deadline.

Loans. The University participates in the National Direct Student Loan Program, Federally Insured Student Loan Program, Nursing Student Loan Program for full-time students enrolled in the School of Nursing, and its own Short-Term Loan Program. Loan applicants must show financial need and at least average academic potential. Address all inquiries to the Director of Financial Aid, University of Northern Colorado.

Employment. Federal and State College Work-Study Program awards are available to qualified students for on-campus employment. In order to determine eligibility, students are required to submit the ACT Family Financial Statement. The University rate of pay is based on the minimum wage law, with consideration given to types of skills required on the job.

Students desiring part-time employment, other than work-study, must obtain a work permit from the Office of Financial Aid before they can accept employment in any area of the University.

The University also endeavors to assist students in securing off-campus employment. Off-campus hours and rates are determined by the individual employer.

Grants. All students who submit the ACT Family Financial Statement form are considered for Federally-funded Supplemental Educational Opportunity Grants. These grants are available to students who demonstrate a high degree of financial need and may be renewable up to four years, provided that financial need continues to be documented and the student makes normal academic progress.

Any Colorado resident student admitted to or attending the University of Northern Colorado who has a documented need is eligible to be considered for a Colorado State Grant.

Awards and Scholarships

Eleanor S. and Alma J. Dickerson Scholarship. This fund was established by Dr. Oliver M. Dickerson, Professor Emeritus of History and Political Science and former Chairman of the Division of Social Studies at the University of Northern Colorado, to assist worthy students during their senior year in the field of social sciences. Two scholarships will be awarded each year and may provide a stipend of \$500 each. Qualified recipients of the scholarships will be chosen by the Scholarship Committee on the basis of scholastic achievement, personality and promise of future growth.

Jule Statton Doubenmier Scholarship Fund. This fund was established by his many friends as a memorial to J.S. "Dobby" Doubenmier, former professor of physical education at the University of Northern Colorado and the director of intermural athletics. The Scholarship Committee of the University selects the man or woman to receive the scholarship for each school year. The scholarship is normally awarded to an upperclassman who has been enrolled in the university for at least one year.

Agnes Wood Garnsey Memorial Scholarship. The American Association of University Women, Greeley Branch, has established a memorial to Agnes Wood Garnsey in the form of an annual scholarship. The scholarship in the amount of \$150 a year is granted to a worthy junior woman for use during her senior year. The recipient is chosen by the University of Northern Colorado Scholarship Committee on the basis of scholarship, leadership, and service to the university.

Marvin E. George Memorial Fund. This Memorial Fund has been established by the Greeley Elks Chorus and friends of Marvin E. George, former professor of music at the University of Northern Colorado. This fund provides financial aid to a meritorious upperclassman enrolled as a music education major at the University of Northern Colorado. The money can be used for tuition, fees, books, materials, room and board, and/or personal expenses while attending the University of Northern Colorado. Applications should be made to the Dean, School of Music, the University of Northern Colorado.

Pearl Beaver Gleason Scholarship Fund. This fund was established by the wills of Mr. and Mrs. Halton H. Friend in memory of Mrs. Friend's mother, to assist each year a deserving and distinguished young undergraduate woman in teacher education. The scholarship may provide a stipend up to \$1,000 to be used for tuition, fees, books and materials, room and board, and/or personal expenses while attending the University of Northern Colorado. Applications must be directed to the Director of Financial Aid, University of Northern Colorado, prior to March 15 for the following academic year. This scholarship is awarded to a Colorado resident whose father is deceased.

Lyman B. Graybeal Student Teaching Scholarship Fund. This fund has been established by Lyman B. Graybeal, the University of Northern Colorado Professor Emeritus of Education, former head of Secondary Education and Director of Student Teaching, and the late Grace Graybeal, to assist student teachers. Officials of the university will select one or more student teachers each year.

Kenneth J. Hansen Memorial Scholarship. A fund has been established by his friends and family in memory of Kenneth J. Hansen, former professor and head of the Department of Business Education at the University of Northern Colorado. The Scholarship Committee selects annually a deserving upperclassman who has been enrolled in the university for at least a year. The award is to be used at the University of Northern Colorado and preference is given to a student majoring in business education.

House of Neighborly Service Scholarship. The House of Neighborly Service Fund has been established as a trust fund, the income of which is to be used to assist a Spanish-American student at the University of Northern Colorado who is a resident of Weld County. The scholarship will be granted on an annual basis as income from the trust fund is available.

Walter D. Humphrey Memorial Scholarship. Friends of the late Walter D. Humphrey, a graduate of the University of Northern Colorado and for many years a teacher and principal in the Denver Public Schools, have established a scholarship in his honor. Income from funds will be used for the scholarship for a student interested in entering the teaching profession. Preference will be given to students who are Denver residents.

Helen MacCracken Scholarship. A fund has been established by Mrs. Helen MacCracken, a former professor of science at the University of Northern Colorado, to provide financial aid to a meritorious student enrolled at the University of Northern Colorado studying elementary science education. Inquiries should be made of the Associate Dean, Arts and Sciences, the University of Northern Colorado.

Della B. McDonald Memorial Scholarship. This fund was established by the will of Della B. McDonald, a long time resident of the city of Greeley. It provides that the income from the Trust Fund be used as scholarships to assist deserving students attending the University of Northern Colorado.

Miriam Mitchell Memorial Scholarship Fund. The Miriam Mitchell Memorial Scholarship Fund was established by the will of Miriam Mitchell to assist deserving young women who are resident citizens of the State of Colorado to defray the expenses of attending the University of Northern Colorado. A number of scholarships are awarded annually from this fund, and a recipient may qualify for each year she is attending the university as a full-time undergraduate student. Normally, a scholarship is not awarded before the sophomore year.

Carl G. Melander Vocal Scholarship Award. A fund was established as a memorial to Carl G. Melander, former professor of music at the University of Northern Colorado. The fund provides for private instruction in singing for deserving and talented young singers. Recipients are chosen by the voice faculty of the School of Music, and the instruction is given by a member of the School of Music faculty.

Mary A. Morrison Scholarship Fund. This fund was established by family and friends of Mary A. Morrison, a retired Greeley teacher. The scholarship is awarded to an incoming Spanish-surnamed freshman student pursuing a degree in education. The recipient will be selected on the basis of need and high probability of success in completing the requirements for a teaching certificate. The scholarship is to cover the cost of fees for the freshman year.

Emily C. Newman Scholarship Fund. This fund was established by the will of Emily C. Newman, pioneer homesteader and teacher in northern Colorado. It provides financial assistance to well-qualified and deserving freshman applicants from Weld and Morgan counties, Colorado.

Nursing Scholarship Program. The University of Northern Colorado has been approved as a participant in the Nursing Scholarship Program. These scholarships are awarded on the basis of financial need, and a recipient may receive a maximum of \$2,000 for a school year.

Edward M. and Agnes S. Nusbaum Memorial Scholarship. This fund was established by Dr. Jesse L. Nusbaum in the name of his parents to serve the institution's need in connection with students who especially merit some financial assistance for their educational needs.

Roof Memorial Scholarship. The Roof Memorial Scholarship assists deserving men and women students to defray expenses of attending the University of Northern Colorado. A number of scholarships are awarded annually from the income of this fund. The recipients must be full-time undergraduate students. Normally awards are not made before the sophomore year.

Tony D. Vaughan Memorial Scholarship. This fund was established to assist special education majors during their junior or senior year. Selection of the recipient is made by the Scholarship Committee, with recommendations from the School of Special Education and Rehabilitation.

John S. Welling Scholarship. A fund was established by his friends and family in memory of John S. Welling, former professor of social sciences at the University of Northern Colorado. The Scholarship Committee annually selects a deserving sophomore student who is majoring in social science. The award is to be used for expenses at the University of Northern Colorado.

Air Force ROTC University Scholarship Program. The Air Force ROTC offers a number of scholarships to selected students. These scholarships are available to well-qualified students in the four-year program only. Benefits include full tuition, laboratory expenses, incidental fees, and an allowance for books. In addition, the scholarship provides \$100 each month in non-taxable subsistence allowance.

Applicants are selected on the basis of qualifying tests scores, quality of their academic work, extracurricular activities, a medical evaluation, and a rating by a board of Air Force officers.

Once awarded a scholarship, a cadet continues on scholarship status until graduation and commissioning unless he falls below qualifying standards (i.e., a freshman awarded a grant would normally remain on grant status for the full four years of his undergraduate college work).

A scholarship recipient incurs no additional active duty obligation.

All inquiries should be directed to the Chairman, Department of Aerospace Studies.

Alpha Delta Kappa Scholarship. This fund was established by the Colorado Alpha Delta Kappa Sorority and the local Alpha Delta Kappa Chapters to assist deserving Junior, Senior, or Graduate women who are residents of the State of Colorado, maintaining at least a 3.0 grade average, and preparing for a career in teaching.

Student Health Program

A program of health services is available for the purpose of meeting health needs and maintaining good health which in turn, facilitates the students' progress toward educational goals. This is accomplished by providing medical and mental health services, preventive medicine, health education, access to and coordination with local medical facilities, and a health insurance program. The student group health and accident insurance plan provides hospitalization and care for sickness and accidental injury. All full-time students (7 quarter hours or more) have access to these benefits upon payment of student fees. Services available to part-time students are limited as outlined in the Student Health Services and Insurance brochure. This brochure, which describes benefits provided and how to use the program, is available at registration and at the Health Center. Also, a copy may be obtained by writing directly to the Student Health Center. A brief description of the program is as follows:

- 1. The Health Center** (on-campus out patient clinic). Provides an initial source of help for any student who has a known or suspected health problem. Examples of benefits provided are services by physicians and registered nurses,

diagnostic laboratory, emergency first aid, immunizations, referrals, mental health services, administration of allergy medications, and counseling for health problems.

2. The Supplemental Off-Campus Program. Provides up to three office calls (\$8 each), two diagnostic x-rays, and \$20 for diagnostic laboratory tests each quarter by a contractual agreement with local physicians.

3. The Student Group Hospitalization and Accident Insurance. Provides care 52 weeks per year anywhere in the United States or Canada. Major medical benefits are not provided.

Copies of Medical Records will be sent to other institutions for a \$2.00 fee.

Housing

The University of Northern Colorado provides a variety of housing accommodations for students. On-campus accommodations are provided for approximately 3,150 single students in residence halls. One hundred university-owned furnished apartments are provided for married students during the academic year. Summer Quarter usage of residence hall facilities provides for an additional 280 units for families.

Residence Requirements in Brief. Any undergraduate student enrolled, summer included, is subject to the university housing regulations.

All first year freshman students must live in university residence halls for at least one year with the following exceptions: (1) students 21 years of age or over; (2) students who have completed more than 45 credit hours; (3) students whose parents or guardians live in the Greeley vicinity; (4) married students; (5) veterans. A veteran must have served at least 12 months in active status in one of the United States military services.

Residence Halls. The housing staff at the University of Northern Colorado strives to provide comfortable, wholesome, pleasant living conditions, healthy and appealing food, and an opportunity to enhance the educational experience of students who live in the residence halls. Group living in a university setting is a unique learning experience. Interaction with people from other geographical areas, ethnic groups and religions provides an opportunity to broaden one's perspective of life. Further, the opportunity, in a secure setting, to compare one's own life style and values with those of other individuals and groups is a vital element in the maturation process of every student. Most rooms are designed for two students. They are fully furnished, including blankets, drapes, and bed linens. Students may add to their room furnishings with small belongings from home. All residence halls have recreation rooms, lounges, study areas, cleaning equipment and personal laundry facilities and ironing boards. (Students provide their own personal linens, towels, and irons.)

Food Service. Meals prepared in each dining hall are served cafeteria style. University food staff plans menus which give proper emphasis on nutrition, quality and quantity. At least two choices of main courses, salads and deserts are offered at noon and evening meals. Special diets or menus are not provided. Three meals a day are served Monday through Saturday. Two meals (breakfast and dinner) are served on Sundays, official university holidays and the closing day of each quarter. No refunds are made for meals missed. Additional servings are available at all meals on most items.

Staff. A professionally-trained staff is provided in each residence hall to assist students and an active student government is elected to give leadership to activities and programs. The intramural athletic program, a scholastic-cultural program, and most of the social life on campus originate from the residence units. Activities, programs and counseling services are designed to supplement and enrich student education. Hall activities are financed by a small dues assessment on each resident.

Residence Hall Regulations. Regulations applicable to residence hall living attempt to provide ample opportunity for personal growth and self-discipline. Group living requires certain regulations that apply to all. These are published in the Housing Contract and student handbooks, and students are involved to a large measure in determining the local regulations by which residents will live.

Students are not required to maintain hours. After closing hours access to residence halls can be arranged. All residence halls normally close by 11:00 p.m. on Sunday through Thursday and by 1:00 a.m. on Friday and Saturday nights.

Contracts. Each reservation and assignment in all residence halls is available only on a contract basis for the school year (Fall, Winter and Spring Quarters), or for the remaining portions of the school year for students entering after the Fall Quarter. Separate contracts for Summer Quarter housing only are available. Room reservations for the next school year are made at the end of spring term for students already on campus who wish to return to the residence halls. In all except the apartment type halls (Turner and Lawrenson Halls), room and meals are included. Apartment hall residents as well as students living off-campus may contract individually for meals at adjacent dining facilities on either a full or partial board plan. Separate meal contracts are for one quarter and may be renewed each quarter.

Generally, STUDENTS ARE NOT PERMITTED TO TERMINATE A CONTRACT UNLESS THEY WITHDRAW FROM THE UNIVERSITY OR BECOME MARRIED after entering the contractual agreement. The contract is binding throughout the full academic year. In exceptional cases, where a student's circumstances have radically changed after entering the contract, he may petition the University Housing Office for release. OBLIGATIONS TO THE TERMS AND CONDITIONS OF THE CONTRACT DO NOT TERMINATE UNTIL THE UNIVERSITY HAS OFFICIALLY APPROVED A PETITION FOR RELEASE FROM CONTRACT.

Application for Housing. Address the Housing Office when applying for any type of on-campus housing. A deposit of \$50.00 must be advanced to confirm a reservation. If it is decided not to attend the University of Northern Colorado, and a written statement is received by the Housing Office to that effect, the policy in regard to housing deposit refunds is as follows:

A \$25.00 refund will be made to academic year applicants who cancel their housing contract on or before August 15. Applicants who contract during the year starting with the Winter, Spring, or Summer Quarters are subject to the cancellation deadline dates below:

November 15 (for Winter Quarter applicants)

February 15 (for Spring Quarter applicants)

May 15 (for Summer Quarter applicants)

Notice received after these dates in each quarter or no notice to forego attendance at the university results in a full forfeiture of the deposit. A housing deposit for a student who is assigned to university housing will be held during all consecutive reservation periods and the full period of residence. The deposit will be refunded by mail, when all monies owed to the university are paid and the contract fulfilled, approximately 60 days after termination of campus residence.

Rates. Rates are established on a room and board basis and vary slightly depending upon hall location and size of room. Changes are authorized by the Board of Trustees. The University reserves the right to change rates prior to the beginning of any academic quarter.

Married Student Housing Facilities. There are 98 permanent two-bedroom furnished apartments available for students and their immediate families. These apartments are located on university-owned property near residence halls on the East Campus between 17th and 18th Streets. Applications for rentals are made to the Director of Housing, University of Northern Colorado, Greeley, Colorado, 80639.

Off-Campus Housing. The Housing Office, provides limited assistance for students who are not required to live in residence halls to obtain housing in the city of Greeley. Board is available in the residence halls on a contract basis for students living off-campus.

The Housing Office assists students who cannot find university housing by maintaining current lists of private rooms, apartments and houses that are available in the Greeley area. Students seeking off-campus residence are advised to arrive in Greeley early.

Only those persons who agree to the Colorado Fair Housing Act of 1959 are eligible to be listed with the University of Northern Colorado. The University of Northern Colorado does not inspect nor approve off-campus housing.

Libraries

The main University Library is located on the Darrell Holmes Campus and provides the materials and services necessary for student and faculty research and study.

The library materials collection, comprised of a total of over 958,395 units or 724,883 volume equivalents is housed largely in the Michener Library.

The Library holdings contain representative collections of literature in the fields of knowledge taught at the University; also, bound periodicals, government documents, pamphlets and reference materials in the variety of formats, e.g., print, microforms, motion pictures, filmstrips, slides, maps, phono records and tapes, braille writing, videotapes and cassettes, etc.

The stacks are open to all students and other patrons, individual and group study facilities are located in or near all stack areas.

UNC students, with proper identification, may borrow books from any state supported college or university in Colorado, and the University of Denver. Students borrowing from these colleges are bound by the regulations of the lending institution.

The Educational Information Retrieval Service, a new educational service rendered via computer search, works through the Reference Services.

The Multi-media Services, located on the lower level of the Michener Library, are composed of the Film Library Services; Photo-Duplication Services; Microforms Reading and Storage; Educational Resources Center, containing educational materials, textbooks, curriculum guides, testing materials, et cetera, for the student who is preparing to teach; special Reserve Book Facility and Reading Area; and Services to the Handicapped.

The Music Library is located in Carter Hall, 307. Selected Library volumes, including music reference materials, together with music recordings, scores, and listening equipment are available.

The Laboratory School libraries (K-6 and 7-12) are located in Bishop-Lehr Hall. The best of children's and young adult literature has been gathered in approximately 23,000 volumes, together with other learning media, for the laboratory school student and faculty use. College students preparing to teach also find this facility and its collection worth examining.

Tours and special instruction in library use are available on request.

Media Services

Assistance to faculty and students in the location, acquisition, and utilization of media is available from two regular services on campus:

The Instructional Materials Services is located in Michener Library L-10. Here faculty film requests and orders are processed. A Library of 2,000 films, 90C filmstrips, several hundred audio recordings, and numerous video tapes is available. All audio-visual equipment and films for the University are centrally located at and supplied by the IMS. Student projectionists are provided for faculty members who desire this help. Portable video units utilizing ½-inch video tapes are also available on loan from the IMS.

The Media Planning and Production Services in the Department of Educational Media are located in McKee 101. In addition to consultative services, the following facilities and staff skills are available: Audio production staff provide tape recordings and duplication services. A graphics production staff is available in the center for the creation and reproduction of visual and photographic instructional materials. Through the facilities of the Instructional Television (ITV) division, a complete production studio is available. A three-channel distribution system allows for playback of videotapes or distribution of locally originated live telecasts to most buildings on campus.

Campus Ombudsman

Members of the academic community who have concerns which they are unable to reconcile through the existing University structure are encouraged to contact the Campus Ombudsman by telephoning 351-2889 or by writing c/o University of Northern Colorado, Greeley, Colorado 80639.

The Ombudsman is a neutral party who fields complaints and indications of confusion from University members, who acts on those complaints in the form of advice or investigation, and who makes known the results of an investigation. The Ombudsman assumes no authority to alter or reverse decisions made by University officials. The strength of the office lies in an impartial position, in the privilege to free inquiry, and in the ability to act on an informal and personal level.

An ombudsman Advisory Board, composed of students, faculty, and administrative staff, is available to hear complaints or inquiries regarding the Ombudsman. The Board may be contacted through the Office of the Ombudsman.

Office of Alumni Relations

As early as 1919 UNC, then the Colorado State Normal School, compiled a listing of alumni and their locations. Interest in maintaining active alumni relations programs have persisted since that time. On February 11, 1965, the Alumni Association was established as a non-profit corporation independent of the University. The Association is governed by a 21 person Board of Directors and has as its purpose the creation and encouragement of programs mutually beneficial to the University and its Alumni. Membership in the organization is open to all who have attended UNC for a minimum of one quarter as a full-time student (12 quarter hours) or a minimum of 15 quarter hours as a part-time student. A Student Alumni Advisory Council works in conjunction with alumni programs. The Office of Alumni Relations coordinates all alumni records and activities. For further information contact the Office of Alumni Relations, Alumni House, 1905 10th Avenue.

Placement Service

The Placement Center is located in Carter Hall, Room 401, and provides service to the student, the employer, and the University. A file of credentials can be established for graduating seniors, alumni, and for students who have a college degree and completed course work at our University. Enrollment is not required, but highly recommended.

Employment is not guaranteed. University students and Placement Center enrollees are offered counseling service and other assistance which will aid the candidate in reaching a career decision based on a full appreciation of individual potential. Included in our facilities are seven private rooms for personal interviewing and a library section which contains files of materials relating to vacancies and prospective employers.

Special Resources Program for the Disabled

The Coordinator-Counselor for Disabled Students provides assistance to the physically handicapped in their pursuit of higher education. This program at-

tempts to meet the various needs of severely disabled students. Resource services offered to disabled students include interpreters, tutors, notetakers, an English for the Deaf class, and professional counseling services. Other more specialized services are offered for the visually handicapped and for the orthopedically disabled.

Student Activities

All campus organizations must apply each year through the Associated Students to the Division of Student Services for charter approval. When organizations are recognized by the Associated Students and the Division of Student Services, facilities of the campus set aside for such purposes may be used by the groups.

Most student activities are coordinated in the University Center, located on 20th Street between 10th and 11th Avenues. The Center is designated to be the hub of the campus community life. Most University Center facilities are open to all faculty, staff, students, and visitors on a regular weekly schedule. The use of university facilities for nonacademic purposes is scheduled through the Center's Scheduling Office.

Student Government. Student government and activities on the campus are administered by the members of the Associated Students under the sponsorship of the Dean of Students Office. The Associated Students elect an Executive body in the Spring and the Student Congress is elected half in the Spring and half in the Fall.

Membership in the Associated Students permits students to attend most cultural, social, dramatic and athletic events without additional charge. Facilities of the University Center are also available to members.

Athletics. The intercollegiate athletic activities of the university are governed by a Board of Athletic Control on which both students and faculty are represented. Intercollegiate athletic programs are scheduled in football, basketball, baseball, cross country, field and track, wrestling, swimming, gymnastics, tennis and golf. Competition is afforded with women from other colleges in basketball, volleyball, track and field, field hockey, softball, tennis, badminton, gymnastics, and swimming. Gunter Hall, Butler-Hancock Hall, Jackson Field, and the Holmes Campus athletic fields afford the facilities for the major indoor and outdoor sports.

The university is a member of the National Collegiate Athletic Association, and is bound by the rules of that body in governing eligibility of athletics and the conduct of students at or in connection with athletic events.

Intramural Programs. The intramural programs for men and women are important offerings of the School of Health, Physical Education and Recreation. These programs are open to all students with a wide variety of team, individual, and dual sports on a competitive yet informal and voluntary basis. It is hoped that all students will take advantage of the opportunity to actively participate in these programs. Indoor and Outdoor facilities are made available for evening and weekend recreational use by students.

Forensics. Students have an opportunity to participate in a comprehensive program for intercollegiate debate and public discussion. The university is a member of the Colorado-Wyoming Forensic Association and has the Colorado Beta Chapter of Pi Kappa Delta, national forensic society. Under faculty supervision, students participate in regional and national programs and contests.

Publications. Interested students have an opportunity for expression in three student publications; the Mirror (a tri-weekly newspaper) and Colorado North Review and Quarterly Overview (general interest and literary magazines).

Clubs and Honorary Fraternities. Each school or college of the university sponsors honorary fraternities and clubs of various types which are of special

interest to students majoring or minoring in the school or college. These organizations provide an opportunity for students and faculty members to become better acquainted.

Qualified students are eligible to become members of numerous honorary and service fraternities. Organizations open to both men and women include:

- Alpha Psi Omega, national drama fraternity;
- Gamma Theta Upsilon, national geography honorary;
- Lambda Sigma Tau, national science fraternity;
- *Phi Sigma Iota, national foreign language fraternity;
- *Phi Alpha Theta, national history fraternity;
- Phi Mu Alpha Sinfonia, national music fraternity;
- Pi Kappa Delta, national forensic fraternity;
- *Pi Omega Pi, national business education fraternity;
- Kappa Delta Pi, national education fraternity;
- Delta Pi Epsilon, national business education fraternity (alpha alpha chapter);
- Pi Mu Epsilon, national math fraternity.

The following honorary and service fraternities are for men:

- Arnold Air Society, honorary AFROTC society;
- Epsilon Pi Tau, national honorary fraternity in industrial arts
- Kappa Kappa Psi, national band fraternity;
- Phi Delta Kappa, national professional education fraternity.

Women's honorary and service organizations include:

- Angel Flight, National Service Auxiliary of Arnold Air Society;
- Chandelle, junior women's honorary;
- Delta Omicron, national music fraternity;
- Mortar Board, senior women's honor society;
- Pi Lambda Theta, national education fraternity;
- Spur, national service fraternity;
- Tau Beta Sigma, national band fraternity;
- Theta Pi Theta, Home Economics Honorary.

Social Organizations. At the University of Northern Colorado there are eight national social sororities and seven national social fraternities. Sororities are: Alpha Delta Pi, Alpha Gamma Delta, Alpha Xi Delta, Alpha Phi, Alpha Sigma Alpha, Delta Zeta, Sigma Kappa, Sigma Gamma Rho, and Sigma Sigma Sigma. Fraternities are: Alpha Zeta Omega, Lambda Chi Alpha, Sigma Alpha Epsilon, Sigma Chi, Sigma Phi Epsilon, Tau Kappa Epsilon, Theta Xi, and Omega Psi Phi.

All students are eligible for pledging once they have matriculated. To be eligible for initiation, students must maintain at least a 2.0 cumulative grade point average.

Panhellenic Council, composed of two representatives from each sorority, functions as the coordinating agent for its respective groups, governing pledging and initiation and maintaining a high plane of inter-sorority relations on the campus. The council sponsors several awards to the member organizations including awards for high scholastic achievement. The Greek Council, composed of the presidents of each fraternity and sorority, is the coordinating agent among the Greeks. It fosters cooperation among the Greeks and sponsors total Greek activity.

Religious Program. The university emphasizes the values of a religious life and encourages students to attend churches of their choice. Greeley is noted as a city of churches. Most denominations are represented by an active church. There are several student religious groups on the campus. Including an ecumenical campus ministry located at the Agape House at 2204 11th Avenue.

*Members of the Association of College Honor Societies.

Veterans Eligible for "G.I." Educational Benefits

Students with military service should contact the UNC Office of Veterans' Affairs to establish eligibility for state and federal veterans' benefits. Two photocopies of separation papers (DD-214) are usually required. Servicemen's dependents receiving VA benefits should also see the Veterans' Affairs Office.

Important: VA regulations require students who withdraw from a course to report their last date of attendance immediately to the Veterans' Affairs Office. The V.A. will not consider a student to have made satisfactory academic progress when he or she fails or withdraws from all courses undertaken when enrolled in two or more courses.

Performing Arts

The Little Theatre of the Rockies, the Opera Guild and the Dance Program present a wide variety of programs in theatre, musical theatre, and dance during the academic year. All students may audition and/or participate in all production activities by attending tryouts, held at the beginning of each quarter. For further information call the Performing Arts box office: 351-2200.

Qualified students are eligible to participate in the choirs, the university bands, the university orchestra, and the Greeley Philharmonic Orchestra. During the academic year, the School of Music presents special programs. For further information call the School of Music: 351-2678.

FEES AND EXPENSES

All rates quoted below are subject to a provision that the University reserves the right to change tuition, fees and other charges without notice. As with all state-supported institutions, the tuition rates are affected by legislative action which may not be finalized until late spring of any given year.

Revised information concerning tuition and fees may be available prior to registration. Contact the Office of Student Services, University Center, University of Northern Colorado, Greeley, Colorado 80639. (303)351-2796.

On-Campus Instruction

Summer, Fall, Winter or Spring Quarters

	1975-76 Actual		1976-77 Estimate	
	Colorado Resident	Non Resident	Colorado Resident	Non Resident
Six Credit Hours or Less:				
Tuition, Per Credit Hour	\$17.00	\$34.00	\$18.00	\$72.00
Student Services Fees a)	11.00	11.00	11.00	11.00
More than Six Credit Hours:				
Tuition	\$117.00	\$465.00	\$128.00	\$512.00
Health Insurance b)	12.50	12.50	18.00	18.00
Student Services Fees a)	45.50	45.50	45.50	45.50
TOTAL	\$175.00	\$523.00	\$191.50	\$575.50
Off-Campus Instruction c)				
(Continuing Education Services)				
Group Instruction d)				
Correspondence Study				
Multi-media Learning Packages				
(For courses numbered 300 and above)	\$20.00		\$20.00	
(For courses numbered 299 and below)	15.00		15.00	

a) Student Services Fees are committed for the support of student activities programs, the Student Health Center, and Associated Student government. No part of these fees is remitted to those students who may not desire to make use of any or all of the privileges provided. Full-time students receive I.D. cards validated for admission to campus athletic events, performing arts productions, selected lectures and other events, as specified for admission under the I.D. card. During Summer Session the \$11.00 part-time charge does not apply to workshops of less than an 8-week duration. Student Services Fees for full-time Summer students may be set at a rate lower than the academic year.

b) Health Insurance coverage is required for all students who register for seven academic hours or more each quarter, **except summer**. Details of this coverage may be obtained from the Student Health Center.

c) Residence status is not currently determined for or applied to these programs.

d) When group instruction involves a sequential program or external degrees, additional program fees may be charged.

The right of a student to classification as a resident for tuition payment purposes in a state institution of higher education is determined under State Law--Colorado Revised Statutes 1966, as amended, 1973. Administrative procedures fix status **before or at the time of registration**. If, following a registration and payment of tuition, the status conferred on a student is questioned for revision, appeal may be made on a specific form and the case will be reviewed by the University Committee on Residence Status. The determination by the committee following the review is final. All matters concerning residency status rulings shall be filed with the Office of the Registrar, where referrals will appropriately be made to the University Committee on Residence Status.

Incidental Extra Fees Applicable Under Specified Conditions

Certified Statement of Issuance of Teaching

Certificate and/or diploma	\$1.00
Change of Program: Assessed for each add-drop slip processed	2.00
Late Registration Fee: Assessed for registration after scheduled registration time	5.00
Assessed for each added day of late registration	2.00
Late Application for Graduation	10.00
Meal Ticket Replacement	5.00
Official Transcript of University Records, per copy	1.00
Optional Student Health Insurance Coverage Summer Quarter Only* ..	20.00
(If a student was not enrolled full-time--for more than six credit hours--Spring Quarter 1976, he does not have health insurance coverage for the Summer Quarter of 1976.)	
Special Program Fees such as bowling, skiing, field trips, golf.....	At Cost
Special Tests by the Counseling Service	At Cost
Student Identification Card Replacement	5.00
Transcript Evaluation Fee for application for the baccalaureate and master's degrees and graduate student certification program	10.00

*This insurance can be obtained only by requesting coverage at registration or at the Student Health Center during the first week of the quarter.

Fees for Music Instruction

Individual music lessons, per quarter

Non-music majors	\$15.00
Persons not enrolled in the University or affiliated schools	25.00

Placement Center Charges

(The placement year begins September 1 and ends August 31)

Initial enrollment	\$10.00
Re-enrollment	10.00
First and subsequent copies of credentials mailed when applicant has not re-enrolled, per copy	2.00
Telephone calls, postage for Air Mail and Special Delivery are billed at actual cost.	

Residence Hall Charges

All rates quoted are subject to a provision that the University reserves the right to change rates prior to the beginning of any academic quarter.

RESIDENCE HALLS WITH ROOM AND BOARD (Occupancy: two persons per room)	QUARTERLY RATES PER STUDENT	
	1975-76 Actual	1976-77 Estimate
Harrison	\$390.00	\$450.00
McCowen, Wilson, Wiebking	390.00	440.00
Belford, Tobey-Kendel, Sabin, Snyder	375.00	425.00
Cross, Hadden, Hays, Troxel	370.00	420.00

**RESIDENCE HALLS, APARTMENT
STYLE, WITHOUT BOARD**

(Occupancy: four persons per apartment)

Turner Hall	\$185.00	\$210.00
Lawrenson Hall	200.00	230.00

Board service only is available at the residence halls on a quarterly contract basis for students living in Turner Hall, Lawrenson Hall or off campus.

FAMILY FACILITIES

MONTHLY RATES PER FAMILY	
	1975-76 Actual

Student Family Apartments, East Campus

leased on 12-month contract (includes furnishings & utilities)	\$120.00	\$130.00
---	----------	----------

Additional family facilities are available in Turner and Lawrenson Halls Summer Quarter only, limited to the student and three (3) dependents per family, including furnishings and utilities.

Policy on Reassessments, Refunds, Retentions on Withdrawal

Adjustments in tuition or fees are permitted after registration only under specified conditions. In most circumstances a change in the number of credit hours for which a student registers will not affect the charges initially assessed. When changes in a course of study within the first week result in registration of less than seven hours, applicable refund of tuition and fees will be made.

To be eligible for a refund of any kind upon withdrawal from school the student must present a formal, approved Notice of Withdrawal or an Add-Drop Slip at the Accounting Office. The Records Office and Housing Office will provide information on the application procedures required. Refunds are not prorated; rather, they are made in terms of the policy statements below and the residence halls lease.

Refunds allowed against paid tuition and student services fees upon withdrawal are provided as follows:

On programs of six credit hours or less, the student will be assessed a \$15

withdrawal fee if withdrawal occurs during the first week of the term and a \$30 withdrawal fee if withdrawal occurs during the second week. If the student withdraws after the second week of the term, the student will be required to pay the full amount of tuition and student services fees.

On programs of seven or more credit hours, the student will be assessed a \$25 withdrawal fee if withdrawal occurs during the first week of the term, \$50 if withdrawal occurs during the second week, \$75 if withdrawal occurs during the third week, and \$100 if withdrawal occurs during the fourth week. If the student withdraws after the fourth week of the term, the student will be required to pay the full amount of tuition and student services fees.

Refunds allowed against assessed quarterly board and room charges, apartment rentals, and the Housing Deposit are permitted under the terms of the housing lease. The Housing Office, when consulted at withdrawal, will provide information on the computations applied.

Incidental fees and health insurance are not refunded for any cause at any time.

PAYMENT OF STUDENT ACCOUNTS

Any student who completes registration is responsible for the payment of tuition, fees, and applicable housing or food service charges and should be **prepared to pay the full amount at the beginning of the term.**

Each student's final registration packet will contain a UNC Fee Card, showing the applicable housing system charges for the term, the number of hours the student has registered for, the student's residency status, and the **due date** for his or her tuition, fees, and housing charges. If full payment of these charges is not made when due, the student is subject to a charge for late payment and withdrawal of enrollment. The University will send a notice of pending withdrawal of enrollment to any such student on the second day of the third week of classes. The notice is mailed to the student's local address on file with the Registrar's Office with a copy to the permanent mailing address of the student. (Every student is required to notify the Registrar's Office promptly of any change in his or her local address or permanent mailing address.) If full payment of the entire account balance, including the late payment charge, is not received by the Cashier's Office within one week of the date of the notice, the enrollment of the student will automatically be withdrawn. A student withdrawn under this policy is not eligible to re-enroll until the beginning of the next term. To be eligible to re-enroll for a subsequent term, the student must pay his or her entire financial obligation to the University.

An installment plan, with appropriate deferral fees, is available to students. This plan consists of a 50 percent down payment during the first two weeks of the term with the balance due prior to the end of the sixth week of classes.

All other University charges become due and payable when they appear on either of the two statements of student accounts receivable which will be issued each term. The first statement will be mailed to the student's local address after the end of the second week of classes and becomes past due one week after mailing to the student. The second statement is mailed after the end of the sixth week of classes and becomes past due one week after mailing to the student.

A student with a past due financial obligation to the University is subject to a late payment charge as follows:

Past Due Balance	Charge
\$10.00 to \$99.99	\$5
100.00 to 299.99	10
300.00 to 499.99	20
500.00 to 699.99	30
700.00 to 899.99	40
900.00 and over	50

The University will not register a student, release a diploma to a student, nor provide a transcript to any student or former student who has any financial

obligation to the University (other than a loan not yet due).

Any student who presents to the University a check that is not accepted for payment by the bank, because of insufficiency of funds, nonexistence of an account, or other reason for which the student is responsible, is charged a fee of 1 percent of the amount of the check or \$5, whichever is greater. A notice of this fee and the amount of the "bad check" placed on the student's account is mailed to his or her local address or to his or her permanent mailing address. A "bad check" presented in payment of tuition, fees, and housing charges will be considered as a non-payment and may result in withdrawal of a student's enrollment.

DEGREE PROGRAMS

UNDERGRADUATE MAJOR, MINOR, AND NON-DEGREE PROGRAMS

1976-77

LA - stands for Liberal Arts

TE - stands for Teacher Education

- Aerospace minor-LA
Anthropology major-LA
Anthropology minor-LA
Biological Sciences major-LA and TE
Biological Sciences minor-LA and TE
Black Studies major-LA
Black Studies minor-LA
Botany major-LA
Business minor-LA
Business Administration-LA (*emphasis on Accounting*)
Business Administration major-LA (*emphasis on Finance*)
Business Administration major-LA (*emphasis in General*)
Business Administration major-LA (*emphasis in Management Adm.*)
Business Administration major-LA (*emphasis in Management Info. Science*)
Business Administration major-LA (*emphasis in Management/Mgmt. Sci.*)
Business Administration major-LA (*emphasis in Management/Public Adm.*)
Business Administration major-LA (*emphasis in Marketing*)
Business Administration major-LA (*emphasis in Office Admin.*)
Business Teacher Ed. major-TE (*emphasis in Basic Bus. & Econ.*)
Business Teacher Ed. major-TE (*emphasis in Distributive Ed.*)
Business Teacher Ed. major-TE (*emphasis in Office Education*)
Business Teacher Ed. minor-TE
Chemistry major-LA and TE
Chemistry minor-LA and TE
Chem. minor for Med. Tech.-LA
Communication major-TE (*emphasis in PTE*)
Communication major-LA (*emphasis in Human Relationship*)
Communication major-LA (*emphasis in Mass Media*)
Communication major-LA (*emphasis in Law and Public Policy*)
Communication major-LA (*emphasis in Organization*)
Communication minor-LA and TE
Comm. minor for El. Ed.-TE
Dance Education minor-TE
Dietetics major-LA
Earth Sciences major-LA and TE
Earth Sciences minor-LA and TE
Economics minor-LA
Economics Ed. minor-TE
Ed. Field Experiences-non-degree program
Educational Media minor-TE
Elementary Ed. major-TE
Elementary Ed. major-TE (*emphasis in Bilingual-Bicultural*)
Elementary Education:
Early childhood-TE
Elementary Science minor-TE
English major-LA and TE
English minor-LA and TE
Environmental Studies minor-LA
Family Life & Consumer Education major-LA
Fine Arts major-LA and TE
Fine Arts minor-LA and TE
Florence Program-non-degree program
Food & Nutrition major-LA
French major-LA and TE
French minor-LA and TE
Geography major-LA
Geography minor-LA
German major-LA and TE
German minor-LA and TE
Gerontology major-LA
Health major-LA
Health minor-LA
Health Education major-TE
Health Education minor-TE
History major-LA and TE
History minor-LA and TE
Home Ec. Ed. Major-TE
Home Economics minor-TE
Home Ec. minor in Bus.-LA
Home Ec. minor in Sci.-LA

Humanities minor-LA	Physical Education major-TE (<i>emphasis in Secondary</i>)
Individual Tutorial Program-non-degree program	Physical Education minor-TE
Industrial Arts major-LA and TE	Physical Science major-TE
Industrial Arts minor-LA and TE	Physics major-LA and TE
Interdis. Studies major-LA and TE	Physics minor-LA and TE
Journalism major-LA and TE (<i>emphasis in Business</i>)	Political Science major-LA
Journalism major-LA and TE (<i>emphasis in Radio/Television</i>)	Political Science minor-LA
Journalism major-LA and TE (<i>emphasis in Social Science</i>)	Pre-School minor-TE
Journalism major-LA and TE (<i>emphasis in The Arts</i>)	Pre-School Ed. major-TE
Journalism minor-TE	Psychology major-LA
Junior High School Sci. major-TE	Psychology minor-LA and TE
Mathematics major-LA and TE	Recreation major-LA
Mathematics minor-LA and TE	Russian minor-LA and TE
Medical Technology major-LA	Russian-Soviet Studies minor-LA
Mexican American Studies major-LA	School of Educational Change & Development major-LA and TE
Mex. Amer. Studies minor-LA and TE	Social Science major-LA and TE
Middle School Ed. major-TE	Sociology major-LA
Music major-LA and TE	Sociology minor-LA
Music minor-LA	Spanish major-LA and TE
Music major-LA (<i>emphasis in Instrumental</i>)	Spanish minor-LA and TE
Music major-LA (<i>emphasis in Piano</i>)	Special Education major-TE (<i>emphasis in Acous. Handicapped</i>)
Music major-LA (<i>emphasis in Theory/Composition</i>)	Special Education major-LA and TE (<i>emphasis in Audiology</i>)
Music major-LA (<i>emphasis in Vocal</i>)	Special Education major-TE (<i>emphasis in Mental Retardation</i>)
Music Education major-TE (<i>emphasis in Instrumental</i>)	Special Education major-LA and TE (<i>emphasis in Speech Pathology</i>)
Music Education major-TE (<i>emphasis in Vocal, Piano & General</i>)	Rehabilitation & Related Services major-LA
Musical Theatre major-LA	Theatre Arts major-LA and TE
Nursing major-LA	Theatre Arts minor-LA and TE
Outdoor Education-Environ. Education minor-TE	Voc. Teacher Education - non-degree program
Philosophy minor-TE	Women's Studies minor-LA and TE
Physical Education major-TE (<i>emphasis in Elementary</i>)	Zoology major-LA

Aerospace Studies

Administered by the Department of Aerospace Studies

Aerospace Studies Minor. Requirements for a minor are completion of the 12 hours of the General Military Course and the 18 hours of the Professional Officer Course, excluding AS-403, for a total of 30 hours.

AFROTC Curriculum

Four-Year. The four-year program requires student participation in the General Military Course (GMC) and the Professional Officer Course (POC), each requiring six quarters. During the second year of the GMC, qualified cadets may apply for membership in the POC. Cadets selected by the Professor of Aerospace Studies (PAS) will enter the POC at the beginning of the junior year or six quarters prior to completion of their academic program. Cadets will be commissioned in the Air Force Reserve on completion of: (1) the GMC and POC, (2) a four-week Field Training Course between the sophomore and junior year, and (3) college degree requirements.

Two-Year. The two-year program requires student participation in six academic undergraduate and/or graduate quarters concurrently with the POC. **Students**

will compete for selection during the academic year preceeding the year of entrance into the POC. Students will be commissioned in the Air Force Reserve on completion of: (1) a six-week Field Training Course during the summer prior to entering the POC, (2) the POC, (3) six quarters of undergraduate/graduate academic work, and (4) college degree requirements. Testing information is available at the AFROTC office.

Flight Instruction Program. Students selected for Pilot Training receive 25 hours of flight instruction during the senior year of the POC. Students possessing a private flying license are excluded from this portion of training.

General Military Course

The General Military Course is a two-year program open to all full-time, undergraduate students. Air Force uniforms and textbooks are furnished. Veterans and Junior ROTC graduates may request waiver of portions of the GMC. Also, the GMC may be compressed into one year to accommodate students entering out-of-phase.

Freshmen enroll in the following courses:

Course No.	Course Title	Hours	Credit
AS 100	US. Military Forces in the Contemporary World I	.....	2
AS 101	US. Military Forces in the Contemporary World II	.....	2
AS 102	U.S. Military Forces in the Contemporary World III	.....	2

Sophomores enroll in the following courses:

AS 200	The Developmental Growth of Air Power I	.....	2
AS 201	The Developmental Growth of Air Power II	.....	2
AS 202	The Developmental Growth of Air Power III	.....	2

Professional Officer Course

The Professional Officer Course is a two-year program which prepares the student for active duty service as a commissioned officer in the United States Air Force Reserves. The curriculum is continually up-dated to include current technological developments made by the military establishment. All course instruction is student-centered. The Professor of Aerospace Studies selects the most highly qualified applicants for enrollment. Corps Training is arranged within the cadet corps on an individual basis.

Required Professional Officer Courses:

AS 300	Security Forces in America I	.....	3
AS 301	Security Forces in America II	.....	3
AS 302	Security Forces in America III	.....	3
AS 400	Concepts of Air Force Leadership	.....	3
AS 401	Concepts of Air Force Leadership and Management I	.....	3
AS 402	Concepts of Air Force Leadership and Management II	.....	3
*AS 403	Flight Instruction	.....	3

*AS 403 (Flight Instruction) is required for all pilot trainees; however, enrollment for the ground school class is open to any interested student.

Staff. Air Force personnel are assigned by Headquarters, United States Air Force. The Professor of Aerospace Studies (PAS) and instructional staff are officers with diversified experience.

AFROTC College Scholarship Program. The program includes full tuition, fees, reimbursement for all required text material, and \$100 per month. Both male and female students, in either the two-year or four-year program, may qualify on a competitive basis.

Anthropology Major

Administered by the Department of Anthropology

The Department of Anthropology offers a Liberal Arts major and minor in Anthropology. Students interested in being certified for teaching of Anthropology must take a major in Social Sciences rather than in Anthropology.

Students pursuing the B.A. degree with a major in Anthropology must plan their programs to fulfill the following requirements:

1. All General Education requirements as specified earlier in this catalog.
2. Two courses selected from each of the following areas: Cultural, Archaeology, Physical, and Theory; and one course from the area of Linguistics.
3. Electives in Anthropology chosen from any of the areas to total 48 hours credit.

	<i>Number of Required Courses</i>
I. General .....	.0
Selected from ANT 100, 380, 472. (ANT 100 is not required for majors, but will count as 5 of the hours of electives. However, majors are strongly urged to take ANT 110, 140, and 170 early in their academic programs.)	
II. Cultural .....	.2
Selected from ANT 110, 120, 121, 122, 220, 221, 222, 280, 281, 300, 320, 321, 322, 323, 324, 325, 326, 327, 328, 331, 335, 337, 350, 381, 382, 383, 420, 421, 431, 490.	
III. Archaeology .....	.2
Selected from ANT 140, 240, 241, 242, 340, 341, 342, 344, 345, 346, 347, 348, 349, 440, 450.	
IV. Physical .....	.2
Selected from ANT 170, 370, 371, 372, 373, 470, 471.	
V. Theory .....	.2
Selected from ANT 384, 442, 480, 481.	
VI. Linguistics .....	.1
Selected from ANT 360, 361.	
VII. Electives	Courses to total 48 hours
4. A further requirement of a minor or a concentration of at least 27 hours agreed upon in consultation with the adviser.	
5. Electives sufficient to complete requirements for the Bachelor of Arts degree.	

Following are the requirements for the minor:

1. One course selected from each of the following areas: Cultural, Archaeology, Physical, Theory, and Linguistics. In addition, electives in Anthropology chosen from any of the areas to total 27 hours credit.

	<i>Number of Required Courses</i>
I. General .....	.0
Selected from ANT 100, 380, 472 (ANT 100 is not required of majors, but will count as 5 of the hours of electives. However, majors are strongly urged to take ANT 110, 140, and 170 early in their academic program.)	
II. Cultural .....	.1
Selected from ANT 110, 120, 121, 122, 220, 221, 222, 280, 281, 300, 320, 321, 322, 323, 324, 325, 326, 237, 328, 331, 335, 337, 350, 381, 382, 383, 420, 421, 431, 490.	
III. Archaeology .....	.1
Selected from ANT 140, 240, 241, 242, 340, 341, 342, 344, 345, 346, 347, 348, 349, 440, 450.	
IV. Physical .....	.1
Selected from ANT 170, 370, 371, 372, 373, 470, 471.	
V. Theory .....	.1
Selected from ANT 384, 442, 480, 481.	
VI. Linguistics .....	.1
Selected from ANT 360, 361.	
VII. Electives	Courses to total 27 hours

Biological Sciences Major**Administered by the Department of Biological Sciences**

Students majoring in Biological Sciences must plan their programs to fulfill the following requirements:

1. Complete the General Education Requirements of 60 quarter hours.
2. Complete the following courses:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
BIO 101	Principles of Biology .....	.5
BIO 102	Principles of Botany .....	.5
BIO 103	Principles of Zoology .....	.5

3. A minimum of 10 hours in each of the prefix areas BIO, BOT and ZOO must be taken with at least one course from each category I-V.

I. Evolutionary Biology (A study of the genes and genetic changes in an organism or population.)

BIO 231	Genetics .....	.5
BIO 336	Evolution .....	.3
BIO 234	Population Genetics .....	.3

II. Interactional Biology (A study of the interactions between organisms and their environment.)

BIO 241	Modifications of the Human Environment .....	.4
BOT 340	Plant Ecology .....	.5
ZOO 340	Animal Ecology .....	.5
ZOO 301	Principles of Animal Behavior .....	.4
BIO 346	Aquatic Ecology .....	.5

III. Structural and Developmental Biology (A study of development of organisms.)

BOT 323	Morphogenesis of Non-Vascular Plants .....	.5
BOT 324	Morphogenesis of Vascular Plants .....	.5
ZOO 121	Human Anatomy .....	.4
ZOO 427	Vertebrate Embryology .....	.5
ZOO 428	Comparative Vertebrate Anatomy .....	.5

IV. Organismal Biology (An in-depth study of a particular group of organisms with emphasis on recognition.)

BIO 361	Microbiology .....	.5
BOT 310	Plant Taxonomy .....	.5
BOT 424	Mycology .....	.5
ZOO 304	Ornithology .....	.4
ZOO 316	Entomology .....	.5
ZOO 320	Invertebrate Zoology .....	.5
ZOO 412	General Parasitology .....	.5
ZOO 441	Faunistics .....	.5

V. Physiological Biology (A study of the bio-chemical function of cells and organisms.)

BIO 350	Cell Physiology .....	.5
BOT 350	General Plant Physiology .....	.5
ZOO 250	Human Physiology .....	.5

Students interested in special areas of biology such as graduate work, teacher certifications or other professional areas should attempt to include additional courses appropriate to their programs. Consult with your adviser.

VI. Enrichment Biology (All BIO, BOT and ZOO courses not required in categories I-V may be used for elective credit.)

4. A minor of 27 or more quarter hours is recommended. Chemistry, Physics, Mathematics or Earth Sciences are suggested depending upon the student's career goals. Check with adviser.

5. Three courses in each of the areas of Chemistry, Physics, and Mathematics not selected as a minor are recommended, depending upon the student's career goal.

6. Students majoring in Biological Sciences who plan to teach in the public schools must also complete the Professional Teacher Education (PTE) 31 hours; plus EDFE 372, two hours credit; SCED 442, three hours credit; and BIO 371, one hour credit. They must meet with the departmental PTE committee for evaluation before admittance into the program.

7. Additional hours of electives to complete 180 quarter hours of academic credit required for graduation. Students interested in preparing for certain professional areas in the Biological Sciences should be prepared to include additional hours in their program.

Biological Sciences Minor

Following are the requirements for minor:

BIO	101	Principles of Biology	.....	.5
BIO	102	Principles of Botany	.....	.5
BIO	103	Principles of Zoology	.....	.5
		*Electives	.....	.12
				<u>27</u>

*Electives must be chosen from at least three of the categories I-V listed under the Biological Sciences major.

Minors interested in teaching Biological Sciences in secondary schools must complete the minor listed above plus additional electives to be selected with approval of the student's minor adviser to complete 36 hours.

Black Studies Major

Administered by the Department of Black Studies

The Black Studies Program offers a major and a minor.

Students pursuing the B.A. with a major in Black Studies must plan their program to fulfill the following requirements.

1. Meet all General Education requirements as specified earlier in this catalog.
2. Following courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
BLS	101 Crisis of Identity	..... 3
BLS	220 Black Community Development	..... 3
BLS	240 Dynamics of Racism	..... 3
BLS	260 Themes in Afro-American Literature	..... 3
HIST	277 History of the Black Man in America I	..... 4
HIST	278 History of the Black Man in America II	..... 4
HIST	279 History of the Black Man in America III	..... 4
BLS	380 Education in the Black Community	..... 3
BLS	392 Linguistic Styles of Black America	..... 3
BLS	399 Community Study Project	..... 1-4
BLS	495 Interpersonal Communication	..... 3
Black Study Electives to be selected from courses listed below with the approval of the Coordinator of Black Studies		..... <u>11-14</u>
		48

Black Studies Electives

BLS	308	Interpersonal Growth Workshop	.....	3
BLS	322	Black Nationalism	.....	3
BLS	340	The Black Family	.....	3
BLS	350	Black Psychology	.....	3
BLS	360	Rhythm and the Black Experience	.....	3
BLS	420	Black Urban Politics	.....	3
BLS	430	Law and the Black Community	.....	3
BLS	460	Black Religion	.....	3

BLS	462	Theatre of Black America	3
BLS	463	The Black Man in American Drama II: 1945 to the Present	3
BLS	464	Seminar in Black Theatre	4
BLS	465	Black Media	3
BLS	480	Black Curriculum Development	3

Black Studies Minor

ENG	312	Afro-American Literature	3
HIST	277	History of the Black Man in America I	4
HIST	278	History of the Black Man in America II	4
HIST	279	History of the Black Man in America III	4
BLS	101	Crisis of Identity	3
BLS	240	Dynamics of Racism	3
BLS	220	Black Community Development	3
BLS	399	Community Study Project	1-4
		Electives selected from the following list with the approval of the Coordinator of Black Studies	2
			27

Black Studies Minor Electives

BLS	308	Interpersonal Growth Workshop	3
BLS	322	Black Nationalism	3
BLS	340	The Black Family	3
BLS	350	Black Psychology	3
BLS	360	Rhythm and the Black Experience	3
BLS	420	Black Urban Politics	3
BLS	430	Law and the Black Community	3
BLS	460	Black Religion	3
BLS	462	Theatre of Black America	3
BLS	463	The Black Man in America Drama II: 1945 to the Present	3
BLS	464	Seminar in Black Theatre	4
BLS	465	Black Media	3
BLS	480	Black Curriculum Development	3
BLS	495	Interpersonal Communication	3

Botany Major**Administered by the Department of Biological Sciences**

Students pursuing the B.A. degree with a major in Botany must plan their programs to fulfill the following requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. Take the following:

Course No.	Course Title	Hours	Credit
BIO	101	Principles of Biology	5
BIO	102	Principles of Botany	5
BIO	103	Principles of Zoology	5
BIO	231	Genetics	5
BIO	361	Microbiology	5
BIO	391	Seminar in Research	1
BOT	310	Plant Taxonomy	5
BOT	323	Morphogenesis of the Nonvascular Plants	5
BOT	324	Morphogenesis of the Vascular Plants	5
BOT	340	Plant Ecology	5
BOT	350	General Plant Physiology	5
		Electives to be selected with approval of major adviser	9
			60

3. It is recommended that one minor of 27 or more quarter hours in chemistry, physics, or mathematics be included.

4. It is recommended that a minimum of 15 quarter hours in each of the above fields (chemistry, physics, or mathematics) not selected as a minor be included.
5. It is recommended that a foreign language be included.
6. Electives to complete 180 hours required for graduation.

Business Administration Administered by the School of Business

The faculty of the School of Business feels it is essential to provide students with a high quality education and employers with high quality graduates. The faculty believes it is important that students enrolling in the School of Business develop a sense of responsibility and pride of achievement. In order to meet these objectives, it is necessary that a student majoring in business satisfy the following requirements before graduation:

1. Complete the General Education requirements of 60 quarter hours.
2. Complete the required courses listed in the Business Core plus the requirements in one of the areas of emphasis.
3. A student may not enroll in any Business course more than three times.
4. Complete additional course work, of which at least 15 hours must be in courses offered in the School of Arts, the College of Arts and Sciences, the School of Music, and the Department of Psychology, Counseling, and Guidance.
5. A minor is not required.

Business Administration Core

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
BUS 100	The American Business System .....	.3
BUS 150	Principles of Management .....	.4
BUS 180	Introduction to Business Data Processing .....	.3
BUS 205	Business Communications .....	.3
BUS 220	Principles of Accounting I .....	.4
BUS 221	Principles of Accounting II .....	.4
BUS 231	Business Law I .....	.3
BUS 260	Marketing .....	.4
BUS 291	Business Statistics I .....	.5
BUS 370	Business Finance .....	.4
ECON 100	Introductory Economics .....	.5
ECON 102	Contemporary Economic Problems .....	.3
*MATH 115	Essentials of Mathematics I .....	.3
		48

*Two years of high school algebra may be substituted for MATH 115.

Emphasis in Accounting

The emphasis in accounting and the accounting department are approved under the State Accountancy Law of Colorado. Students who complete all requirements for a degree with this emphasis meet the academic requirements for taking the Certified Public Accountant examination in Colorado.

Students transferring accounting courses to UNC must complete the following courses at UNC as minimum requirements to receive a Bachelor of Science Degree in Business Administration with an accounting emphasis: BUS 321, 322, 324, 420, 427, and 428 or 429.

BUS 232	Business Law II .....	.3
BUS 233	Business Law III .....	.3
BUS 320	Intermediate Accounting I .....	.4
BUS 321	Intermediate Accounting II .....	.4
BUS 322	Intermediate Accounting III .....	.4
BUS 323	Cost and Managerial Accounting I .....	.4

52 / DEGREE PROGRAMS

BUS	324	Cost and Managerial Accounting II	4
BUS	420	Advanced Accounting I	4
BUS	427	Auditing	4
BUS	428	Income Tax Accounting I	3

At least seven hours of additional accounting chosen from among the following:

BUS	326	Governmental and Institutional Accounting	4
BUS	421	Advanced Accounting II	4
BUS	429	Income Tax Accounting II	3
			<u>44</u>

Emphasis in Finance and Insurance -- Finance Option

BUS	292	Business Statistics II	3
BUS	320	Intermediate Accounting I	4
BUS	340	Introduction to Insurance	3
BUS	456	Business Policies and Management	3
BUS	470	Financial Management	3
BUS	471	Investments	3
ECON	202	Money and Banking	5
		Fifteen additional hours of Finance courses or other Business courses with approval of adviser	15
			<u>39</u>

Emphasis in Finance and Insurance -- Insurance Option

BUS	240	Introduction to Insurance	3
BUS	292	Business Statistics II	3
BUS	320	Intermediate Accounting I	4
BUS	341	Life and Health Insurance	3
BUS	342	Social and Group Insurance	3
BUS	444	Property Insurance	3
BUS	445	Casualty Insurance	3
BUS	456	Business Policies and Management	3
BUS	470	Financial Management	3
		One additional course in Insurance	3
		Nine additional hours in Finance and Insurance, or other business courses with approval of adviser	9
			<u>40</u>

Emphasis in General Business

BUS	232	Business Law II	3
BUS	233	Business Law III	3
BUS	292	Business Statistics II	3
BUS	323	Cost and Managerial Accounting I	4
BUS	354	Human and Organizational Behavior	4
BUS	365	Marketing Strategy	4
BUS	456	Business Policies and Management	3
BUS	470	Financial Management	3
ECON	200	The Price System	4
		Electives in Business, Economics, and the Behavioral Science areas	9
			<u>40</u>

Emphasis in Management -- Administration Option

BUS	292	Business Statistics II	3
BUS	323	Cost and Managerial Accounting I	4
BUS	354	Human Behavior in Business	4
BUS	453	Personnel Management	4
BUS	454	Development of the Labor Movement	2
BUS	455	Collective Bargaining	3
BUS	456	Business Policies and Management	3

One of the following:

BUS	396	Management Science--Deterministic Models	3
BUS	397	Management Science--Probabilistic Models	3
			3

At least 13 hours of additional course work chosen from among the following:

ECON	200	The Price System	4
ECON	350	Income and Employment Analysis	4
BUS	320	Intermediate Accounting	4
BUS	352	Procurement	3
BUS	383	Electronic Data Processing--COBOL	3
BUS	455	Collective Bargaining	3
			<u>13</u>
			39

Emphasis in Management -- Information Science Option

BUS	281	Electronic Data Processing -- FORTRAN	3
BUS	292	Business Statistics II	3
BUS	320	Intermediate Accounting I	4
BUS	323	Cost and Managerial Accounting I	4
BUS	383	Electronic Data Processing -- COBOL	3
BUS	385	Electronic Data Processing -- Data Management	3
BUS	388	Systems and Procedures I	3
BUS	389	Systems and Procedures II	3
BUS	396	Management Science -- Deterministic Models	3
BUS	397	Management Science -- Probabilistic Models	3
BUS	453	Personnel Management	4
BUS	456	Business Policies and Management	3
BUS	482	Special Topics in Management Information Systems	3
BUS	489	Computer Simulation Models	3
			<u>45</u>

Emphasis in Marketing

BUS	261	Salesmanship	3
BUS	361	Retail Management	4
BUS	362	Advertising	3
BUS	365	Marketing Strategy	4
BUS	366	Consumer Behavior	4
BUS	456	Business Policies and Management	3
BUS	460	Market Analysis and Research I	3
BUS	462	Marketing Problems	4
BUS	466	Market Analysis and Research II	3
BUS	470	Financial Management	3

Student will elect two of the following courses:

BUS	363	Sales Management	3
BUS	364	Distribution Management	3
BUS	461	Advertising Campaigns	3
BUS	464	International Marketing	3
BUS	465	Seminar in Retailing	3
			<u>40</u>

Emphasis in Office Administration

BUS	112	Typewriting III	3
BUS	109	Calculating Machines and Business Arithmetic	3
*BUS	115	Landmark ABC Shorthand II	4
		or	
*BUS	118	Advanced Shorthand	4
BUS	211	Office Practicum I	5
BUS	214	Records Management	2
BUS	219	Shorthand Transcription	4
BUS	281	Electronic Data Processing -- FORTRAN	

54 / DEGREE PROGRAMS

		<i>or</i>	
BUS	383	Electronics Data Processing -- COBOL	3
BUS	452	Office Management	3
BUS	453	Personnel Management	4
COMM	420	General Semantics	4
		Business Electives (at 300 and 400 level)	4
			<u>39</u>

*Prerequisites to these courses cannot be taken as part of the emphasis.

Secretarial (Two-Year Non-Degree Program)

The following are required:

BUS	100	The American Business System	3
BUS	101	Consumer Business Problems	3
BUS	109	Calculating Machines and Business Arithmetic	3
BUS	111	Typewriting II	3
BUS	112	Typewriting III	3
		<i>either</i>	
BUS	114	Landmark ABC Shorthand I	4
BUS	115	Landmark ABC Shorthand II	4
BUS	219	Shorthand Transcription	4
		<i>or</i>	
BUS	116	Beginning Gregg Shorthand	4
BUS	117	Intermediate Gregg Shorthand	4
BUS	118	Advanced Shorthand	4
BUS	219	Shorthand Transcription	4
		<i>and</i>	
BUS	150	Principles of Management	4
BUS	180	Introduction to Business Data Processing	3
BUS	206	Business Communications	3
BUS	211	Office Practicum I	5
BUS	212	Office Practicum II	5
BUS	214	Records Management	2
BUS	219	Shorthand Transcription	4
BUS	220	Principles of Accounting I	4
BUS	221	Principles of Accounting II	4
BUS	231	Business Law I	3
COMM	110	Communication: Public Form	3
ENG	101	Elementary Composition I	3
ENG	102	The College Research Paper	3
PSY	120	General Psychology	3
		Business electives to complete a minimum of 90 quarter hours	<u>10-14</u>
			<u>90</u>

Business Administration Minor

BUS	100	The American Business System	3
BUS	150	Principles of Management	4
BUS	205	Business Communications	3
BUS	220	Principles of Accounting I	4
BUS	221	Principles of Accounting II	4
BUS	231	Business Law I	3
ECON	100	Introductory Economics	5
		Electives in Business or Economics	<u>10</u>
			<u>Minimum 36</u>

Business Teacher Education

Students pursuing the B.A. degree with a major in Business Teacher Education must plan their programs to meet the following requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. Complete the required courses listed in the Business Teacher Education Core plus the required courses for the emphasis plus business, economics, voca-

tional teacher education or business teacher education electives.

3. A student may not enroll in any Business course more than three times.

4. Professional Teacher Education courses as listed within the Program Requirements section of this catalog. For Business Teacher Education these consist of EDF 365, EDF 485, any five hours of PSY 301-325 or PSY 349; the Special Education Requirement for teacher certification--EDSE 401 and VTE 430; BEVE 340, and three hours of methods courses in Business Teacher Education as planned by adviser; and EDFE 470 (Student Field Experiences).

5. Electives to complete the 180 quarter hours of academic credit required for graduation.

6. A minor is not required.

7. Most schools require a vocational credential for teaching business. Each major in Business Teacher Education should check with the Department Chairman during his first enrollment in UNC concerning requirements for this credential. Among the requirements are:

a. Approved occupational experiences in the area of emphasis.

b. Nine hours of specific vocational teacher education courses.

c. Student field experience with a teacher holding a state vocational credential.

Business Teacher Education Core

Course No.	Course Title	Hours	Credit
BUS 100	The American Business System	3	.3
BUS 101	Consumer Business Problems	3	.3
*BUS 110	Typewriting I	3	.3
BUS 150	Principles of Management	4	.4
**BUS 170	Principles of Finance	3	.3
BUS 180	Introduction to Business Data Processing	3	.3
BUS 205	Business Communications	3	.3
BUS 220	Principles of Accounting I	4	.4
BUS 221	Principles of Accounting II	4	.4
BUS 231	Business Law I	3	.3
BUS 260	Marketing	4	.4
BEVE 371	Evaluation in Business Subjects	3	.3
ECON 100	Introductory Economics	5	.5
VTE 310	Vocational Education Foundation-Seminars	3	.3
			48

*One year of typewriting in high school may be substituted.

**BUS 370 may be substituted for BUS 170 with consent of student's adviser.

Emphasis in Basic Business and Economics

BUS 111	Typewriting II	3	.3
BUS 112	Typewriting III	3	.3
BUS 232	Business Law II	3	.3
BUS 233	Business Law III	3	.3
BUS 340	Introduction to Insurance	3	.3
BUS 371	Personal Finance	3	.3
BEVE 341	Methods and Materials of Teaching Typewriting	1	.1
BEVE 342	Methods and Materials of Teaching Bookkeeping	1	.1
BEVE 344	Methods and Materials of Teaching Basic Business	1	.1
BEVE 430	Economic Education Seminar	3	.3
		Two additional courses in Economics	6-10
		Electives in Business, Economics, Business Teacher Education or Vocational Teacher Education to total 34 hours	34

Emphasis in Office Education

BUS 111	Typewriting II	3	.3
BUS 112	Typewriting III	3	.3
BUS 211	Office Practicum I		
BUS 212	Office Practicum II	5-10	

56 / DEGREE PROGRAMS

BUS	214	Records Management	2
BUS	452	Office Management	3
BEVE	341	Methods and Materials of Teaching Typewriting	1
BEVE	348	Methods and Materials of Teaching Office Practice	1
BEVE	451	Preparation of Teaching Vocational Business and Office Education	3
BEVE	481	Teaching Improvement Seminar in Vocational Business and Office Education	2
VTE	410	Cooperative Education and Coordination Techniques	3
		<i>and</i>	
BUS	320	Intermediate Accounting I	4
BUS	321	Intermediate Accounting II	4
BUS	428	Income Tax Accounting I	3
BEVE	343	Methods and Materials of Teaching Bookkeeping	1
		<i>or</i>	
BUS	114	Landmark ABC Shorthand I	4
BUS	115	Landmark ABC Shorthand II	4
BUS	219	Shorthand Transcription	4
BEVE	342	Methods and Materials of Teaching Shorthand	1
		<i>or</i>	
BUS	116	Beginning Gregg Shorthand	4
BUS	117	Intermediate Gregg Shorthand	4
BUS	118	Advanced Shorthand	4
BUS	219	Shorthand Transcription	4
BEVE	342	Methods and Materials of Teaching Shorthand	1
			43-48

Emphasis in Distributive Education

Business Teacher Education majors electing this specialization must complete BEVE 347, Instructional Methods in Distributive Education, four hours credit, in partial fulfillment of requirement two listed above. Approved occupational experience in the areas of marketing of at least 4,000 hours is required for a vocational teaching credential. The student should contact the distributive education faculty in the Department of Business Teacher Education during his first enrollment at UNC to discuss the occupational experience requirements. An application regarding occupational experience is submitted to the Business Teacher Education Department during the quarter in which one plans to graduate. It is recommended that during the sophomore year of enrollment the student enroll in VTE 210, Career Opportunities Seminar in Vocational Education, three hours credit. It is suggested that the student look for additional electives in the Vocational Teacher Education section of this catalog.

BUS	261	Salesmanship	3
BUS	361	Retail Management	4
BUS	362	Advertising	3
BUS	365	Marketing Strategy	4
BUS	465	Seminar in Retailing	3
BEVE	345	Organization and Administration of Distributive Education	3
BEVE	365	Teaching the Wholesaling and Service Occupations	3
BEVE	471	Student Teaching Improvement Seminar in Distributive Education	2
VTE	410	Cooperative Education and Coordination Techniques	3

Select four of the following:

BEVE	360	Teaching Retail Store Operations	1
BEVE	361	Teaching Retail Merchandising	1
BEVE	362	Teaching Retail Promotion	1
BEVE	363	Teaching Marketing Information Systems	1
BEVE	364	Teaching Marketing Personnel	1
		Electives in Business, Business Teacher Education or Vocational Teacher Education planned by major adviser	6

Business Teacher Education Minor

BUS	100	The American Business System	3
BUS	101	Consumer Business Problems	3
*BUS	110	Typewriting I	3
BUS	111	Typewriting II	3
BUS	112	Typewriting III	3
		<i>Shorthand Emphasis</i>	
BUS	114	Landmark ABC Shorthand I	4
BUS	115	Landmark ABC Shorthand II	4
BUS	219	Shorthand Transcription	4
		<i>or</i>	
BUS	116	Beginning Gregg Shorthand	4
BUS	117	Intermediate Gregg Shorthand	4
BUS	118	Advanced Shorthand	4
BUS	219	Shorthand Transcription	4
		<i>and</i>	
BEVE	342	Methods and Materials of Teaching Shorthand	1
		<i>or</i>	
		<i>Bookkeeping Emphasis</i>	
BUS	220,	221 Principles of Accounting I, II	8
		<i>or</i>	
		<i>Basic Business Emphasis</i>	
BUS	150	Principles of Management	4
BUS	231	Business Law I	3
BUS	260	Marketing	4
BUS	371	Personal Finance	3
ECON	100	Introductory Economics	5
		Electives in Business or Business Teacher Education to complete 36 hours	2-13
			36

*One year of typewriting in high school may be substituted.

Most states require courses in methods and materials of teaching specific subjects for certification. Students minoring in Business Teacher Education should take BEVE 340, 341, 342, 343, or 344.

Chemistry Major -- Liberal Arts Administered by the Department of Chemistry

Students pursuing the B.A. degree with a major in Chemistry must include the following courses in their programs:

1. General Education as specified earlier in this catalog.
2. Courses in the major:

Course No.	Course Title	Hours Credit
CHEM 104	Principles of Chemistry I	5
	<i>or</i>	
CHEM 106	Principles of Chemistry IA	5
CHEM 105	Principles of Chemistry II	5
	<i>or</i>	
CHEM 107	Principles of Chemistry IIA	5
CHEM 111	Qualitative Analysis	5
CHEM 301	Inorganic Chemistry I	3
CHEM 311	Quantitative Analysis I	5
CHEM 332	Organic Chemistry I	5
CHEM 333	Organic Chemistry II	5
CHEM 334	Organic Chemistry III	5
CHEM 335	Advanced Laboratory in Organic Chemistry	1
CHEM 390	Chemical Literature	1
CHEM 401	Inorganic Chemistry II	3
CHEM 402	Laboratory in Inorganic Chemistry	1
CHEM 414	Instrumental Methods of Analysis	5
CHEM 431	Organic Qualitative Analysis	3

CHEM	451	Physical Chemistry I	4
CHEM	452	Physical Chemistry II	4
CHEM	453	Physical Chemistry III	4
CHEM	454	Physical Chemistry I Laboratory	1
CHEM	455	Physical Chemistry II Laboratory	1
CHEM	456	Physical Chemistry III Laboratory	1
			<hr/> 67

3. Mathematics including 131, 132, 133, and 234.
4. Physics 265, 266, 267.
5. ENG 101, 102, COMM 110 or equivalent.
6. One year of foreign language (preferably German) is recommended.
7. Electives to complete requirements for graduation.

Those students planning a career in chemistry should familiarize themselves with the professional training requirements of the American Chemical Society. These requirements will be met by completing the above program in the proper sequence in addition to six quarter hours of senior research or six quarter hours of advanced courses in chemistry listing CHEM 453 as prerequisite. A reading knowledge of German is also required. Students completing this program will be certified to the American Chemical Society as meeting its Minimum Standards.

Chemistry Major -- Teaching Administered by the Department of Chemistry

Students majoring in Chemistry who plan to teach in the public schools must include the following courses in their programs:

1. General Education as specified earlier in this catalog.
2. Professional Teacher Education, 31 hours, plus EDFE 372, two hours credit and SCED 441, three hours credit, taken concurrently.
3. Courses in the major:

Course No.	Course Title	Hours Credit
CHEM 104	Principles of Chemistry I	5
<i>or</i>		
CHEM 106	Principles of Chemistry IA	5
CHEM 105	Principles of Chemistry II	5
<i>or</i>		
CHEM 107	Principles of Chemistry IIA	5
CHEM 111	Qualitative Analysis	5
CHEM 301	Inorganic Chemistry I	3
CHEM 311	Quantitative Analysis I	5
CHEM 332	Organic Chemistry I	5
CHEM 333	Organic Chemistry II	5
CHEM 334	Organic Chemistry III	5
PHYS 260	Introductory Physics -- Mechanics	4
PHYS 261	Introductory Physics -- Heat, Sound, and Light	4
PHYS 262	Introductory Physics -- Electricity and Magnetism	4
<i>or</i>		
PHYS 265	General Physics -- Mechanics	5
PHYS 266	General Physics -- Electricity	5
PHYS 267	General Physics -- Sound Light, and Heat	5
Chemistry electives to be selected with approval of student's adviser		5-8
(CHEM 495, Seminar in Teaching Chemistry is strongly recommended.)		

4. One minor of 27 or more quarter hours. It is recommended that this minor be in Mathematics.

5. Additional hours of electives to complete 180 quarter hours of academic credit required for graduation.

Chemistry Minors

Following are the requirements for the art and sciences minor:

CHEM	104	Principles of Chemistry I	5
		<i>or</i>	
CHEM	106	Principles of Chemistry IA	5
CHEM	105	Principles of Chemistry II	5
		<i>or</i>	
CHEM	107	Principles of Chemistry IIA	5
		<i>or</i>	
CHEM	111	Qualitative Analysis	5
		<i>and</i>	
CHEM	130	Introductory Organic Chemistry	5
		<i>and</i>	
CHEM	311	Quantitative Analysis I	5
		<i>or</i>	
CHEM	332	Organic Chemistry I	5
		<i>and</i>	
CHEM	333	Organic Chemistry II	5
		<i>and</i>	
CHEM	334	Organic Chemistry III	5
		Electives to complete the minor	2
		Electives must be selected from the following courses: CHEM 111, 281, 301, 311, 314, 360, 482, 483. Alternative courses must be approved by the Chemistry Department before the student enrolls in the course.	
			<u>27</u>

Following are the requirements for persons planning to teach in the secondary

school:

CHEM	104	Principles of Chemistry I	5
		<i>or</i>	
CHEM	106	Principles of Chemistry IA	5
CHEM	105	Principles of Chemistry II	5
		<i>or</i>	
CHEM	107	Principles of Chemistry IIA	5
CHEM	111	Qualitative Analysis	5
CHEM	130	Introductory Organic Chemistry	5
		<i>or</i>	
CHEM	332	Organic Chemistry I	5
		Electives to complete the minor	7
			<u>27</u>

Electives must be selected from the following courses: CHEM 281, 301, 311, 314, 360, 482, 483. Alternate courses must be approved by the Chemistry Department before the student enrolls in the course.

Chemistry Minor for Medical Technology

CHEM	104	Principles of Chemistry I	5
		<i>or</i>	
CHEM	106	Principles of Chemistry IA	5
CHEM	105	Principles of Chemistry II	5
		<i>or</i>	
CHEM	107	Principles of Chemistry IIA	5
CHEM	111	Qualitative Analysis	5
CHEM	311	Quantitative Analysis I	5
CHEM	332	Organic Chemistry I	5
CHEM	333	Organic Chemistry II	5
			<u>30</u>

HONORS -- The Department of Chemistry participates in the Honors Program. See Page 23.

Communication Major**Administered by the Department of Communication**

Students pursuing the B.A. with a major in Communication must plan their program to fulfill the following requirements:

1. Students shall meet all General Education requirements as specified earlier in this catalog. In selecting General Education courses, students should consult their communication advisers.

2. Students shall complete 50 hours of Communication course units.

3. Students shall (a) select a minimum of one area of emphasis (i.e., Mass Media, Organization, etc.) and (b) meet the course requirements for that area.

4. Students may select a minor or additional major from (a) those areas of emphasis listed below (i.e., Mass Media, Human Relationship, etc.) or (b) any other related discipline approved by their advisers.

5. Students desiring entry into the Professional Teacher Education Program must select only the communication PTE emphasis or minor.

I. Communication: Professional Teacher Education Emphasis*

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
COMM 130	Voice and Speech Improvement	3	
COMM 170	Oral Interpretation	3	
COMM 212	Reason in Controversy	3	
COMM 250	Public Speaking as an Art Form	3	
COMM 302	Small Group Communication	4	
COMM 323	Interpersonal Communication: Theory	4	
COMM 312	Practical Debate	3	
COMM 420	General Semantics	4	
COMM 486	Directing Communication Activities	3	
COMM 270	Readers Theatre	3	
THEA 240	Play Direction	3	
JOUR 105	Newswriting	3	
			<u>39</u>
	Electives in Communication (Consult your adviser)		11
			<u>50</u>

*See information under "Professional Teacher Education" in this catalog.

II. Communication: Human Relationship Emphasis

COMM 220	Nonverbal Communication	3	
COMM 302	Small Group Communication	4	
COMM 323	Interpersonal Communication: Theory	4	
COMM 323	Interpersonal Communication: Situation	4	
	or		
COMM 323	Interpersonal Communication: Practical Application	4	
COMM 420	General Semantics	4	
*COMM 490	Workshop in Communication	3	
			<u>22</u>
	Electives in Communication		28
			<u>50</u>

*Student should select a COMM 490 course (i.e., Family Communications, etc.) which is approved by the adviser.

III. Communication: Mass Media Emphasis

COMM 140	Principles of Mass Communication	3	
COMM 340	Radio Production	4	
COMM 342	TV Production	8	
COMM 345	Media Theory	3	
COMM 346	Media Practicum	3	
			<u>21</u>

Electives will be in Communications or related disciplines as approved by the adviser

29

50

COMM 510. Internship in Communication (in media) is an elective that may be taken only with the approval of the media faculty. This approval should be obtained one quarter in advance of the internship.

IV. Communication: Law and Public Policy Emphasis

COMM 212	Reason in Controversy	3
COMM 250	Public Speaking as an Art Form	3
COMM 302	Small Group Communication	4
COMM 312	Practical Debate	3
*COMM 356	Communication Strategies	3
*COMM 452	Seminar in American Public Address	3
COMM 460	Persuasion	3
COMM 554	Seminar in Public Discourse: Communication and the Law	3
		<u>25</u>
	Electives in Communication	<u>25</u>
		50

*Students should consult their advisers in selecting course subtitles.

V. Communication: Organization Emphasis

COMM 220	Nonverbal Communication	3
COMM 302	Small Group Communication	4
COMM 323	Interpersonal Communication: Theory	4
*COMM 330	Organizational Communication	6
COMM 400	Theories of Group Process	3
*COMM 490	Workshop in Communication	3
		<u>23</u>
	Electives in Communication and related disciplines	<u>27</u>
		50

*Students should consult their advisers in selecting course subtitles.

Communication Minor

1. Students may declare a communication minor by completing 30 credit hours including required courses in any one of the four communication emphasis areas: Human Relationship, Organization, Mass Media, Law and Public Policy. Students may elect to complete more than one Communication minor.

2. Students may select a communication minor in Professional Teacher Education *only* by completing the following outline of courses:

COMM 130	Voice and Speech Improvement	3
COMM 170	Oral Interpretation	3
COMM 212	Reason in Controversy	3
COMM 302	Small Group Communication	4
COMM 312	Practical Debate	3
COMM 323	Interpersonal Communication: Theory	4
COMM 270	Readers Theatre	3
COMM 420	General Semantics	4
COMM 486	Directing Communication Activities	3
		<u>29</u>
	Electives in Communication	<u>7</u>
		36

3. Communication Minor for Elementary Education/Preschool.

COMM 130	Voice and Speech Improvement	3
COMM 170	Oral Interpretation	3
COMM 302	Small Group Communication	4
COMM 375	Oral Interpretation of Children's Literature	3
COMM 420	General Semantics	4
THEA 280	Creative Dramatics	3
		<u>20</u>
	Electives in Communication	<u>9</u>
		29

Dance Education Minor (Men and Women) Administered by the School of Health, Physical Education and Recreation

1. A student selecting this minor must have a major in a Teacher Education program.

2. The following courses are required:

HPER	293	Analysis and Movements of Modern Dance	2
HPER	294	Problems in Dance Composition	2
HPER	256	Improvisation and Composition Forms	2
HPER	255	Modern Dance Techniques	4
HPER	456	Workshop in Modern Dance	4

The above courses should be taken in the order shown.

Remaining minor courses are:

HPER	290	Analysis and Movements of Folk and Square Dance	2
HPER	291	Rhythms for the Elementary School	2
HPER	296	Rhythmic Analysis and Dance Accompaniment	2
HPER	326	Teaching of Dance	2
HPER	457	Dance History and Philosophy	4
HPER	459	Dance Production in High School and College	2
HPER	131	Dance Performance	1
HPER	132	Jazz Dance	1
HPER	136	Ballet	1
			<u>31</u>

Suggested for non physical education majors selecting this minor:

HPER	220	Anatomical Kinesiology	3
------	-----	------------------------	---

Dietetics Major Administered by the Department of Home Economics

This major prepares a student upon graduation to apply for a Dietetic Internship or traineeship, the completion of which qualifies an individual for membership in the American Dietetic Association. Typical positions for dietitians are found in the areas of hospital dietetics, commercial or college food service management, school lunch program supervision, public health nutrition, extended care facilities and consultation services.

NOTE: With additional study at the graduate level a wide-range of administrative positions in dietetics, research or teaching at the college level in food or nutrition courses and research in industrial laboratories is available.

1. No minor is required.

2. The following courses are required and listed according to recommended sequence.

- *HEC 101, Self Identification 2
- *HEC 108, Investigating the Home Economics Profession 2

Freshman Year

Course No.	Course Title	Hours	Credit
BUS	180	Introduction to Data Processing	3
CHEM	104	Principles of Chemistry I	5
CHEM	105	Principles of Chemistry II	5
CHEM	130	Introductory Organic Chemistry	5
JOUR	105	Newsriting	4
ZOO	105	General Zoology (sub. for SCI 104 in Gen. Ed.)	4
			<u>26</u>

Sophomore Year

HEC	242	Principles of Food Preparation	4
HEC	249	Food/Nutrition Modules	1-3
HEC	251	Nutrition I	3
BIO	261	Medical & Public Health Microbiology	4

BUS	220	Principles of Accounting I	4
CHEM	281	Human Biochemistry	5
PSY	466	Industrial Psychology	3
ZOO	250	Human Physiology	5
			<u>29-31</u>

Junior Year

CD	331	Development of the Infant and Toddler	3
HEC	349	Food/Nutrition Modules	1-3
HEC	353	Diet Therapy	3
HEC	362	Demonstration Techniques	2
HEC	374	Consumer Aspects of Household Equipment	4
BUS	205	Business Communications	3
PSY	341	Phenomenological Approaches to Perception	3
			<u>19-21</u>

Senior Year

HEC	445	Experimental Food Studies	4
HEC	446	Food Service Administration	3
HEC	447	Quantity Food Purchasing and Preparation	4
HEC	448	Organization and Management of Food Service	3
HEC	449	Food/Nutrition Modules	1-3
HEC	451	Nutrition II	3
HEC	456	Infant and Child Nutrition	3
BUS	453	Personnel Management	5
			<u>26-28</u>

*These courses should be taken during the first year the student is enrolled as a major in Dietetics.

The student with the guidance of an adviser will select electives from courses in various departments to supplement major requirements to meet A.D.A. requirements and to meet individual needs and interests.

Earth Science Major

Administered by the Department of Earth Sciences

This program is for students interested in careers in astronomy, geology, meteorology, or oceanography, as well as for those desiring a broad background in the earth sciences. It is designed to be flexible enough to accommodate the interests and needs of each individual. When a student first elects an Earth Sciences major it is essential that he meet with an adviser in the department to discuss his goals and to outline a program of study which will enable him to achieve these goals. The department is interdisciplinary, and students will have an opportunity to gain experience in all the earth sciences.

Following are the requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. 80 quarter hours of science and mathematics courses, of which at least half must have AST, ESCI, GEOL, MET, and/or OCN prefixes.
3. Electives to complete the 180 quarter hours of academic credit required for graduation.

Earth Sciences Major (Teaching)

This program is for students who plan to teach earth science in the secondary schools.

Following are the requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. Professional Teacher Education courses -- 31 hours, plus EDFE 372 -- two hours and SCED 441 -- three hours, which are to be taken concurrently.

3. 80 quarter hours of science and/or mathematics courses, of which at least half must have AST, ESCI, GEOL, MET, and/or OCN prefixes. Earth Sciences teaching majors should select, in consultation with an adviser, courses which will provide a broad background in the earth science disciplines and supporting sciences. The following courses are recommended to provide such a background.

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
AST 301	Principles of Astronomy I	.4
AST 302	Principles of Astronomy II	.3
BIO 101	Principles of Biology	.5
CHEM 104	Principles of Chemistry I	.5
CHEM 105	Principles of Chemistry II	.5
GEOL 201	Principles of Geology I	.4
GEOL 202	Principles of Geology II	.4
GEOL 203	Principles of Geology III	.4
MATH 330	Mathematics for the Sciences I	.3
MET 301	Elements of meteorology	.4
MET 302	Dynamic Meteorology	.4
MET 320	Climatology	.3
OCN 301	Principles of Oceanography I	.3
OCN 302	Principles of Oceanography II	.3
PHYS 260	Introductory Physics -- Mechanics	.4
PHYS 261	Introductory Physics -- Heat, Sound, and Light	.4
PHYS 262	Introductory Physics -- Electricity and Magnetism	.4
ESCI 499	Seminar in Earth Science	.2

4. Electives to complete the 180 quarter hours of academic credit required for graduation.

Earth Sciences Minor

Students minoring in Earth Sciences will, in consultation with a minor adviser, select 30 hours of Astronomy, Earth Science, Geology, Meteorology, and/or Oceanography courses best suited to their particular needs.

Those who plan to be teachers should select courses which will provide a broad background in the earth sciences. AST 100, GEOL 100, MET 200, and OCN 200 are minimum recommendations. To be qualified to teach earth science in secondary schools students must take a total of at least 36 quarter hours of science courses.

Economics Minor

Administered by the Department of Economics

1. Following is the required program:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
ECON 100	Introductory Economics	.5
ECON 102	Contemporary Economic Problems	.3
ECON 470	History of Economic Thought	.3
ECON 200	The Price System	.4
	Advanced Electives	<u>.12</u>
		27

Economics minors will take two of the following: Geography 100, Anthropology 100, Political Science 100 or Sociology 100. Consult your adviser.

Students interested in being certified for teaching of Economics must take a major in Social Sciences rather than in Economics.

Economic Education Minor Administered jointly by the Department of Economics and the School of Business.

Course No.	Course Title	Hours	Credit
BUS 100	The American Business System	3	3
BUS 101	Consumer Business Problems	3	3
BUS 371	Personal Finance	3	3
BEVE 430	Economic Education Seminar	3	3
ECON 100	Introductory Economics	5	5
ECON 102	Contemporary Economic Problems	3	3
	Electives in Business or Economics	17	17
			<u>36</u>

The electives must be planned in cooperation with the minor adviser. Elective courses may be chosen from the economic courses listed on pages 163, 164, and from the following list: GEOG 312, Economic Geography, five hours credit; BUS 260, Marketing, four hours credit; BUS 340, Introduction to Insurance, three hours credit; or HEC 211, Management for Today's Family, three hours credit.

Educational Field Experiences

The Educational Field Experiences department of the College of Education is charged with coordinating all types of student field experiences in cooperating schools for all departments of the university. Its course offerings include:

I. Early Field Experiences

Course No.	Course Title	Hours	Credit
EDFE 270	School and Community Aide	1-4	
EDFE 360	Introduction to Teaching: Primary Continuum	2	2
EDFE 361	Introduction to Teaching: Intermediate Continuum	2	2
EDFE 362	Introduction to Teaching: Middle School	2	2
EDFE 363	Introduction to Teaching: Business	2	2
EDFE 364	Introduction to Teaching: Communication	2	2
EDFE 365	Introduction to Teaching: Fine Arts	2	2
EDFE 366	Introduction to Teaching: Foreign Languages	2	2
EDFE 367	Introduction to Teaching: Health, Physical Education and Recreation	2	2
EDFE 368	Introduction to Teaching: Home Economics	2	2
EDFE 369	Introduction to Teaching: Industrial Arts	2	2
EDFE 370	Introduction to Teaching: Mathematics	2	2
EDFE 371	Introduction to Teaching: Music	2	2
EDFE 372	Introduction to Teaching: Sciences	2	2
EDFE 373	Introduction to Teaching: Social Sciences	2	2
EDFE 374	Introduction to Teaching: Theatre Arts	2	2
EDFE 379	Introduction to Teaching: Inner City	2	2
EDFE 380	Simulation Experiences in the Human Relations of Teaching	3	3
EDFE 422	Individual Study in Student Field Experience	1-4	

II. Supervised Teaching for Certification

EDFE 420	Supervised Teaching: Inner City	2	
EDFE 430	Supervised Teaching: Special Education-Secondary Level	18	18
EDFE 440	Supervised Teaching: Pre-School Level	18	18
EDFE 450	Supervised Teaching: Elementary Level	18	18
EDFE 460	Supervised Teaching: Secondary Level	18	18
EDFE 470	Supervised Teaching: Vocational Education	18	18
EDFE 480	Advanced Supervised Teaching: Elementary Level	18	18
EDFE 490	Advanced Supervised Teaching: Secondary Level	18	18

Important Note: All EDFE courses are marked S - U with no grade point average computed.

Educational Media Minor

Administered by the Department of Educational Media

The purpose of this program is to prepare teachers to work in what has been variously called the comprehensive library, educational media center, instructional materials center or learning resource center. While the title is not significant, the concept of teachers trained to handle both print and non-print materials is becoming increasingly important. This is particularly true of the person who works alone in a given media center.

Students pursuing the V.A. degree with a minor in Educational Media must plan their programs to fulfill the following requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. Complete required and elective courses below for a minimum of 27 hours.

Required Courses:

Course No.	Course Title	Hours Credit
EDEM 195	Library Resources, Organization and Usage	3
EDEM 410	Introduction to Educational Resources	3 or 5
EDEM 420	Design and Construction of Audio-Visual Materials	3
EDEM 434	Reference Materials: Basic School Reference Service	3
EDEM 530	Cataloging and Classification	3
EDEM 536	Evaluation and Selection of Educational Materials	3
EDEM 575	Organizational Resource Center	5

Electives:

EDEM 330	Instructional Materials-Problems of Organization, Storage and Retrieval	3
EDEM 516	Utilization of Educational Resources	3
EDEM 534	Reference Materials: Service in Specialized Subject Areas and Government Publications	3
EDRD 314	Improvement of Instruction in Literature in the Elementary School	2

Elementary Education

Administered by the Department of Elementary Education and Reading

Students pursuing the B.A. degree with an elementary education major must plan their programs to meet the following requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. The following required subject matter courses are applicable to general education only if a second major in Special Education is earned or if Elementary Education is a second major.

Course No.	Course Title	Hours Credit
FA 224	Elementary Art	3
GEOG 100	World Geography	
	or	
GEOG 148	Anglo-America	5
HIS 175	Unit Survey of United States History	4
MATH 191	Basic Mathematics I	3
MATH 192	Basic Mathematics II	3
MUS 204	Music Fundamentals	2
MUS 205	Experiencing Music for Elementary Teachers	1
PSCI 100	National Government of the United States	5
3. Complete the professional education courses.		
EDF 365	Basic Concepts of Education	5
PSY 349	Educational Psychology	5
*EDFE 450	Supervised Teaching: Elementary Level	18
EDF 485	Philosophy of Education	3

*Eighteen hours student teaching must be in elementary education in the kindergarten or in grades one through six. Internships are available.

4. Complete the elementary teacher education courses.

*EDEL	320	Improvement of Instruction in Mathematics in the Elementary School	3
*EDEL	330	Teaching Handwriting and Spelling in the Elementary School	2
*EDEL	340	Improvement of Instruction in English in the Elementary School	3
*EDEL	350	Improvement of Instruction in Social Studies in the Elementary School	3
EDFE	360, 361, or 362	Introduction to teaching	2
EDRD	310	Improvement of Instruction in Reading in the Elementary School	3
EDRD	314	Improvement of Instruction in Literature in the Elementary School	2
*EDRD	411	Approaches to Reading Instruction	3
FA	225	Methods of Teaching Art in the Elementary School	2
HPER	288	Physical Education Activities for the Elementary School	2
HPER	301	Health Education in the Elementary School	2
MUS	206	Music Methods and Materials for Elementary Teachers	2
SCED	470	Teaching Science in the Elementary School	3
			<u>32</u>

*Must be taken at University of Northern Colorado

5. A student who double majors in elementary education and special education may substitute FA 229 for FA 224 and 225.

6. A student who double majors in elementary education and special education and who completes EDSE 309 for the special education major may substitute one quarter hour of EDFE 270 in the regular classroom for EDFE 360, 361, and 362 in the elementary education major.

7. Elementary teachers will be prepared to meet a wide-range of educational needs and abilities including the mildly or moderately handicapped to be accommodated in the regular classroom.

8. A minor, any minor offered by the University of Northern Colorado, is required. A second major from a department other than the Department of Elementary Education and Reading may be earned in lieu of the minor. An individually designed program of 30 quarter hours planned with the elementary education adviser and filed in the Elementary Education Office may be earned in lieu of the minor.

9. Completion of a minimum of eighteen quarter hours in Elementary Teacher Education courses including EDEL 320, EDRD 310, and either EDFE 360, 361, or 362 before student teaching. EDEL 320, EDRD 310, and either EDFE 360, 361, or 362 must be completed before applying for student teaching.

10. Sufficient electives to complete 180 quarter hours of academic credit.

Elementary Education: Bilingual Bicultural Administered by the Department of Elementary Education

1. Completion of all requirements for the major Elementary Education: except the requirement of a minor.

2. Completion of the following courses.

MAS	101	Introduction to Mexican American Studies	4
MAS	102	Oral, Reading, and Written Spanish Communication: I	3
MAS	103	Oral, Reading, and Written Spanish Communication II	3
MAS	104	Oral, Reading, and Written Spanish Communication III	3
MAS	290	Intermediate Oral, Reading and Written Spanish Communication	3
MAS	300	Advanced Oral, Reading, and Written Spanish Communication	3

EDEL/ MAS	472	Evaluation and Selection of Bilingual and Bicultural Materials	2
EDEL/ MAS	474	Teaching in a Second Language in the Elementary Bilingual and Bicultural School	3
EDCI/ MAS	481	History and Philosophy of Bilingual Education	3
			<u>27</u>

3. Competency in the Spanish language must be demonstrated to the Department of Elementary Education and Reading.

Elementary Education: Early Childhood Education Administered by the Department of Elementary Education and Reading

1. Complete the General Education requirements of 60 quarter hours.
2. Complete the professional education courses as specified for the major Elementary Education. (Student Teaching must be in kindergarten or in grades one through three.)
3. Take the following courses in elementary instructional techniques.

EDEC	460	Nursery-Kindergarten Education	3
EDEC	462	Classroom Management in Early Childhood	3
EDEC	464	Introduction to Early Childhood Education	3
EDEL	320	Improvement of Instruction in Mathematics in the Elementary School	3
EDEL	330	Teaching Handwriting and Spelling in the Elementary School	2
EDFE	360	Introduction to Teaching: Primary Continuum	2
EDRD	310	Improvement of Instruction in Reading in the Elementary School	3
EDRD	314	Improvement of Instruction in Literature in the Elementary School	2
EDRD	411	Approaches to Reading Instruction	3
FA	224	Elementary Art	3
FA	225	Methods of Teaching Art in the Elementary School	2
HPER	288	Physical Education Activities for the Elementary School	2
MUS	318	Music Activities for Classroom Teachers	3
			<u>34</u>

4. Preschool and child growth and development (12 quarter hours).

CD	136	Introduction to Preschool	2
CD	331	Development of the Infant and Toddler	3
CD	333	Development and Guidance of the Preschool Child	4
CD	334	Preschool Curriculum and Methods	3
CD	335	Observation and Participation in Preschool	3
CD	437	Administration of Programs for Young Children	3
PSY	230	Human Growth and Development	5

5. Compensatory programs (9 quarter hours).

EDEC	463	Diagnostic Teaching in Early Childhood	3
EDEC	467	Compensatory Programs in Early Childhood	3
EDSE	306	Identification of Learning Disabilities in Early Childhood or	
EDSE	326	Introduction to Teaching Learning Disabled Children	3

6. Early childhood teachers will be prepared to meet a wide-range of educational needs and abilities including the mildly or moderately handicapped to be accommodated in the regular classroom.

7. EDEL 320 and 330, EDEC 460, 462, 464, and EDRD 411 must be taken at the University of Northern Colorado.

8. Completion of a minimum of eighteen quarter hours in elementary instructional techniques including EDEL 320, EDRD 310, and EDFE 360 before student teaching. EDEL 320, EDRD 310, and EDFE 360 must be completed before applying for student teaching.

9. Sufficient electives to complete 180 quarter hours of academic credit. These electives will be chosen in consultation with the major adviser.

Elementary Science Minor Administered by the Department of Science Education

The following courses are required:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
BIO 401	Conservation of Natural Resources	4
SCI 303	Elementary Biological Science	3
SCI 309	Science for Elementary Teachers	3
SCED 151	Introductory Science Field Experiences	2
	Electives to be selected with approval of student's minor adviser	15
		27

Recommended Electives:

AST 100	General Astronomy	4
BIO 101	Principles of Biology	5
BIO 102	Principles of Botany	5
BIO 103	Principles of Zoology	5
BIO 336	Evolution	3
GEOL 100	General Geology	4
MET 200	General Meteorology	4
SCI 210	Values Act(i) on Environment	3
SCI 508	Science Workshop	3
ZOO 304	Ornithology	4

English Major (non-teaching) Administered by the Department of English

Students pursuing the B.A. degree with a non-teaching major in English must plan their programs to fulfill the following requirements:

1. General Education requirements as specified earlier in this catalog.
2. One minor totaling 27 quarter hours.
3. Courses in the major (listed below) in the following two (a and b) groups:
 - a. Core requirements totaling 8 hours.
 - b. Electives totaling 54 hours.

A. Core requirements totaling 8 hours:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
*ENG 111	Introduction to Poetry	4
	or	
ENG 112	Introduction to Fiction	4
ENG 113	Introduction to Drama	4
	Electives	54
		62

*Qualified students may be exempted by examination.

Any of the additional courses listed below or any of the courses listed under "Literature options" in the program for English majors in teacher education (page 71).

B. Electives totaling 54 hours:

ENG	240	Creative Writing: Introduction to Poetry	4
ENG	241	Creative Writing: Introduction to Fiction	4
ENG	325	Studies in Science Fiction	4
ENG	340	Creative Writing: Advanced Poetry	4
ENG	341	Creative Writing: Advanced Fiction	4
ENG	360	Chaucer	4
ENG	401	Greek and Comparative Mythology	4
ENG	402	The Short Story	4
ENG	403	Techniques of the Novel	5
ENG	404	Modern Literature About Childhood and Adolescence	4
ENG	405	Contemporary American Drama	4
ENG	406	Modern Drama Since Ibsen	4
ENG	407	Advanced Studies in Poetry	4
ENG	408	Elizabethan Drama Exclusive of Shakespeare	4
ENG	409	Literary Criticism	4
ENG	410	History of Ideas in Literature	4
ENG	411	Biography and Autobiography	4
ENG	415	Literature of the Old Testament	4
ENG	416	Literature of the New Testament	4
ENG	418	Grammatical Analysis	4
ENG	419	Advanced Topics in Syntax	4
ENG	420	Stylistics	4
ENG	430	Studies in World Literature	4-12
ENG	440	Literature and the Death of God	4
ENG	441	Colloquium in Literature	4-12
ENG	450	Studies in Russian Literature	4

4. Electives to complete the 180 hours of academic credit required for graduation.

5. ENG 101, 102, 103, and 105 may not count toward English major.

English Major (teaching)

Administered by the Department of English

Students majoring in English who plan to teach in the public schools must fulfill the following requirements:

1. General Education requirements as specified in this catalog.
2. Professional Teacher Education Core of 31 quarter hours plus EDFE 364, two quarter hours, and EED 341, four quarter hours. EDFE 364 and EED 341 are taken concurrently. At least one quarter must elapse between the time when the student takes EDFE 364 and EED 341 and the time when the student takes EDFE 460 (Student Teaching). Prerequisites for admission into PTE as English majors are stipulated in section 5 below.
3. One minor totaling 27 quarter hours.
4. Courses in the major (listed below) in the following three (a, b, c) groups:
 - a. Core requirements totaling 28 hours.
 - b. Literature options totaling 24 hours.
 - c. Electives totaling 10 hours.

A. Core Requirements28

*ENG	111	Introduction to Poetry	4
		or	
ENG	112	Introduction to Fiction	4
ENG	113	Introduction to Drama	4

ENG	319	Advanced Expository Writing	4
ENG	320	The English Language	4
ENG	321	Generative-Transformational Grammar	4
EED	402	Literature and Materials in the Secondary School	5
<u>EDRD</u>	<u>420</u>	<u>Reading in the Secondary School</u>	<u>3</u>

*Qualified students may be exempted by examination.

B. Literature Options	24
Choose two courses from each group.	

Group I

ENG	211	Medieval Literature	4
ENG	212	Renaissance Literature	4
ENG	213	The Restoration and Eighteenth Century	4
ENG	301	Shakespeare: Early Plays	4
ENG	302	Shakespeare: Later Plays	4

Group II:

ENG	214	The Romantic Movement	4
ENG	216	American Literature to the Civil War	4
ENG	217	American Literature: The Civil War to 1914	4
ENG	218	Early Victorian Literature	4
ENG	219	Later Victorian Literature	4

Group III:

ENG	220	English Literature: 1900-1939	4
ENG	221	English Literature: 1940 to the Present	4
ENG	225	American Literature: 1914-1939	4
ENG	226	American Literature: 1940 to the Present	4

C. Electives	10
--------------------	----

NOTE: Courses in Groups I, II, and III above that were not taken to fulfill the literature requirement may be elected as well as any of the courses listed below.

ENG	240	Creative Writing: Introduction to Poetry	4
ENG	241	Creative Writing: Introduction to Fiction	4
ENG	325	Studies in Science Fiction	4
ENG	340	Creative Writing: Advanced Poetry	4
ENG	341	Creative Writing: Advanced Fiction	4
ENG	360	Chaucer	4
ENG	401	Greek and Comparative Mythology	4
ENG	402	The Short Story	4
ENG	403	Techniques of the Novel	5
ENG	404	Modern Literature About Childhood and Adolescence	4
ENG	405	Contemporary American Drama	4
ENG	406	Modern Drama Since Ibsen	4
EED	406	Literature for Adolescents	4
ENG	407	Advanced Studies in Poetry	4
ENG	408	Elizabethan Drama Exclusive of Shakespeare	4
ENG	409	Literary Criticism	4
ENG	410	History of Ideas in Literature	4
ENG	411	Biography and Autobiography	4
ENG	415	Literature of the Old Testament	4
ENG	416	Literature of the New Testament	4
ENG	418	Grammatical Analysis	4
ENG	419	Advanced Topics in Syntax	4
ENG	420	Stylistics	4
ENG	430	Studies in World Literature	4-12
ENG	440	Literature and the Death of God	4
ENG	441	Colloquium in Literature	4-12
ENG	450	Studies in Russian Literature	4

Additional Requirements:

5. Students who intend to enter the teaching profession are required to complete at least two English courses with a minimum grade point average of 2.3 before being admitted to the PTE program.

6. Electives to complete the 180 hours of academic credit required for graduation.

Recommendations:

Prospective students are advised to elect one of the following courses in the sophomore year:

EDFE	270	School and Community Aide
THEA	280	Creative Dramatics

The following minors are recommended for teaching majors: foreign language, humanities, history, journalism, sociology, communication, theatre arts.

Teaching majors are urged to elect one or more of the following courses in supporting skills:

EDEM	410	Introduction to Educational Resources	5
EDEM	460	Television in Education	4
PSY	271	Psychological Testing and Measurements	3
PSY	230	Human Growth and Development	5
COMM	170	Oral Interpretation	3
COMM	302	Small Group Communication	4
COMM	420	General Semantics	4

Teaching majors are advised to complete student teaching one quarter before graduation to allow for an independent study on problems in teaching *after* the student teaching experience.

English Minor (non-teaching)

Core Requirements			8
*ENG	111	Introduction to Poetry	4
		or	
ENG	112	Introduction to Prose	4
ENG	113	Introduction to Drama	4
		Electives	23
			<u>31</u>

*Qualified students may be exempted by examination.

Choose any of the additional courses listed for the major.

English Minor (teaching)

Students with a minor in English who plan to teach English in the public schools should meet the following requirements:

Core requirements			17
*ENG	111	Introduction to Poetry	4
		or	
ENG	112	Introduction to Prose	4
ENG	113	Introduction to Drama	4
EED	402	Literature and Materials in the Secondary School	5

One of the following:

ENG	319	Advanced Expository Writing	4
ENG	320	The English Language	4
ENG	321	Generative-Transformational Grammar	4
		Electives	19
			<u>36</u>

*Qualified students may be exempted by examination.

Minors may choose from Groups I, II, III, and electives listed in program for English teaching majors. In addition, teaching minors may elect whichever courses in the ENG 319, 320, and 321 sequence they did not take to fulfill the requirement.

ENG 101, 102, 103, and 105 may not count toward English minor.

NOTE: Teaching minors, (except Elementary Education majors), who wish to student teach and/or be certified in English, must take EED 341, Methods and Materials for Teaching Language and Composition in the Secondary School.

Elementary Education majors minoring in English are to take the program for arts and sciences minors.

HONORS:The Department of English participates in the Honors Program. See page 23.

Environmental Studies Minor

The following 31 hours of intensive environmental studies represent an interdisciplinary approach to the many complex environmental problems.

1. The courses may be used as elective to the general education curriculum requirements.

2. The courses in the minor are:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
ENST 110	Introduction to Environmental Studies	3
ENST 210	Science of the Environment	3
ENST 220	Population Dynamics and Genetic Probabilities	3
ENST 230	Economics of Natural Resources	3
ENST 240	Politics and the Environment	3
ENST 250	Man's Atmospheric Environment	3
ENST 260	Ecological Interpretations	3
ENST 270	Social Implications of Ecology	3
ENST 280	Natural Resources and Technology	3
ENST 310	Future Environments and Ecosystem Modification	1
ENST 350	Environmental Pollution and Man's Health	3
		31

Additional courses which may be substituted for any of the above courses with the approval of the minor adviser are:

ENST 120	Man's Attitude Toward His Physical and Social Environments	3
ENST 300	The General Systems Approach	4
ENST 361	Art and the Environment	3

Family Life and Consumer Education Major Administered by the Department of Home Economics

This major provides professional opportunities in the areas of social and youth services, utility companies, or commercial firms.

1. No minor is required.

2. The following courses are required in the recommended sequence:

- a. *HEC 101, Self Identification 2
- b. *HEC 108, Investigating the Home Economics Profession 2

Freshman Year

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
HEC 171	Design in Living	3
**HEC 181	Basic Textiles	5
***HEC 190	Fundamentals of Clothing Construction	3
	****Science	15
		26

Sophomore Year

HEC	211	Management for Effective Living	3
HEC	212	Management Dynamics	3
HEC	221	Human Relations	3
HEC	242	Principles of Food Preparation	4
HEC	249	Food/Nutrition Modules	1-3
HEC	250	Principles of Human Nutrition	3
			17-19

Junior and Senior Year

CD	331	Development of the Infant and Toddler	3
CD	333	Development and Guidance of the Preschool Child	4
HEC	349	Food/Nutrition Modules	1-3
HEC	362	Demonstration Techniques	2
HEC	371	Design for Shelter	3
HEC	372	Design for Interiors	3
HEC	374	Consumer Aspects of Household Equipment	4
HEC	415	Consumer Education	3
HEC	419	Home Management Practicum	3
HEC	445	Experimental Food Studies	4
HEC	449	Food/Nutrition Modules	1-3
HEC	465	Home Economics Programs for Special Needs	3
			34-38

*These courses should be taken during the first year the student is a major.

**HEC 382 Consumer Textiles may be substituted.

***Students with sufficient background are eligible to take competency exam for possible exemption from these courses or be exempted with comparable course work.

****These courses are to be selected with guidance of the student's adviser.

The student with the guidance of an adviser will select electives from courses in various departments to supplement major requirements and to meet individual needs and interests.

Fine Arts Major

Administered by the Department of Fine Arts

The Fine Arts Department offers a teaching and non-teaching major as well as a minor.

Students pursuing the B.A. degree with a major in Fine Arts must plan their programs to fulfill the following requirements:

1. Meet all General Education requirements as specified earlier in this catalog.
2. Complete the following courses as a part of the major.

Foundations Program

Course No.	Course Title	Hours	Credit
FA 121	Foundation Lecture I	2	3
FA 122	Foundation Studio I	3	3
FA 123	Foundation Lecture II	2	2
FA 124	Foundation Studio II	3	3
FA 125	Foundation Lecture III	2	2
FA 126	Foundation Studio III	3	3
			15

The foundations program is required of all art majors and is normally taken the freshman year. Lecture and studio courses must be taken concurrently (i.e., Foundation Lecture I and Foundation Studio I.) Introductory level studio courses (i.e., Introduction to Oils, Sculpture, etc.) may be taken concurrently with Foundations if desired.

Art History Program

FA	110	Art History Survey I	4
FA	111	Art History Survey II	4
		Elect any upper division Art History course as offered	<u>4</u>
			12

Studio Program

FA	202	Figure Drawing	3
FA	203	Introduction to Watercolor Painting	3
FA	215	Crafts: Design on Fabrics or	
FA	216	Craft Expression in Construction	3
FA	217	Introduction to Pottery	3
FA	220	Introduction to Painting	3
FA	258	Introduction to Sculpture	3
FA	259	Printmaking	<u>3</u>
			21

3. For the non-teaching Fine Arts major, the student must complete two (2) areas of emphasis in Fine Arts courses including the introductory courses each for a total of 30 hours. (An area of emphasis must consist of at least 12 quarter hours.)

Areas of Emphasis:

Art History
Ceramics
Crafts
Design
Drawing
Painting
Printmaking
Sculpture

4. Complete six (6) hours of Fine Art electives for a total of 84 quarter hours.
5. General Education electives to meet requirements for graduation.

Fine Arts Teaching Major

Students majoring in Fine Arts who plan to teach in public schools should include the following courses in their programs:

1. Meet all General Education requirements as specified earlier in this catalog.
2. Professional teacher education, 33 quarter hours including EDFE 365, Introduction to Teaching two hours credit and EDFE 450 or 460 Student Teaching (Elementary or Secondary), 18 hours credit.

The following required courses in the major:

FA	121	Foundations Lecture I	2
FA	122	Foundations Studio I	3
FA	123	Foundations Lecture II	2
FA	124	Foundations Studio II	3
FA	125	Foundations Lecture III	2
FA	126	Foundations Studio III	<u>3</u>
			15

Art History Program

FA	110	Art History Survey I	4
FA	111	Art History Survey II	4
		Elect any upper division Art History Course as offered	<u>4</u>
			12

76 / DEGREE PROGRAMS

FA	202	Figure Drawing	3
FA	203	Introduction to Watercolor Painting	3
FA	215	Crafts: Design on Fabrics	
		or	
FA	216	Craft Expression in Construction	3
FA	217	Introduction to Pottery	3
FA	220	Introduction to Painting	3
FA	258	Introduction to Sculpture	3
FA	259	Printmaking	3
*EDFE	270	Teacher Aide, Fine Arts	2
**FA	339	Leading Ideas in Art for Teachers (Elm/Sec)	2
FA	430	Seminar in Art Education (Elm/Sec)	2
FA	432	The Curriculum in Art Education (Elm/Sec)	3
			30

*Majors must enroll in a minimum of one hour EDFE 270 (elementary) and one hour EDFE 270 (secondary). A student may carry additional hours if desired.

**Must be taken prior to FA 339, EDFE 365 and FA 341.

4. Students in this program must complete their student teaching prior to second quarter of the senior year. Then complete FA 430 and FA 432.

5. Complete one area of emphasis in Fine Arts for a minimum of 12 quarter hours. Areas of Emphasis: Ceramics, crafts, design, drawing, history of art, painting, printmaking, sculpture.

6. Summary of Fine Arts majors requirements: Forty-five (45) hours of required Fine Arts courses, twelve (12) hours in one area of Fine Arts emphasis and 27 hours of Fine Arts electives must be completed for a total of eighty-four (84) hours in the major.

7. The number of additional hours beyond the 84 that are required for certification depend upon whether the student elects to become certified for (1) elementary art education, (2) secondary art education (including grades 7 through 12), or (3) elementary and secondary (K-12). If the student elects option 3, he will be required to enroll in all five of the courses listed for options 1 and 2.

8. A copy of the requirements for departmental admission to Professional Teacher Education, should be obtained in the Department of Fine Arts Office early in the students educational career to assure proper course planning.

Fine Arts Minor

The Fine Arts minor is an academic non-teaching minor consisting of thirty-six (36) quarter hours of Fine Arts Course work. The requirements are as follows:

1. Elect from the Foundations Program any one of five (5) quarter hours Foundation block courses (i.e., Foundation Lecture I and Foundation Studio I).

2. FA 110 Art History Survey I, 4.

FA 111 Art History Survey II, 4

3. Elect twenty-three (23) quarter hours in Fine Arts to complete 36 quarter hours.

UNC Program in Florence: Studies in Comparative Arts

Supervised by the Department of Fine Arts

Paolo Barucchieri, Director

The Department of Fine Arts supervises a program in Comparative Arts at a residence center, "La Poggerina" near Florence, Italy. Participants in this program may be used to partially satisfy major and minor requirements in the Department of Fine Arts, Anthropology, Humanities, or General Education requirements. A description of this program may be found in this catalog on page 186.

Food and Nutrition Major Administered by the Department of Home Economics

This major prepares a student for positions in commercial test kitchens, technical work in quality control, product development in laboratories in the food processing industry, or nutrition work in government agencies, or industry.

1. No minor is required.

2. The following courses are required and listed according to the recommended sequence:

- a. *HEC 101, Self Identification2
- b. *HEC 108, Investigating the Home Economics Profession2

Freshman Year

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
CHEM 104	Principles of Chemistry I	5
CHEM 105	Principles of Chemistry II	5
CHEM 130	Introductory Organic Chemistry	5
JOUR 105	Newsriting	4
		<u>19</u>

Sophomore Year

HEC 211	Management for Effective Living	3
HEC 221	Human Relationships	3
HEC 242	Principles of Food Preparation	4
HEC 249	Food/Nutrition Modules	1-3
HEC 251	Nutrition I	3
BUS 205	Business Communications	3
CHEM 281	Human Biochemistry	5
		<u>22-24</u>

Junior Year

CD 331	Development of the Infant and Toddler	3
CD 333	Development and Guidance of the Preschool Child	4
HEC 349	Food/Nutrition Modules	1-3
BIO 361	Microbiology	5
HEC 362	Demonstration Techniques	2
IA 342	Basic Photography	3
IA 345	Publication Production	5
		<u>23-25</u>

Senior Year

HEC 419	Home Management Practicum	3
HEC 445	Experimental Food Studies	4
HEC 446	Food Service Administration	3
HEC 447	Quantity Food Purchasing and Preparation	4
HEC 448	Organization and Management of Food Service	3
HEC 449	Food/Nutrition Modules	1-3
HEC 451	Nutrition II	3
HEC 456	Infant and Child Nutrition	3
		<u>24-26</u>

*These courses should be taken during the first year the student is a major.

The student with the guidance of an adviser will select electives from courses in various departments to supplement major requirements and to meet individual needs and interests.

French Major**Administered by the Department of Foreign Languages**

Students pursuing the B.A. with a major in French must plan their programs to fulfill the following requirements:

1. Complete the General Education requirements of 60 quarter hours. (French majors are urged to take ANT 100 or SOC 100 or HIST 130, 131, 132.) Student should consult his assigned adviser.

2. The following courses or their equivalents are required for the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
FR 201	Intermediate French I	4
FR 202	Intermediate French II	4
FR 203	Intermediate French III	4

In addition, one of the following series:

a. For students who plan to teach in the public schools:

FR 310	Intermediate French Conversation	3
FR 311	Intermediate French Composition	3
FR 312	Intermediate French Syntax and Stylistics	3
FR 400	Problems in Oral French	3
FR 410	French Civilization	3
	<i>or</i>	
FR 411	Contemporary France	3
	*Five French literature courses chosen from the departmental offerings	15
	**Electives in French to be chosen with the consent of the adviser	6
		<u>48</u>

Students who desire teaching certification will also take 36 credit hours, including EDFE 366, Observation, (2 hours credit) and FL 341, Methods, (3 hours credit) which must be taken during the same quarter. Before being permitted to apply for student teaching, a French major must have successfully passed the department oral proficiency examination.

b. For students wishing a Liberal Arts major:

	*Five French literature courses chosen from the departmental offerings	15
	**Electives in French to be chosen with the consent of the adviser	21
		<u>48</u>

*It is recommended that the student take FR 415 or the equivalent before beginning the literature courses.

**Three hours of FL 131, Foreign Language House and FL 410, Linguistics are the only FL prefix courses which may be applied toward the major.

3. NOTE: All work to be counted toward the B.A. degree in French must be beyond the first-year level.

4. In addition, a minor of at least 27 quarter hours approved by the Department.

5. Electives sufficient to complete requirements for the B.A. degree.

French Minor

Requirements for a French minor are as follows:

FR 201	Intermediate French I	4
FR 202	Intermediate French II	4
FR 203	Intermediate French III	4

In addition, one of the following series:

a. For students who plan to teach in the public schools:

FR	310	Intermediate French Conversation	3
FR	311	Intermediate French Composition	3
FR	312	Intermediate French Syntax and Stylistics	3
FR	400	Problems in Oral French	3
		Electives in French to be chosen with the consent of the adviser	6
			<u>30</u>

b. For students wishing a Liberal Arts minor:

		*Three French literature courses chosen from the departmental offerings	9
		Electives in French to be chosen with the consent of the adviser	9
			<u>30</u>

*It is recommended that the student take FR 415 or the equivalent before beginning the literature courses.

Geography Major

Administered by the Department of Geography

The Department of Geography offers a non-teaching major and minor in Geography.

Students pursuing the B.A. with a major in Geography must plan their programs to fulfill the following requirements:

1. All General Education requirements as specified earlier in this catalog. (Students majoring or minoring in geography will take two of the following courses: ANT 100, ECON 100, PSCI 100, or SOC 100.)

2. The following required courses in the major:

Course No.	Course Title	Hours	Credit
GEOG 120	Physical Geography I	3	3
GEOG 121	Physical Geography II	3	3
GEOG 122	Cultural Geography I	3	3
GEOG 123	Cultural Geography II	3	3
GEOG 148	Anglo-America	5	5
GEOG 364	Maps and Their Uses	2	2
	Electives in Advanced Regional Courses	14	14
	Electives in Advanced Systematic Courses	15	15
			<u>48</u>

3. At least one minor of 27 quarter hours.

4. Electives to complete the 180 hours of academic credit required for graduation.

Students interested in being certified for teaching Geography must take a major in Social Sciences.

Geography Minor

GEOG 100	World Geography	5	5
GEOG 148	Anglo-America	5	5
GEOG 364	Maps and Their Uses	2	2
	Electives in Advanced Regional Geography	5	5
	Electives in Advanced Systematic Geography	5	5
	Electives in Advanced Regional or Systematic Geography	5	5
			<u>27</u>

German Major

Administered by the Department of Foreign Languages

Students pursuing the B.A. with a major in German must plan their programs to fulfill the following requirements:

80 / DEGREE PROGRAMS

1. Meet all General Education requirements of 60 quarter hours. (German majors are urged to take ANT 100 or SOC 100 or HIST 130, 131, 132.) Student should consult his assigned adviser.

2. The following courses or their equivalents are required for the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
GER 201	Intermediate German I	4
GER 202	Intermediate German II	4
GER 203	Intermediate German II	4

In addition, one of the following series:

a. For students who plan to teach in the public school:

GER 335	Intermediate German Conversation	4
GER 336	Advanced German Composition	4
GER 337	Advanced German Grammar	4
GER 345	Phonetics of the German Language	3
GER 400	Problems in Oral German	3
	Five German literature courses chosen from the departmental offerings	15
	*Electives in German to be chosen with the consent of the adviser	3
		<u>48</u>

Students who desire teaching certification will also take 36 credit hours, including EDFE 366, Observation, (2 hours credit) and FL 341, Methods, (3 hours credit) which must be taken during the same quarter. Before being permitted to apply for student teaching, a German major must have successfully passed the department oral proficiency examination.

b. For students wishing a Liberal Arts major:

GER 335	Intermediate German Conversation	4
	Five German literature courses chosen from the departmental offerings	15
	*Electives in German to be chosen with the consent of the adviser	17
		<u>48</u>

*Three hours of FL 131, Foreign Language House and FL 410, Linguistics are the only FL prefix courses which may be applied toward the major.

3. **NOTE:** All work to be counted toward the B.A. degree in German must be beyond the first-year level.

4. In addition, a minor of at least 27 quarter hours approved by the Department.

5. Electives sufficient to complete requirements for the B.A. degree.

German Minor

Requirements for a German minor are as follows:

GER 201	Intermediate German I	4
GER 202	Intermediate German II	4
GER 203	Intermediate German II	4

In addition, one of the following series:

a. For students who plan to teach in the public schools:

GER 335	Intermediate German Conversation	4
GER 336	Advanced German Composition	4
GER 337	Advanced German Grammar	4
GER 345	Phonetics of the German Language	3
GER 400	Problems in Oral German	3

b. For students wishing a Liberal Arts minor:

GER	335	Intermediate German Conversation	4
		Three German literature courses chosen from the departmental offerings	9
		Electives in German to be chosen with the consent of the adviser	5
			<u>30</u>

Gerontology

Administered by the Department of Recreation

Students pursuing the B.S. degree with a major in Gerontology must plan their programs to fulfill the following requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. The following courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
GERO	205	Introduction to Gerontology	4
HPER	236	Introduction to Health Aspects of Gerontology	4
HPER	369	Therapeutic Recreation	3
HPER	472	Recreation Leadership	3
HPER	495	Senior Seminar	4
ANT	381	Enculturation	4
EDSE	290	Orientation to Rehabilitation and Related Services	3
HEC	221	Family Relationship	3
PSY	230	Human Growth and Development	3
PSY	433	Maturity and Aging	3
MAS	302	The Contemporary Mexican American	3
SOC	341	Sociology of Aging	3
ZOO	156	Elements of Human Physiology-Anatomy	5
GERO	453	Internship in Gerontology	18
			<u>63</u>

3. One minor of 30 quarter hours, or 30 quarter hours of supporting courses selected with the approval of the major adviser in the Recreation Department.

4. Senior Gerontology majors will complete GERO 453, Internship in Gerontology, 18 hours. Courses GERO 205, PSY 433, SOC 341, HPER 369, and HPER 495 and a GPA of 2.3 in the required courses, as well as a 2.3 cumulative are prerequisites for GERO 453.

5. Electives sufficient to complete requirements for the Bachelor of Science degree.

Health Education Major (Teaching Emphasis)

Administered by the Department of Health and Safety Education

Students pursuing the B.A. degree with a major in Health Education must plan their programs to fulfill the following requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. Professional Teacher Education, 36 hours.
3. The following courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
CHEM	130	Introductory Organic Chemistry	5
ZOO	156	Elements of Human Physiology & Anatomy	5
		or	
HPER	222	Physiological Kinesiology	3
		or	
ZOO	250	Human Physiology	5
HPER	200	Introduction to Health Education	2
HPER	205	Issues in Health	3
		or	
HPER	237	Human Sexuality	3
		and	
HPER	238	Contemporary Issues in Drug Abuse	3

82 / DEGREE PROGRAMS

HPER	224	Maturational Kinesiology .....	.3
		<i>or</i>	
PSY	432	Preadolescence and Adolescence .....	.3
BIO	234	Population Genetics .....	.3
HPER	236	Health Aspects of Gerontology .....	.3
		<i>or</i>	
EDEM	410	Introduction to Educational Resources .....	.3-5
PSY	250	Humanistic Psychology .....	.3
		<i>or</i>	
PSY	255	Psychology of Emotional Adjustment .....	.3
HEC	251	Nutrition I .....	.3
HPER	262	Standard First Aid and Personal Safety .....	.2
HPER	299	Community Health .....	.3
HPER	301	Health Education in the Elementary School .....	.2
HPER	342	Modern Concepts of Health and Disease .....	.3
HPER	343	Methods and Observation of Health Education .....	.5
HPER	350	Introduction to Environmental Health .....	.3
BIO	361	Microbiology .....	.5
HPER	471	Safety Education .....	.3
			54-61

Health Education Minor (Teaching Emphasis)

HPER	200	Introduction to Health Education .....	.2
HPER	205	Issues in Health .....	.3
		<i>or</i>	
HPER	237	Human Sexuality .....	.3
		<i>and</i>	
HPER	238	Contemporary Issues in Drug Abuse .....	.3
HPER	262	Standard First Aid and Personal Safety .....	.2
PSY	250	Humanistic Psychology .....	.3
		<i>or</i>	
PSY	255	Psychology of Emotional Adjustment .....	.3
		<i>or</i>	
PSY	432	Preadolescence and Adolescence .....	.3
HPER	299	Community Health .....	.3
HPER	301	Health Education in the Elementary School .....	.2
HPER	342	Modern Concepts of Health and Disease .....	.3
HPER	343	Methods and Observation of Health Education .....	.5
HPER	350	Introduction to Environmental Health .....	.3
HPER	471	Safety Education .....	.3
			29-32

Health Major (Non-Teaching Emphasis)**Administered by the Department of Health and Safety Education**

Students pursuing the B.S. degree with a major in Health must plan to fulfill the following requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. Complete the required courses in the major:

CHEM	130	Introductory Organic Chemistry .....	.5
		<i>or</i>	
CHEM	281	Human Biochemistry .....	.5
ZOO	156	Elements of Anatomy and Physiology .....	.5
		<i>or</i>	
HPER	222	Physiological Kinesiology .....	.3
		<i>or</i>	
ZOO	250	Human Physiology .....	.5
HPER	200	Introduction to Health .....	.2
RSM	203	Introduction to Statistical Methods .....	.3
HPER	224	Maturational Kinesiology .....	.3
		<i>or</i>	
PSY	250	Humanistic Psychology .....	.3
		<i>or</i>	
PSY	432	Preadolescence and Adolescence .....	.3

BIO	234	Population Genetics	3
HPER	236	Health Aspects of Gerontology	3
HEC	251	Nutrition I	3
BIO	261	Medical and Public Health Microbiology	4
		<i>or</i>	
BIO	361	Microbiology	5
HPER	262	Standard First Aid and Personal Safety	2
HPER	299	Community Health	3
HPER	342	Modern Concepts of Health and Disease	3
HPER	350	Environmental Health	3
HPER	205	Issues in Health	3
		<i>or</i>	
HPER	237	Human Sexuality	3
		<i>or</i>	
HPER	238	Contemporary Issues in Drug Abuse	3
ZOO	412	General Parasitology	5
HPER	471	Safety Education	3
HPER	454	Internship in Health	9-18
		<i>and twelve hours of the following:</i>	
JOUR	105	Newswriting	4
SOC	272	The Community	3
SOC	310	Social Psychology	3
SOC	325	Sociology of Medicine	3
BUS	341	Life and Health Insurance	3
BUS	354	Human Behavior in Business	3
SOC	435	Socio-Cultural Change	3
EDEM	410	Introduction to Educational Resources	3-5
ANT	470	The Nature of Man	3
ANT	472	Medical Anthropology	3

72-75

Health Minor (non-teaching)

Students interested in the Health Science Minor (non-teaching) will be required to complete 36 hours from the following:

CHEM	108	General Chemistry	5
		<i>or</i>	
CHEM	130	Introductory Organic Chemistry	5
		<i>or</i>	
CHEM	281	Human Biochemistry	5
ZOO	156	Elements of Human Physiology-Anatomy	5
		<i>or</i>	
ZOO	250	Human Physiology (Preq. ZOO 121 or 326 and CHEM 281)	5
PSY	250	Humanistic Psychology	3
		<i>or</i>	
PSY	432	Preadolescence and Adolescence	3
HPER	299	Community Health	3
HPER	342	Modern Concepts of Health and Disease	3
HPER	350	Introduction to Environmental Health	3
BIO	261	Medical and Public Health Microbiology	4
		(recommended CHEM 281, ZOO 121)	
		<i>or</i>	
BIO	361	Microbiology (Preq. CHEM 130-5)	4-5

Nine hours of Electives from the following to complete 36 hours for the minor.

SOC	272	The Community	3
SOC	310	Social Psychology	3
SOC	325	Sociology of Medicine	3
SOC	435	Socio Cultural Change	3
ANT	470	The Nature of Man	3
ANT	472	Medical Anthropology	3

36

History Major**Administered by the Department of History**

1. Meet all General Education requirements as specified earlier in this catalog.
2. Students pursuing the B.A. degree with a major in History, teaching or non-teaching, must take the following courses in the major:

Course No.	Course Title	Hours	Credit
HIST 130	Western Civilization I	4	
HIST 131	Western Civilization II	4	
HIST 132	Western Civilization III	4	
HIST 170	United States History, 1607-1815	4	
HIST 171	United States History, 1816-1899	4	
HIST 172	United States History, 1900 to Present	4	
HIST 240	Survey of Asian History	4	
HIST 299	Introduction to Historical Research	3	
	Advanced Electives in History		<u>.33</u>
			64

3. One minor of 27 quarter hours preferably within the College of Arts and Sciences.

4. The Department of History recommends that prospective history majors take a foreign language.

5. Electives sufficient to complete the 180 quarter hours required for the Bachelor of Arts degree.

6. Students majoring in history who plan to teach in the public schools are responsible for the program outlined above. Moreover, such students should be advised that the more subjects they are pursuing the greater the opportunity for employment. Regional Teaching accrediting agencies require at least 18 quarter hours of study in the specific discipline before the candidate is permitted to teach, e.g., 18 quarter hours Anthropology, 18 quarter hours in Geography, etc. *Non-history courses will not be counted towards the major.* Students will also take 31 quarter hours in the professional Teacher Education Program (requirements and prerequisites for admission listed below) plus EDFE 373, two quarter hours credit and SSED 341, three quarter hours credit.

a. The faculty of the History Department will not consider any student's application for the PTE program unless he has passed at least 20 hours in history, of which at least eight hours of history have been passed at the University of Northern Colorado.

b. To be admitted to PTE one must have a grade point average of at least 2.3 in the major. In figuring the grade point average in the major, only courses taken at the University of Northern Colorado are counted, excluding the general education courses or their substitutes.

c. Before registering for EDFE 373 and SSED 341 one must have completed EDF 460 and PSY 302-326 (five 2-week units), and the following courses or their equivalents:

HIST 130	Western Civilization I	4
HIST 131	Western Civilization II	4
HIST 132	Western Civilization III	4
HIST 170	United States History, 1607-1815	4
HIST 171	United States History, 1816-1899	4
HIST 172	United States History, 1900 to Present	4
	Two of the introductory courses in the Social Sciences	<u>.10</u>
		34

The above requirements (6 a, b, c) also apply for the History minor.

d. Before registering for EDFE 460, Student Teaching, all majors in History must have completed at least 40 hours in the major.

History Minor

Students pursuing the B.A. degree with a minor in History, teaching or non-teaching, must take the following courses in the minor:

HIST	130	Western Civilization I	4
HIST	131	Western Civilization II	4
HIST	132	Western Civilization III	4
HIST	170	United States History, 1607-1815	4
HIST	171	United States History, 1816-1899	4
HIST	172	United States History, 1900 to Present	4
		Advanced Electives in History	12
			36

Students minoring in History should take two of the following basic courses to fulfill the General Education requirement: ANT 100, ECON 100, GEOG 100, PSCI 100, SOC 100.

These general education courses will not be counted toward the minor.

HONORS. The Department of History participates in the Honors Program. See page 23.

Home Economics Education

Administered by the Department of Home Economics

With the fulfillment of the specified Home Economics subject matter requirements, vocational and education courses, the student will be certified and credentialed to teach in home economics programs in the junior and senior high schools.

1. Cumulative GPA of 2.3 for admission into PTE.
2. Minor is recommended. Student should select a concentration in an area other than Home Economics to increase employment opportunities.
3. A total of five hours are required from food modules courses numbered HEC 249, 349 and 449 and may be taken after the freshman year.
4. The following courses are required:

- a. *HEC 101, Self Identification 2
- b. *HEC 108, Investigating the Home Economics Profession 2

Freshman Year

Course No.	Course Title	Hours Credit
HEC 171	Design in Living	5
HEC 181	Basic Textiles	5
HEC 193	Creative Clothing Construction	4
		12

Sophomore Year

HEC 211	Management for Effective Living	3
HEC 212	Management Dynamics	3
HEC 221	Human Relationships	3
HEC 242	Principles of Food Preparation	4
HEC 249	Food/Nutrition Modules	1-3
HEC 250	Principles of Human Nutrition	3
		17-19

Junior Year

VTE 310	Foundations of Vocational Education	2
VTE 311	History of Vocational Education	1
CD 331	Development of Infant and Toddler	3
CD 333	Development and Guidance of Preschool Child	4

HEC	349	Food/Nutrition Modules	1-3
HEC	362	Demonstration Techniques	2
HECV	363	Introduction to Curriculum in Home Economics Education	3
HECV	367	Principles/Practices of Evaluation in Home Economics Education	3
HEC	369	Laboratory Management and Maintenance	1
HEC	371	Design for Shelter	3
HEC	372	Design for Interiors	3
HEC	374	Consumer Aspects of Household Equipment	4
HEC	396	Fashion Design - Flat Pattern Drafting	4
		or	
HEC	494	Tailoring	4
			<u>34-36</u>

Senior Year

EDSE	403	Working with Handicapped Students in Sec Sch	3
VTE	411	Vocational Student Organizations	1
VTE	412	Cooperative Education and Coordination Tech	3
HEC	415	Consumer Education	3
VTE	414	Future Homemakers of America	2
VTE	430	Voc Ed for Learners with Special Needs	3
HEC	449	Food/Nutrition Modules	1-3
HECV	460	Occupations in Home Economics	3
HECV	462	Preparation for Teaching Vocational Home Economics	3
HECV	464	Home Economics Youth Organizations	2
HECV	482	Teach Improvement Seminar in Vocational Home Economics	2
			<u>26-28</u>

Recommended courses:

EDFE	270	School and Community Aide	1-4
VTE	290	Directed Occupational Experience	3-8
EDEM	410	Introduction to Educational Resources	3
EDEM	420	Design and Construction of Audio-Visual Materials	3
HECV	432	Teaching Child Development and Family Living in Secondary School	3

For students who elect to qualify for occupational programs in public schools or other institutions, 2000 wage-earning hours in Home Economics related occupations are required.

Each student with a major in Home Economics will be assigned to a faculty adviser.

The following courses are required for professional teacher education certification:

PSY	349	Educational Psychology	5
EDF	365	Basic Concepts of Education	5
EDFE	368	Introduction to Teaching: Home Economics	2
EDFE	470	Supervised Teaching: Vocational Education	18
EDF	485	Philosophy of Education	3

*These courses should be taken during the first year the student is a major.

Home Economics Minors

A student who wishes to minor in Home Economics must register with the department prior to enrollment.

General Home Economics Minor

A minimum of 27 credit hours needs to be selected from the following courses (this is not a teaching minor):

HEC	171	Design in Living	3
HEC	181	Basic Textiles	5
HEC	193	Creative Clothing Construction	4
HEC	211	Management for Effective Living	3
HEC	221	Human Relationships	3
HEC	250	Principles of Human Nutrition	3
CD	331	Development of the Infant and Toddler	3
CD	333	Development and Guidance of the Preschool Child	4
HEC	340	Basic Food Preparation and Service	4
IA	359	Construction Activities for the Elementary School	3
HEC	371	Design for Shelter	3
HEC	372	Design for Interiors	3
HEC	415	Consumer Education	3
HEC	456	Infant and Child Nutrition	3

Home Economics Minor in Business

A student with a major in the Department of Home Economics may choose the following program for a minor in Business.

BUS	100	The American Business System	3
BUS	150	Principles of Management	4
BUS	220	Principles of Accounting I	4
BUS	260	Marketing	4
BUS	261	Salesmanship	3
BUS	361	Retail Management	4
BUS	362	Advertising	3
ECON	100	Introductory Economics	5
			30

Area of Emphasis

Textiles and Clothing

Courses in textiles and clothing enriched through recommended courses in Business, Economics, Fine Arts, Psychology, Science and Sociology, furnish knowledge and training essential to the student and ultimate consumer for satisfactory selection of clothing and household fabrics for the individual, family, and home.

The emphasis in textiles and clothing leads to opportunities in many areas such as teaching in stores, extension or trade schools, custom dressmaking or work with commercial companies as a consultant. It is recommended that the student work within the framework of the Family Life and Consumer Education Major. A student interested in career opportunities in the fashion industry may elect to follow a minor in Business. The selection and sequence of courses is subject to approval by the major adviser in textiles and clothing.

Recommended Departmental Courses

HEC	181	Basic Textiles	5
HEC	190	Fundamentals of Clothing Construction	3
or			
Competency Exam			
HEC	193	Creative Clothing Construction	4
HEC	382	Consumer Textiles	4
HEC	384	Seminar in Textiles and Clothing	3
HEC	395	Fashion Design - Flat Pattern Drafting	4
HEC	481	Advanced Textiles	4
HEC	494	Tailoring	4

Home Economics Science Minor
Administered by the Department of Chemistry

This minor consists of three or four quarters of chemistry and microbiology (BIO 361) and electives with approval of the minor adviser to complete 27 hours.

Humanities Minor
Administered by the Department of English

A pre-planned thirty-six hour program of coordinated courses in the arts and humanities requiring careful organization by the student with his adviser and the Director of Humanities.

Requirements:

1. Thirty-three hours of study in at least two, but no more than three of the areas of Anthropology, Communication, English, Fine Arts, History, Humanities, Music, Philosophy, Sociology, Theatre.

2. Careful coordination of related courses. These may be coordinated around a topic, theme, period of time or place; for example: topics or themes in classical or Renaissance or Asian culture; comparative studies in literature, art, philosophy; and so forth.

3. A three-hour independent study on a topic selected by the student at the culmination of the course work from ideas inspired by the courses. The study is to cut across disciplinary boundaries, and it may cross chronological or cultural lines. The purpose of the study is to help the student in integrating and synthesizing knowledge.

4. No hours in the student's major field will apply to the minor.

Following is a list of courses that may be drawn upon to build an integrated group of studies. Others from the departments listed may be taken with the approval of the adviser and the department or professor.

ANTHROPOLOGY 100, 110, 120, 121, 122, 140, 220, 221, 222, 240, 242, 280, 281, 300, 320, 321, 322, 323, 324, 325, 326, 327, 328, 331, 335, 337, 340, 341, 342, 344, 345, 346, 347, 348, 349, 350, 360, 361, 380, 381, 382, 383, 420, 421, 431. (ANT 100 or 110 recommended as prerequisites.)

COMMUNICATION 120, 140, 170, 212, 220, 250, 270, 302, 312, 323, 330, 345, 356, 400, 420, 452, 460, 490.

ENGLISH 211, 212, 213, 214, 216, 217, 218, 219, 220, 221, 225, 226, 301, 302, 325, 360, 401, 402, 403, 405, 406, 407, 408, 410, 411, 415, 416, 430, 440, 441, 450.

FINE ARTS 110, 111, 212, 360, 362, 363, 364, 365, 366, 367, 368, 369, 380, 381, 382, 383.

HISTORY 130, 131, 132, 170, 171, 172, 210, 220, 230, 340, 341, 350, 360, 363, 370, 371, 372, 382, 440, 458, 459, 490, 492.

HUMANITIES 201, 202, 203, 204, 205, 210, 220, 221, 222, 223, 226, 251, 252, 290, 301, 377, 378, 411.

MUSIC 140*, 141*, 142*, 143*, 240*, 241*, 242*, 340*, 341*, 449*, 285*, 385*, 485*.

Applied music: maximum of 6 hours in study of any instrument or voice acceptable towards the minor.

Musical organizations: maximum of 3 hours acceptable towards the minor.

(*Prerequisites would need to be fulfilled.)

PHILOSOPHY 100, 150, 201, 202, 203*, 270, 305*, 312*, 315*, 330, 355, 360*, 370*, 405, 415*...(*Fulfill prerequisites or have consent of instructor.)

SOCIOLOGY 145*, 310*, 312*, 321*, 323*, 333*, 334*, 341*, 345*, 410*, 420*, 421*, 432*, 435*, 450*, 451*. (*Prerequisite SOC 100.)

THEATRE 230, 320, 430, 431, 432.

Florence Program: Humanities

For courses taught in Florence, see page 186.

Individualized Tutorial Program

This highly-individualized, experimental program, initiated winter quarter 1975, is open to freshmen, sophomores, and first quarter juniors. A small number of faculty member have been designated as tutors, each of whom will be assigned from ten to twenty students. Each participating student will select a tutor upon entry into the program, and, thereafter, the student's entire educational experiences will be determined by agreement between the tutor and student. A student may enroll in a maximum of two regular courses each quarter; the bulk (and possibly, the entirety) of his credits, however, will be earned in tutorial study, consisting of blocks of essentially-independent work -- in the library, laboratory or field -- devised in consultation with the tutor. At frequent intervals the student will meet with his tutor for informal discussion of work projects and progress. Tutorial students with similar interests will also have an opportunity to meet together periodically. Each block of tutorial work will culminate in a research or analytical report or some other evidence of the student's accomplishment. No grades, other than satisfactory/unsatisfactory will be given, although the tutor will maintain a thorough evaluative record of the student's work and attainments.

Students interested in the program should consult one of the tutors: Professors Neal Cross (English), Richard Dietz (Earth Sciences), or James Wanner (Anthropology), or Michael Jacobs (Education).

Industrial Arts Major (Non-Teaching) Administered by the Department of Industrial Arts

Students pursuing the B.S. degree with a major in Industrial Arts (non-teaching) must plan their programs to fulfill the following requirements:

1. All General Education requirements as specified earlier in this catalog.
2. Mathematics 123 and 124.
3. Chemistry 104 and 105.
4. Physics 260 and 261.
5. Industrial Arts core which consists of 61-65 academic quarter hours as follows:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
IA 118	General Plastics (Synthetic Materials)	3	
IA 141	Graphic Arts Fundamentals	3	
IA 150	Wood Processing	3	
IA 161	Principles of Drafting	3	
IA 170	General Metals	3	
IA 180	General Electricity	3	
IA 190	Introduction to Power	2	
IA 219	Plastics	2	
IA 241	Graphic Arts	2	
IA 261	Pictorial Drafting	2	
IA 272	Gas and Electric Welding	3	
IA 281	Electro-Mechanical Equipment and Measuring Instruments	2	
IA 291	Internal Combustion and Reciprocating Engines	3	
IA 350	Woodworking Technology	5	
IA 362	Working Drawings	3	
IA 374	Machine Tool Operation	2	
IA 480	Electronic Circuit Applications	5-9	
IA 433	Industrial Materials	3	
	Business or Economic Electives	9	
			61-65

6. Twenty academic quarter hour electives in industrial arts.

Industrial Arts Major (Teacher Preparation) Administered by the Department of Industrial Arts

Students majoring in Industrial Arts who plan to teach in the public schools should meet the following requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. Professional Teacher Education, 31 hours, plus EDFE 369, two hours credit; EDFE 270, three hours credit (recommended that it be completed by the end of the sophomore year.)

3. Required courses in the major:

IA	118	General Plastics (Synthetic Materials)	3
IA	141	Graphic Arts Fundamentals	3
IA	150	Wood Processing	3
IA	161	Principles of Drafting	3
IA	170	General Metals	3
IA	180	General Electricity	3
IA	190	Introduction to Power	2
IA	219	Plastics	2
IA	241	Graphic Arts	2
IA	261	Pictorial Drafting	2
IA	272	Gas and Electric Welding	3
IA	281	Electro-Mechanical Equipment and Measuring Instruments	2
IA	291	Internal Combustion and Reciprocating Engines	3
IA	320	Course Organization in Industrial Arts	3
IA	330	Methods of Teaching in the Secondary School Industrial Arts	3
IA	335	History and Philosophy of Industrial Arts	3
IA	336	Principles of General Shop Organization	5
IA	350	Woodworking Technology	5
IA	362	Working Drawings	3
IA	374	Machine Tool Operation	2
			58

4. Elect 10 additional hours from the following areas of industrial arts: Wood, Metal, Crafts, Drafting, Power, Graphic Arts and Electricity-Electronics (Total IA Major is 68 hours).

5. Free electives to complete 180 quarter hours of academic credit for graduation.

Minors in Industrial Arts

All students who wish to minor in Industrial Arts must register with the Department prior to enrollment in either of the two programs listed below.

Industrial Arts Minor (Teaching Preparation)

Required courses in the minor:

IA	161	Principles of Drafting	3
IA	261	Pictorial Drafting	2
IA	320	Course Organization in Industrial Arts	3
IA	336	Principles of General Shop Organization	5

Elect 17 quarter hours in industrial arts to meet the minor requirements of 30 hours.

Interdisciplinary Studies Program

Under this recently-inaugurated program any undergraduate in the College of Arts and Sciences (and, with the approval of the appropriate dean, those in other schools and colleges) will be able to pursue an interdisciplinary course of study of his or her own devising in substitution for the traditional major and minor.

The major purposes of this program are to afford students greatly enlarged opportunities to pursue courses of study tailored to their individual interests and needs; to encourage students to develop a greater awareness of the interrelatedness and wholeness of knowledge; to enable students to confront both contemporary and lasting human issues and problems in broad, realistic perspective; and to help lay

the groundwork for students who aspire to useful careers in such important fields as environmental protection, urban affairs, and international relations.

Degree requirements under this program consist of: meeting all basic category requirements of the General Education program--that is, completing three courses in the Sciences, three in the Social and Behavioral Sciences, three in Humanities and Integrative Studies, two in Communications, two in Professional and Applied Studies, and two ICU courses--but, providing the foregoing are satisfied, the student need not complete the full complement of 60 hours in General Education; completing a coherent multi- or interdisciplinary program of approximately 90 hours, developed in consultation with at least two faculty members selected by the student (who will then serve as the student's advisory committee until the program is completed), and with the approval of a University-wide Committee on Interdisciplinary Studies; accumulating the total 180 quarter hours of academic credit required for graduation. (Students who plan to teach in the public schools should also include the appropriate hours of Professional Teacher Education courses in their program.) Students desiring to enter the program should do so not later than the second quarter of their junior year.

Interested students should consult with Dean Robert Schulze, Chairman of the Committee on Interdisciplinary Studies, or other members of that committee, or a member of the Admissions staff.

Journalism Major **Administered by the Department of Journalism**

Students pursuing the B.A. in Journalism must plan their programs to fulfill the following requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. Before taking journalism course work, complete a course in English composition or pass the Journalism Department's proficiency test covering English composition.
3. Take journalism courses totaling 50 quarter hours.
4. Select electives to complete the 180 quarter hours. Among these electives must be at least nine hours in one liberal arts study area beyond credits in that area applied to General Education and beyond credits applied to the journalism major and the minor.
5. Each major, before his last quarter, must pass a typing proficiency test and a grammar-copypediting proficiency test.
6. Each major, after finishing the junior year, should take the one-quarter internship (JOUR 450) for 15 hours credit.
7. Majors must take these core courses:

Journalism Core

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
JOUR 100	Introduction to Journalism	2
JOUR 105	Newswriting	4
JOUR 115	Advanced Newswriting	4
JOUR 200	Journalism Internship	6
	(or 2 hours JOUR 200 plus JOUR 450)	
JOUR 399	Press and Current Affairs	3
		<u>19</u>

8. In addition to the core courses, majors are to take courses in one of these areas of emphasis:

News-Editorial Emphasis

JOUR 250	News Editing	3
JOUR 255	Publications Layout	3

92 / DEGREE PROGRAMS

JOUR	297	Feature Writing for News Media	3
JOUR	397	Master Journalists and Their Times	3
JOUR	492	Ethics and Libel	3
JOUR	496	Opinion Formation	3
		Electives in journalism or related courses approved by adviser	13
			<u>31</u>

Teacher Education Emphasis

JOUR	250	News Editing	3
JOUR	284	Techniques of Advertising	3
*JOUR	301	Teaching Secondary School Journalism	3
JOUR	397	Master Journalists and Their Times	3
JOUR	401	Scholastic Publications	3
JOUR	402	Teaching by Newspaper and Broadcast	2
JOUR	492	Ethics and Libel	3
IA	345	Publication Production	5
		Electives in journalism or related courses approved by adviser	9
			<u>34</u>

*Course taught by Journalism Department, but credit applied in Professional Teacher Education.

Management Relations Emphasis

JOUR	255	Publications Layout	3
JOUR	284	Techniques of Advertising	3
JOUR	324	Direct Mail Advertising	1
JOUR	325	Media Planning	1
JOUR	326	Advertising Regulation	1
JOUR	360	Community Newspaper	3
JOUR	395	Fundamentals of Public Relations	3
JOUR	470	Press Computation	3
JOUR	492	Ethics and Libel	3
IA	345	Publication Production	5
		Electives in journalism or related courses approved by adviser	5
			<u>31</u>

9. Select one minor from among business, business education, English, communication, history, economics, political science, sociology, psychology, or environmental studies; or select one emphasis below; to total 27 quarter hours; or select 27 quarter hours from an academic area with the approval of the journalism adviser.

Emphasis areas, which can be taken in place of a minor are:

Radio-Television Emphasis

JOUR	200	Journalism Internship-Radio	3
JOUR	445	Writing for Radio	3
COMM	110	Communication: Public Forum	3
COMM	340	Radio Production and Practices	3
COMM	342	Television Production	4
		Electives in communication and/or journalism, with JOUR 450, Intern, recommended if it is not taken for the journalism major	11
			<u>27</u>

Social Science Emphasis

HIST	172	United States History III	3
GEOG	312	Economic Geography	5

PSCI	201	State and Local Government	5
SOC	145	Social Problems	3
		Electives in one or more of these areas: diplomatic history, social and industrial history, contemporary history, economic history and problems, government or foreign policy	<u>11</u>
			27

Business Emphasis

BUS	100	The American Business System	3
BUS	101	Consumer Business Problems	3
BUS	150	Principles of Management	3
BUS	260	Marketing	4
BUS	261	Salesmanship	3
BUS	362	Advertising	3
		Electives in marketing and/or management	8
			<u>27</u>

The Arts Emphasis

HEC	171	Design in Living	3
HEC	211	Management for Effective Living	3
HEC	221	Human Relationships	3
HEC	340	Food Preparation and Service	4
HEC	415	Consumer Education	3
		Electives in home economics, economics	<u>11</u>
			27

Additional Requirements for Teacher Education:

Majors in journalism who plan to teach in junior or senior high school are to complete the emphasis printed before, with these additions:

1. Gain admittance to Professional Teacher Education with a grade point average in courses taken here in the major of at least 2.3 and after having taken about one-half or more of the courses in the journalism major.

2. Complete 34 quarter hours in professional education. These include 5 hours from among PSY 301-325 or PSY 349 for which there is the prerequisite, PSY 120; EDF 365; EDF 485; EDFE 363; EDFE 460 (student teaching); and JOUR 301.

3. Complete one minor in a related teaching field, such as English, business education, social science, communication, as that minor is described by that department.

Journalism Minor

Requirements for a student taking a major in one field and electing Journalism as a minor are:

JOUR	100	Introduction to Journalism	2
JOUR	105	Newswriting	4
JOUR	115	Advanced Newswriting	4
JOUR	284	Techniques of Advertising	3
*JOUR	301	Methods of Teaching Journalism in the Secondary School	3
IA	345	Publications Production	5
		Electives in journalism, English, communication, or one of the social sciences	<u>6</u>
			27

*Taken only if going into teacher education.

HONORS. The School of Business participates in the Honors Program. See Honors Program section of catalog.

Junior High School Science Major Administered by the Department of Science Education

Students majoring in Junior High School Science who plan to teach in the public schools are required to include the following courses in their programs:

1. All General Education requirements as specified earlier in this catalog.
2. Professional Teacher Education, 31 hours, EDFE 372, two hours credit, and SCED 441 or 442, three hours credit, to be taken concurrently.
3. SCED 151, Introductory Science Field Experiences.
4. The following courses in the major:

Course No.	Course Title	Hours	Credit
BIO 101	Principles of Biology	5	
BIO 102	Principles of Botany	5	
BIO 103	Principles of Zoology	5	
CHEM 104	Principles of Chemistry I	5	
	or		
CHEM 106	Principles of Chemistry IA	5	
CHEM 105	Principles of Chemistry II	5	
	or		
CHEM 107	Principles of Chemistry IIA	5	
PHYS 260	Introductory Physics-Mechanics	4	
PHYS 261	Introductory Physics-Heat, Sound, and Light	4	
GEOL 100	General Geology (If an Earth Science Minor is elected, replace GEOL 100 with four hours of additional electives.)	4	
	*Electives	19	
		56	

5. One minor of at least 27 quarter hours.

6. Sufficient electives to complete 180 quarter hours of academic credit required for graduation.

*Recommended electives:

AST 100	General Astronomy	4
BIO 231	Genetics	5
BIO 250	Cell Physiology	5
BIO 260	Microbiology	5
BIO 336	Evolution	3
BIO 360	Biology of Microorganisms	3
BIO 401	Conservation of Natural Resources	4
CHEM 190	Introductory Organic Chemistry	5
GEOL 201	Principles of Geology I	5
MET 100	General Meteorology	4
MET 320	Climatology	3
MET 330	Physical Meteorology	3
OCN 200	General Oceanography	3
OCN 201	Principles of Oceanography	3
PHYS 262	Introductory Physics-Electricity and Magnetism	4
SCI 210	Values Act(i) on Environment	3
ZOO 250	Human Physiology	5

Mathematics Major (Liberal Arts) Administered by the Department of Mathematics

Students pursuing the B.A. with a major in Mathematics must plan their program to fulfill the following requirements (No minor is required in this program):

1. All General Education requirements as specified earlier in this catalog.
2. Courses in the major:

Course No.	Course Title	Hours Credit
*MATH 131	Calculus with Analytic Geometry I	4
*MATH 132	Calculus with Analytic Geometry II	4
*MATH 133	Calculus with Analytic Geometry III	4
*MATH 234	Calculus with Analytic Geometry IV	4
MATH 321	Introduction to Modern Algebra I	4
MATH 322	Introduction to Modern Algebra II	4
MATH 323	Introduction to Modern Algebra III	4
MATH 432	Basic Analysis I	4
MATH 433	Basic Analysis II	4
MATH 434	Basic Analysis III	4
	Electives to be selected from MATH 250 or higher, excluding MATH 280, 330, 331, 332, 351, 395 and 401	20
		<u>60</u>

*Qualified Students may be exempted by examination.

3. Additional electives to complete the 180 quarter hours of academic credit required for graduation.

Mathematics Majors (Teacher Education) Administered by the Department of Mathematics

Students majoring in Mathematics who plan to teach in the secondary school should include the following courses in their programs (no minor is required in this program):

- All General Education requirements as specified earlier in this catalog.
- Professional Teacher Education 36 hours, including EDFE 370, two hours credit, and MED 341, three hours credit, to be taken simultaneously.

3. Courses in the major:

*MATH 131	Calculus with Analytic Geometry I	4
*MATH 132	Calculus with Analytic Geometry II	4
*MATH 133	Calculus with Analytic Geometry III	4
*MATH 234	Calculus with Analytic Geometry IV	4
MATH 321	Introduction to Modern Algebra I	4
MATH 322	Introduction to Modern Algebra II	4
MATH 323	Introduction to Modern Algebra III	4
MATH 341	Introduction to Modern Geometry I	4
MATH 342	Introduction to Modern Geometry II	4
MATH 380	Computer Programming	4
MATH 250	Elementary Probability Theory	4
MATH 432	Basic Analysis I	4
MATH 433	Basic Analysis II	4
	Electives to be selected from mathematics or mathematics education courses numbered 203 or higher	8
		<u>60</u>

*Qualified Students may be exempted by examination.

4. Additional electives to complete the 180 quarter hours of academic credit required for graduation.

Students majoring in Mathematics who plan to teach in the elementary school should include the following courses in their programs:

- Meet all General Education requirements as specified earlier in this catalog.
- Professional Teacher Education 31 hours.
- Courses in the major:

*MATH 131	Calculus with Analytic Geometry I	4
*MATH 132	Calculus with Analytic Geometry II	4
*MATH 133	Calculus with Analytic Geometry III	4
MATH 201	Basic Mathematical Logic	3
MATH 202	Theory of Sets	3
MATH 321	Introduction to Modern Algebra I	4

96 / DEGREE PROGRAMS

MATH	322	Introduction to Modern Algebra II	4
MATH	341	Introduction to Modern Geometry I	4
MATH	250	Elementary Probability Theory	4
		Electives: Math 124, 125, 191, 192, 193, or any Math or MED courses numbered 200 or higher. (Elementary Education majors cannot count MATH 191 or 192 in this major.)	14
			<u>48</u>

*Qualified Students may be exempted by examination.

4. Complete the additional requirements as stated on page 66 in this catalog for certification as an elementary school teacher.

Mathematics Minors

Following are the requirements for the Liberal Arts minor:

*MATH	131	Calculus with Analytic Geometry I	4
*MATH	132	Calculus with Analytic Geometry II	4
*MATH	133	Calculus with Analytic Geometry III	4
*MATH	234	Calculus with Analytic Geometry IV	4
		Electives in mathematics numbered 124 or higher, at least eight of which must be in courses numbered 250 or higher excluding MATH 330, 331, 332, 395, and 401	14
			<u>30</u>

*Qualified Students may be exempted by examination.

Following are the requirements for the minor for persons planning to teach:

1. Courses in the minor:

*MATH	131	Calculus with Analytic Geometry I	4
*MATH	132	Calculus with Analytic Geometry II	4
MATH	321	Introduction to Modern Algebra I	4
MATH	322	Introduction to Modern Algebra II	4
MATH	341	Introduction to Modern Geometry I	4
		**Electives in mathematics or mathematics education courses numbered 124 or higher	10
			<u>30</u>

*Qualified Students may be exempted by examination.

**It is recommended that a course be selected from among MATH 323, 342, 250, 305, 380, 464.

2. MED 341, Methods of Teaching Mathematics.

Following are the requirements for the minor in mathematics for Elementary Education majors:

MATH	193	Informal Geometry	3
		Electives to be selected with approval of the student's minor adviser	24
			<u>27</u>

Medical Technology Major Administered by the Department of Chemistry

The four-year program leading to the B.A. degree in Medical Technology requires the student to earn a total of 180 academic quarter hours. A minimum of 132 quarter hours will be earned on the campus of the University of Northern Colorado during the first three years and 48 quarter hours of Medical Technology will be earned during the senior year (12 months) at one of the affiliated hospitals (Weld County General Hospital, Greeley; St. Francis Hospital, Colorado Springs; Mercy Hospital, Denver). These courses are under the supervision of the clinical staff at each hospital. Only a limited number of positions are available for the clinical year. Selection of students for placement will be made from qualified juniors in the program. Criteria for selection will include academic performance, with emphasis

on work in the major and minor courses, length of time in the major and faculty recommendations.

Students admitted to the Medical Technology program must include the following courses in their program:

1. General Education (42 hours) as specified earlier in this catalog. Three required science courses will be accepted as meeting the area requirements in science.

2. Courses in the major:

Course No.	Course Title	Hours Credit
MTEC 450	Urinalysis and Clinical Microscopy	.4
MTEC 452	Hematology	.9
MTEC 453	Pretransfusion Tests and Blood Bank Procedures	.5
MTEC 454	Clinical Chemistry	.13
MTEC 455	Serology	.3
MTEC 456	Medical Microbiology	.12
MTEC 457	Histologic Technique	.2
		<u>48</u>

3. The Medical Technology Chemistry minor of 27 or more hours.

4. Thirty-eight quarter hours are required by the American Society of Clinical Pathologists and the staff of the Weld County General Hospital in the following courses: BIO 350, BIO 361, CHEM 281 or CHEM 482 and 483, PHYS 261, 262, BIO 101, 103, ZOO 250.

5. Five hours of college mathematics.

6. Twenty-three quarter hours of free electives to complete 180 quarter hours of academic credit required for graduation.

Mexican American Studies Major

Administered by the Department of Mexican American Studies

Students pursuing the B.A. with a major in Mexican American Studies must plan their programs to fulfill the following requirements:

1. Meet all General Education requirements as specified earlier in this catalog.
2. The following required courses in the major:

Course No.	Course Title	Hours Credit
MAS 101	Introduction to Mexican American Studies	.4
MAS 102	Oral, Reading and Written Spanish Communication I	.3
MAS 103	Oral, Reading and Written Spanish Communication II	.3
MAS 104	Oral, Reading and Written Spanish Communication III	.3
MAS 270	History of Mexico I	.3
MAS 280	History of Mexico II	.3
MAS 290	Intermediate Oral, Reading and Written Spanish Communication	.3
MAS 300	Advanced Oral, Reading and Written Spanish Communication	.3
MAS 302	Social Stratification in the Mexican American Community	.3
MAS 304	Bicultural Systems	.3
MAS 306	History of the Chicano in the Southwest	.3
MAS 308	Survey of Mexican Literature	.3
MAS 310	Linguistics Applied to Chicano Spanish	.3
MAS 410	Survey of Contemporary Chicano Literature	.3
MAS 412	Mexican American Art	.3
MAS 414	Mexican American Philosophical Thought	.3
		<u>49</u>

3. A minor of 27 or more quarter hours or a second major (strongly recommended).

4. Electives to complete 180 quarter hours of academic credit.

Mexican American Studies Minor

MAS	101	Introduction to Mexican American Studies	4
MAS	302	Social Stratification in the Mexican American Southwest	3
MAS	304	Bicultural Systems	3
MAS	306	History of the Chicano in the Southwest	3
MAS	414	Mexican American Philosophical Thought	3
		Electives to be selected with the approval of the student's minor adviser	<u>11</u>
			27

In addition to these 27 hours, students majoring in the teaching professions are required to take EDCI 551, Problems in Teaching Minority Groups, 3 hours credit, and to have Student Field Experience with Mexican American students.

Middle School Education

The Middle School Education major is a program leading to the B.A. degree for career teachers at middle school levels (usually a subset of grades 5-8). Students selecting this program will be assigned to a Middle School Advisory Group of about 12 students with an adviser. The Advisory Group will serve to help the student in planning the total program, arranging for early field experiences, providing for alternative and additional studies, promoting continuity in the total program, and giving some guidance during the first year of employment.

The Middle School Council establishes policy for this major and approves the proposed academic components of the middle school major for each student in the program.

Students pursuing this major must plan their programs to meet the following requirements:

1. Meet all General Education requirements as specified earlier in this catalog.
2. Complete a Middle School Academic Major under one of the following plans:
Plan I. One major field with supporting field.
Plan II. Two related fields.
Plan III. A broad, interdisciplinary field.

The Middle School Academic Major must be approved by the student's adviser and by the Middle School Council and must contain a minimum of 60 quarter hours.

3. Complete the following Professional Education Program:

Course No.	Course Title	Hours	Credit
EDCI	101	Orientation to Education	2
EDCI	102	Orientation to Middle Schools	2
EDSE	401	Handicapped Students in Regular Classrooms	3
EDSE	403	Working with Handicapped Students in the Secondary School	3
EDRD	310	Improvement of Instruction in Reading in the Elementary School	3
PSY	349	Educational Psychology	5
		Electives in Psychology	4
EDF	365	Basic Concepts in Education	5
EDF	485	Philosophy of Education	3
EDRD	420	Reading in Secondary Schools	3
EDFE	270	School Aide	2 (or more)
EDFE	380	Simulation Experiences in the Human Relations of Teaching	3
EDFE	362	Introduction to Teaching (Middle School)	2
EDCI	341	Methods of Teaching (Middle School)	3
EDFE	460	Supervised Teaching (Middle School)	<u>18</u>
			61

Music Majors

Administered by the School of Music

Students who are interested in majoring in music are not automatically accepted as music majors even though they meet the general admission require-

ments of the university. Formal applications for admission to the School of Music must be made through the office of the Dean of the School of Music. Auditions and interviews are part of the admission requirements. Admission forms are available upon request. Admission may be limited by availability of staffing and facilities.

Bachelor of Arts (non-teaching) Degree

Music Major
Music Minor

Bachelor of Music (non-teaching) Degree

Emphasis in Instrumental, Voice or Piano performance or Theory and Composition.

A combined program with the Bachelor of Music Education Degree and the Bachelor of Music Degree in the performance or theory and composition areas.

Bachelor of Music Education (teaching) Degree

Music Education (Instrumental or Vocal, Piano and General Emphasis).
Music Education and Music (combined with the Bachelor of Music Degree).

Bachelor of Arts Degree

1. Complete the General Education requirement of 60 quarter hours.
2. A 51-hour major in music as outlined below:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>
MUS	100	Recitals, Concerts, Productions0
MUS	101, 102, 103	Sight Singing & Theory I, II, III12
*MUS	141, 142, 143	Music Literature & Styles I, II, III6
MUS	201, 202, 203	Advanced Sight Singing & Theory I, II, III9
MUS	240, 241, 242	History of Music I, II, III9
MUS	301	Counterpoint3
MUS	302	Homophonic Forms3
		Electives in Music9
		<u>51</u>

*May be used as part of the 60 hours of required General Education.

3. One academic minor of 27 quarter hours outside the School of Music.
4. Two years of a Foreign Language.
5. Two quarter hours of applied music credit must be earned each quarter in residence in the student's major performance area. One quarter hour of credit must be earned each quarter in residence in a major musical organization (Concert Band, Varsity Band, Symphonic Wind Band, Laboratory Orchestra, Chamber Orchestra, University Symphony Orchestra, Mixed Concert Choir, University Singers, University Chorus, Women's Concert Choir or Varsity Men's Glee Club).
6. Meet all music performance and recital attendance requirements as listed in the respective departmental Applied Music and Performance Handbook.
7. Electives to meet requirements for graduation.

Music Minor (Liberal Arts)

MUS	101, 102, 103	Sight Singing & Theory I, II, III12
*MUS	141, 142, 143	Music Literature & Styles I, II, III6
		Electives15
		<u>33</u>

All students taking the music minor must complete the above core courses, either by taking the courses or challenging the examination.

In addition, the student may elect courses in music history, theory, literature, performance study, or ensemble participation to complete a 33 hour requirement (a maximum of 6 hours in performance and 3 hours in ensemble participation may apply towards meeting the elective requirements).

*May be used as part of the 60 hours required General Education.

Bachelor of Music Degree

Students pursuing the Bachelor of Music degree must plan their programs to meet the following requirements:

1. Complete 42 hours of General Education as specified earlier in this catalog for non-teaching degree programs.
2. Complete the required courses listed below for the Instrumental, Voice, Piano or Theory and Composition emphasis.
3. Meet all recital attendance requirements as listed in the respective departmental Applied Music and Performance Handbook.
4. Four credit hours of individual instruction shall be carried on during each quarter of residence and culminate in a senior recital or the performance of compositions by the candidate for the degree. See appropriate departmental Handbook.
5. Electives to meet requirements for graduation.
6. Students pursuing the Vocal Emphasis are required to have two years of a Foreign Language.

Instrumental Emphasis (Performance)

MUS	100	Recitals, Concerts, Productions	0
MUS	101, 102, 103	Sight Singing & Theory I, II, III	12
MUS	141, 142, 143	Music Literature & Styles I, II, III	6
*MUS	160,161,162	Beginning Class Piano I, II, III	3
		<i>and/or</i>	
*MUS	260, 261, 262	Intermediate Class Piano I, II, III	3
		<i>or</i>	
*MUS	271,471	Individual Performance in Piano	12
MUS	201, 202, 203	Advanced Sight Singing & Theory I, II, III	9
MUS	240, 241, 242	History of Music I, II, III	9
MUS	301	Counterpoint	3
MUS	302	Homophonic Forms	3
MUS	303	Instrumentation	3
MUS	320, 321, 322	Instrumental Techniques and Conducting I, II, III	3
MUS	402	Polyphonic Forms	3
MUS	403	Acoustics of Music	3
**MUS	428	Orchestral Excerpts Class (Brass)	3
MUS	423	Practicum in Band Conducting and Performance	3
		<i>or</i>	
MUS	425	Practicum in Orchestral Conducting and Performance	3
MUS	449	History of Musical Instruments	3
		Applied Music	48
		Major Musical Organizations	12
		Small Ensembles	12

*Any or all of the piano requirements may be waived by a proficiency examination.

**Required of all brass majors.

Voice Emphasis (Performance)

MUS	100	Recitals, Concerts, Productions	0
MUS	101, 102, 103	Sight Singing & Theory I, II, III	12
MUS	141, 142, 143	Music Literature & Styles I, II, III	6
*MUS	160, 161, 162	Beginning Class Piano, I, II, III	3
*MUS	260, 261, 262	Intermediate Class Piano I, II, III	3
		<i>and/or</i>	
*MUS	271,471	Individual Performance in Piano	12
MUS	285, 485	Opera Workshop	6
MUS	201, 202, 203	Advanced Sight Singing & Theory I, II, III	9
MUS	240, 241, 242	History of Music I, II, III	9
MUS	301	Counterpoint	3
MUS	302	Homophonic Forms	3
MUS	303	Instrumentation	3

MUS	323, 324	Choral Techniques and Conducting I, II	2
		<i>or</i>	
MUS	424	Practicum in Choral Conducting and Performance	3
MUS	402	Polyphonic Forms	3
MUS	409	Stage and Opera Techniques	1-3
MUS	441	Choral Literature	3
MUS	442	Choral Literature from 1750	3
MUS	445	Vocal Repertoire: German Art Song	2
MUS	446	Vocal Repertoire: French Art Song	2
MUS	447	Vocal Repertoire: Italian Song	2
		Applied Music	48
		**Major Musical Organizations	12
		Foreign Languages	27-30
		Electives in Music	12-15

*Six quarters of piano study are required. The level of study will be determined by audition and the availability of staff.

**At least one hour each quarter in residence.

Piano Emphasis (Performance)

MUS	100	Recitals, Concerts, Productions	0
MUS	101, 102, 103	Sight Singing & Theory I, II, III	12
MUS	234, 434	piano Ensemble	3
MUS	141, 142, 143	Music Literature & Styles I, II, III	6
MUS	270, 470	Individual Performance in Voice	6
MUS	271, 471	Individual Performance in Piano	48
MUS	201, 202, 203	Advanced Sight Singing & Theory I, II, III	9
MUS	240, 241, 242	History of Music I, II, III	9
MUS	301	Counterpoint	3
MUS	302	Homophonic Forms	3
MUS	323, 324	Choral Techniques and Conducting I, II	2
MUS	350, 351, 352	Traditions in Piano Literature I, II, III	6
MUS	401	Improvisation	3
MUS	402	Polyphonic Forms	3
MUS	403	Acoustics of Music	3
MUS	404	Piano Accompanying	2
*MUS	415, 416, 417	Piano Literature I, II, III,	
	418, 419, 420	VI, V, VI	12
MUS	424	Practicum in Choral Conducting and Performance	3
MUS	461, 462, 463	Principles of Piano Teaching I, II, III	6
		Major Musical Organizations	12

*At least three courses of Piano Literature are required. Open to all students at the Sophomore level or above.

Theory and Composition Emphasis

MUS	100	Recitals, Concerts, Productions	0
MUS	101, 102, 103	Sight Singing & Theory I, II, III	12
MUS	141, 142, 143	Music Literature & Styles I, II, III	6
*MUS	160, 161, 162	Beginning Class Piano I, II, III	3
		<i>or</i>	
*MUS	260, 261, 262	Intermediate Class Piano I, II, III	3
		<i>or</i>	
*MUS	271, 471	Individual Performance in Piano	38
MUS	163, 164, 165	Beginning String Instruction I, II, III	3
MUS	201, 202, 203	Advanced Sight Singing & Theory I, II, III	9
MUS	240, 241, 242	History of Music I, II, III	9
MUS	301	Counterpoint	3
MUS	302	Homophonic Forms	3
MUS	303	Instrumentation	3
MUS	320, 321, 322	Instrumental Techniques and Conducting I, II, III	3
MUS	323, 324	Choral Techniques and Conducting I, II	2
MUS	340	Survey of History and Literature of Jazz	2
MUS	360	Voice Class	1

MUS	361	Flute and Saxophone Class	.....1
MUS	362	Clarinet Class	.....1
MUS	363	Double Reed Class	.....1
MUS	364	Trumpet and French Horn Class	.....1
MUS	365	Low Brass Class	.....1
MUS	366	Percussion Class	.....1
MUS	400	Pedagogy of Music Theory	.....3
MUS	401	Improvisation	.....2
MUS	402	Polyphonic Forms	.....3
MUS	403	Acoustics of Music	.....3
MUS	405	Sixteenth Century Counterpoint	.....3
MUS	422	Individual Study in Form and Analysis	.....3
**MUS	277, 477	Individual Instruction in Composition	.....36
		Major Musical Organization	.....12

*Nine quarters of piano study are required. The level of study will be determined by audition and the availability of staff.

**Individual Instruction in Composition is seldom rewarding for students who do not have a strong background in music theory. Students wishing to enter this program in the freshman year must submit to the Department of Theory and Composition evidence of prior training in the area. This evidence should consist of compositions, high school credits earned in music theory, etc. A personal interview with a member of the Theory and Composition staff should be arranged if at all possible.

Students who are not qualified to enter this program in the freshman year but hope to do so in the sophomore year should seek to be admitted to the School of Music as a major in a performing area for the freshman year.

Bachelor of Music Education with Teacher Preparation

Students pursuing the Bachelor of Music Education for the purpose of teaching must plan their program to meet the following requirements:

1. Complete the General Education requirements of 60 quarter hours, including six hours of MUS 141, 142, 143, Music Literature and Styles I, II, III.
2. Professional Teacher Education, 31 hours as specified in the Professional Teacher Education section of this catalog.
3. The required courses listed for the Instrumental Emphasis or the Vocal, Piano and General Emphasis.
4. Two hours of applied music credits are to be earned each quarter of residence in the student's major performance area and one hour of credit to be earned each quarter in residence in a major musical organization (Concert Band, Varsity Band, Symphonic Wind Band, Mixed Concert Choir, University Chorus, Women's Concert Choir, Varsity Men's Glee Club, University Symphony Orchestra, Chamber Orchestra, or Laboratory Orchestra, University Singers).
5. Meet all music performance and recital attendance requirements as listed in the respective departmental Applied Music and Performance Handbook.
6. Electives to meet requirements for graduation.
7. Meet requirements for Admission to the Professional Teacher Education Program.
8. Marching Band is required during Fall Quarter of all wind and percussion students on campus in the instrumental music education program who plan to teach in the secondary schools and wish certification.

Instrumental Emphasis

MUS	100	Recitals, Concerts, Productions	.....0
MUS	101, 102, 103	Sight Singing & Theory I, II, III	.....12
*MUS	141, 142, 143	Music Literature & Styles I, II, III	.....6
MUS	160, 161, 162	Beginning Class Piano I, II, III	
		or	
MUS	260, 261, 262	Intermediate Class Piano I, II, III	
		or	
		Electives in Music (upon evidence of piano proficiency)	.....6

MUS	163, 164, 165	Beginning Strings I, II, III	3
MUS	201, 202, 203	Advanced Sight Singing & Theory I, II, III	9
MUS	210	Introduction to Music Education	2
MUS	240, 241, 242	History of Music I, II, III	9
MUS	301	Counterpoint	3
MUS	302	Homophonic Forms	3
MUS	303	Instrumentation	3
MUS	310	Teaching Elementary General Music (PTE)	3
MUS	311	Teaching Middle-Junior High School General Music (PTE)	3
MUS	313	Teaching Instrumental Music (PTE)	3
MUS	320, 321, 322	Instrumental Techniques and Conducting I, II, III	3
MUS	360	Voice Class	1
MUS	361	Flute and Saxophone Class	1
MUS	362	Clarinet Class	1
MUS	363	Double Reed Class	1
MUS	364	Trumpet and French Horn Class	1
MUS	365	Low Brass Class	1
MUS	366	Percussion Class	1
MUS	412	Instrument Repair and Care	2
MUS	443	Instrumental Literature	3
		Applied Music	22
		Major Musical Organization	11
		Music Electives (to be selected from the following)	8
Music Electives			
MUS	206	Music Methods and Materials for Elementary Teachers (PTE)	2
MUS	316	Teaching Music Listening	3
MUS	317	Children's Song Literature	3
MUS	318	Music Activities for Classroom Teachers	3
MUS	325	Choral Conducting and Literature for the High School	1
MUS	340	Survey of History and Literature of Jazz	2
MUS	341	Music and the Related Arts	2
MUS	401	Improvisation	2
MUS	408	Introduction to String Pedagogy	2
MUS	410	Introduction to Vocal Pedagogy	2
MUS	411	Methods and Materials for Class Instrumental Instruction	3
MUS	414	Music for Children with Learning Disabilities	3
MUS	444	Marching Band Techniques	2
MUS	449	History of Musical Instruments	3

*May be used as part of the 60 hours of required General Education.

Vocal, Piano, and General Emphasis

MUS	100	Recitals, Concerts, Productions	0
MUS	101, 102, 103	Sight Singing & Theory I, II, III	12
*MUS	141, 142, 143	Music Literature & Styles I, II, III	6
MUS	160, 161, 162	Beginning Class Piano I, II, III	3
		<i>and/or</i>	
MUS	260, 261, 262	Intermediate Class Piano I, II, III	3
		<i>or</i>	
MUS	271, 471	Individual Performance in Piano (For Voice Majors)	12
		<i>or</i>	
MUS	269, 469	Individual Performance in Voice (For Piano Majors)	6
MUS	201, 202, 203	Advanced Sight Singing & Theory I, II, III	9
MUS	210	Introduction to Music Education	2
MUS	240, 241, 242	History of Music I, II, III	9
MUS	301	Counterpoint	3
MUS	302	Homophonic Forms	3

104 / DEGREE PROGRAMS

MUS	303	Instrumentation	3
MUS	310	Teaching Elementary General Music (PTE)	3
MUS	311	Teaching Middle-Junior High School General Music (PTE)	3
MUS	313	Teaching Instrumental Music (PTE)	3
MUS	323, 324	Choral Techniques and Conducting I, II	1
MUS	325	Choral Conducting and Literature for the High School	1
**MUS	367	Brass and Percussion Class	1
**MUS	368	String Class	1
**MUS	358	Woodwind Class	1
		Applied Music	22
		Major Musical Organization	11
		Music Electives (to be selected from courses below)	16
Music Electives			
***MUS	285, 485	Opera Workshop	1-3
MUS	206	Music Methods and Materials for Elementary Teachers	2
MUS	316	Teaching Music Listening	3
MUS	317	Children's Song Literature	3
MUS	318	Music Activities for Classroom Teachers	3
MUS	340	Survey of History and Literature or Jazz	2
MUS	341	Music and the Related Arts	2
MUS	401	Improvisation	2
MUS	404	Piano Accompanying	2
MUS	408	Introduction to String Pedagogy	2
MUS	409	Stage and Opera Techniques	1-3
MUS	410	Introduction to Vocal Pedagogy	2
MUS	414	Music for Children with Learning Disabilities	3
MUS	437, 438, 439	Piano Literature IV, V, VI	6
MUS	441	Choral Literature	3
MUS	442	Choral Literature from 1750	3
****MUS	445	Vocal Repertoire: German Art Song	2
****MUS	446	Vocal Repertoire: French Art Song	2
****MUS	447	Vocal Repertoire: Italian Song	2
MUS	461, 462, 463	Principles of Piano Teaching I, II, III	6

*May be used as part of the 60 hours of required General Education.

**Individual Performance may be substituted.

***Maximum of ten hours applicable toward the sixteen required hours of electives.

****Requires a proficiency level II in piano or voice as a prerequisite.

Admission to the Professional Teacher Education Program.

In addition to meeting the general requirements for formal admission to the Professional Teacher Education Program at close of the sophomore year the student majoring in music must:

1. Demonstrate an acceptable level of performance on his major instrument or voice. Such ability will be evaluated by a jury examination conducted by the music faculty, and through the scheduled performances of the student in the weekly recital series.

2. Pass a proficiency examination in functional piano in which he will demonstrate his ability to play, at sight, piano accompaniments suitable for community and classroom singing.

3. Demonstrate to a jury of the music faculty his ability to read music vocally at sight with the use of solfège.

4. Show acceptable aptitude for music study as demonstrated by a 2.3 GPA in the required freshman and sophomore music courses.

5. Demonstrate to the satisfaction of a reviewing music faculty committee, professional promise as a teacher.

6. Submit transcript with PTE Admission Application to the School of Music Office.
7. Meet all music performance and recital attendance requirements as listed in the respective departmental Applied Music and Performance Handbook.

Bachelor of Music Education and Bachelor of Music Degrees

Combined Degrees Program (requires a minimum of 225 credit hours)

Admission to candidacy for the combined Bachelor of Music Education and Bachelor of Music degrees is based upon the recommendation of a School of Music faculty reviewing committee. The student who desires to complete the combined degrees must demonstrate outstanding musical talent. Application for admission to the combined degree program must take place prior to the close of the student's second year in the university.

Requirements:

1. Complete the requirements for the B.M.E. degree in Music Education.
2. Complete the performance and small ensemble requirements in the B.M. degree.
3. Present a complete graduation recital.
4. Meet all music performance and recital attendance requirements as listed in the respective departmental Applied Music and Performance Handbook.
5. Complete the requirements listed below in an emphasis area. (see requirements in the Bachelor of Music Degree section.)

Instrumental Emphasis

1. Complete a minimum of an additional 26 hours for a total of 48 hours in Individual Performance and 14 additional hours in large and small ensembles.

2. Complete the following courses:

MUS	100	Recitals, Concerts, Productions	0
MUS	402	Polyphonic Forms	3
MUS	403	Acoustics of Music	3
MUS	423	Practicum in Band Conducting and Performance	
		<i>or</i>	
MUS	425	Practicum in Orchestral Conducting and Performance	3
MUS	449	History of Musical Instruments	3

Voice Emphasis

1. Complete a minimum of an additional 26 hours for a total of 48 hours in Individual Performance in Voice.

2. Complete 27 to 30 hours of a Foreign Language.

3. Complete the following courses:

MUS	100	Recitals, Concerts, Production	0
MUS	185, 285, 385, 485	Opera Workshop	1-3
MUS	316	Teaching Music Listening	3
MUS	402	Polyphonic Forms	3
MUS	424	Practicum in Choral Conducting and Performance	3
MUS	441	Choral Literature to 1750	3
MUS	442	Choral Literature from 1750	3
MUS	445	Vocal Repertoire: German Art Song	2
MUS	446	Vocal Repertoire: French Art Song	2
MUS	447	Vocal Repertoire: Italian Song	2

Theory and Composition Emphasis

Students seeking the combined degrees with Theory and Composition as the areas of emphasis for the Bachelor of Music program must have an area of emphasis in performance to satisfy the requirements for the Bachelor of Music Education degree. Theory and Composition majors must have a total of 18 hours of credit in

piano, all or a portion of which will have been earned in satisfying the requirements for the Bachelor of Music Education program. The candidate for the combined degrees must also complete the following courses:

(If there appears to be duplication between the B.M.E. and the B.M. degrees see your adviser in Theory and Composition.)

MUS	320, 321, 322	Instrumental Techniques and Conducting I, II, III .....	.3
MUS	323, 324	Choral Techniques & Conducting I, II .....	.2
MUS	340	Survey of History & Literature of Jazz .....	.2
MUS	361	Flute & Saxophone Class .....	.1
MUS	362	Clarinet Class .....	.1
MUS	363	Double Reed Class .....	.1
MUS	364	Trumpet & French Horn Class .....	.1
MUS	365	Low Brass Class .....	.1
MUS	366	Percussion Class .....	.1
MUS	400	Pedagogy of Music Theory .....	.3
MUS	401	Improvisation .....	.2
MUS	402	Polyphonic Forms .....	.3
MUS	403	Acoustics of Music .....	.3
MUS	405	16th Century Counterpoint .....	.3
MUS	422	Individual Study in Form & Analysis .....	.3
*MUS	277, 477	Individual Instruction in Composition .....	.36

*Individual Instruction in Composition is seldom rewarding for students who do not have a strong background in music theory. Students wishing to enter this program in the freshman year must submit to the Department of Theory and Composition evidence of prior training in the area. This evidence should consist of compositions, high school credits earned in theory, text books used, etc. A personal interview with a member of the Theory and Composition staff should be arranged if at all possible.

Students who are not qualified to enter this program in the freshman year but hope to do so in the sophomore year should seek to be admitted to the School of Music as a major in a performing area for the freshman year.

Recitals, Concerts and Productions

All undergraduate students must enroll in MUS 100, Recitals, Concerts, and Productions, each quarter in residence as part of their course programs. For specific requirements, see the respective departmental School of Music *Applied Music and Performance Handbook*.

Individual Performance

The music major must demonstrate continuous growth in his ability to perform on his major instrument. Each student will be expected to appear frequently as a soloist in the weekly student recital series. During the senior year he will be presented in joint recital with other graduating seniors. Such proficiency in performance requires continuous study of the major instrument, or voice, under the tutorage of a private teacher.

Credit for all individual music instruction will be entered in the student's registration under the title and course number appearing below:

In each course-level listed, for Individual Performance in Applied Music, there shall be three levels of evaluation of a student's performance, depending upon the degree being sought: 1. Music Performance Major (B.M.), 2. Music Education Major (B.M.E.), or 3. the Non-music Major.

Refer to the "Handbook" for specific references.

200 series -- Introductory work in the fundamentals of the chosen performance medium -- technical studies and repertoire will be selected according to the student's need. FOR FRESHMAN AND SOPHOMORES.

400 series -- Continuation of technical studies for further development of performance competency. Repertoire from the standard literature will be selected. Voice majors will begin to draw from Italian, German and French sources in the art song, opera and oratorio. FOR JUNIORS AND SENIORS.

- 269, 469. INDIVIDUAL PERFORMANCE IN VOICE FOR THOSE WITH NON-VOICE EMPHASIS. *Two hours credit.*
- *270, 470. INDIVIDUAL PERFORMANCE IN VOICE. *Two-four hours credit.*
- *271, 471. INDIVIDUAL PERFORMANCE IN PIANO. *Two-four hours credit.*
- *272, 472. INDIVIDUAL PERFORMANCE IN ORGAN. *Two-four hours credit.*
- *273, 473. INDIVIDUAL PERFORMANCE IN STRINGS. *Two-four hours credit.*
- *274, 474. INDIVIDUAL PERFORMANCE IN WOODWINDS. *Two-four hours credit.*
- *275, 475. INDIVIDUAL PERFORMANCE IN BRASS. *Two-four hours credit.*
- *276, 476. INDIVIDUAL PERFORMANCE IN PERCUSSION. *Two-four hours credit.*
- *277, 477. INDIVIDUAL INSTRUCTION IN COMPOSITION. *Two-four hours credit.*
- *278, 478. INDIVIDUAL PERFORMANCE IN HARP. *Two-four hours credit.*
- *279, 479. INDIVIDUAL PERFORMANCE IN GUITAR. *Two-four hours credit.*

*May be used by non-music majors as part of the 60 hours of required General Education.

Performance Organizations

The music major must participate each quarter in a major musical organization in which his instrument normally belongs -- band, orchestra, or choir. Piano and organ majors may select either a vocal or an instrumental organization for a minimum of eight hours. The remaining three quarter hours will be in a piano ensemble.

Credit for all music performance organizations will be entered on the student's registration under the title and course number appearing below:

200 series -- Freshman and Sophomores

400 series -- Juniors and Seniors

- *230, 430. STRING ENSEMBLE. *One hour credit.*
- *231, 431. BRASS ENSEMBLE. *One hour credit.*
- *232, 432. WOODWIND ENSEMBLE. *One hour credit.*
- *233, 433. PERCUSSION ENSEMBLE. *One hour credit.*
- *234, 434. PIANO ENSEMBLE. *One hour credit.*
- *235, 435. GUITAR ENSEMBLE. *One hour credit.*
- **280, 480. MIXED CONCERT CHOIR. *One hour credit.*
- **281, 481. UNIVERSITY CHORUS. *One hour credit.*
- **282, 482. UNIVERSITY SINGERS. *One hour credit.*
- **283, 483. WOMEN'S CONCERT CHOIR. *One hour credit.*
- **284, 484. VARSITY MEN'S GLEE CLUB. *One hour credit.*
- *285, 485. OPERA WORKSHOP. *One-three hours credit.*
- *286, 486. CHORUS AND ORCHESTRA WORKSHOP. *One hour credit.*
- **289, 489. LABORATORY ORCHESTRA. *One hour credit.*
- *288, 488. OPERA ORCHESTRA. *One hour credit.*
- **290, 490. SYMPHONIC WIND BAND. *One hour credit.*
- **291, 491. CONCERT BAND. *One hour credit.*
- *292, 492. MARCHING BAND. *One hour credit.*
- **293, 493. VARSITY BAND. *One hour credit.*
- *294, 494. JAZZ ENSEMBLE. *One hour credit.*

- *295, 495. UNIVERSITY BRASS CHOIR. *One hour credit.*
 **296, 496. UNIVERSITY SYMPHONY ORCHESTRA. *One hour credit.*
 **297, 497. CHAMBER ORCHESTRA. *One hour credit.*

*May be used by non-music majors as part of the 60 hours of required General Education.

**Major Musical performance organizations.

HONORS: The School of Music participates in the Honors Program. See page 23.

Musical Theatre Major (Non-Teaching)

Administered by the School of Music and Department of Theatre Arts

The program leading to the B.A. degree with a major in Musical Theatre is designed to prepare students for work in musical comedy. Students who are interested in majoring in Musical Theatre are not automatically accepted into the program even though they meet the general admission requirements of the University. Auditions and interviews are part of the admission requirements for acceptance into the program.

Formal application for admission into the Musical Theatre major must be made in writing to the office of the Dean of the School of Music or to the office of the Chairman of the Department of Theatre Arts.

Students pursuing the B.A. degree with a major in Musical Theatre must plan their programs to meet the following requirements:

1. Complete 60 hours of General Education as specified earlier in this catalog.
2. Meet all recital and production attendance requirements as specified for the program (see your adviser).

3. The following courses in the major:

Course No.	Course Title	Hours	Credit
MUS	100	Recitals, Concerts, Productions	0
MUS	101, 102, 103	Sight Singing & Theory I, II, III	12
*MUS	141, 142, 143	Music Literature & Styles I, II, III	6
THEA	160	Acting I (Internals)	3
MUS	269, 469	Individual Performance in Voice for those with Non-Voice Emphasis	24
**MUS	271	Individual Performance in Piano	12
MUS	285, 485	Opera Workshop	12
THEA	260	Acting II (Externals)	3
THEA	261	Stage Make-up	2
THEA	270, 271, 272	Stage Movement I, II, III	3
THEA	370, 371, 372	Rhythmic & Dramatic Movement I, II, III	3
MUS	409	Stage & Opera Techniques	2
THEA	465, 466, 467	Musical Theatre Repertory I, II, III	6
MUS	468	Individual Coaching in Musical Theatre Repertory	6
		(To be taken concurrently with THEA 465, 466, 467)	
THEA		Individual Performance in Theatre (in technical theatre work only)	4
MUS		Music Performance (Vocal Ensembles)	12

*May be used as part of the 60 hours of General Education, thus allowing for six additional hours of electives.

**A competency examination may be taken and, if passed, the hour requirements waived, thus allowing for six additional hours of electives.

Students contemplating graduate work should prepare themselves to meet the requirements of graduate study in music or theatre arts. This would involve preparing themselves in the disciplinary competencies as well as research re-

quirements to enter graduate school. At the present, there is little graduate opportunity in musical theatre. See your adviser.

4. Electives sufficient to complete the requirements for the Bachelor of Arts degree.

Nursing Major Administered by the School of Nursing

Students pursuing the B.S. degree with a major in Nursing must plan their programs to fulfill the following requirements:

1. Complete the General Education requirements of 60 quarter hours. Three of the required pre-nursing science courses will be accepted as meeting the General Education requirements in the area of sciences.

2. Required support courses:

Course No.	Course Title	Hours	Credit
CHEM 108	General Chemistry	5	.5
CHEM 109	General Chemistry -- Organic	5	.5
CHEM 281	Biochemistry	5	.5
ZOO 105	Vertebrate Zoology	4	.4
ZOO 121	Mammalian Anatomy	4	.4
ZOO 250	Physiology	5	.5
ZOO 351	Medical Pharmacology	4	.4
BIO 261	Microbiology	4	.4
PSY 120	General Psychology	3	.3
SOC 100	Principles of Sociology	5	.5
ANT 100	General Anthropology	5	.5
HEC 251	Nutrition I	3	.3
HEC 354	Diet Therapy	1	.1
HEC 355	Diet Therapy	1	.1
HEC 356	Diet Therapy	1	.1

3. Nursing Courses:

NURS	200, 201, 202	Techniques and Skills in Nursing Practice I, II, III	6
NURS	205, 210, 215, 220, 225	Conceptual Foundations for Nursing Practice I, II, III, IV, V	10
NURS	300, 301, 302	Process of Professional Nursing I, II, III	15
NURS	305, 310, 315	Selected Concepts and Theories in Professional Nursing I, II, III	6
NURS	350	Psychopathological Concepts in Nursing	2
NURS	360	Pathophysiological Concepts in Nursing	4
NURS	330, 335, 340	Professional Nursing in Speciality Areas I, II, III	9
NURS	400, 401	Advanced Professional Nursing Process I and II	10
NURS	405, 410, 415	Advanced Concepts and Theories in Professional Nursing I, II, III	6
NURS	422	Individual Studies in Nursing	1-4
NURS	430, 435	Professional Nursing in Complex Specialty Areas I, II	6
NURS	450	Special Emphasis in Selected Professional Nursing Roles	6-12

4. Electives sufficient to complete requirements for graduation.

Policy for Admissions of Students to the Nursing Major

Pre-Clinical Program: Students who are interested in nursing are not automatically accepted as nursing majors even though they meet the general admission requirements of the University. Formal applications, both to the University and the nursing major are obtained from and made to the University of Northern Colorado Office of Admissions. Admission as a nursing major may be limited by availability of resources.

It is highly recommended that students planning for a career in nursing include chemistry, physics, biology, and math in their high school program. Proficiency in

basic mathematics is essential to succeed in the nursing program.

In addition to the general health requirements, applicants to the nursing program must bring the following immunizations up to date before entering the University: adult diphtheria-tetanus and polio.

The designation of nursing major does not necessarily assure an appointment in the School of Nursing at the Sophomore year (Clinical Level I). Students enrolled in the pre-clinical program will receive academic advising from members of the School of Nursing faculty.

Clinical Program: A separate admission and acceptance process is required for the student to enter clinical nursing courses at the beginning of the sophomore year. Forms for applying to the clinical program and information regarding application procedure may be obtained at the School of Nursing. The following factors may guide the Student Affairs Committee of the School of Nursing in selecting candidates for admission to the clinical program:

1. Cumulative grade point average earned
 - a. at the University of Northern Colorado
 - b. or at a previous institution in the case of a transfer student.
2. Grades earned below a C in all prior studies with emphasis on grades in the supporting courses.
3. Results of the health examination required for admission to the clinical nursing program. (See Health Policies for nursing majors on page 116 of this catalog.)
4. Recommendation resulting from an interview based on evidence of personal and social qualities appropriate for professional nursing practice (intellectual curiosity, self-direction, dependability, and ability to work well with others).
5. Scores on selected tests measuring such factors as: aptitude; cognitive, affective, and psychomotor skills; and achievement. (Information on testing requirements may be obtained from the School of Nursing at the time of application.)

The number of students admitted to the clinical nursing program is calculated on the available resources. Available resources may limit possibilities for readmission to the program for those students who withdraw from the program for any reason.

Registered Nurses Pursuing a Degree. Graduates of state approved diploma or associate degree programs who are currently licensed to practice as registered nurses are eligible for admission to the nursing program fall, winter, and spring quarters. Registered nurse students may challenge selected nursing courses after admission to the University and the School of Nursing. Evaluation occurs on two levels, content and practice. The College Level Examination Program (CLEP) offers the opportunity to challenge certain general education courses (see University Policy). Curriculum objectives are the same for the registered nurse student and the generic student of nursing.

Promotion. A grade of C is a minimum requirement for progression in the nursing courses. The School of Nursing faculty reserves the right to place on probation or to require the withdrawal from the nursing program any student who, in their professional judgment, fails to satisfy the requirements of scholarship, health status, and/or performance.

Graduation. The degree of Bachelor of Science in nursing will be granted by the University of Northern Colorado upon the recommendation of the faculty of the School of Nursing for those who have successfully completed the prescribed curriculum with an average of C or above.

William R. Ross Award. In 1966 the School of Nursing faculty established the William R. Ross Achievement Award in honor of retiring president, Dr. William R. Ross. This award recognizes each year a senior nursing student for outstanding scholarship, leadership, and service.

HONORS. See page 23.

Health Policies for Nursing Majors. Within the academic year preceding the first clinical course, a conference with a nurse in the Student Health Service is required for an assessment of the student's health status. If health concerns exist, further diagnostic studies are required.

In addition to the Nursing Conference the following are required:

1. Immunizations: adult tetanus-diphtheria, and polio. The student's previous immunization record should be checked. A complete series, a booster or no further immunizations may be indicated at this time.

2. Tests: a tuberculin skin test, a large chest x-ray*, VDRL, and a rubella titer. If the rubella titer is negative, the student will be advised to consult with a physician to determine whether immunization for rubella is indicated.

*The University does not own an x-ray machine. Chest x-rays will be at the student's expense.

Additional Expenses for Nursing Majors. In addition to the regular tuition and fees, nursing majors have the following expenses:

<i>Year</i>	<i>Quarter</i>	<i>Item</i>	<i>Amount*</i>
Sophomore	Fall	Uniforms and caps**	\$65.00-75.00
		Chest x-ray	10.00
		White shoes	15.00-20.00
		Name pin	.50
		Watch with second hand	8.00-20.00
Junior	Fall	Stethoscope	6.00-25.00
Senior	Spring	School pin	35.00
		Chest x-ray	10.00

*Costs listed above are approximate and are subject to change.

**Uniform orders are taken toward end of freshman year.

Assignments for Clinical Experience. Nursing students have opportunities for a variety of clinical experiences with health agencies. . . hospitals, long term care, industry, and community. . . in northeastern Colorado. Students work closely with agency personnel as well as with individually assigned faculty members. Assignments are made to the agencies according to available space. All assignments require transportation and may necessitate moving from the Greeley area.

Outdoor Education - Environmental Education Undergraduate Minor - Outdoor Education

The purpose of this program is to prepare teachers and leaders in the areas of Outdoor Education, Environmental Education and Outdoor Leisure Education. Numerous opportunities are provided for students to actively participate in outdoor learning experiences conducted beyond the classroom. Undergraduate students are provided an opportunity to participate in Outdoor Laboratory School Programs conducted in the University Laboratory School, the Special Education Laboratory School and in public school outdoor programs. Course offerings, which have significance for this broad area, are offered in many departments of the University. An opportunity to participate in adventure education programs is provided. Students interested in Outdoor Education should pursue the following program under the advisement of the Coordinator of Outdoor Education.

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
OED 250	Outdoor Education and Environmental Awareness	3	3
OED 350	Education for Leisure Through Outdoor Education	4	4
OED 450	Programs in Outdoor Education	3	3
OED 308	Workshop in Outdoor Education	3	3
BIO 401	Conservation of Natural Resources	4	4
ENST 361	Art and the Environment	3	3
GEOG 350	Geography of Colorado	3	3
	<i>or</i>		
GEOG 353	Geography of the Great Plains	2	2
JOUR 496	Opinion Formation	3	3
MUS 315	Music and Recreation	2	2
		<u>28</u>	<u>28</u>

Electives: Selected under advisement with the coordinator of the Outdoor Education Program.

Philosophy Minor**Administered by the Department of Philosophy**

The Department of Philosophy wishes to allow maximum student participation in the selection of his/her minor program. Students minoring in Philosophy will, in consultation with a philosophy faculty, select 30 hours of Philosophy courses best suited to their particular needs.

The following is a suggested guideline:

I. Logic	3
COMM 120, PHIL 340	
II. History of Philosophy	6
PHIL 201, 202, 203, 305, 312	
III. Value Theory	3
PHIL 150, 330, 355	
IV. Systematics	6
PHIL 315, 360, 370, 415, 430, 440	
V. Electives	<u>12</u>
	30

Philosophy minors intent upon graduate school in Philosophy must consult with Philosophy faculty.

Physical Education Majors**Physical Education (K-12)**

Margaret E. Everett, Co-Chairperson

George H. Sage, Co-Chairperson

Students pursuing the B.A. degree with a teaching major in Physical Education must plan their programs to fulfill the following requirements:

1. Complete the General Education requirements of 60 quarter hours.

2. Students must complete a *minimum of one course* from each of the following areas. Eleven additional courses must be taken from any area. A student *must obtain competency* in at least 9* of these 14 activities.

A. Team Sports:

HPER 271	Analysis and Movements of Soccer	1
HPER 272	Analysis and Movements of Field Hockey	1
HPER 273	Analysis and Movements of Basketball	2
HPER 274	Analysis and Movements of Volleyball	2
HPER 276	Analysis and Movements of Football or Flag Football	2
HPER 278	Analysis and Movements of Baseball or Softball	2

B. Individual or Dual Sports:

HPER 270	Analysis and Movements of Weight Training and Conditioning	1
HPER 275	Analysis and Movements of Wrestling	2
HPER 277	Analysis and Movements of Track	2
HPER 279	Analysis and Movements of Self Defense	1
HPER 280	Analysis and Movements of Badminton	1
HPER 281	Analysis and Movements of Fencing	1
HPER 282	Analysis and Movements of Bowling	1
HPER 284	Analysis and Movements of Tennis	2
HPER 285	Analysis and Movements of Tumbling and Gymnastics	2
HPER 286	Analysis and Movements of Archery	1
HPER 287	Analysis and Movements of Golf	1

C. Aquatics and Rhythms:

HPER 283	Analysis and Movements of Swimming	2
HPER 138	Senior Life Saving	2
HPER 139	Water Safety Instructors Course	2
HPER 290	Analysis and Movements of Folk and Square Dance	2
HPER 293	Analysis and Movements of Modern Dance	2
HPER 294	Problems in Dance Composition	2

*Competency to include:

- 1) Demonstrable skill
- 2) Analysis of skill
- 3) Knowledge of material

Competency examinations consist of a knowledge and skill proficiency test. Standard criteria for acceptable competency for each motor activity area have been established. Competency in each activity may be met in the following ways:

A. Competency examinations may be taken by students while they are enrolled in the Analysis and Movements class in that motor activity. (NOTE: Passing the Analysis and Movements class for a particular motor activity *does not* automatically mean that the competency requirement for that activity has been passed. The Competency Program and the Analysis and Movements series of classes are independent of each other. The Analysis and Movement classes are designed to help students improve their ability in the various motor activities but some students will not have mastered an activity well enough to pass the Physical Education Department Competency requirement for it by the end of one quarter, although they may receive a passing grade for the class.)

B. Competency examinations may be taken after a student has completed the Analysis and Movements class for that motor activity, if the student does not meet the Competency Requirement while taking the class.

C. When Competency examinations are to be taken in (B) above, the student must arrange the examination at the convenience of the instructors. Normally, competency examinations given in (B) will be given only once per quarter.

3. Students must successfully complete coaching classes in 3 of the following areas: (Recommended to take at least one sport for each season.)

Baseball or Softball	Swimming
Basketball	Tennis
Dance Production	Track and Field
Field Hockey	Volleyball
Football	Wrestling
Gymnastics	

Students must successfully complete officiating classes in at least one of the following sports:

Baseball or Softball	Tennis
Basketball	Track and Field
Football	Volleyball
Gymnastics	Wrestling
Swimming	

4. The following courses are also required in the major:

HPER	200	Introduction to Physical Education	2
HPER	205	Issues in Health	3
HPER	220	Anatomical Kinesiology	3
HPER	221	Mechanical Kinesiology	3
HPER	222	Physiological Kinesiology	3
HPER	223	Psychological Kinesiology	3
HPER	224	Maturational Kinesiology	3
HPER	262	Standard First Aid and Personal Safety	2
HPER	291	Rhythmic Education in the Elementary School	2
HPER	380	Prevention and Care of Sports Injuries	2
HPER	432	Adapted Physical Education	3
HPER	436	Sociological Interpretations in Physical Education and Sport	3
HPER	450	Administration of Physical Education	3
		<i>Methods Block (Recommended to take as a 10-hour block.)</i>	
HPER	235	Teaching Experience Seminar	1
HPER	344	Methods and Observation of Teaching Physical Education in the Elementary School	3
HPER	345	Methods and Observation of Teaching Physical Education in the Secondary School	2
HPER	346	Assistant Teaching	1
HPER	426	Tests and Measurement in Physical Education	3

5. Professional Teacher Education, 36 hours, plus HPER 344, three hours credit, and HPER 345, two hours credit.

6. HPER 344, 345 and at least 10 of the HPER Analysis and Movements classes and 7 Competencies *must be* completed before a student may teach in this field.

7. A minor of 30 quarter hours or more. It is recommended that this be a teaching minor. This minor may be selected outside the School of Health, Physical Education and Recreation, or from within the School of Health, Physical Education, and Recreation, in either Health Education or in Dance Education.

8. Most states require courses in methods and observation of teaching specific subjects for certification. Students majoring in this field are encouraged to take Introduction to Teaching and Methods of Teaching in their minor.

9. Electives sufficient to complete requirements for the Bachelor of Arts degree.

Physical Education Minor (Men and Women – Coaching Emphasis)

Entry to this minor requires athletic participation at the University of Northern Colorado and approval by either Women's or Men's athletic department. *Before enrolling* in courses in this minor, secure applications from the school HPER office.

A minimum of 6 hours elected from the following courses. A student must obtain competency in at least 3 of these activities. (See page 113 for description of competency examinations.)

HPER	270	Analysis and Movements of Weight Training and Conditioning	1
HPER	272	Analysis and Movements of Field Hockey	1
HPER	273	Analysis and Movements of Basketball	2
HPER	274	Analysis and Movements of Volleyball	2
HPER	275	Analysis and Movements of Wrestling	2
HPER	276	Analysis and Movements of Football or Flag Football	2
HPER	277	Analysis and Movements of Track	2
HPER	278	Analysis and Movements of Baseball or Softball	2
HPER	283	Analysis and Movements of Swimming	2
HPER	284	Analysis and Movements of Tennis	2
HPER	285	Analysis and Movements of Tumbling and Gymnastics	2

Students must successfully complete coaching classes in 3 of the following areas: (Recommended to take at least one sport for each season.)

Baseball or Softball	Swimming
Basketball	Tennis
Dance Production	Track and Field
Field Hockey	Volleyball
Football	Wrestling
Gymnastics	

Students must successfully complete officiating classes in at least one of the following sports:

Baseball or Softball	Tennis
Basketball	Track and Field
Football	Volleyball
Gymnastics	Wrestling
Swimming	

And the following:

HPER	220	Anatomical Kinesiology	3
------	-----	------------------------------	---

And two of the following:

HPER	221	Mechanical Kinesiology	3
HPER	222	Physiological Kinesiology	3
HPER	223	Psychological Kinesiology	3

And the following:

HPER	380	Prevention and Care of Sports Injuries	2
HPER	436	Sociological Interpretations in Physical Education and Sport	3
HPER	470	Administration of Athletics	3

Physical Education Minor (Teaching Emphasis -- Secondary Level)

1. Students must complete a *minimum of one course* from each of the following areas. Seven additional courses must be taken from any area. A student *must obtain competency* in at least 7* of these 10 activities.

A. Team Sports:

HPER	271	Analysis and Movements of Soccer	1
HPER	272	Analysis and Movements of Field Hockey	1
HPER	273	Analysis and Movements of Basketball	2
HPER	274	Analysis and Movements of Volleyball	2
HPER	276	Analysis and Movements of Football or Flag Football	2
HPER	278	Analysis and Movements of Baseball or Softball	2

B. Individual or Dual Sports:

HPER	270	Analysis and Movements of Weight Training and Conditioning	1
HPER	275	Analysis and Movements of Wrestling	2
HPER	277	Analysis and Movements of Track	2
HPER	279	Analysis and Movements of Self Defense	1
HPER	280	Analysis and Movements of Badminton	1
HPER	281	Analysis and Movements of Fencing	1
HPER	282	Analysis and Movements of Bowling	1
HPER	284	Analysis and Movements of Tennis	2
HPER	285	Analysis and Movements of Tumbling and Gymnastics	2
HPER	286	Analysis and Movements of Archery	1
HPER	287	Analysis and Movements of Golf	1

C. Aquatics and Rhythms:

HPER	283	Analysis and Movements of Swimming	2
HPER	138	Senior Life Saving	2
HPER	139	Water Safety Instructors Course	2
HPER	290	Analysis and Movements of Folk and Square Dance	2
HPER	293	Analysis and Movements of Modern Dance	2
HPER	294	Problems in Dance Composition	2

*Competency to include:

- 1) Demonstrable skill
- 2) Analysis of skill
- 3) Knowledge of material

(See Physical Education Major for a description of the Competency examinations and how competencies may be met.)

2. Students minoring in this program must complete two coaching classes.

3. The following courses are also required for this minor:

HPER	220	Anatomical Kinesiology	3
HPER	221	Mechanical Kinesiology	3
HPER	222	Physiological Kinesiology	3
HPER	223	Psychological Kinesiology	3
HPER	262	Standard First Aid and Personal Safety	2
HPER	345	Methods and Observations of Teaching Physical Education in the Secondary School	2
HPER	346	Assistant Teaching	1
HPER	426	Tests and Measurement in Physical Education	3
		or	
HPER	436	Logical Interpretations of Physical Education and Sport	3

4. HPER 345 and at least 10 of the HPER Analysis and Movements classes and 7 of the Competencies *must be* completed before a student may student teach in this field.

Physical Education Minor (Teaching Emphasis -- Elementary Level)

Students must complete a *minimum of one course* from each of the following areas. Seven additional courses must be taken from any area. A student *must obtain competency* in at least 7* of these 10 activities.

A. Team Sports:

HPER	271	Analysis and Movements of Soccer	1
HPER	272	Analysis and Movements of Field Hockey	1
HPER	273	Analysis and Movements of Basketball	2
HPER	274	Analysis and Movements of Volleyball	2
HPER	276	Analysis and Movements of Football or Flag Football	2
HPER	278	Analysis and Movements of Baseball or Softball	2

B. Individual or Dual Sports:

HPER	275	Analysis and Movements of Wrestling	2
HPER	277	Analysis and Movements of Track	2
HPER	279	Analysis and Movements of Self Defense	1
HPER	284	Analysis and Movements of Tennis	2
HPER	285	Analysis and Movements of Tumbling and Gymnastics	2

C. Aquatics and Rhythms:

HPER	283	Analysis and Movements of Swimming	2
HPER	138	Advanced Life Saving	2
HPER	139	Water Safety Instructors Course	2
HPER	290	Analysis and Movements of Folk and Square Dance	2
HPER	293	Analysis and Movements of Modern Dance	2
HPER	294	Problems in Dance Composition	2

*Competency to include:

- 1) Demonstrable skill
- 2) Analysis of skill
- 3) Knowledge of material

(See Physical Education Major for a description of the Competency examinations and how competencies may be met.)

2. Students minoring in this program must complete two coaching classes.

3. The following courses are also required for this minor:

HPER	220	Anatomical Kinesiology	3
HPER	224	Maturational Kinesiology	3
		And one of the following:	
HPER	221	Mechanical Kinesiology	3
HPER	222	Physiological Kinesiology	3
HPER	223	Psychological Kinesiology	3
		And the following:	
HPER	245	Tumbling, Apparatus and Self-testing Activities for the Elementary School Child	2
HPER	262	Standard First Aid and Personal Safety	2
HPER	291	Rhythms for the Elementary School	2
HPER	344	Methods and Observation of Teaching Physical Education in the Elementary School	3
HPER	426	Tests and Measurement in Physical Education	3

4. HPER 344 and at least 10 hours of the HPER Analysis and Movements classes and 7 of the Competencies *must be* completed before a student may student teach in this field.

Physical Science Major (Teaching) **Administered by the Department of Physics**

This is a broad degree in physical science (teaching) under which programs can be tailored to the individual needs of the student.

1. Meet all General Education requirements as specified earlier in this catalog.
2. Professional Teachers Education, 31 hours, plus EDFE 372, two hours credit, and SCED 441, three hours credit.
3. A total of 60 hours minimum in chemistry, physics, and related fields.
4. A program of specific content requirement will be determined between the student and his/her adviser and each such program.

Physics Major**Administered by the Department of Physics**

Students pursuing the B.A. with a major in Physics must plan their programs to fulfill the following requirements:

1. General Education requirements as specified earlier in this catalog.
2. The following courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
PHYS 265	General Physics -- Mechanics	5	
PHYS 266	General Physics -- Electricity	5	
PHYS 267	General Physics -- Sound, Light, and Heat	5	
PHYS 365	Mechanics I	4	
PHYS 366	Electricity and Magnetism I	4	
PHYS 367	Optics I	4	
PHYS 368	Atomic Physics	5	
PHYS 465	Mechanics II	3	
PHYS 466	Electricity and Magnetism II	3	
PHYS 468	Nuclear Physics I	5	
PHYS 469	Solid State Physics	4	
	Electives to be selected with approval of student's adviser	8	
			<u>55</u>

3. A mathematics minor of 27 or more quarter hours (through calculus).
4. CHEM 104 or 106 and CHEM 105 or 107.
5. Electives to complete requirements for graduation.

Physics Major (Teaching)

Students majoring in Physics who plan to teach in the public schools should include the following courses in their programs:

1. General Education requirements as specified earlier in this catalog.
2. Professional Teacher Education, 31 hours, plus EDFE 372, two hours credit, and SCED 441, three hours credit.
3. The following courses in the major:

PHYS 265	General Physics -- Mechanics	5	
PHYS 266	General Physics -- Electricity	5	
PHYS 267	General Physics -- Sound, Light, and Heat	5	
PHYS 361	AC Circuits	5	
PHYS 365	Mechanics I	4	
PHYS 366	Electricity and Magnetism I	4	
PHYS 368	Atomic Physics	5	
PHYS 468	Nuclear Physics I	5	
	<i>or</i>		
PHYS 469	Solid State Physics	5	
	Physics electives of 300 number or higher to be selected with approval of student's adviser	10	
			<u>48</u>

4. A minimum of 27 quarter hours of mathematics to include calculus through MATH 234.
5. CHEM 104 or 106, 105 or 107, and 111.
6. Additional hours of electives to complete 180 quarter hours of academic credit required for graduation.

Physics Minor

Following are the requirements for the arts and sciences minor:

PHYS 265	General Physics -- Mechanics	5
PHYS 266	General Physics -- Electricity	5

PHYS	267	General Physics -- Sound, Light, and Heat	.....5
PHYS	365	Mechanics I	
		or	
PHYS	366	Electricity and Magnetism I	.....4
PHYS	268	Modern Physics	.....4
		or	
PHYS	368	Atomic Physics	.....5
		Physics electives to be selected with approval of student's minor adviser	.....6-7
			<u>30</u>

Substitute PHYS 268, Modern Physics, for SCI 103 requirement.

Physics minors interested in being qualified for teaching in the secondary school must complete the minor listed above.

Political Science Major

Administered by the Department of Political Science

Political Science offers a non-teaching major and minor in Political Science. Students pursuing the B.A. with a major in Political Science must plan their programs to fulfill the following requirements:

1. Complete the General Education requirements of 60 quarter hours. (Students majoring or minoring in political science will take two of the following courses: GEOG 100, ANT 100, ECON 100, or SOC 100.)

2. The following required courses in the major:

Course No.	Course Title	Hours	Credit
PSCI 101	United States Government I	.....3	
PSCI 102	United States Government II	.....3	
PSCI 103	United States Government III	.....3	

Electives in political science to include at least one course from each of the following groups A, B, C, & D*39

Group A -- United States Government

PSCI 106	Contemporary Political Conflict, Consciousness, and Power in the United States	.....3	
PSCI 200	Legislative Processes	.....3	
PSCI 201	State and Local Government	.....5	
***PSCI 202	Legislative Processes II	3-15	
PSCI 205	Civil Liberties in the United States	.....3	
PSCI 206	Politics and the Consumer	.....3	
PSCI 207	Politics of Feminism	.....3	
PSCI 300	Public Opinion and Pressure Groups	.....4	
PSCI 301	Problems in United States Government	.....3	
PSCI 302	The President and the Bureaucracy	.....3	
PSCI 303	The Administration of Justice	.....4	
PSCI 305	The Politics of Bureaucracy	.....4	
***PSCI 340	Field Research and Study in Political Science	3-15	
PSCI 343	Politics and the Environment	.....4	
PSCI 400	Political Parties	.....3	
PSCI 401	Minority Politics	.....3	
PSCI 402	Urban Politics	.....4	
**PSCI 500	Constitutional Law	.....5	

Group B -- International Relations

PSCI 220	International Relations	.....4	
PSCI 320	American Foreign Policy	.....4	
PSCI 325	Politics and Conflict in the Middle East	.....4	
PSCI 421	The United Nations	.....3	
PSCI 425	Soviet Foreign Policy	.....4	
PSCI 426	Foreign Policies in Asia	.....4	
**PSCI 520	Seminar in International Politics	.....3	

Group C -- Political Theory

PSCI	330	Natural Law, Divine Law, and Human Virtue	3
PSCI	331	Consent, Freedom, and Political Obligation	3
PSCI	332	Equality, Democracy, and Revolution	3
PSCI	430	Majority Rule and Minority Rights	3
PSCI	435	Problems in Political Philosophy	3

Group D -- Comparative Government

PSCI	210	European Political Systems	4
PSCI	310	East European Government and Politics	4
PSCI	410	Government and Politics of Asia	4
PSCI	411	Government and Politics of Latin America	4
PSCI	412	The Politics of the Developing Areas	4
PSCI	413	Political Systems of Sub-Saharan Africa	4
PSCI	414	Government and Politics of the Soviet Union	4
**PSCI	510	Seminar in Comparative Politics	3

Group E -- General

*PSCI	250	Introduction to Research in Political Science	3
**PSCI	550	Research and Inquiry in Political Science	3
			<u>48</u>

*It is recommended that majors take PSCI 250, especially those intending to do graduate work in political science.

**Qualified juniors and seniors may be admitted to 500 level courses by special permission.

***Enrollment by application to the Political Science Internship Program. See No. 5 below.

3. One minor of at least 27 quarter hours.

4. Electives to complete 180 quarter hours of academic credit.

5. Up to 15 credit hours may be taken in the Political Science Internship Program but only a maximum of 9 credit hours can apply toward the Political Science major or minor. Admission to the Internship Program is limited. Applications for the program are available in the Political Science office. Applications must be submitted to the Director, Internship Program, Department of Political Science, no later than the time of the early or pre-registration for the quarter of the proposed internship.

Political Science Minor

PSCI	101	United States Government I	3
PSCI	102	United States Government II	3
PSCI	103	United States Government III	3
		Electives in political science selected with the approval of the Department of Political Science	<u>18</u>
			<u>27</u>

Students interested in being certified for teaching of Political Science must take a major in Social Sciences rather than in Political Science.

Preschool Education**Administered by the Department of Elementary Education and Reading**

1. Meet all General Education requirements as specified earlier in this catalog
2. Complete the professional education courses.
3. The following courses are required for the major and are listed according to recommended sequence.

Freshman Year

Course No.	Course Title	Hours	Credit
CD	136	Introduction to Preschool	.2
SP	130	Voice and Speech Improvement	.3
EDSE	160	Introduction to Speech Correction	.3
PSY	255	Psychology of Emotional Adjustment	.3
			<u>1.1</u>

Sophomore Year

HEC	221	Family Relationships .....	.3
HEC	251	Nutrition I .....	.3
HEC	340	Basic Food Preparation and Service (preschool section) .....	.4
SOC	415	The Sociology of Child Development .....	.3
			<u>13</u>

Junior Year

CD	331	Development of the Infant and Toddler .....	.3
CD	333	Development and Guidance of the Preschool Child .....	.4
*CD	334	Preschool Curriculum and Methods .....	.3
CD	335	Observation and Participation in Preschool .....	.3
EDSE	306	Identification of Learning Disabilities in Early Childhood .....	.3
HEC	456	Infant and Child Nutrition .....	.3
HPER	291	Rhythms for the Elementary School .....	.2
<i>or</i>			
THEA	280	Creative Dramatics .....	.3
			<u>21 or 22</u>

Senior Year

EDEC	460	Nursery-Kindergarten Education .....	.3
CD	437	Administration of Programs for Young Children .....	.3
*CD	438	Practicum in Preschool Teaching .....	.3
CD	439	Parent Education .....	.3
HPER	262	Standard First Aid and Personal Safety .....	.2
			<u>14</u>

*Must be taken at University of Northern Colorado.

4. CD 438 must be completed prior to student teaching.

5. The University offers many areas and courses complementary to the preparation in Preschool Education. To complete 180 quarter hours of academic credit, the student with guidance of the adviser will select from courses in various departments to supplement major requirements and to meet individual needs and interests.

Preschool Minor

Minors in Preschool need an adviser to plan course sequence.

CD	136	Introduction to Preschool .....	.2
CD	331	Development of the Infant and Toddler .....	.3
CD	333	Development and Guidance of the Preschool Child .....	.4
CD	334	Preschool Curriculum and Methods .....	.3
CD	335	Observation and Participation in Preschool .....	.3
CD	437	Administration of Programs for Young Children .....	.3
CD	438	Practicum in Preschool Teaching .....	.3
HEC	251	Nutrition I .....	.3
			Electives
			<u>27</u>

Recommended Electives for Preschool Minor:

COMM	130	Voice and Speech Improvement .....	.3
CD	332	Sequences of Conceptual Learning .....	.3
CD	439	Parent Education .....	.3
EDEC	460	Nursery-Kindergarten Education .....	.3
HEC	221	Family Relationships .....	.3
HEC	234	Montessori and Young Children .....	.3

Psychology Major

Administered by the Department of Psychology

Students pursuing the B.A. degree with a major in Psychology must plan their programs to fulfill the following requirements:

1. All General Education requirements as specified in this catalog.
2. A second major is highly recommended.
3. The following required courses in the major (60 hours):

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
PSY 121	Introduction to Psychology I	4
PSY 122	Introduction to Psychology II	4
RSM 203	Introductory Statistical Methods	3
PSY 275	Experimental Psychology	5
PSY 491	Field Experiences	Minimum 5
One course from the following:		
PSY 240, PSY 241, PSY 265, PSY 343, PSY 443, PSY 480, PSY 481		3
One course from the following:		
PSY 250, PSY 251, PSY 341, PSY 345		3
One course from the following:		
BLS 101, BLS 240, BLS 340, BLS 350, BLS 380, BLS 495, MAS 105, MAS 106, MAS 304, MAS 306		3
Approved Electives		30
		Minimum 60

Psychology Minor (Liberal Arts)

Required courses for the undergraduate minor in psychology are:

PSY 121	Introduction to Psychology I	4
PSY 122	Introduction to Psychology II	4
One course from the following:		
PSY 240, PSY 241, PSY 265, PSY 343, PSY 443, PSY 480, PSY 481		3
One course from the following:		
PSY 250, PSY 251, PSY 341, PSY 345		3
Approved Electives		13
		Minimum 27

Psychology Minor (PTE)

Required Courses for the undergraduate minor in psychology are:

PSY 120	General Psychology	3
PSY 140	Human Learning and Cognition	3
PSY 230	Human Growth and Development	
<i>or</i>		
PSY 431	Infancy and Childhood	
<i>or</i>		
PSY 432	Preadolescence and Adolescence	3-5
Electives (Choose from RSM 312, and PSY courses other than 121, 122, 161, and 222)		16-18
		Minimum 27

Recreation Major

Administered by the Department of Recreation

Students pursuing the B.S. degree with a non-teaching major in Recreation must plan their programs to fulfill the following requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. The following courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
HPER 200	Introduction to Recreation	3
HPER 252	Social Recreation	2

HPER	253	Camp Counseling	3
HPER	262	Standard First Aid and Personal Safety	2
HPER	265	Recreation Skills and Sports and Games	3
HPER	266	Outdoor Recreation Skills	2
HPER	267	Recreation Skills in the Recreation Center and on the Playground	3
HPER	290	Analysis and Movements of Folk and Square Dance	2
HPER	337	Socio-Psychological Concepts of Leisure	3
HPER	368	Programs in Recreation	4
HPER	369	Therapeutic Recreation	3
HPER	451	Administration of Community Parks and Recreation	5
HPER	471	Safety Education	3
HPER	472	Recreation Leadership	4
FA	550	Art in Recreation	3
MUS	315	Music and Recreation	2
PSY	230	Child and Adolescent Psychology	5
THEA	280	Creative Dramatics	3
			<u>55</u>

3. One minor of 30 quarter hours, or 30 quarter hours of supporting courses selected with the approval of the major adviser.

4. Senior recreation majors will complete HPER 452, Internship in Recreation, 18 hours. Courses HPER 368, 369, 451, and 472 and a GPA of 2.3 in the required courses, as well as a 2.3 cumulative are prerequisites for HPER 452.

5. Electives sufficient to complete requirements for the Bachelor of Science degree.

Russian Minor

Administered by the Department of Foreign Languages

This minor requires 30 hours of Russian to be selected from the following courses with the approval of the minor adviser. It is designed for Liberal Arts students and students interested in teaching.

Course No.	Course Title	Hours	Credit
RUS 101	Elementary Russian I	5	5
RUS 102	Elementary Russian II	5	5
RUS 103	Elementary Russian III	5	5
RUS 201	Intermediate Russian I	4	4
RUS 202	Intermediate Russian II	4	4
RUS 203	Intermediate Russian III	4	4
RUS 305	Survey of Russian Literature I	3	3
RUS 306	Survey of Russian Literature II	3	3
RUS 307	Survey of Russian Literature III	3	3
RUS 335	Russian Conversation	3	3
RUS 336	Advanced Russian Composition	3	3
RUS 337	Advanced Russian Grammar	3	3
RUS 341	Pushkin	3	3
			<u>30</u>

Russian-Soviet Studies Minor

Dean A. Arnold, Coordinator

Requirements:

1. Twenty-three hours of study selected from the following:

ECON	250	History of Economic Systems: Socialism, Communism, Capitalism, Fascism	3
ECON	320	Russia's Soviet Economy	3
GEOG	365	The Soviet Union	5
GEOG	392	Field Course in Geography (Russian Study Tour)	5
GEOG	490	Problems in Geography (Russian-Soviet Topic)	3
HIST	378	Russian History from the Beginning to Alexander I, 860-1801	4

HIST	379	Imperial Russia: 1801-1917	4
HIST	478	History of Soviet Union	4
HIST	492	History of Modern World Communism	4
PSCI	414	Government and Politics of the Soviet Union	4
PSCI	425	Soviet Foreign Policy	4
RUS	101	Elementary Russian I	5
RUS	102	Elementary Russian II	5
RUS	103	Elementary Russian III	5
RUS	201	Intermediate Russian I	4
RUS	202	Intermediate Russian II	4
RUS	203	Intermediate Russian III	4
RUS	305	Survey of Russian Literature I	5
RUS	306	Survey of Russian Literature II	5
RUS	307	Survey of Russian Literature III	5
RUS	335	Russian Conversation	3
RUS	336	Advanced Russian Composition	3
RUS	337	Advanced Russian Grammar	3
RUS	341	Pushkin	3
SOC	337	Soviet Society Today	4

2. IS 422. A four-hour individual study on a topic selected by the student at the culmination of the course work. The study is to cut across disciplinary boundaries with the purpose of integrating and synthesizing knowledge.

3. No specific courses are required other than IS 422. However, Russian Language is strongly recommended and a maximum of 15 hours may be applied toward the minor.

4. Planning of the program by the student with the coordinator.

5. Hours in the minor will not apply toward the student's major field or another minor.

SCHOOL OF EDUCATIONAL CHANGE AND DEVELOPMENT

Donald M. Luketich, Dean

Bachelor of Arts
Bachelor of Science

The School is an approved administrative unit of the university. The major purpose of the school is to cooperate with and facilitate innovative programs and ideas anywhere within the university.

Students who wish to pursue innovative programs leading to a degree may submit a proposal to the school. The school does not duplicate any academic program of the university, but exists as an option for those students who wish to pursue programs that require the use of the total resources of the university. Admission will be by invitation and based on the program the student submits that has been approved by the Advisory Board and the Resource Board. In general, the program will be of an interdisciplinary nature and will use the total resources of the university, and may use the resources of the community, state and nation.

A Student Manual is available in the University Bookstore. It contains information about the school, the procedures the students are to follow, and the forms the student uses as he pursues his program.

Programs and projects submitted to the school that do not involve a degree are administered by the Dean. Departments, schools, and colleges within the university may request the services of the Dean. Public schools, institutions, and other colleges and universities who desire the services of the school may work with the Dean to develop programs and projects.

Social Science**David Lonsdale, Coordinator**

The Department of Anthropology, Economics, Geography History, Political Science, and Sociology cooperate in offering an interdepartmental major in Social Science.

Social Science Major (Non-teaching)

Students pursuing the B.A. degree with a major in Social Science must plan their programs to fulfill the following requirements:

1. Meet all General Education requirements as specified earlier in this catalog.
2. Courses in the major as specified below:

	<i>Hours Credit</i>
a. Introductory courses in five social science fields (GEOG 100, ANT 100, ECON 100, PSCI 100, SOC 100). Since two of these courses are counted toward the General Education requirements, only 16 hours of credit from this group will apply toward the major	.16
b. Advanced electives in one, two, or three social science areas. For the areas selected, the following courses must be taken: ANT 381 or 382, ECON 200, GEOG 148, PSCI 220 or 421, SOC 450 or 310 (Six hours of Minority Studies may be included in the 32 hours advanced Social Science requirements.)	.32
*c. HIST 170, 171, 172 (U.S. History)	.12
*d. HIST 130, 131, 132 (World History)	.12
	72

*These are the only history courses which are acceptable for a Social Science major.

3. No minor required for a Social Science major.
4. Electives sufficient to complete requirements for the Bachelor of Arts degree.

Social Science Major (Teaching)

Students majoring in Social Science who plan to teach in the public schools should include the following courses in their programs:

1. Meet all General Education requirements as specified earlier in this catalog.
2. Courses in the major as specified above:
 - a. Professional Teacher Education (PTE), 31 hours, plus EDFE 373, 2 hours, and SSED 341, 3 hours.
 - b. No Social Science major may apply for admission to Professional Teacher Education (PTE) until he has passed at least 20 quarter hours of courses in the major, at least eight hours of which must have been taken at the University of Northern Colorado.
 - c. To be admitted to PTE, the student must have at least a 2.3 average in those courses counting toward his major which were taken at the University of Northern Colorado, and must have taken all the courses in 2a and 2b above.
 - d. Before taking EDFE 373 and SSED 341, the student must have completed EDF 365, and PSY 302 to 326 (five 2-week units).
 - e. Before being permitted to apply for student teaching, a Social Science major must have completed successfully at least 40 hours in the major.

HONORS. Social Science majors may participate in the Honors Program. See page 23.

Sociology Major**Administered by the Department of Sociology**

Students pursuing the B.A. with a major in Sociology must plan their programs to fulfill the following requirements:

1. All General Education requirements as specified earlier in this catalog. The students should consult his assigned adviser.

2. Courses selected from each of the following areas:

	<i>Hours Credit</i>
I. Principles of Sociology	5
SOC 100	
II. Social Theory	12
SOC 450*, 451*, 452*, 454*, 550** , 551** , 554**	
III. Methodology and Research	8
SOC 460*, 461*, 563**	
One course from each of the following areas:	15-20
IV. Social Psychology	
Selected from SOC 210, 310, 312, 410, 415, 515*	
V. Social Institutions	
Selected from SOC 120, 221, 321, 323, 325, 420, 421, 424, 427, 520**	
VI. Social Organization and Process	
Selected from SOC 333, 334, 337, 432, 435, 454, 537**	
VII. Social Problems	
Selected from SOC 145, 240, 340, 341, 345, 447	
VIII. Demography and Ecology	
Selected from SOC 270, 272, 478, 479, 574**	
IX. Advanced Electives	
Electives include any Sociology courses above 100	
Total hours including advanced electives	56

*Required courses for majors.

**Courses numbered 500 and above -- seniors with 3.00 GPA and permission of instructor.

3. In addition, a minor of 33 quarter hours.

4. Electives sufficient to complete requirements for the Bachelor of Arts degree.

Following are the requirements for the minor:

1. All General Education requirements as specified earlier in this catalog. The student should consult his assigned adviser.

2. Courses selected from each of the following areas:

	<i>Hours Credit</i>
I. Principles of Sociology	5
SOC 100	
One course from each of the following areas:	
IV. Social Psychology	
Selected from SOC 210, 310, 312, 410, 415, 515	
V. Social Institutions	
Selected from SOC 120, 221, 321, 323, 325, 420, 421, 424, 427, 520	
VI. Social Organization and Process	
Selected from SOC 333, 334, 337, 432, 435, 454, 537	
VII. Social Problems	
Selected from SOC 145, 240, 340, 341, 345, 447	
VIII. Demography and Ecology	
Selected from SOC 270, 272, 478, 479, 574	
IX. Advanced Electives	
Electives including any Sociology course above 100	
Total hours including advanced electives	33

Students interested in being certified for teaching of Sociology must take a major in Social Sciences rather than in Sociology.

Spanish Major

Administered by the Department of Foreign Languages

Students pursuing the B.A. with a major in Spanish must plan their programs to fulfill the following requirements:

1. Meet all General Education requirements of 60 quarter hours. (Spanish majors are urged to take ANT 100 or SOC 100 or HIST 130, 131, 132.) Students should consult his assigned adviser.

2. The following courses or their equivalents are required for the major:

Course No.	Course Title	Hours	Credit
SPAN 201	Intermediate Spanish I	4	4
SPAN 202	Intermediate Spanish II	4	4
SPAN 203	Intermediate Spanish III	4	4

In addition, one of the following series:

a. For students who plan to teach in the public schools.

SPAN 310	Advanced Spanish Grammar	4	4
SPAN 325	Advanced Spanish Composition	3	3
SPAN 335	Spanish Conversation	4	4
SPAN 345	Spanish Pronunciation	4	4
SPAN 400	Problems in Oral Spanish	3	3
	Six Spanish literature courses, 3 in Peninsular literature and 3 in Latin American literature, to be chosen from the departmental offerings	18	48

Students who desire teaching certification will also take 36 credit hours, including EDFE 366, Observation, (2 hours credit) and FL 341, Methods, (3 hours credit) which must be taken during the same quarter. Before being permitted to apply for student teaching, a Spanish major must have successfully passed the department oral proficiency examination.

b. For students wishing a Liberal Arts major:

SPAN 310	Advanced Spanish Grammar	4	4
	Six Spanish literature courses, 3 in Peninsular literature and 3 in Latin American literature, to be chosen from the departmental offerings	18	18
	*Electives in Spanish to be chosen with the consent of the adviser	14	48

*Three hours of FL 131, Foreign Language House and FL 410, Linguistics are the only FL prefix courses which may be applied toward the major.

3. NOTE: All work to be counted toward the B.A. degree in Spanish must be beyond the first-year level.

4. In addition, a minor of at least 27 quarter hours approved by the Department.

5. Electives sufficient to complete the requirements for the B.A. degree.

Spanish Minor

Requirements for a Spanish Minor are as follows:

SPAN 201	Intermediate Spanish I	4	4
SPAN 202	Intermediate Spanish II	4	4
SPAN 203	Intermediate Spanish III	4	4

In addition, one of the following series:

a. For students who plan to teach in the public schools:

SPAN 310	Advanced Spanish Grammar	4	4
SPAN 325	Advanced Spanish Composition	3	3
SPAN 335	Spanish Conversation	4	4
SPAN 345	Spanish Pronunciation	4	4
	Electives in Spanish to be chosen with the consent of the adviser	3	30

b. For students wishing a Liberal Arts minor:

SPAN 310	Advanced Spanish Grammar	4	4
	Three Spanish literature courses chosen from the departmental offerings	9	9
	Electives in Spanish to be chosen with the consent of the adviser	5	30

Special Education Majors Administered by the School of Special Education

The School of Special Education and Rehabilitation offers several majors at the undergraduate level and affords students the opportunity to qualify for a Colorado Teacher Certificate in the area of the acoustically handicapped or mental retardation, both educable and trainable. A pre-professional program leading to the Bachelor of Arts degree in speech pathology and audiology is offered, as well as a program leading to the Bachelor of Science degree in Rehabilitation and Related Services. Junior and senior students may take course work in the areas of teaching the visually handicapped, physically handicapped, emotionally disturbed, and in speech correction. This course work may be used for certification in the special areas of teaching when all requirements for certification are met.

The campus Special Education school, a cooperative project of the Greeley Public Schools and University of Northern Colorado, provides a laboratory for observation and student teaching. The Special Education facility also includes a speech and hearing service and complete audiometric evaluations; and provides for testing and measuring exceptional children.

Students pursuing the B.A. with a major in Special Education must plan their programs to meet the following requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. Professional Teacher Education Program (PTE) Exceptions: (1) Students concentrating in audiology are exempt from the PTE requirements. (2) Students concentrating in Speech Pathology have the option of choosing a program with or without the PTE courses.

PTE Requirements for Special Education Majors:

Specific requirements are established by each Area of Concentration before a student may apply for PTE. See adviser.

Course No.	Course Title	Hours	Credit
EDF 365	Basic Concepts of Education .....	.....	5
EDF 485	Philosophy of Education .....	.....	3
PSY 349	Educational Psychology .....	.....	5
EDSE 309	Introduction to Special Education Student Teaching .....	.....	2
EDFE 420	Special Education Student Teaching: Elementary .....	.....	18
	<i>or</i>		
EDFE 430	Special Education Student Teaching: Secondary .....	.....	18
			<u>33</u>

3. Core requirements as listed below.
4. Adviser approved electives to complete the 180 quarter hours of academic credit required for graduation.

Mental Retardation Emphasis

Students may declare a major in mental retardation at any time, but because of limited training facilities, candidacy for a degree is dependent upon departmental acceptance at the time a student applies for PTE. Students with a declared major in mental retardation who have not been accepted into PTE are considered tentative candidates. Departmental recommendation for PTE acceptance is based upon: (1) documented experience working with handicapped children (at least 50 clock hours of contact is expected); (2) positive letters of recommendation from persons who supervised and/or evaluated the contact with handicapped children; (3) grade point average. (The PTE application is used to provide information upon which the departmental recommendation is based.) Only students who receive departmental recommendation will be given student teaching assignments. Since a limited number of students can be accepted into PTE each quarter, students who meet the requirements for acceptance but who are in excess of the quota restriction will be placed on a waiting list for consideration in succeeding quarters.

It should be understood that students majoring in the department of mental retardation will actually be screened twice. The first selection will be at the time of

application for PTE and the second at the time of application for student teaching.

Within the department of mental retardation there are two majors: (1) Special Education: Mental Retardation for those students who wish to become teachers of educable level children (either elementary or secondary) and (2) Special Education: Trainable Mentally Retarded (all levels). The ratio of the number of students being trained to be teachers of educable level children to the number being trained as teachers of trainable mentally retarded children is approximately 3 to 1.

If an individual wishes to be endorsed as a teacher of both Educable Mentally Retarded and Trainable Mentally Retarded persons, the student must student teach in each area. Even though dual endorsement is therefore possible, a student may not use these programs for a double major of Special Education: Mental Retardation, and Special Education: Trainable Mentally Retarded.

All students in either major are required to take:

EDSE	100	Education of Exceptional Children	3
EDSE	160	Introduction to Speech Correction	3
EDSE	304	Introduction to Measurement of the Handicapped	3
EDSE	305	Educational Prescription and Programming for Exceptional Children	4
EDSE	310	Introduction to Mental Retardation	4
EDSE	412	Curriculum Development and Methodology for Mentally Retarded: Elementary Level	4
EDSE	421	Behavior Management in the Classroom	3
EDRD	310	Improvement of Instruction in Reading	3
FA	229	Art for the Exceptional Child	3
IA	359	Construction Activities in the Elementary Classroom	3
PSY	230	Human Growth and Development	5
			<u>35</u>

Plus Electives to total 48 hours.

Students specializing in teaching EMR students at the secondary level must take:

EDSE	413	Curriculum Development and Methodology for Mentally Retarded: Secondary Level and the following:	4
VTE	310	Vocational Education Foundation - Seminars	3
VTE	410	Cooperative Education and Coordination Techniques	3
VTE	210	Recommended electives in Vocational Teacher Education: Career Opportunities	3
VTE	290	Direct Occupational Experiences	3
VTE	411	Vocational Student Organizations	1
VTE	415	Seminar: VICA	2
VTE	430	Vocational Education for Learners with Special Needs	3

Students specializing in teaching the trainable must take:

EDSE	311	Education of the Trainable Mentally Retarded	4
EDSE	312	Seminar: Teaching the TMR	2
EDSE	414	Problems in Teaching Trainable Mentally Retarded Children	4
EDSE	415	Vocational Training for TMRs	4
			<u>14</u>

To complete endorsement requirements in Special Education: Trainable Mentally Retarded, student teaching must be done in an education facility for trainable mentally retarded children.

Electives to total 48 hours should be chosen in consultation with the adviser. In addition, each student must support the major with a minor, a double major, or an area of concentration of 27 hours (selected with the approval of the adviser).

Recommended Electives:

EDSE	302	Counseling Parents of Exceptional Children	3
EDSE	320	Introduction to the Education of Socially and Emotionally Disturbed Children	3

EDSE	326	Introduction to Teaching Learning Disabled Children	3
EDSE	330	Care and Pathology of the Physically Handicapped	3
EDSE	350	Pathology and Introduction to the Hearing Impaired	3
EDSE	404	The Resource Program Teacher	3
EDSE	440	Survey of Education of Visually Handicapped	3
EDRD	411	Approaches to Reading Instruction	3
EDEL	320	Improvement of Instruction in Mathematics in the Elementary School	3
MUS	206	Music Methods and Materials for the Elementary Teacher	2
MUS	414	Music for Children with Learning Disabilities	3

Acoustically Handicapped Emphasis

Students may declare a major in acoustically handicapped at any time, but because of limited training facilities, candidacy for a degree is dependent upon departmental acceptance at the time a student applies for PTE. Students with a declared major in acoustically handicapped who have not been accepted into PTE are considered tentative candidates. Students should contact the Area Director for specific information.

Students must complete the course work necessary for certification in Pre-School, or Elementary, or a specific area of Secondary Education.

All students must complete a minimum of 2 credit hours of EDFE 270, School and Community Aide, prior to applying for PTE.

Core Requirements:

EDSE	100	Education of Exceptional Children	3
EDSE	250	The Structure of Language	3
EDSE	260	Introduction to Phonetics	3
EDSE	265	Acoustics of Speech	3
EDSE	270	Pathologies of the Auditory Mechanism	3
EDSE	304	Introduction to Measurement of the Handicapped	3
EDRD	310	Improvement of Instruction in Reading in the Elementary School	3
		<i>or</i>	
EDRD	420	Reading in the Secondary School	3
ENG	321	Generative-Transformational Grammar	4
EDSE	350	Pathology and Introduction to the Hearing Impaired	3
EDSE	356	Manual Communication Skills: S.E.E.	2
EDSE	357	Speech Reading	3
EDSE	358	Auditory Training and Hearing Aids	3
EDSE	370	Basic Audiology	5
EDEM	410	Introduction to Educational Resources	3 or 5
EDSE	451	Speech Development for the Hearing Impaired	6
EDSE	452	Language Development for the Hearing Impaired	6
EDSE	453	Curriculum and Content for the Acoustically Handicapped	4
EDSE	455	Methods of Teaching Reading to the Hearing Impaired	3
EDSE	456	Manual Communication Skills: A.S.L.	2

68-70

All or parts of EDSE 350, EDSE 356, and EDSE 456 may be challenged for credit.

Visually Handicapped Concentration

The teacher training program leading to endorsement to teach visually handicapped children is offered at the graduate level. (See Graduate Bulletin.) However, undergraduates who are interested in exploring Education of Visually Handicapped Children as a career possibility are given the opportunity as juniors and seniors to declare an Area of Concentration with this department. This concentration is an addition to the student's declared major.

The Area of Concentration in Education of Visually Handicapped would include 21 hours of course work. The undergraduate courses would include:

EDSE	440	Survey of Education of Visually Handicapped	3
EDSE	441	Auditory Comprehension in Children for Classroom Teachers	3

EDSE 442	Efficient Visual Discrimination in Children for Classroom Teachers	3
----------	--	---

With the consent of an assigned adviser in the Visually Handicapped area, a student may take twelve or more additional hours of 500 level graduate courses.

Though this Area of Concentration does not lead toward certification at the undergraduate level, it does reduce the graduate program by one quarter should the student choose to continue graduate work toward an M.A. degree in Education of Visually Handicapped Children.

Speech Pathology Emphasis

Core Requirements:

The Bachelor of Arts degree is pre-professional and does not lead to certification of any type. The Master of Arts degree is the professional degree and enables the student to meet the academic and practicum requirements for certification by the American Speech and Hearing Association (ASHA).

If the student desires educational certification in addition to the certification of ASHA, he must take Professional Teacher Education (PTE) and methods courses (EDSE 460) as well as student teaching. The student teaching requirements should be postponed until the graduate level.

All students must apply for admission to the Speech Pathology Program. Transfer students must apply prior to their arrival on campus. Typically, applications are submitted during the sophomore year, by April 1.

Course requirements:

EDSE 100	Education of Exceptional Children	3
EDSE 160	Introduction to Speech Correction	3
EDSE 260	Introduction to Phonetics	3
EDSE 264	Introduction to Clinical Practicum I	2
EDSE 265	Acoustics of Speech	3
EDSE 266	Speech and Language Development	3
EDSE 267	The Auditory and Speech Mechanisms	5
EDSE 301	Behavioral Objectives and Educational Programming for Exceptional Children	1
EDSE 357	Speech Reading	3
	or	
EDSE 358	Auditory Training and Hearing Aids	3
EDSE 360	Articulation Disorders I	4
EDSE 361	Voice Disorders I	3
EDSE 362	Stuttering I	3
EDSE 363	Introduction to Organic Disorders	3
EDSE 364	Introduction to Clinical Practicum II	4
EDSE 365	Language Disorders in Children I	3
EDSE 369	Neurological Basis for Speech and Hearing	4
EDSE 370	Introduction to Audiology	5
EDSE 464	Clinical Practicum in Speech Pathology	6
EDSE 467	Diagnosis in Speech Pathology	3

63

Recommended electives are EDSE 250, 302, 304, 306, 310, 320, 326, 330, 331, 356, 372, 421, 452, 456, 575, PSY 201, 230, 240, 255, 306, 307, 309, 315, 341, 343, 431, 432, 433, 443, 444, 445, 457, 458, ENG 100, 101, 102, 321, COMM 110, 111, 130, 220, 302, 400, 420, 423, 424, 425, ANT 361, ZOO 156, BLS 192, MAS 304, 310, HEC 136, 331, 332, 333, 335, 439.

Audiology Emphasis

Core Requirements:

The Bachelor of Arts degree is pre-professional and does not lead to certification of any type. The Master of Arts degree is the professional degree and enables the student to meet the academic and practicum requirements for certification in Audiology by the American Speech and Hearing Association and endorsement standards for the Audiologist within the public schools. All students must apply for admission to the Audiology Program. Transfer students must apply prior to their

arrival on campus. Typically, applications are submitted during the sophomore year, by April 1. No educational certification is granted.

A minor is not required but the student must elect a minimum of 14 hours in courses dealing with the normal use, growth, and development of speech, hearing and language.

The following is the required program:

EDSE	100	Education of Exceptional Children	3
EDSE	160	Introduction to Speech Correction	3
EDSE	260	Introduction to Phonetics	3
EDSE	265	Acoustics of Speech	3
EDSE	266	Speech and Language Development	3
EDSE	267	The Auditory and Speech Mechanisms	5
EDSE	270	Pathologies of the Auditory Mechanism	3
EDSE	274	Clinical Principles in Audiology	Max. 6
EDSE	350	Pathology and Introduction to Education of the Hearing Impaired	3
EDSE	357	Speechreading	3
EDSE	358	Auditory Training and Hearing Aids	3
EDSE	360	Articulation Disorders I	4
EDSE	369	Neurological Disorders for Speech and Hearing	4
EDSE	370	Introduction to Audiology	5
EDSE	372	Advanced Audiometry	3
EDSE	474	Practicum in Audiology	6
ZOO	156	Elements of Human Physiology and Anatomy	5
			<u>65</u>

Recommended electives are IA 180, 383, 384, ZOO 121, 250, PSY 341, PHYS 460, EDSE 150, 350, 304, 357, 451, 456, 369, PSY 330.

Rehabilitation and Related Services Major Administered by the School of Special Education

Students pursuing the B.S. degree with a major in Rehabilitation and Related Services must plan their programs to meet the following requirements:

1. Meet all General Education requirements as specified earlier in this catalog.
2. Core requirements as listed below.
3. An adviser approved supporting area or an adviser approved non-teaching minor consisting of 27 quarter hours.
4. 27 quarter hours of adviser approved electives to complete the 180 quarter hours of academic credit required for graduation.

Core requirements:

EDSE	100	Education of Exceptional Children	3
EDSE	290	Orientation to Rehabilitation and Related Services	3
EDSE	302	Counseling Parents of Exceptional Children	3
EDSE	304	Introduction to Measurement of Handicapped	3
EDSE	390	Introduction to Social and Rehabilitation Services (EDSE 590 may be substituted)	3
EDSE	391	Seminar: Problems in Social and Rehabilitation Services	3
EDSE	394	Practicum in Social and Rehabilitation Services	2-8
EDSE	491	Interviewing Techniques in Social Rehabilitation Services	3
EDSE	492	Casework Techniques in Social and Rehabilitation Services	3
EDSE	494	Supervised Field Practice in Social and Rehabilitation Services	15
Anthropology: At least three (3) hours selected from the following courses:			
ANT	320	Ethnology of Mexico and Central America	4
ANT	326	Indians of the Southwest	3
ANT	381	Enculturation	4
ANT	382	Acculturation	4
Black Studies: At least three (3) hours selected from the following courses:			
BLS	101	Crisis of Identity	3
BLS	201	Crisis of Identity II	3
BLS	240	Dynamics of Racism	3

BLS	340	The Black Family	3
BLS	380	Education in the Black Community	3
Mexican American Studies: At least three (3) hours selected from the following courses:			
MAS	105	The Contemporary Mexican American I	3
MAS	106	The Contemporary Mexican American II	3
MAS	302	Social Stratification in the Mexican American Community	3
MAS	304	Bicultural Systems	3
Sociology: At least nine (9) hours selected from the following courses:			
SOC	145	Social Problems	3
SOC	210	Social Movements	3
SOC	240	Criminology	4
SOC	245	Problems of Intergroup Relations	4
SOC	310	Social Psychology	3
SOC	340	Juvenile Delinquency	4
SOC	445	Social Conflict	4
Political Science:			
PSCI	300	Public Opinion and Pressure Groups	4
Psychology:			
PSY	255	The Psychology of Emotional Adjustment	3
			<u>66-72</u>

Theatre Arts Major (Non-teaching) **Administered by the Department of Theatre Arts**

Students pursuing the B.A. with a major in Theatre Arts must plan their programs to fulfill the following requirements:

1. All General Education requirements as specified earlier in this catalog.
2. The following courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
THEA 110	Introduction to Stagecraft	3
THEA 160	Acting I (Internals)	3
THEA 240	Beginning Play Direction	3
	Individual Performance in Theatre	10
	Electives (at least 21 quarter hours in Theatre Arts in dramatic literature)	39
		58

It is possible, but not required, for the student major to specialize in such fields of theatre arts as acting, play direction, or technical theatre; or to generalize in theatre arts; or to arrange, with advisement and with the prior approval of the department, an interdisciplinary program of study in such fields as dance theatre, art and technical theatre, or a combination of theatre arts and other disciplines to fit the needs of the student. At least 21 quarter hours of electives in the major must consist of courses in theatre arts (THEA prefix) and in dramatic literature.

Students contemplating graduate work in theatre arts are strongly urged to seek advisement from a member of the Theatre Arts staff and to pursue a strong theatre arts course of study with a liberal arts minor, with extensive course work in dramatic literature, and with at least two years' study in one or more foreign languages.

3. Electives sufficient to complete the requirements for the Bachelor of Arts degree.

Theatre Arts Major (Teaching)

Students majoring in Theatre Arts who plan to teach Drama in the public schools should include the following courses in their programs:

1. All General Education requirements as specified earlier in this catalog.
2. Professional Teacher Education, 31 hours, plus EDFE 374, two hours credit, and EDCI 341, three hours credit (must be taken concurrently).

3. The following courses in the major:

THEA	110	Introduction to Stagecraft	3
THEA	160	Acting I (Internals)	3
THEA	210	Stagecraft	3
THEA	220	Beginning Stage Costuming	3
THEA	240	Beginning Play Direction	3
THEA	260	Acting II (Externals)	3
THEA	261	Stage Make-up	2
THEA	280	Creative Dramatics	3
THEA	310	Beginning Scene Design	3

Two of the following:

THEA	340	Directing Period Plays	3
THEA	341	Directing Experimental Plays	3
THEA	342	Directing Musical Theatre	3
THEA	380	Children's Theatre Production	3
THEA	411	Stage Lighting	2
THEA	430	History of the Theatre I	3
THEA	431	History of the Theatre II	3
THEA	432	History of the Theatre III	3
THEA	440	Directing the One-Act Play	2
		Individual Performance in Theatre	10
		Electives in dramatic literature	6
			<u>64</u>

4. One minor of 27 or more quarter hours. The student desiring to teach in the minor should check below regarding general requirements.

5. Meet the minimum requirements set up by the North Central Association for teachers of Drama. Consult your adviser.

6. Electives sufficient to complete the requirements for the Bachelor of Arts degree.

Theatre Arts Minor (Non-teaching)

Following are the requirements for the minor:

THEA	110	Introduction to Stagecraft	3
THEA	160	Acting I (Internals)	3
THEA	230	Introduction to the Theatre	3
		Individual Performance in Theatre	2
		Electives in Theatre Arts	18
			<u>29</u>

Theatre Arts Minor (Teaching)

For the student desiring to teach drama, the Department of Theatre Arts requires the following teacher education program in the minor:

1. An adviser from the Theatre Arts staff.

2. The following courses in the minor:

THEA	110	Introduction to Stagecraft	3
THEA	160	Acting I (Internals)	3
THEA	210	Stagecraft	3
THEA	230	Introduction to The Theatre	3
THEA	240	Beginning Play Direction	3
THEA	260	Acting II (Externals)	3
THEA	261	Stage Make-up	2
THEA	310	Beginning Scene Design	3
		Individual Performance in Theatre	2
		Electives in Theatre Arts, Speech and English	11
			<u>36</u>

3. EDFE 374, two hours credit, and EDCI 341, three hours credit, in Theatre Arts (must be taken concurrently).

4. Meet the minimum requirements set up by the North Central Association for teachers of Drama. Consult your Theatre Arts adviser.

HONORS. The Department of Theatre Arts participates in the Honors Program. See page 23.

Vocational Teacher Education**Professor:** Keller**Associate Professors:** Barnes, Burns, Palmer, Robins, Walters.**Assistant Professors:** Beall, Bennett, Dierks, Donnel, Johnson, Nick, Peiffer, Sørensen, Van Hook, Welch.**Vocational Credentialing Officer:** Hollingsworth

Vocational Teacher Education is a multi-disciplinary program. Students should refer to:

1. School of Business, Department of Business Teaching Education for Business and Office Education and Distributive Education requirements.
2. School of the Arts, Department of Home Economics for Consumer and Homemaking and Occupational Homemaking requirements.
3. Coordinator, Health Occupations, Gunter 103 -- Vocational Teacher Education for Health Occupations requirements.

Vocational Teacher Education Courses

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
VTE 210	Career Opportunities and Explorations	3
VTE 290	Directed Field Experiences	Max. 12
VTE 310	Vocational Education Foundations -- Seminar	3
VTE 410	Cooperative Education and Coordination Techniques	3
VTE 411	Vocational Student Organizations	1
VTE 412	Distributive Education Clubs of America -- Seminar	2
VTE 413	Future Business Leaders of America - Seminar	2
VTE 414	Future Homemakers of America - Seminar	2
VTE 415	VICA and Post-Secondary Student Professional Organizations in Health Occupations - Seminar	2
VTE 418	Adult Vocational Education	3
VTE 422	Individual Studies in Vocational Education	Max. 4
VTE 430	Vocational Education for Learners with Special Needs	3
VTE 488	Seminars in Vocational Education	Max. 6

Women's Studies Program**Marcia I. Wilcoxon, Coordinator**

The 27-hour Women's Studies minor is an interdisciplinary program administered by a faculty coordinator and a Committee composed of five faculty members appointed by the University administration and five students elected by and from among students minoring in the program.

In all cases, the minor program will be developed individually with each student by the coordinator and Committee. Each minor in Women's Studies should register with the coordinator to develop her or his program and to receive information about new developments and general meetings and programs scheduled.

Courses in Women's Studies are also designed for students to use toward fulfilling general education and majors and other area minor requirements.

The basic goals of the Women's Studies minor and course offerings are to explicate, understand, and overcome social myths about women in order to enhance the dignity of all human beings and to provide unique opportunities for knowledge and understanding for students going into teaching and school administration and into a wide variety of other professional careers.

For further information on the program and on new courses included since the publication of this catalog, students should contact the Coordinator.

Requirements:

Course No.	Course Title	Hours	Credit
ID 148	Introductory Seminar in Women's Studies:		
	Women in Crisis	3	
ID 448	Women's Studies: Senior Seminar	3	

Electives totaling at least 21 hours from among the following and other courses subsequently approved by the Women's Studies Committee:

ANT 220	Seminar in Modern Ethnology (Women in Cross Cultural Perspective or Witches and Virgins: A study of Mediterranean Women)	3	
BLS 102	Crisis in Identity II: The Black Women	3	
EDF 380	Women in Education	3	
ENG 430	Studies in World Literature (Literature by and About Women)	4	
HEC 321	Role Behavior in the Intimate Environment	4	
ICU 205	Human Sexuality (Malumphy-Plakke)	3	
ICU 208	Liberation : Myth to Ms.	5	
ICU 314	Images of Women in Literature	4	
ICU 319	Sexism in Management	3	
PHIL 380	Problems and Methods of Philosophy (An Axiomatic Approach to the Feminist System of India or Conceptual Analysis of Feminism)	3	
PSCI 207	Politics of Feminism	3	
PSY 468	Psychology of Women	3	
SOC 221	Sociology of Sex Roles	3	

A student also may, upon the approval of the Committee, include among her or his electives other pertinent courses offered throughout the University.

Zoology Major**Administered by the Department of Biological Sciences**

Students pursuing the B.A. degree with a major in Zoology must plan their programs to fulfill the following requirements:

1. Complete the General Education requirements of 60 quarter hours.
2. Take the following:

Course No.	Course Title	Hours	Credit
BIO 101	Principles of Biology	5	
BIO 102	Principles of Botany	5	
BIO 103	Principles of Zoology	5	
BIO 231	Genetics	5	
BIO 361	Microbiology	5	
BIO 391	Seminar in Research	1	
ZOO 350	Cell Physiology	5	
ZOO 316	Entomology	5	
	or		
ZOO 412	General Parasitology	5	
ZOO 427	Vertebrate Embryology	5	
ZOO 428	Comparative Vertebrate Anatomy	5	
ZOO 340	Animal Ecology	5	

Electives to be selected with approval of major adviser $\frac{9}{30}$

3. It is recommended that one minor of 27 or more quarter hours in chemistry, physics, or mathematics be included.
4. It is recommended that a minimum of 15 quarter hours in each of the above fields (chemistry, physics, or mathematics) not selected as a minor be included.
5. It is recommended that a foreign language be included.
6. Electives to complete 180 hours required for graduation.

COURSE DESCRIPTIONS

ANTHROPOLOGY

Numbers preceding prefix and course number refer to General Education requirements on page 22. Number in Parentheses is credit hours.

3-ANT 100. General Anthropology. (5). The nature and scope of anthropology, organic man, and the nature of culture.

3-ANT 110. Introduction to Cultural and Social Anthropology. (4). A general introduction into the principles and concepts of the field of cultural and social anthropology.

3-ANT 120. World Ethnology. (3). Ethnologies are selected from various culture areas throughout the world. Emphasis is upon strategies for analysis of ethnographic data.

3-ANT 121. Aboriginal Cultures of North America. (3). Ethnographic study of North American Indian cultures between the time of contact and prior to massive acculturational influences.

3-ANT 122. South American Indians. (3). Study of aboriginal peoples of South America.

3-ANT 140. Introduction to Archaeology. (4). An introduction to archaeological procedures. The course will focus upon archaeological sites (how they are formed, and various methods of excavation), analytical methods (dating, analysis of plant and animal remains, etc.) and the goals of archaeology. A broad coverage, from many areas, will give a background for more advanced courses. Some laboratory experience will be available.

5-ANT 170. Physical Anthropology (4). A general survey of the subfields of physical anthropology: primatology; human paleontology, variation and adaptation. The course will include an introduction to evolutionary theory and population genetics as they apply to problems of human origins and present day racial variation.

3-ANT 220. Seminar in Modern Ethnology. (3-9). A study and analysis of selected modern ethnographies to present up-to-date materials and problems in various culture areas.

3-ANT 221. Folk Cultures. (4). Concentration upon the rural communities of peasant farmers. Communities analyzed from the point of view of the social, religious, economic and political organization, as well as value orientation.

3-ANT 222. Cultural Adaptations of Nomadism. (4). A study of the adaptations made by nomadic peoples to the variety of environments they encounter and to the semipermanent nature of their locations.

3-ANT 240. Archaeology of North America. (4). Ancient man in North America, north of Mexico. The development of prehistoric American Indian cultures; a thorough study of the archaeology of the Mississippi Valley, Great Plains, and other pre-Columbian cultures; historical development and interrelations of archaeological horizons.

3-ANT 241. Archaeology - Field Methods. (2-8). Techniques of archaeological investigation; field surveying and recording of excavated materials; proper handling and preservation of specimens in the field and laboratory; etc. Course involves off-campus archaeological research.

3-ANT 242. Archaeology of South America. (4). Ancient man, and the development of prehistoric Indian cultures in South America. Discussion of archaeological centers, with analysis of ceramics, stonework, art styles, etc. Particular emphasis will be devoted to the Andean Highlands and its influence on cultures elsewhere.

- 3-ANT 280. Primitive Religions.** (3). The religions of the peoples not involved in the Indic complex of Hindu-Buddhist or the Judaic tradition of the Mid-East.
- 3-ANT 281. Principles of Social Organization.** (4). Basic principles of social structure, with emphasis on kinship.
- 3-ANT 300. North American Indians in Contemporary Society.** (4). Study of North American Indian Cultures in present day American society. Relationships between U.S. Government policy, reservation living, competition in a money economy, and acculturation patterns in selected Indian cultures will be explored.
- 3-ANT 320. Ethnology of Middle America.** (4). Indian, mestizo, and urban cultures of Middle America; interethnic relationships; acculturation trends.
- 3-ANT 321. North Africa and the Middle East.** (3). The culture complex of the Mid-East and North Africa. The background of peasant nomad and feudal societies which have helped to produce the present society.
- 3-ANT 322. Oceania.** (4). Peoples of Polynesia, Melanesia and Micronesia.
- 3-ANT 323. South Asia.** (3). A survey of South Asia with particular attention to caste and modernization. Includes Pakistan, India, Nepal, Bhutan, Bangladesh, and Sri Lanka.
- 3-ANT 324. Southeast Asia.** (3). A study of modern ethnic populations and primitive peoples inhabiting Burma, Thailand, Laos, Cambodia and Vietnam, as well as the Philippine Islands and Indonesia.
- 3-ANT 325. Spanish and Mexican American Cultures in American Southwest.** (3). Historical development of Spanish Colonial and Mexican American Cultures including patterns of family structure, health practices and folk medicine, religious patterns, value systems, etc. Patterns are examined in light of current problems.
- 3-ANT 326. Indians of the Southwest.** (4). Ethnology of the Pueblo, Navajo, Apache, Yuman tribes and the Pima-Papago groups.
- 3-ANT 327. Arctic Cultures.** (3). A descriptive survey of the native cultures of the Arctic forest (tiaga) and tundra of Siberia; the Eskimo, Aleut and sub-arctic cultures of North America; and the Lapps of Scandinavia.
- 3-ANT 328. Eastern Asia.** (4). A survey of the anthropology of China and Japan. Emphasis is on understanding modern trends in the region.
- 3-ANT 331. Urban Ethnology.** (4). An in-depth study of the concept of urbanization which will include an investigation of existing conceptual frameworks dealing with urbanization, a review of current cross-cultural research and an investigation of the direction of urbanization within the structure of national and international systems.
- 3-ANT 335. Economic Anthropology.** (4). A general survey of the field of economic anthropology. Topics covered include typologies of economics, the applicability of formal Western economics to non-Western, non-industrial economics, principles of organization of hunting and gathering band economics, tribal economics, chiefdoms, traditional agrarian economics, pastoral economics, and modern peasant economics, and modernization of economic systems under capitalist and socialist systems. Emphasis is on the inter-relationships between economy and the other aspects of culture.
- 3-ANT 337. Political Anthropology.** (4). A general survey of the field of political anthropology. Topics covered include the concept of power; institutional vs. processual approaches to the study of political systems; typologies of political systems; and political change as part of overall modernization in modern Third World countries. General orientation is to the inter-relationships of political, economic, social, and cultural variables in the operation of societies of all types.
- 3-ANT 340. Archaeology of the Southwest.** (4). A study of ancient cultural horizons in the Southwest, up to the Conquest; emphasis on chronology, culture change, and classification. Thorough review of Early Man; the Mogollon, Hohokam, and Pueblo (Anasazi) archaeological cultures.

3-ANT 341. European Prehistory. (4). The development of Paleolithic, Mesolithic, Neolithic, and The Age of Metal, emphasizing the interpretation of archaeological data, Pleistocene geology, and chronology.

3-ANT 342. Near Eastern Archaeology. (4). A survey of the prehistoric foundations and cultural development of civilizations in the Near East, and the Indus Valley, as revealed by major archaeological discoveries; theories of cultural evolution and diffusion.

3-ANT 344. Archaeology of Africa. (3). The antiquity of man in Africa -- a thorough review of archaeological development from the Australopithecines, through the Paleolithic, Mesolithic and Neolithic stages up through the 18th Century A.D. (This course does not include Egypt; cf., ANT 342).

3-ANT 345. Archaeology of Mexico. (4). A comparative study of cultural development in ancient Mexico and Central America with emphasis upon agricultural beginnings, settlement patterns and urbanization, hieroglyphics, calendrical systems, and religious activities. A thorough examination of Archaic, Toltec, and Aztec cultures.

3-ANT 346. Mayan Archaeology. (4). A thorough study of Maya civilization of Mesoamerica: its origins, development, chronology, and archaeological manifestations. A review of other archaeological cultures in southern Mexico and Central America.

3-ANT 347. Archaeology of Greece. (3). A comprehensive survey of Greek civilization, including phases of architecture and statuary, funerary practices, commerce and trade, etc., based upon archaeological interpretation.

3-ANT 348. Etruscan & Roman Archaeology. (4). An archaeological reconstruction of Etruscan origins and culture, and its effects upon the development of Roman civilization. A thorough review of Roman culture -- at the time of Augustus -- through archaeological interpretations.

3-ANT 349. Archaeology of Egypt. (4). A thorough historical reconstruction of the archaeology of Egypt, beginning with the background Stone Age and Predynastic cultures; sequential development of the Old, Middle and New Kingdoms, concluding with Persian, Ptolemaic and Roman occupations of Egypt.

3-ANT 350. European Ethnology. (4-8). Course designed to explore the ethnology of European sub-cultures and will be occasionally subtitled as to area.

3-ANT 360. Anthropological Linguistics. (4). The study of speech and language within the context of anthropology. Cognitive categories formed through language, the nature of language, cultural focus in language, linguistic change.

1-ANT 361. Descriptive Linguistics. (3). A critical examination of language theory, communications theory, and linguistic theories with particular emphasis on the basic linguistic elements of phonology, morphology, grammar and syntax.

3-ANT 370. Human Evolution. (4). A study of evolutionary theory and the various types of evidence for human evolution. Major emphasis will be on interpretation of the fossil record from the emergence of primates to the appearance of Modern Man. Summation of present-day variation in human populations.

5-ANT 371. Human Variation. (4). Prerequisite, ANT 170 or equivalent. An in-depth study of relationships between culture and the biology and genetics of human populations. Assessment of current trends in physical anthropology.

3-ANT 372. Primate Behavior. (3). A study of theories of animal behavior, and their application to the behavior of primates. In-depth examination of the adaptive advantages of social living in its various forms.

5-ANT 373. Human Osteology. (3). (2 lecture, 2 laboratory.) A descriptive and analytical study of the gross anatomy of the human skeletal system. Identification, description, and analysis of human bones from archaeological sites will be emphasized.

3-ANT 380. Great Ideas in Anthropology-Seminar. (3-9). The purpose of the

course is to provide information about current important ideas in special fields of anthropology.

3-ANT 381. Enculturation. (3). A study of the patterned interactions by which an individual becomes oriented to his culture, and through which he is prepared to perform adequately as an adult member of his society. Comparison of the enculturation process in selected nonliterate societies.

3-ANT 382. Acculturation. (4). The study of cultures in contact and the influences they have one upon the other.

3-ANT 383. Culture and Personality. (3). A study of the social development of the individual and of the influence of the cultural environment on the development of the human personality, in relation to social stimulus situations. Examples utilized from primitive societies.

3-ANT 384. Quantitative Methods in Anthropology. (4). An introduction to basic formal techniques as they relate to problems in anthropology. Treatment of problems unique to the various subfields will provide a format for investigating quantitative applications. Problem formulation, statistical description, probability distributions, and significance testing will be covered.

3-ANT 420. Africa South of the Sahara I: Pre-Colonial Socio-Cultural Formations. (4). A study of societies and cultures in Sub-Saharan Africa emphasizing the socio-cultural formations of pre-colonial times and of peoples relatively unaffected by the currents of change induced by European Powers.

3-ANT 421. Africa South of the Sahara II: Colonial and Post-Colonial Adaptations. (4). A study of social and cultural changes and adaptations which have come with the colonial and post-colonial eras. Emphasis is placed on underdevelopment, its causes and consequences.

3-ANT 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

3-ANT 431. Urban Poor. (4). An investigation of the life styles of the poor in urban areas. This course will approach the study of the urban poor as an ethnographic unit—including economic, political and social structure.

3-ANT 440. Techniques of Archaeology. (3). A review of field methods and laboratory techniques, utilized in prehistoric archaeology. Special attention paid to stratigraphy, typological analysis, dating techniques, and research publication.

3-ANT 442. Archaeological Theory. (3). Examination of the increasingly growing body of theory in archaeology. Throughout, the emphasis will concern the integration of archaeology and the other fields of anthropology, and in the use of archaeological theory to formulate laws of cultural evolution. The course will be conducted on a seminar basis.

3-ANT 450. Archaeology Field School. (1-12). Prerequisite, permission of instructor. Techniques taught will include site mapping, controlled surface collection, recording, flotation, and a variety of excavation techniques. The latter will range from random test excavation samples to the excavation of large horizontal areas. Students will be under the direction of instructor and graduate students in ANT 650.

3-ANT 470. The Nature of Man. (3). Prerequisite, permission of instructor. A study of man as a biosocial being. Analysis of the functional requirements of social living and how these have been met in various species including man. A delineation of the distinctive characteristics of man's social existence and how these affect the ecosystem.

3-ANT 471. Culture and Human Genetic Variation. (4). A review of the interaction between culture and genetic variation in human populations. Emphasis will be on the unique evolutionary processes in man resulting from his cultural heritage. Specific examples of current anthropological research will supplement general treatment of the subject.

3-ANT 472. Medical Anthropology. (4). An anthropological analysis of health and disease in a sample of human populations and cultural systems. The course will consist of an introduction to the ecology of some infectious and noninfectious human diseases; an examination of the relations between cultural processes and health and disease; and an investigation of ethnomedicine, including diagnostic and curative methods.

3-ANT 480. Survey of Anthropological Theory. (3). Seminar on the development of anthropological theory from Tylor to the present. Includes cultural evolution, diffusion and historical reconstruction, functionalism, and psychologically oriented theories.

3-ANT 481. Anthropological Theory I. (3). A seminar on the theories of cultural analysis and development of skills for gathering cultural data. Examination of observational and analytical procedures. Recording and analysis of formal and informal behavioral sequences. Formulation of problems of relationships between culture patterns.

3-ANT 490. Field Methods in Ethnography. (4-8). An introduction to the nature of field work and consideration of various methods in social-cultural Anthropology. Emphasis will be on short-term field projects within the region in which the course is taught.

AEROSPACE STUDIES

2-AS 100. U.S. Military Forces in the Contemporary World I. (2). A course examining the history of air power in the world and in the United States, an introduction to Air Force doctrine and how it relates to national strategy. Corps Training is included as a laboratory portion of all aerospace courses.

2-AS 101. U.S. Military Forces in the Contemporary World II. (2). An examination of the Strategic Air Command, Aerospace Defense Command, and the Tactical Air Command as they are used for instruments of national power.

2-AS 102. U.S. Military Forces in the Contemporary World III. (2). An examination of the coordination between the Air Force, the Army, and the Navy as these organizations are used to achieve national goals.

2-AS 200. The Developmental Growth of Air Power I. (2). Course encompassing the development of Air Power in the United States from the beginning of manned flight through the period between WWI and WWII.

2-AS 201. The Developmental Growth of Air Power II. (2). Course encompassing the development of Air Power in the United States from World War II through the Korean War years.

2-AS 202. The Developmental Growth of Air Power III. (2). Course encompassing the development of Air Power in the United States in the Post-Korean War years.

2-AS 300. Security Forces in America I. (3). A study of the role of the professional military leader in today's society; social attitudes toward armed forces and political, social and economic constraints on the defense structure. Development of communicative skill is a major goal of this course.

2-AS 301. Security Forces in America II. (3). A continuing study of the role of the professional military leader in today's society; social attitudes toward armed forces; and political, social and economic constraints on the defense structure. Development of communicative skill is a major goal of this course.

2-AS 302. Security Forces in America III. (3). A continuing study of the role of the professional military leader in today's society; social attitudes toward armed forces; and political, social and economic constraints on the defense structure. Development of communicative skill is a major goal of this course.

2-AS 400. Concepts of Air Force Leadership. (3). A course in AF leadership and management. A study of human behavior and human relations as they affect AF

leadership. The need for discipline and the study of non-judicial punishment and the courts-martial system.

2-AS 401. Concepts of Air Force Leadership and Management I. (3). A study of the variables affecting leadership including the trait, situational and interactional approaches. The study of military management. Discusses planning, organizing, coordinating, directing, and controlling.

2-AS 402. Concepts of Air Force Leadership and Management II. (3). Continuation of the study of military management with the emphasis on the directing and controlling functions. An overview of some of the aspects of management evaluation and information sciences. Course concludes with a pre-commissioning briefing for active duty in the USAF.

2-AS 403. Flight Instruction. (3). This course is designed to meet the ground school requirements for a private pilot license. Includes the study of Federal Aviation regulations, meteorology, Airman's Information Manual, aerial navigation, radio procedures, flight computer and flying safety practices.

ASTRONOMY

Courses in astronomy are administered by the Department of Earth Sciences.

5-AST 100. General Astronomy. (4). (3 lecture, 2 laboratory.) The development of man's understanding of the universe and his place in it. No mathematics background required.

5-AST 301. Principles of Astronomy I. (4). (3 lecture, 2 laboratory.) The solar system: A survey of the dynamics and physical properties of its members.

5-AST 302. Principles of Astronomy II. (3). Prerequisite, AST 100 or 301. The Universe beyond the solar system: stars and stellar systems.

5-AST 310. Observational Astronomy. (4). (2 lecture, 6 laboratory. Maximum 12.) Prerequisite, AST 100 or 301. Equipment, materials, and techniques used in astronomical research. Students will conceive and carry out observational projects.

5-AST 420. Lunar and Planetary Astronomy. (3). Prerequisite, AST 100 or 301. Techniques and results of space exploration. Students will select topics for intensive individual study.

5-AST 499. Seminar in Astronomy. (3). Prerequisite, consent of instructor. An opportunity for students to explore areas of astronomy which are beyond the scope of existing departmental offerings. Specific topics to be treated will be determined by the interests of the students and the instructor.

BUSINESS TEACHER EDUCATION

BEVE 340. Introduction to Business Teacher Education. (PTE) (2). Prerequisite, EDF 365 (or concurrently). A beginning course for future business teachers designed to acquaint students with problems of teaching the business curriculum, philosophy of business education, and professional organizations.

BEVE 341. Methods and Materials of Teaching Typewriting. (PTE) (1). Prerequisites, BUS 112, and BEVE 340 (or concurrently). A beginning course in the teaching of typewriting with special emphasis on various methods and techniques that have been shown to be useful by research. Materials will also be examined in the course. A laboratory period will be scheduled.

BEVE 342. Methods and Materials of Teaching Shorthand. (PTE) (1). Prerequisites, BUS 219, and BEVE 340 (or concurrently). An introduction to the teaching of shorthand for business teachers with emphasis on devices, techniques, and materials. A laboratory period will be scheduled.

BEVE 343. Methods and Materials of Teaching Bookkeeping. (PTE) (1). Prerequisites, BUS 221, and BEVE 340 (or concurrently). An introduction to the

teaching of bookkeeping. Major emphasis in the course will be on techniques and methods of aiding students in high school. Materials will be examined and evaluated in the class. A laboratory period will be scheduled.

BEVE 344. Methods and Materials of Teaching Basic Business Subjects. (PTE) (1). Prerequisites, BUS 100, BEVE 340 (or concurrently), and ECON 100. A course designed to aid beginning business teachers in the teaching of basic business subjects of general business law, economics, consumer economics, etc. Materials available for such classes will be examined by the class. A laboratory period will be scheduled.

BEVE 345. Organization and Administration of Distributive Education. (PTE) (3). Prerequisite, BEVE 340 (or concurrently). A study of the organization, supervision, and coordination of secondary school, post secondary school, and adult distributive education programs.

BEVE 347. Instructional Methods in Distributive Education. (4). Prerequisites, BEVE 340 and BEVE 345. A course devoted to the specific methods and techniques relating to the teaching of distributive education. Major emphasis will be placed upon individual instruction and sources of instructional materials.

BEVE 348. Methods and Materials of Teaching Office Practice. (PTE) (1). Prerequisites, BUS 109, 211, 214, and BEVE 340 (or concurrently). An introduction to the teaching of office practice with emphasis on classroom organization plans, teaching methods, development or selection of materials and equipment.

BEVE 360. Teaching Retail Store Operations (1). Prerequisite, BUS 361 (or concurrently). A study of store operations and store security. Particular attention will be paid to the retail employee's responsibility in these areas. The study will develop entry level skills in receiving and marking merchandise and in store security. Representative forms will be utilized in this course. Primary emphasis on this course will be placed upon the teaching of these skills to distributive education students.

BEVE 361. Teaching Retail Merchandising. (1). Prerequisite, BUS 361 (or concurrently). A study of the buying function in retailing and the merchandising mathematics associated with this function.

BEVE 362. Teaching Retail Promotion. (1). Prerequisites, BUS 361, BUS 362 (or concurrently). A study of the retail employee's responsibility to the advertising, display, and sales promotion functions in the retail store. The retail promotional planning calendar will be the primary point of reference in this course. Primary emphasis will be placed on teaching retail promotion to distributive education students.

BEVE 363. Teaching Marketing Information Systems. (1). Prerequisite, BUS 260 (or concurrently). A study of the retail employee's responsibility in gathering and disseminating market information.

BEVE 364. Teaching Marketing Personnel. (1). Prerequisite, BUS 260 (or concurrently). A study of the human and customer relations responsibilities of the retail employee.

BEVE 365. Teaching the Wholesaling and Service Occupations. (3). Prerequisite, BUS 260. A study of the various occupations in the wholesaling and service industries for which a distributive education student might prepare. Special attention will be paid to the competencies needed by people employed in these occupations.

BEVE 371. Evaluation in Business Subjects. (PTE) (3). Designed to supplement the methods course with a foundation in techniques of evaluation including the preparation and administration of tests in the skill and content areas of business subjects and the use of other evaluative materials in the field.

BEVE 430. Economic Education Seminar. (PTE) (3). Prerequisite, ECON 100. A study of the conceptual framework of economic education for potential teachers, administrators, curriculum specialists, and guidance personnel.

BEVE 451. Preparation for Teaching Vocational Business and Office Edu-

caution -- "Taken prior to student teaching." (3). Prerequisite, PTE approval. BEVE 340 and methods may be taken concurrently with BEVE 451. This course substitutes for EDCI 341 and is required for students seeking a state vocational teaching credential. The course MUST be taken prior to student teaching in business and office education. The student will be placed with a state-approved vocational business/office education program. The course will cover such topics as: the vocational business and office education curricula in Colorado; preparation for student teaching; terminology; instructional content and learning experiences; review of methods, media, teaching strategies; evaluation; professional involvement; FBLA review. Following the student teaching experience, the student will be involved in BEVE 481 -- a teaching improvement seminar, and job placement activities.

BEVE 460. Curriculum Development in Distributive Education. (3). Prerequisite, BEVE 345. A study of the basic principles of curriculum development, content organization, and criteria for evaluation; the analysis of Distributive Education curriculums in high school, junior colleges, and adult education programs; the construction of courses of study and preparation of units of instruction in Distributive Education.

BEVE 461. Direction of Distributive Education Club Activities. (2). Prerequisite, BEVE 345. A course designed to give the aims and objectives of the D.E. clubs and to relate its position to the total overall Distributive Education Program. An emphasis will be placed on the development of program activities and direction of activities.

BEVE 471. Student Teaching Improvement Seminar in Distributive Education. (2). Prerequisite, EDFE 470. This seminar follows the student teaching experience and is required of all DE students planning to obtain a vocational credential and assistance from the department in obtaining employment. The seminar is designed to provide group and individual instruction. The topics covered are: (a) Evaluation of student teaching experience and work experience; (b) diagnosis of knowledge/skill competencies for teaching distributive education; (c) prescriptive learning experiences; (d) completion of forms for vocational endorsement; (e) preparation of UNC placement forms; (f) employment procedures and techniques; (g) the department's in-service program and services. PLEASE NOTE STUDENTS SHOULD NOT PLAN TO DO THEIR STUDENT TEACHING THE LAST QUARTER ON CAMPUS.

BEVE 481. Teaching Improvement Seminar in Vocational Business and Office Education. (2). Prerequisite, EDFE 470. This seminar follows the student teaching experience and is required of all vocational business/office education students planning to obtain a vocational credential. The seminar is designed to provide group and individual instruction. The topics covered are: (a) Evaluation of student teaching experience and work experience; (b) diagnosis of knowledge/skill competencies for teaching business/office education; (c) prescriptive learning experiences; (d) completion of forms for state vocational credential; (e) preparation of UNC placement forms; (f) employment procedures and techniques; (g) actual job interviews; (h) the department's in-service program and services.

BIOLOGY

Courses in biology are administered by the Department of Biological Sciences.

5-BIO 101. Principles of Biology. (5). (3 lecture, 4 laboratory.) A study of biological principles from the biosphere to the ultrastructures of the cell. Aspects of ecology, reproduction, genetics, evolution, the structural and functional basis of life, and the coordination of the organism to be studied.

5-BIO 102. Principles of Botany. (5). (3 lecture, 4 laboratory.) Prerequisite, BIO 101. A study of plant diversity concerned with morphology, habitats, structure, function, and economic relationships of the plant kingdom.

5-BIO 103. Principles of Zoology. (5). (3 lecture, 4 laboratory.) Prerequisite, BIO 101. A survey of animal diversity, including principles of structure and function, phylogeny, life cycles and systematics. The relationship of the animal kingdom to man is stressed.

5-BIO 104. Topics in Biological Sciences. (3, maximum 9). This course is designed to acquaint beginning students with current problems and topics in the areas of biology and medicine. The topic will be announced each quarter. No credit given to Biological Sciences majors or minors.

5-BIO 170. Laboratory in Biological Sciences. (1). (2 laboratory.) Co-requisite, BIO 104. A course designed to give the student laboratory experience with plant and animal structure, function, diversity, and ecological relationships.

5-BIO 231. Genetics. (5). (3 lecture, 4 laboratory.) Prerequisites, BIO 101, 102, 103. A study of the fundamental laws of heredity and their application to plants and animals, with emphasis on the heredity of man.

5-BIO 234. Population Genetics. (3). A study of genes in human populations together with a consideration of the influence of various environmental factors on the distribution of these genes. Credit not allowed for major in Biological Sciences.

5-BIO 240. General Ecology. (4). (3 lecture, 3 laboratory.) A general study of plant and animal communities and their relationships with the environment. Laboratory activities will include field trips to various biotic communities for analysis. Man's role in nature is considered throughout the course. Course not recommended for major in Biological Sciences.

5-BIO 241. Modification of the Human Environment. (4). (3 lecture, 3 laboratory.) Discussions regarding the alteration of the earth's surface due to man's activities. Topics include effects of pollutants on biological systems, environmental planning and the National Environmental Policy Act, and the optimizing of human environments. Laboratory exercises will include the sampling of specific pollutants, and field trips.

5-BIO 261. Medical and Public Health Microbiology. (4). (3 lecture, 3 laboratory.) Recommended, CHEM 281, ZOO 121. This course places emphasis on the microorganisms of public health significance, their detection, the diseases they cause and treatment of these diseases. The course is primarily designed for students in dietetics, nursing, pre-medicine, pre-dentistry, and pre-veterinary medicine.

5-BIO 262. Common Infections of Man. (3). Common Infections of Man is designed to provide a relevant background for the interested student to understand the infections of mankind, how they affect him, how they are transmitted and how they are treated.

5-BIO 336. Evolution. (3). Prerequisite, BIO 231. This course is designed as a study of the processes of change of living organisms through time, and to show how genetic variations are related to natural selection and formation of species. Some time is devoted to consideration of the impact of the theory of evolution on the biological sciences since Darwin's time.

5-BIO 346. Aquatic Ecology. (5). (3 lecture, 6 laboratory.) Prerequisites, BIO 101, 102, 103. A course in the study of fresh water plants and animals of the Rocky Mountain Region. Emphasis will be upon methods of collecting, classification, ecological relations, and economic importance of the fresh water biota. Field trips arranged. *Collecting permits are needed.*

5-BIO 350. Cell Physiology. (5). (3 lecture, 4 laboratory.) Prerequisites, BIO 101, 102, 103, CHEM 130, or 332, recommended CHEM 281. A course in general biological principles relating cell structure to function. The topics discussed include genetic control of cell activity, the molecular basis of cell metabolism, energy transformations within the cell, cell division, and homeostatic regulation of the cell environment.

5-BIO 360. Biology of Microorganisms. (4). (3 lecture, 2 laboratory.) A survey of microorganisms with emphasis on basic principles and techniques of microbiology as well as the role of microorganisms in nature, industry, and disease. Credit

not allowed for biology major.

5-BIO 361. Microbiology. (5). (3 lecture, 4 laboratory.) Prerequisite, CHEM 130 or 332, recommended BIO 103 or ZOO 105. An examination of the variety of microorganisms and their activities in the biological world. Emphasis is primarily on bacteria but important aspects of molds, viruses, rickettsia, and chlamydia are included. The course is recommended for biological sciences and medical technology students.

5-BIO 371. Techniques of Biological Preparation. (1). (3 laboratory.) Prerequisite, acceptance in PTE. This is a course designed to acquaint the student with the techniques of laboratory preparation and biological investigation. Emphasis is placed on instrumentation and methods of preparing culture media, experimental solutions, and living material. Required of all Biological Sciences majors accepted in PTE.

5-BIO 380. Public Schools and Venereal Disease Education. (3). An introduction to the history, epidemiology, control and medical aspects of common venereal diseases with emphasis on counseling, teaching and curriculum development and implementation in secondary schools. The course is designed for secondary school teachers, administrators, and others involved in activities concerning teenage youths.

5-BIO 381. Topics in Birth Control and Contraception. (1). Prerequisites, permission of director of Birth Control Center and instructor; must be taken concurrently with BIO 382. An interdisciplinary study of basic biological, medical and guidance principles used in birth control and abortion counseling.

5-BIO 382. Counseling in Birth Control and Contraception. (1, maximum 4). Prerequisites, BIO 381, permission of director of Birth Control Center and instructor. Practical experience in birth control and abortion counseling at the UNC Birth Control Center. Emphasis is placed upon effective referral of clients to sources of professional help and information. Limit of one credit hour per enrollment.

5-BIO 391. Seminar in Research. (1). Prerequisite, junior classification. A course designed to acquaint the student with the preliminary procedures in scientific research. Techniques of problem delineation, literature survey and synthesis of data are stressed. Credit not allowed for graduate students. This course is a prerequisite for BIO 392.

5-BIO 399. Undergraduate Research. (Maximum 10). Prerequisite, consent of instructor. An introduction to the theories and practice of research in the biological sciences. A problem will be selected in one of the following fields: animal ecology, aquatic biology, embryology, bacteriology, mycology, genetics, animal physiology, plant physiology, plant ecology, ornithology, invertebrate zoology, vertebrate zoology, parasitology, vertebrate anatomy, upon consultation with the professor who specializes in that area. Original research will be conducted by the student and final report will be submitted by him to the supervising instructor.

5-BIO 401. Conservation of Natural Resources. (4). A study of the relation of natural resources to the development of man and his culture. Units of study are organized on soil, water, forest and forest products. Range management, wildlife, and mineral resources are also covered. The emphasis throughout is on their relation to man. Field trips required. Credit will not be allowed for students who have taken BIO 501.

5-BIO 430. Behavioral Genetics. (3). Prerequisites, BIO 231, also PSY 120 or PSY 121. This course will deal with the genetic basis of behavior in man and animals, and contemporary issues in this expanding area, including: genetic counseling, eugenics, intelligence and genetic correlates of psychopathology.

5-BIO 471. Biological Microtechnique. (3). (1 lecture, 6 laboratory.) Prerequisites, BIO 101, 102, 103. The skills of killing, staining and preparing plant and animal tissues for microscopic study.

5-BIO 475. Biological Photography. (3). (2 lecture, 3 laboratory.) A study of the skills and techniques of photomicrography, macrophotography, general nature

photography, slide production, etc., as used for audiovisual aids and scientific publication.

5-BIO 480. Topics in Field Biology. (1-15). Field studies in biology on a national or international basis. In-depth field investigation will be emphasized but some preparatory work will be done on campus. Subheadings will indicate the nature of the topic each time offered.

5-BIO 491. Undergraduate Seminar. (1). A study of the current research and literature on selected biological topics.

BLACK STUDIES

4-BLS 101. Crisis of Identity. (3). An analysis of the identity formation and self-concept processes from the Black perspective, as related to the Black experience. Explores identity formation as a function of societal attitudes.

4-BLS 102. Crisis of Identity II. (3). Psychodynamic and sociological analysis of the formation of self-concept and processes of identification as related to the Black woman.

4-BLS 220. Black Community Development. (3). An historical analysis of the origins and development of institutions in the Black community, including the migrations of Black people from the rural South to the effects of urban life in the Black community.

4-BLS 240. Dynamics of Racism. (3). The exploration of the socio-psychological variables involved in the production and maintenance of attitudes of bigotry and racism.

4-BLS 260. Themes in Afro-American Literature. (3). The purposes of this course are to acquaint the student with literary genres of Black writing, i.e., the novel, poetry, drama, essay, short story, and autobiography; to study the development of and to recognize the similarities and differences in Black thought and writings from slavery to contemporary Black Power movements.

4-BLS 320. The Black Economy. (3). An introduction to economic capitalism, its historical effect on Black communities, and its relationship to Black capitalism. An examination of the economic programs and policies of Federal and local government and labor unions.

4-BLS 322. Black Nationalism. (3). An analysis of the development of Black social movements: nationalism, integration, and separation, including Vesey, Garvey, Malcolm X, and Pan-Africanist movements.

3-BLS 340. The Black Family. (3). A social system approach to the study of the Afro-American family, the dynamics of family relationships and the effects of social, political, and economic institutions on Black family life.

3-BLS 350. Black Psychology. (3). An analysis of various schools of psychological thought and their application to the Black experience in America. Also included is the study of the environment of Blacks and its effect on the application of these various psychological theories to Black people.

4-BLS 360. Rhythm and the Black Experience. (3). A study of the historical, thematic, and stylistic development of Black music from ancient Africa to the present.

4-BLS 370. Black Cultural Development. (3). A survey of contemporary Black musicians, artists, playwrights, and writers. Emphasis will be placed on listening to and reading the works of Bullins, Baraka, Coltrane, Pharoah, Sanders, Gordone, Angelou and Baldwin.

4-BLS 380. Education in the Black Community. (3). An analysis of the economic, sociological, and political foundations of education in the Black community. Aims, methods, and leaders of Black education with special emphasis upon the interrelationship between the Black school, the Black values, and the Black community.

1-BLS 392. Linguistic Styles of Black America. (3). A study of the historical development of Black dialect from West Africa to the present. Examination and analysis of research on Black language from social, economic, and political perspectives.

4-BLS 399. Community Study Project. (1-4). A field work course which will require a community-based project in housing, education, or social services.

3-BLS 420. Black Urban Politics. (3). An examination of American government and laws; an analysis of the concept of Black power, and their combined influence on the development of leadership and acquisition of power within the Black community.

4-BLS 430. Law in the Black Community. (3). A social systems approach to the study of law enforcement and legal processes occurring within the Black community; an examination of the relationship between poverty and justice and the effects of institutional racism on the legal agencies in the Black community.

4-BLS 432. Pan African World. (3). A comparative study of the politics and government of selected states and colonies in Africa, the Caribbean, South America, and the United States.

4-BLS 460. Black Religion. (3). An explorative analysis of historical and social forces in the formation of Black religious institutions in the United States.

4-BLS 462. Theatre of Black America. (3). A survey of dramatic forms of expression of Afro-Americans from the minstrel through early 20th Century to current theatrical forms such as Black repertory workshops and theatres in the street.

4-BLS 463. The Black Man in American Drama II: 1945 to the Present. (3). This course will be an examination, study, and discussion of the image of the Black Man as he appears in contemporary dramas. Special emphasis will be placed on Black Characters and Black Playwrights. The course will be conducted as a lecture-discussion.

4-BLS 464. Seminar in Black Theatre. (4). The course will be conducted as a special discussion and production seminar. In addition to writing six papers on selected articles, students are also required to participate in the production of a play that will be presented at the end of the quarter.

1-BLS 465. Black Media. (3). An analysis of the relationship of Blacks and mass communications -- journalism, broadcasting, and creative writing. A study of those areas of visual communication -- motion pictures, television -- which contribute to the image of Blacks in the United States.

4-BLS 480. Black Curriculum Development. (3). An examination of educational curricular development as it relates to minorities and affects sociological perspectives. The student will also gain practical experience in developing curriculum.

1-BLS 495. Interpersonal Communication. (3). A course designed to help students understand attitudes and styles of different socioeconomic groups and to improve communication between cultures.

BOTANY

Courses in botany are administered by the Department of Biological Sciences.

4-BOT 306. Economic Botany. (3). A study of the plants that directly affect the welfare of man including plants that supply our food, drugs, fibers, naval stores, wood, dyes, insecticides, and other useful products. Each plant source is briefly considered as to its classification, structure and ecological requirements.

5-BOT 310. Plant Taxonomy. (5). (3 lecture, 6 laboratory.) Prerequisites, BIO 101, 102. An introductory course concerned with recognition and identification of plants at the species and family levels. Use of keys, manuals, and collecting techniques.

5-BOT 323. Morphogenesis of the Nonvascular Plants. (5). (3 lecture, 4 laboratory.) Prerequisites, BIO 101, 102. Structure, morphogenesis and phylogenetic relationships of the algae, fungi, bryophytes and mosses.

5-BOT 324. Morphogenesis of the Vascular Plants. (5). (3 lecture, 4 laboratory.) Prerequisites, BIO 101, 102. Structure, morphogenesis and phylogenetic relationships of the ferns, gymnosperms, and angiosperms.

5-BOT 340. Plant Ecology. (5). (3 lecture, 6 laboratory.) Prerequisites, BIO 101, 102. A study of plant ecosystems and the interrelationships of the organisms therein as they are affected by the factors of the environment. Field studies are made on the plains and in the mountains.

5-BOT 350. General Plant Physiology. (5). (4 lecture, 3 laboratory.) Prerequisites, BIO 101, 102, CHEM 130 or 332. A course dealing with the fundamental principles of growth and development, absorption and utilization of water and minerals, photosynthesis, translocation, respiration, and chemical composition of plants.

5-BOT 424. Mycology. (5). (3 lecture, 6 laboratory.) Prerequisites, BIO 101, 102. A survey of the groups of fungi including taxonomy, phylogeny, physiology, reproductive patterns and cultural techniques.

5-BOT 471. Principles of Plant Culture. (5). (3 lecture, 6 laboratory.) A study of greenhouses and garden culture of the higher plants. Emphasis will be on the recognition and control of plant diseases, soil preparation, propagation techniques, and the control of insects.

BUSINESS

All business courses ending in the ten numbers as designated in the categories below belong to that business area of study:

1-9 General courses

10-19 Secretarial courses

20-29 Accounting courses

30-39 Business Law courses

40-49 Insurance courses

50-59 Management courses

60-69 Marketing courses

70-79 Finance courses

80-89 Data Processing & Computer courses

90-99 Quantitative (mathematical) courses

2-BUS 100. The American Business System. (3). A general course designed to provide an understanding of how the American business system operates and its place in the economy. The course provides background for more effective use of business services in personal affairs as well as foundation for future business courses.

2-BUS 101. Consumer Business Problems (3). A course designed to acquaint the student with business as it affects him personally. Some of the topics to be considered will be the use of credit, insurance needs, banking, buying guides, consumer protection, and other problems of the individual.

2-BUS 109. Calculating Machines and Business Arithmetic. (3). (2 lecture, 2 laboratory.) An office machines course emphasizing the operation and use of printing, electronic, and rotary calculators. Business arithmetic is studied in its applications to the routine business calculations in retail and wholesale businesses.

2-BUS 110. Typewriting I. (3). A beginning course in typewriting. Emphasis will be given to both personal and vocational use. Students who have had one year of typewriting may not take this course for credit.

2-BUS 111. Typewriting II. (3). Prerequisites, BUS 110 completed satisfactorily,

or a speed of at least 30 w.p.m. The second course in typewriting. Emphasis will be strictly on vocational use. Students who have had two years of high school typewriting or the equivalent may not take this course for credit.

2-BUS 112. Typewriting III. (3). Prerequisite, BUS 111 with a grade of "C" or better, or a speed of at least 45 w.p.m. The third course in typewriting. Emphasis will be on speed and accuracy building and advanced production procedures.

2-BUS 114. Landmark ABC Shorthand I (4). Prerequisite, BUS 111. An introductory course designed to provide students the necessary skills to meet vocational objectives for stenographers, secretaries, and other office professionals. The alphabetic system uses the letters of the alphabet and familiar punctuation marks to represent sounds, resulting in an acceleration of the ability to take notes and transcribe.

2-BUS 115. Landmark ABC Shorthand II (4). Prerequisite, BUS 114 with a grade of "C" or better. A continuation of Landmark ABC I. This course is devoted to the improvement of dictation and transcription skills.

2-BUS 116. Beginning Gregg Shorthand. (4). Prerequisite, BUS 111. Course comprises complete theory of Gregg shorthand. Students who have one year of high school shorthand or the equivalent cannot take this course for credit, but should take BUS 117.

2-BUS 117. Intermediate Gregg Shorthand. (4). Prerequisite, BUS 116 with a grade of "C" or better, or take dictation at 60 w.p.m. Course comprises intensive review of Gregg shorthand theory. Students who have had two years of high school shorthand or the equivalent may not take this course for credit.

2-BUS 118. Advanced Shorthand. (4). Prerequisite, BUS 117 and the ability to take dictation of at least 80 w.p.m., and typing speed of 45 w.p.m. This course is devoted primarily to improvement of dictation and transcription.

2-BUS 150. Principles of Management. (4). A study of concepts, principles, theories, and operational problems of organization and management. The functional areas of management -- planning, controlling, organizing, decision making and others will be examined as well as contributions to management of other disciplines.

2-BUS 170. Financial Institutions. (3). This course is designed to provide factual knowledge of the financial institutions in our economy. Course emphasis will be placed upon the integration of the short-term money market, the long-term capital market, and monetary and fiscal management, particularly as these relate to business practices.

2-BUS 180. Introduction to Business Data Processing. (3). (Laboratory arranged.) This course is designed to familiarize students with the basic concepts and procedures of data processing. The student is introduced to manual, mechanical, and computer processing methods. Emphasis is placed on hardware, software, and applications.

2-BUS 205. Business Communications. (3). An introductory course in business communications. Basic principles and practices of business letters, reports, and oral communications are studied and applied.

2-BUS 206. Functional Business Writing. (3). Prerequisite, BUS 205. A study and application of the principles used in effective letter writing for business and industry.

2-BUS 211. Office Practicum I. (5). Prerequisite, consent of instructor. This course is designed as an office situation using real office tasks as the basis for learning experiences. Production typing, transcription (shorthand and/or machine), filing, mailing procedures, inventory, payroll procedures, duplicating and copying services are all included in a world-of-work environment.

2-BUS 212. Office Practicum II. (5). Prerequisite, BUS 211. This course offers the student the opportunity to refine his office skills. Emphasis is also placed upon the organizational structure and operations in today's office, supervisory responsibilities, decision-making, grooming, and human relations.

2-BUS 213. Office Practicum III. (5). Prerequisites, BUS 211 and 212 and consent of coordinator. A practical experience course providing on-the-job application of secretarial and/or office skills.

2-BUS 214. Records Management. (2). Prerequisite, BUS 110 completed satisfactorily. An introduction to various records systems used in the business world. Practice will be provided in the various filing systems also.

2-BUS 219. Shorthand Transcription. (4). Prerequisites, BUS 112 and 115 or 118, and the ability to take dictation of at least 100 w.p.m. Emphasis is upon rapid and accurate transcription, speed dictation, punctuation, and other office skills.

2-BUS 220. Principles of Accounting I. (4). A beginning course in accounting. Students who have previously studied bookkeeping or accounting may be exempt from this course with the approval of their adviser. Common business transactions are recorded in various journals, summarized in general and subsidiary ledgers, and the effect of these transactions is reported on classified financial statements.

2-BUS 221. Principles of Accounting II. (4). Prerequisite, BUS 220. The emphasis in this course is on principles of accounting as they apply to the measurement and reporting of assets, liabilities, ownership equities, periodic revenues, and periodic expenses.

2-BUS 231. Business Law I. (3). The first part of this course is designed to give the student a foundation for the study of law. It is concerned with the nature of the law, social forces, law enforcement, and certain aspects of tort and criminal law. The second part consists of the law of contracts and agency and employment.

2-BUS 232. Business Law II. (3). Prerequisite, BUS 231. Using the framework of the Uniform Commercial Code, the discussions will center around the following topics: commercial paper, personal property, bailments, sales, security devices, and insurance.

BUS 233. Business Law III. (3). Prerequisite, BUS 231. This course continues the study of business law dealing especially with the topics of partnerships, corporations, real property and the environment, estates, bankruptcy, government and business, consumer protection and special interest topics.

2-BUS 240. Introduction to Insurance. (3). This course deals with the basic principles of insurance and risk. Various kinds of insurance are discussed; the primary objective of the course is an orientation to the many kinds of insurance and their purposes.

2-BUS 260. Marketing. (4). Prerequisite, ECON 100. Marketing is studied as a total system of integrated business activities directed at consumers, distributors and industrial and institutional markets. The business firm is examined with respect to its unique objectives and resources and the manner in which it adapts to greater socio-economic influences. Marketing concepts and theories are evaluated as are practical applications (new product development, selection of advertising media and design of copy, use of marketing research, etc.). Particular attention is paid to the marketing manager as the firm's prime decision maker and liaison between the marketplace and the socio-economic considerations.

BUS 261. Salesmanship. (3). An introductory course in the principles and practices of salesmanship. Attention is directed to selling to industrial and institutional purchasing agents, to distributors as well as retail level selling. Selling demonstrations are conducted and emphasis is placed on professional selling as a career.

2-BUS 281. Electronic Data Processing -- FORTRAN. (3). (Laboratory arranged.) Prerequisite, BUS 180 or equivalent. This course includes an introduction to electronic computer operation and to FORTRAN programming. The student will develop and analyze programs for business applications and the use of existing programs for general applications.

2-BUS 291. Business Statistics I. (5). Prerequisite, MATH 115. A course designed to orient the business student to statistics and its uses in business affairs. Students will be exposed to techniques useful in description of statistical data, sampling distribution, statistical estimation, hypothesis testing, simple regression and cor-

relation analysis and selected nonparametric statistical techniques.

2-BUS 292. Business Statistics II. (3). (Laboratory arranged.) Prerequisite, BUS 291 or equivalent. This course is designed to build on the foundations laid in BUS 291. Major emphasis will be on sampling techniques, quality control, and multiple regression and correlation analysis. Students will also learn to use standard statistical computer software packages.

2-BUS 295. Introduction to Operations Research. (3). (Laboratory arranged.) Prerequisite, MATH 115 or second year of high school algebra. A course of business-oriented mathematical concepts applicable to analysis and control in business. Control of variables in operations, as used in decision making, in the establishment of standards and limits for performance, to maximize operational efficiency. New mathematical techniques related to statistical measurement of economic activity.

2-BUS 307. Administrative Business Reports. (3). Prerequisite, BUS 205. Organization, preparation, and analysis of business and technical reports with emphasis on techniques of collecting, interpreting, and presenting information.

2-BUS 320. Intermediate Accounting I. (4). Prerequisite, BUS 221 with a minimum grade of "C". An advanced course in accounting principles stressing statement presentation and valuation problems in presenting current assets and liabilities on the statements.

2-BUS 321. Intermediate Accounting II. (4). Prerequisite, BUS 320 with a minimum grade of "C". A continuation of BUS 320. Emphasizes problems encountered in valuing investments, plant and equipment, and stockholder's equity for statement presentation.

2-BUS 322. Intermediate Accounting III. (4). Prerequisite, BUS 321 with a minimum grade of "C". A continuation of BUS 320 and 321. Emphasizes analysis of financial statements, effects of errors on statements, preparing funds flow statements and price level adjustments.

2-BUS 323. Cost and Managerial Accounting I. (4). Prerequisite, BUS 221. The emphasis in this course is on the accumulation and analysis of financial data for management purposes.

2-BUS 324. Cost and Managerial Accounting II. (4). Prerequisite, BUS 323. This course gives emphasis to both costing for inventory valuation and income determination and costing for planning and control.

2-BUS 326. Governmental and Institutional Accounting. (4). Prerequisite, BUS 320 with a minimum grade of "C" or consent of the instructor. Accounting principles and procedures relating to schools, hospitals, and other non-profit institutions and to cities, counties and other governmental units.

2-BUS 333. Real Estate Law. (2). This course is concerned with basic terminology, concepts, and relationships involving purchaser, seller, broker, builders, lending agencies, administrative groups, and landlord and tenant. Practical aspects of title, building contracts, loans, deeds, liens, restrictions, zoning, eminent domain, es-crow, and statutory requirements will be included.

2-BUS 334. Life Insurance Law and Company Operation. (3). In this course the following legal topics as applied to life insurance will be discussed and studied: law of contract and agency, the life insurance contract, policy provisions, the contract in operation, settlement options, and beneficiary designations. Company organization, operation, investments will be studied (CLU Course 2).

2-BUS 339. Property Insurance Law. (3). This course provides a review of basic principles of business law and applies them specifically to property and casualty insurance practices and problems. Special attention is given to the law of contracts as applied to insurance contracts, agency insurance, and the law of liability as resulting from negligence. (C.P.C.U. Part IV).

2-BUS 341. Life and Health Insurance. (3). Prerequisite, Bus 240. This course is designed to provide the student with a firm foundation in the many details of life and health insurance. Topics considered will include: individual life contracts,

special and annuity contracts, disability income, medical expense insurance, probability in life insurance, reserves, nonforfeiture values, and dividends. (CLU Course 1).

2-BUS 342. Social and Group Insurance. (3). Prerequisite, BUS 240. This course provides a background in the large area of social insurance and also group insurance. Various kinds of group policies are discussed, including life, health, etc.

2-BUS 343. Pension Planning. (3). Prerequisite, BUS 240. As part of a comprehensive insurance program, the following topics are discussed concerning pension planning: basic features of a pension plan, tax considerations, cost considerations, allocated funding instruments, profit sharing, and tax sheltered annuities. (CLU Course 4).

2-BUS 344. Insurance and Taxation. (3). Prerequisite, BUS 240. The effect of income, estate, and gift taxation on an insurance program are discussed in this course. These taxes are considered for the individual and the business enterprise also.

2-BUS 349. Insurance Management. (6). (two per quarter.) This course reviews the basic principles of management and then applies them specifically to the management of insurance businesses. A brief unit on personal finance is also included to help persons manage. Also included in the course are units on accounting and business finance as applied to the insurance business. (C.P.C.U. Part V).

2-BUS 352. Procurement. (3). Prerequisite, BUS 150. The course deals primarily with the procurement of proper equipment, materials, and supplies for the business firm. Topics discussed include: automation, budgets, procedures, quality, sources of supply, price policies, forward buying, and the legal status of the procurement officer.

2-BUS 354. Human and Organizational Behavior. (4). Prerequisite, BUS 150 or consent of instructor. This course treats the human aspects of business and how they influence efficiency, morale, and management in the organization. It is designed to acquaint the student with the psychological and sociological approaches to human behavior.

2-BUS 361. Retail Management. (4). Prerequisite, BUS 260. A study of the basic principles and techniques of retail merchandising and store operation.

2-BUS 362. Advertising. (3). Prerequisite, BUS 260. An introductory course in advertising principles including a study of advertising terminology, the communication process, advertising agencies, media, and ad copy and layout elements. The course looks at advertising from the business viewpoint but shows its importance to the consumer, business and the economy.

2-BUS 363. Sales Management. (3). Prerequisite, BUS 261. A study of sales management, the major problems involved, and the relationship of sales management to the total business operation.

2-BUS 364. Distribution Management. (3). Prerequisite, BUS 260. A systems approach to the marketers' problems of physical distribution including inventories, transportation, warehousing, packaging, order processing. Also study of channels of distribution with emphasis on problems of industrial distribution.

2-BUS 365. Marketing Strategy. (4). Prerequisite, BUS 260. This course is designed to familiarize the student with operations of marketing organizations. The understandings and administrations of marketing strategy with regard to consumer analysis, product planning, and promotion.

2-BUS 366. Consumer Behavior. (4). Prerequisite, BUS 365 or consent of instructor. A course exploring the consumer and his behavior as it affects the marketing function. A synthesis of empirical findings on consumer behavior as well as models for analyzing it. The course also features application of theoretical generalizations to practical marketing problems.

2-BUS 370. Business Finance. (4). Prerequisite, BUS 221. This course emphasizes the sources of short-term, intermediate-term, and long-term funds for a business. Principles and motives of financial management are stressed.

2-BUS 371. Personal Finance. (3). Prerequisite, BUS 100. The course is designed to help those students interested in the problems of allocating income and managing personal finances.

2-BUS 372. Principles of Real Estate. (3). The course is designed to be a beginning course in the real estate area. Theories and practices that have a significant influence on the real estate market both locally and nationally are discussed. The course will be useful to the consumer, the practitioner in real estate, and the general employee in business.

2-BUS 376. Credit Management. (3). This course provides information and understanding of the credit operations of business for both students of business and practicing businessmen. The various kinds of credit (consumer and commercial) are discussed, and the management of credit by business firms is given emphasis in the course.

2-BUS 383. Electronic Data Processing -- COBOL. (3). (Laboratory arranged.) Prerequisite, BUS 180 or equivalent. This course includes an introduction to electronic computer operation and to COBOL programming. The student will develop and analyze programs for business applications and the use of existing programs for general applications.

2-BUS 385. Electronic Data Processing -- Data Management. (3). (Laboratory arranged.) Prerequisite, BUS 383 or equivalent. Advanced computer programming techniques with special reference to COBOL for business applications. Advanced topics include sequential processing with tape and disk devices, ISAM processing and data management techniques.

2-BUS 388. Systems and Procedures I. (3). Prerequisite, a course in computer programming or consent of instructor. The relationship of systems and procedures to policies and needs of management, job characteristics, management audit, and flow charting will be examined. Also an analysis of operations by a study of work simplification, work measurement, work sampling will be made which will include current developments in human engineering, job design, forms control, records management, and company manuals.

2-BUS 389. Systems and Procedures II. (3). Prerequisite, BUS 388 or equivalent. The integration of systems for all major functional modules of an organization. Topics include management systems, information requirements, determining system economics, current issues, and case studies and applications of management information systems.

2-BUS 396. Management Science -- Deterministic Models. (3). Prerequisites, BUS 291 and 295. Managerial decision making based upon optimality analysis, linear programming, microanalytic methods including inventory control, games and strategies, queuing theory and Markov Analysis.

2-BUS 397. Management Science -- Probabilistic Models. (3). Prerequisites, BUS 292 and 295. Decision making in uncertain environments. Application of modern statistical techniques, with particular emphasis in probability models, including Bayesian methods of analysis.

2-BUS 406. Internship in Business. (12). Prerequisite, consent of faculty coordinator. A practical experience course providing opportunities to utilize the theory of academic business administration courses in accounting, marketing, finance, insurance, general business, and office management situations.

BUS 407. Small Business Counseling. (3). Prerequisite, Senior standing and consent of faculty coordinator. A cooperative program with the Small Business Administration in which students apply theories learned in all business majors to actual small business problems.

2-BUS 420. Advanced Accounting I. (4). Prerequisite, BUS 321 with a minimum grade of "C". This course includes a study of partnerships, installment sales, consignment sales, home and branch office relationships, business combinations, and an introduction to consolidations.

2-BUS 421. Advanced Accounting II. (4). Prerequisites, BUS 420 with a

minimum grade of "C". An advanced course dealing with special problems of consolidations, foreign subsidiaries and branches, and fiduciary accounting.

2-BUS 427. Auditing. (4). Prerequisites, BUS 291 and 321. This course involves a study of professional ethics and legal responsibility for public accountants, generally accepted accounting principles, and auditing procedures.

2-BUS 428. Income Tax Accounting I. (3). Prerequisite, BUS 221 or consent of the instructor. A study of the basic rules and regulations of Federal income taxation of individuals. Includes as an integral part of this subject matter, tax planning for individuals in such areas as standard vs. itemized deductions, joint vs. separate returns, importance of distinguishing between deductions for adjusted gross income and deductions from adjusted gross income, and capital gain income vs. ordinary income.

2-BUS 429. Income Tax Accounting II. (3). Prerequisite, BUS 428. A continuation of BUS 428, with emphasis on federal income tax rules applicable to partnerships and corporations.

2-BUS 440. Business Insurance. (3). Prerequisites, BUS 240 and 341. Various kinds of insurance for the business firm are studied. The special needs of the individual proprietor, partnerships, and corporations receive attention. Special disability insurance, life insurance on key men, and split dollar plans are discussed. (CLU Course 9).

2-BUS 441. Estate Planning and Life Insurance. (3). Prerequisite, BUS 240. Topics studied include: disposition of property in estates and trusts, administration of estates, federal estate taxation, federal gift taxation, planning through trusts and wills, and the place of life insurance in estate planning. (CLU Course 10).

2-BUS 442. Analysis of Insurance Functions I. (3). This course covers in detail an analysis of the various insurance functions especially applicable to property and casualty insurance. Some of the topics covered will be underwriting practices, loss prevention, rate making, regulation of insurance, types of insurers, reserves necessary, human motivation, professional ethics, and risk management. (C.P.C.U. Part II).

2-BUS 443. Analysis of Insurance Functions II. (3). A continuation of BUS 442. (Second part of C.P.C.U. Part II).

2-BUS 444. Property Insurance. (3). Prerequisite, BUS 240 or consent of instructor. This course covers in detail an analysis of insurance principles and practices applicable to property insurance. Some of the topics covered will be fire insurance, indirect loss insurance, and modern multi-peril policies. (C.P.C.U. Part I and I.I.A. 22).

2-BUS 445. Casualty Insurance. (3). Prerequisite, BUS 240 or consent of instructor. This course covers in detail an analysis of insurance principles and practices applicable to casualty insurance. Some of the topics covered will be general liability insurance, malpractice insurance, and bonding. (C.P.C.U. Part I continued and I.I.A. 23).

2-BUS 452. Office Management. (3). Prerequisites, BUS Core or consent of instructor. The emphasis in this course is on the functions of the office and office organization, work in the office, office layout, equipment, supplies and forms, personnel problems in the office, and costs and control of office work.

2-BUS 453. Personnel Management. (4). Prerequisite, BUS Core or consent of instructor. A study of the principles and techniques of personnel management with attention given to their psychological foundations.

2-BUS 454. Development of the Labor Movement. (2). This course traces the development of the labor movement, the basic philosophies of the different labor unions, labor legislation, and decisions of courts and labor boards which affect management's relations with its employees.

2-BUS 455. Collective Bargaining. (3). Prerequisite, BUS 454 or consent of instructor. This course deals with contract negotiations and contract administration, grievances and labor disputes. These problems are approached primarily from

the viewpoint of the management of company in terms of its long-run and short-run policies.

2-BUS 456. Business Policies and Management. (3). Prerequisite, BUS Core and senior standing. A course for the senior student designed to integrate the various functional areas of business in terms of policy level decision making. Cases are emphasized.

BUS-457. Small Business Management. (3). This course is designed to emphasize those aspects of management that are uniquely important to small business firms, and to develop the student's understanding of the economic and social environment in which the small concerns functions.

2-BUS 460. Market Analysis and Research I. (3). Prerequisites, BUS 260 and 291. This course is designed to acquaint the student with the typical marketing problems on which research can be used effectively. Analysis of basic research designs and basic methods of collecting data will be covered. Special emphasis will be placed on motivational research, product research, advertising research, marketing research, consumer-demand research and sales control research.

2-BUS 461. Advertising Campaigns. (3). Prerequisite, BUS 362. This senior-level course is designed to give students realistic experience in campaign planning. Students will assume the identity of an advertising agency and will be responsible for the preparation of a complete advertising program. The program will include a background analysis, market definition, objectives, media selection, scheduling, budgeting, creative elements and evaluation criteria.

2-BUS 462. Marketing Problems. (4). Prerequisites, BUS 365 and senior standing or consent of the instructor. A course dealing with the problems of marketing managers. This senior level course is designed to acquaint the student with current marketing problems. Included will be a study of business cases and/or business games and a current reading of related materials.

2-BUS 464. International Marketing. (3). Prerequisite, BUS 260. A seminar designed to consider the global or multinational aspect of business enterprise and its effect on marketing problems and management. The functional areas of international marketing will be considered through the study of marketing systems of various countries and multinational market groups.

2-BUS 465. Seminar in Retailing. (3). Prerequisite, BUS 361. A study of the recent developments in retailing. Special emphasis will be given to the tools which aid in the decision making process in retail management.

BUS 466. Market Analysis and Research II. (3). Prerequisite, BUS 460. This course is a continuation of BUS 460. Students will conduct an actual research project and study case problems in marketing research.

2-BUS 470. Financial Management. (3). Prerequisite, BUS 370. In this course the problems of financing business enterprise are studied. The scope includes working capital financing, budgeting, analyzing financial statements, and intermediate and long-term financing. Cases will be used to illustrate.

2-BUS 471. Investments. (3). Prerequisite, BUS 370. The course is designed to provide the individual investor with a working basis for investment policy. A study will be made of topics such as how to develop a logical investment program, how to recognize and minimize investment risks, how to formulate decisions, and how to take advantage of investment opportunities.

2-BUS 472. Investment Analysis. (3). Prerequisite, BUS 471. An analysis of various types of securities and the management of investment portfolios.

2-BUS 473. Commercial Bank Policies and Management. (3). Prerequisites, BUS 170, 370, and ECON 202. The internal operations of commercial banks, including managerial problems.

BUS 474. Case Problems in Financial Management. (3). Prerequisite, BUS 470. A comprehensive course in applied financial management, policy, and theory. Students will be called upon to integrate accounting, management, finance and other business skills in the financial decision making process for the firm. A case

study-problem solving method will be utilized.

2-BUS 482. Special Topics in Management Information Systems. (3). This course is an in-depth study of topics in the student's field of interest to include both primary and secondary research in management information systems.

2-BUS 489. Computer Simulation Models. (3). (Laboratory arranged.) Prerequisites, BUS 291 and 295 and a course in computer programming or consent of instructor. This course introduces the student to the methodology of systems analysis by the use of models and computer simulation. The primary emphasis will be on decision making with special attention devoted to automated application and the GPSS programming language.

PRESCHOOL

CD 136. Introduction to Preschool. (2). The philosophies, goals, and purposes of the preschool are introduced. The role of the teacher, the curriculum and the physical facilities of the UNC preschool are studied. Then a variety of preschool program models are visited, evaluated, and compared.

CD 331. Development of the Infant and Toddler. (3). A study of growth patterns from conception through infancy and the third year. Includes prenatal and post-natal factors influencing early development, guidance and provision for care, and the responsibilities of adults for providing a favorable home environment. Opportunities for observation of infants and toddlers and experiences in constructing home-made toys.

CD 332. Sequences of Conceptual Learning. (3). This course studies children's learning processes and their learning patterns. Individual differences will be considered in examining how children learn and what teachers can do to help.

CD 333. Development and Guidance of the Preschool Child. (4). (3 lecture, 2 laboratory.) The physical, intellectual, social, and emotional development of the preschool child are approached from the developmental point of view. Appropriate guidance procedures are discussed as they pertain to these and related areas. Developmental theory is compared to alternative approaches to child study.

CD 334. Preschool Curriculum and Methods. (PTE) (3). Taken in conjunction with CD 335 -- Prerequisite, 333 or consent of instructor. A study of curriculum, including the selection of Art, Literature, Music and Science for the individual child's development. Experience in planning curriculum programs. A study of specific methods and techniques in teaching preschool.

CD 335. Observation and Participation in Preschool. (3). (1 seminar, 6 laboratory.) Taken in conjunction with CD 334 -- Prerequisite, 333 or consent of instructor. Observation of specific methods and techniques relating to the teaching of preschool. Practical laboratory observation and experience with preschool age children.

CD 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. A copy of a well-written paper must be filed with the instructor before credit is given.

CD 437. Administration of Programs for Young Children. (3). Prerequisite, consent of instructor. The organization and management of various types of Child Care Centers. Specific emphasis is given to program planning, selecting and organizing equipment, and learning administrative procedures.

CD 438. Practicum in Preschool Teaching. (3). (1 seminar, 6 laboratory.) Prerequisite, CD 333, 334, 335, or consent of instructor. The laboratory experience gives the students an introduction to student teaching through observation, demonstration and participation with preschool children under an experienced preschool teacher.

CD 439. Parent Education. (3). This course deals with relationships between parents, children and teachers. Emphasis is on resources for meeting problems through cooperative interaction.

CHEMISTRY

5-CHEM 100. Introductory Chemistry. (3). This course introduces the student to basic concepts in chemistry. It is specifically designed to prepare students majoring in nursing, who have no high school chemistry, to enroll in CHEM 108, General Chemistry. Credit will not be allowed toward a chemistry major or minor.

5-CHEM 101. Foundations of Chemistry I. (3). Chemistry as it relates to man and his society is presented. Topics such as the chemistry of polymers (including textiles), food, drugs, and other timely topics will be presented. It is assumed that the student has no previous background in chemistry. Any chemical principles needed to understand the above topics as presented will be covered in class. Credit will not be allowed toward a chemistry major or minor.

5-CHEM 102. Foundations of Chemistry II. (4). (3 lecture, 3 laboratory.) Prerequisite, CHEM 101. This course is a continuation of CHEM 101 and will treat additional topics of interest based upon a knowledge of acids and bases, quantitative relationships in chemical reactions and radiochemistry.

5-CHEM 103. Applied Organic Chemistry. (4). (3 lecture, 3 laboratory.) Prerequisite, CHEM 102 or 104. An introduction to the chemistry of common organic compounds will be presented. The chemistry of fuels, polymers (including textiles), compounds associated with living systems, foods and food additives, and drugs will be stressed. Enrollment restrictions: This course may not be counted for credit toward a major or minor in chemistry.

5-CHEM 104. Principles of Chemistry I. (5). (4 lecture, 3 laboratory.) This course introduces the student to the principles of chemistry together with some descriptive chemistry to illustrate these principles. It is designed for science majors and minors, as well as for pre-medical, pre-dental, pre-veterinary, pre-engineering, and home economics students.

5-CHEM 105. Principles of Chemistry II. (5). (4 lecture, 3 laboratory.) Prerequisite, CHEM 104 or 106. This course is a continuation of the principles of chemistry together with the descriptive chemistry necessary to illustrate these principles. It is designed for the same group of students as CHEM 104 and is necessary to provide a reasonably complete understanding of the basic concepts of chemistry.

5-CHEM 106. Principles of Chemistry IA. (5). (4 lecture, 3 laboratory.) Prerequisite, one year high school chemistry, three years high school mathematics or MATH 123. The course presents the principles of chemistry rigorously to those students who have a strong background in high school chemistry and mathematics. Descriptive chemistry will be used to illustrate the theoretical basis of modern chemistry. Laboratory work will emphasize quantitative aspects of chemistry.

5-CHEM 107. Principles of Chemistry IIA. (5). (4 lecture, 3 laboratory.) Prerequisite, CHEM 104 or 106. This course is a continuation of the principles of chemistry together with the descriptive chemistry necessary to illustrate these principles. It is designed for the same group of students as CHEM 106 and is necessary to provide a reasonably complete understanding of the basic concepts of chemistry. Laboratory work will emphasize the quantitative aspects of chemistry.

5-CHEM 108. General Chemistry. (5). (4 lecture, 3 laboratory.) High school chemistry is strongly recommended. Principles of chemistry will be studied with some application to inorganic chemistry. Those topics and laboratory techniques will be stressed which prepare the student for those chemistry courses required of nursing students. Students not majoring in nursing should take CHEM 104 or 106, Principles of Chemistry I or IA.

5-CHEM 109. General Chemistry-Organic. (5). (4 lecture, 3 laboratory.) Basic concepts in organic chemistry will be introduced. Emphasis will be placed on those topics which relate to an understanding of living systems. Courses such as physiology, biochemistry, and pharmacology build on these basic concepts. Students not majoring in nursing should take CHEM 130, Introductory Organic Chemistry, or

CHEM 332, Organic Chemistry I.

5-CHEM 110. Elements of Chemistry. (4). (3 lecture, 3 laboratory.) This course introduces the student to basic concepts in chemistry. It is specifically designed to prepare students having no high school chemistry to enroll in CHEM 108, General Chemistry. Credit will not be allowed toward a chemistry major or minor. This course is for Special Services students only.

5-CHEM 111. Qualitative Analysis. (5). (3 lecture, 6 laboratory.) Prerequisites, CHEM 105 or 107 and MATH 123 or one year of high school algebra. In this course the student is introduced to analytical theory and the methods of detection of common ions. The laboratory work illustrates the class discussions.

5-CHEM 130. Introductory Organic Chemistry. (5). (4 lecture, 3 laboratory.) Prerequisite, CHEM 105 or 107 or 108. This course provides an elementary introduction to organic chemistry, including some of the many applications in such fields as food, drug, plastic, dye, and vitamin chemistry. A student cannot receive credit for both CHEM 130 and 332.

5-CHEM 281. Human Biochemistry. (5). (4 lecture, 3 laboratory.) Prerequisites, CHEM 109 or 130 or 333. An introduction to the biochemistry of the human system. The chemistry of cellular and body processes, foods and nutrition, and of diseases related to metabolism will be considered.

5-CHEM 301. Inorganic Chemistry I. (3). Prerequisite, CHEM 311. This course is an introduction to inorganic chemistry. Literature, atomic structure and chemical bonding will be presented.

5-CHEM 311. Quantitative Analysis I. (5). (3 lecture, 6 laboratory.) Prerequisite, CHEM 111. This course provides a discussion of quantitative analytical procedures and emphasizes analytical theory. Gravimetric, volumetric, colorimetric and electrodeposition methods are applied to common substances in the laboratory.

5-CHEM 312. Quantitative Analysis II. (5). (3 lecture, 6 laboratory.) Prerequisite, CHEM 311. Corequisite, CHEM 452. Special attention is given to the analysis of complex mixtures, and the use of certain analytical instruments.

5-CHEM 314. Instrumental Analysis. (3). (2 lecture, 3 laboratory.) Prerequisites, CHEM 311 and either CHEM 130 or 332. Lectures and laboratory sessions centered around colorimetry, spectrophotometry, fluorimetry, flame spectrophotometry, infrared spectrophotometry and other selected methods of analysis. For medical technology, biology and earth science majors, as well as others not qualified to take CHEM 414.

5-CHEM 315. Food Chemistry. (5). (3 lecture, 6 laboratory.) Prerequisite, CHEM 130. This course explores the chemistry of foods, food products and food additives. The laboratory deals with some of the techniques of qualitative and quantitative analysis of foods for selected inorganic and organic constituents.

5-CHEM 332. Organic Chemistry I. (5). (4 lecture, 3 laboratory.) Prerequisite, CHEM 105 or 107. This course is the first of a series of three courses which cover the nomenclature and reactions of the various classes of organic compounds, together with basic electronic aspects of these compounds. The aliphatic and aromatic compounds are integrated in this series. A student cannot receive credit for both CHEM 130 and 332.

5-CHEM 333. Organic Chemistry II. (5). (4 lecture, 3 laboratory.) Prerequisite, CHEM 332. This course is the second of the series which covers the nomenclature, reactions and electronic theory of the various classes of organic compounds. Aliphatic and aromatic compounds are integrated in this series.

5-CHEM 334. Organic Chemistry III. (5). (4 lecture, 3 laboratory.) Prerequisite, CHEM 333 or 530. This course is the last of the series which covers the nomenclature, reactions and electronic theory of the various classes of organic compounds. Aliphatic and aromatic compounds are integrated in this series. Chemistry majors (Arts and Sciences) may also register for CHEM 335 (one hour) concurrently.

- 5-CHEM 335. Advanced Laboratory in Organic Chemistry.** (1). (3 laboratory.) Prerequisites, CHEM 334, or taken concurrently. This is a laboratory course dealing with organic preparations, analysis, and structure determination using the more advanced research tools of nmr, gpc, ir, and uv.
- 5-CHEM 350. Computer Programming in Chemistry.** (1). Prerequisites, MATH 125, CHEM 105 or 107. An introduction to programming in the BASIC language and its application to problems in chemistry.
- 5-CHEM 360. Environmental Chemistry.** (4). Prerequisites, CHEM 130 or 332. The involvement of chemistry in the understanding and solution of environmental problems will be explored. Areas such as pesticides, fossil and nuclear fuels and detergents as well as topics related to air, water and soil pollution will be discussed.
- 5-CHEM 381. Enzyme Chemistry** (2). Prerequisite, CHEM 281. A study of the structure and function of enzymes with an emphasis on the kinetics and mechanisms of enzyme-catalyzed reactions.
- 5-CHEM 390. Chemical Literature** (1). Prerequisite, CHEM 334. This course covers the use of the library and the function of chemical literature. Problems in the use of the library are assigned.
- 5-CHEM 401. Inorganic Chemistry II.** (3). Prerequisites, CHEM 301, 452. Corequisite, CHEM 453. The chemistry of typical inorganic compounds will be presented. Emphasis will be placed on the relationship of bonding and structure to chemical properties.
- 5-CHEM 402. Laboratory in Inorganic Chemistry.** (1). (3 laboratory.) Prerequisite, CHEM 301. The student will perform experiments which will explore the structure, bonding and chemical properties of inorganic substances.
- 5-CHEM 411. Quantitative Analysis.** (5). (3 lecture, 6 laboratory.) Prerequisites, MATH 123 and CHEM 105 or 107. Lectures treat the equilibria existing in solutions of acids, bases, and slightly soluble salts, and the application of such equilibria to gravimetric and acid-base and volumetric precipitation analysis. Laboratory work consists of illustrating these three types of analyses. Students having credit in any quantitative analysis course must obtain permission of instructor before enrolling in this course.
- 5-CHEM 414. Instrumental Methods of Analysis.** (5). (3 lecture, 6 laboratory.) Prerequisite, CHEM 311. Corequisite, CHEM 453. Lectures will consider the theory and techniques of the analysis of chemical systems by various optical, X-ray and electrical methods of analysis. In the laboratory the student will perform analyses using the colorimeter, spectrophotometer, flame photometer, fluorimeter, infrared spectrophotometer and polarograph.
- 5-CHEM 421. Elements of Glass Blowing.** (1). (3 laboratory.) Demonstrations and practice in the elementary operations of glass blowing; the construction and repair of borosilicate glass laboratory equipment. This course is for science majors only.
- 5-CHEM 431. Organic Qualitative Analysis.** (3). (1 lecture, 6 laboratory.) Prerequisite, CHEM 334. This course is an advanced laboratory course in organic chemistry. The identification of organic compounds by classical and modern spectral methods constitutes the laboratory work. Lecture will consider theory and technique of analysis.
- 5-CHEM 451. Physical Chemistry I.** (4). Prerequisites, CHEM 333, MATH 133, PHYS 267. Corequisites, CHEM 311, 454. This course is an advanced study of the theoretical principles upon which chemistry is based. The properties of the gaseous, liquid, and solid states, the principles of thermodynamics and thermochemistry and the theories of atomic and molecular structure are considered.
- 5-CHEM 452. Physical Chemistry II.** (4). Prerequisite, CHEM 451. Corequisite, CHEM 455. This course is a continuation of CHEM 451. It introduces the student to the fundamental concepts of entropy, chemical bonding, molecular structure and chemical kinetics.

5-CHEM 453. Physical Chemistry III. (4). Prerequisite, CHEM 452. Corequisite, CHEM 456. This course is a continuation of CHEM 452. It introduces the student to the fundamental concepts of liquid theory, phase equilibrium, solutions and electrochemistry.

5-CHEM 454. Physical Chemistry I Laboratory. (1). Corequisite, CHEM 451. This course will cover the mathematical tools normally utilized in experimental physical chemistry with emphasis on the treatment of data by manual and computer methods. A basic understanding of these tools will be developed and practice in their application will be provided.

5-CHEM 455. Physical Chemistry II Laboratory. (1). Corequisite, CHEM 452. This course will provide experimental contact with the concepts covered in CHEM 451 and CHEM 452. Emphasis will be placed on the application of the mathematical tools discussed in CHEM 454.

5-CHEM 456. Physical Chemistry III Laboratory. (1). Corequisite, CHEM 453. This course is a continuation of CHEM 455 and will deal principally with the concepts covered in CHEM 453.

5-CHEM 457. Selected Topics in Physical Chemistry. (2). Prerequisite, CHEM 453. Some of the topics covered in this course will have been introduced in the first year of physical chemistry but will now be treated in greater depth, others will be new to the physical chemistry student. All topics covered will be selected from the following areas of physical chemistry: molecular spectra, crystals, electrical and magnetic properties of molecules, surface chemistry, catalysis, and chemical bonding.

5-CHEM 482. General Biochemistry I -- The Chemistry of Biological Compounds. (4). (3 lecture, 3 laboratory.) Prerequisite, one year of organic chemistry or its equivalent. An introduction to the chemistry of biologically important compounds. The chemistry of the organic compounds in the living system will be stressed, but bioinorganic chemistry will be included.

5-CHEM 483. General Biochemistry II -- Intermediary Metabolism. (4). (3 lecture, 3 laboratory.) Prerequisite, CHEM 482 or its equivalent. A detailed study of the chemistry of living processes. The regulation of intermediary metabolism will be considered.

5-CHEM 484. Physical Biochemistry. (4). (3 lecture, 3 laboratory.) Prerequisites, CHEM 334, 482. The physical basis of modern biochemistry will be studied. Enzyme chemistry, the physical chemistry of macromolecules, and the molecular organization of the cell will be emphasized.

5-CHEM 490. Senior Research. (2). (Minimum 4, maximum 6.) Prerequisites, CHEM 334, 453. An introduction to research in chemistry. The student will initiate and pursue an independent original investigation. A paper and oral presentation of his work are required. Weekly conferences with instructor are required. The student may earn a maximum of six hours credit.

5-CHEM 496. Seminar in Teaching Chemistry. (2). This course is designed for seniors, graduates and inexperienced teachers to prepare them for the task of setting up, organizing, and running a high school chemistry laboratory and classroom.

COMMUNICATION

1-COMM 110. Communication: Public Forum. (3). An introduction to the principles and practices of platform speaking.

1-COMM 111. Communication: Interpersonal. (3). An introduction to the theoretical foundations of effective communication with a special emphasis on the unique challenges and characteristics of interpersonal and intrapersonal communication.

1-COMM 112. Public Speaking for Reluctant Students. (3). A course designed to enable reluctant students to learn basic principles and experience success in one-to-many speaking situations. By excluding the more courageous and proficient students, this course should provide maximum opportunity with minimum threat. Admission by permission of instructor.

1-COMM 120. Logic in Practice. (3). A practical study of the uses of deductive and inductive logic, including consideration of the nature of concepts, propositions, and arguments as instruments of knowledge; the concept of superstition; development of logos.

1-COMM 130. Voice and Speech Improvement. (3). A study of the speech mechanism through frequent instructor and peer evaluations of class readings. The International Phonetic Alphabet is employed as a method for recording speech sounds.

1-COMM 140. Principles of Mass Communication. (3). An introductory study of the techniques and theories of mass communication, including electronic media, film and print; and its significance in contemporary society.

1-COMM 170. Oral Interpretation. (3). (2 lecture, 2 laboratory.) A study in the oral communication of literature, especially prose and poetry. Laboratory experience includes substantial student performance in individual and group presentations.

1-COMM 210. Laboratory Forensics. (Maximum 3). The course provides laboratory experience in intercollegiate forensics. Students registering for more than one hour of credit must have permission of director of forensics and must devote at least fifteen hours a week to the program. No student may earn more than a total of eight hours in COMM 210.

1-COMM 212. Reason in Controversy. (3). This lecture-discussion course focuses on the nature of argument, the reasoning process, and evidence-claim relationships. Theories of argumentation shall be examined as they apply to courtroom advocacy, political debate, general public debate, and academic intercollegiate and interscholastic debate.

1-COMM 220. Nonverbal Communication. (3). A study of nonverbal communication precepts associated with human communication. One focus is the relationship between nonverbal and verbal communication associated with communication accuracy, attraction, or influence. A second focus is the investigation of nonverbal cues associated with a specific minority group, nation/state, or professional group.

1-COMM 250. Public Speaking as an Art Form. (3). (Maximum 6.) A public forum series, each three credits, offering practical speaking experience. **Speech Composition** focuses on the elements which influence speech construction and delivery and culminates in one delivered speech. **Public Speaking** course content is similar to Speech Composition but culminates in three to five delivered speeches.

1-COMM 270. Readers Theatre. (3). Prerequisite, COMM 170, Oral Interpretation, or the permission of the instructor. A course in the theory and practice of group performances of orally interpreted literature. Content will include selection and adaptation of scripts, theories and techniques of performance, and practical experience in performing Readers Theatre.

1-COMM 302. Small Group Communication (4). A study in the principles and practice of organizing, conducting, and participating in all forms of discussion. Emphasis is placed on small group concepts such as leadership, roles, norms, task functions.

1-COMM 312. Practical Debate. (3). Prerequisite, COMM 212. This course is designed primarily to provide students with a better understanding of the intricacies of intercollegiate academic debating and the opportunity for practical experience in team debating.

1-COMM 323. Interpersonal Communication. (4). (Maximum 12). Prerequisite, theory for Communicative Situations or Practical Applications. A series of courses designed to facilitate a perspective on the readings, theories, and

research associated with interpersonal communication. **Interpersonal Theory**, the prerequisite course, focuses on concepts associated with interpersonal communication. **Communicative Situations** focuses on the social context of interpersonal communication. **Practical Applications** focuses on empathy and alternative communication modes.

1-COMM 330. Organizational Communication. (3). (Maximum 9.) A series of courses designed to acquaint students with issues and concepts applicable to an organizational context. The course can be repeated for credit under different subtitles; for example: Conference Leadership, Information Systems, Decision Theory, Management Communication Strategies and Styles, etc.

1-COMM 340. Radio Production. (4). (Maximum 8.) A series of courses designed to help the student acquire basic production vocabulary, working knowledge, and skills in television. The course can be repeated in series for credit under different subtitles; for example: Introduction to Radio, Advanced Radio, etc.

COMM 341. Methods of Teaching in the Secondary School -- Communication. (3). Prerequisite to student teaching. This course is taken in the department in which student teaching is done. It includes curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of the subject area to the total secondary program. Teaching techniques are a point of emphasis.

1-COMM 342. Television Production. (4). (Maximum 12.) A series of courses designed to help the student acquire basic production vocabulary, working knowledge, and skills in television. The course can be repeated in series for credit under different subtitles; for example: Introduction to TV, Advanced TV, etc.

1-COMM 345. Media Theory: Media and Government, the Adversary Relationship. (3). A series of courses designed to facilitate a perspective on readings, theories, and research associated with specific media. The course can be repeated for credit under different subtitles; for example: Media and the Government; The Adversary Relationship, etc.

1-COMM 346. Media Practicum: Radio Drama. (3). A series of courses designed to offer students an opportunity to relate theory and production in practical media application. The course can be repeated for credit under different subtitles; for example: Broadcast Advertising, Radio Drama, etc.

1-COMM 356. Communication Strategies. (3). (Maximum 9.) Each quarter the class will concentrate on the communication and behavioral strategies used in the rhetoric of one of four areas: Women, Social Protest Groups, Foreign Policy, Free Speech. The course may be repeated under the different subtitles for a maximum of nine credits.

1-COMM 375. Oral Interpretation of Children's Literature. (3). (2 lecture, 2 laboratory.) Prerequisite, COMM 170. A study in the theory and practice of oral interpretation of children's literature, especially poetry and prose. Choral reading and Readers Theatre for children will also be experienced.

1-COMM 400. Theories of Group Process. (3). Prerequisite, COMM 302. A systematic overview of current theory and knowledge of discussion as derived and synthesized from significant empirical investigation.

1-COMM 420. General Semantics. (4). An interdisciplinary course designed to show the relationship among language, thought and behavior. The goals of the course will be to learn to think more clearly, to speak and write more effectively, and to listen and read with greater understanding. Emphasis is placed on innovative and effective teaching methods.

COMM 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department. Application for COMM 422 MUST be submitted two weeks prior to pre-registration.

1-COMM 452. Seminar in American Public Address. (3). (Maximum 9.) A historical and critical study of representative American speakers and speeches of a

specific period. The course can be repeated for credit under different subtitles; for example: American Public Address to 1865, American Public Address 1865-1945, American Public Address 1945 to Present.

1-COMM 460. Persuasion. (3). A study of advocacy with special emphasis on the techniques used in communication and the implications for the listener and reader.

1-COMM 486. Seminar in Directing Communication Activities. (3). A study of philosophy, principles, methods, and problems of directing debate, individual events, and mass communication activities at the secondary school level.

1-COMM 490. Workshop in Communication. (3). (Maximum 9.) A study of the problems involved in communication. The subject matter for the workshop will be announced prior to each quarter.

ECONOMICS

3-ECON 100. Introductory Economics. (5). An introductory analysis of the American economic system as it affects the average citizen. Considers resources, the market, business organization, labor, money and public finance.

3-ECON 102. Contemporary Economic Problems. (3). Prerequisite, ECON 100. Some principles of economic analysis will be treated in greater depth than in the introductory course. Application will be made of these principles to current problems of our society.

3-ECON 145. Urban Economics. (3). Prerequisite, ECON 100. A study of the economic interrelationships of individuals, firms, and government within urban area confines with attention given to analysis of various urban markets, socio-economic problems, government policy, and economic growth.

3-ECON 200. The Price System. (4). Prerequisite, ECON 100 or equivalent. An introduction to the theory of the firm as it relates to the prices of goods and services in the context of resource allocation.

3-ECON 202. Money and Banking. (5). Prerequisite, ECON 100. A study of the origins and present roles of our monetary system, commercial banking and Federal Reserve System.

3-ECON 205. Labor Economics. (3). Prerequisite, ECON 100. This course will first examine the labor market, wages, and employment, and will then give major attention to collective bargaining goals, conflicts, and to current public policy and labor legislation.

3-ECON 241. Public Finance. (5). Prerequisite, ECON 100. A study of government financing on the federal, state, and local level as it is reflected in expenditures, revenue sources; such as taxes, and the problems and solution of public debt.

3-ECON 242. State and Local Finance. (3). The purpose of this course will be to focus attention upon the mechanisms and the goals of public finance as employed by governments on the state and local level in the U.S. economy.

3-ECON 250. History of Economic Systems: Socialism, Communism, Capitalism, Fascism. (3). A survey of socio-economic reform movements, including Utopian schemes, mercantilism, monopolistic capitalism, socialism, communism, fascism and modified capitalism.

3-ECON 260. Radical Economics. (3). Prerequisite, ECON 100. An exploration of economic concepts that have tended to threaten the status quo of established economic thought and theory.

3-ECON 300. International Trade. (3). Prerequisite, ECON 100. An examination of the theory of trade, commercial policy, and practices and institutions that effect the international economy.

3-ECON 302. International Finance. (3). Prerequisites, ECON 100, 210, or the consent of the instructor. A study of the financial instruments, institutions and

organizations which comprise international finance and which assist international trade.

3-ECON 305. Labor-Management Relations. (3). A study into the origins of the labor movement and an examination of the impact of trade unionism on contemporary industrial organization.

3-ECON 320. Russia's Soviet Economy. (3). A synthesis of available knowledge regarding all major sectors of the Soviet economy, particularly as regards their organization and operation.

3-ECON 350. Income and Employment Analysis. (4). Prerequisite, ECON 100. The essential theoretical tools used in macroeconomic analysis at the undergraduate level are considered. These topics include the multiplier, consumption, investment, supply and demand for money, and the ISLm model.

3-ECON 360. Economics of Growth and Development. (3). Prerequisites, ECON 100, 200, or consent of the instructor. An analysis of the theory processes, and history of economic growth and development, with attention given to resource use and productivity increases in less developed areas.

3-ECON 377. Government and Business. (3). Prerequisite, ECON 100. A study of the relation of American public policy to the challenge of industry, labor, agriculture and inflation-depression periods.

3-ECON 390. European Economic History. (3). Prerequisite, ECON 100. A study of the historical origins of the economic institutions of Europe as related to the development of present European economic life.

3-ECON 400. Managerial Economics. (3). Prerequisites, ECON 100, 200. Primarily an introduction to the economics of decision making as it affects the manager. Special attention will be given to certain "optimization techniques," cost and demand analysis. Capital Budgeting will also be discussed.

3-ECON 401. Natural Resource Economics. (3). Prerequisite, ECON 100. Considers the relationship of population to land or natural resources. Land utilization takes place within a physical, institutional economic framework.

3-ECON 402. Welfare Economics. (3). Prerequisites, ECON 100, 200. This course will include the history of welfare theory from the start of the marginal conditions school to the present-day theories of welfare maximization. Attention will be given to the effects of monopoly power, inflation, compensation debate, and the theory of the second best.

3-ECON 451. Introduction to Quantitative Economics. (3). Prerequisites, ECON 100, 200, or the consent of the instructor. An introductory course in the use of mathematical techniques in economics. High School algebra and a good background in economic theory would be sufficient preparation.

3-ECON 453. Engineering Management and Economic Analysis. (3). Prerequisite, ECON 100. An introduction to the techniques used for project evaluation and cost optimization. Special emphasis will be given to multiple project alternatives, annual cash flow, present-worth values, benefit-cost analysis, replacement vs. repair analysis.

3-ECON 460. Economic Colonialism and Imperialism. (3). Prerequisites, ECON 100, 390, or the consent of the instructor. A study of the part played by economic doctrines, theories and practices in the expansionary drives to colonialism and imperialism, with primary emphasis given to modern history.

3-ECON 462. Economic History of the United States. (3). A review of the historical changes in the major American economic institutions with emphasis on the post-Civil War period.

3-ECON 470. History of Economic Thought. (3). Prerequisite, ECON 100. This course will trace the evolution of economic thinking from the period of the Old Testament up to the present-day. Particular attention will be given the roles played by particular "schools" of economic thinkers, the genesis of their ideas and their contributions.

EDUCATIONAL CURRICULUM AND INSTRUCTION

EDCI 101. Orientation to Education. (2). Designed to familiarize students with teaching at several educational levels, the course provides presentations by teachers and other personnel from pre-schools, elementary schools, middle and junior high schools, high schools, and schools of higher education. Students assume responsibility for discussion of these presentations and of their readings on problems in education.

EDCI 102. Orientation to Middle Schools. (2). This is an introduction to the history, philosophy and current curriculum of middle schools. The course emphasizes the organizational plans of the middle schools, skills required of the teachers, nature of the curriculum and the problems of articulation with other schools in a system.

EDCI 340. Introduction to Student Teaching in the Secondary School. (PTE). (2). Student is assigned to a specific class in his major or minor area under supervision in the Laboratory School. He will meet with the class and the supervising teacher five days per week and arrange for one additional conference hour.

EDCI 341. Methods of Teaching in the Secondary School. (PTE) (3). Prerequisite to student teaching. Taken in the department in which student teaching is done. Includes curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of the subject area to the total secondary program. Teaching techniques are a point of emphasis.

EDCI 351. Teaching Problems Laboratory. (3). Designed to assist the preservice teacher in dealing appropriately with problems common to classroom teaching, such as the disruptive student, parent conferences, adapting teaching materials, etc., through the use of simulation, role-playing, films, videotape and other techniques.

EDCI 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with instructor and one with the chairman of the department.

EDCI 481. History and Philosophy of Bilingual Education. (3). Designed to provide an understanding of how a language other than English may be used as an instructional tool in teaching children of a culturally different background. Specific emphasis will be given to the Renaissance Movement of bilingualism in southwest U.S. since the passage of the Bilingual Education Act.

EDCI 551. Problems in Teaching Minority Groups. (3). An in-depth study of minority groups -- with special emphasis on the psychological, educational and social needs of the Mexican American school child of the Southwest. An attempt will also be made to acquaint educators with teaching methods and techniques that seem to work with minority children.

EDCI 560. Professional Responsibilities of Teachers. (PTE) (Maximum 3). Designed to provide a basic understanding of the roles and responsibilities within the education profession. Includes consideration of professional organizations, teacher rights and responsibilities, personnel policies and working conditions. *Enrollment limited to beginning teachers.*

EARLY CHILDHOOD EDUCATION

EDEC 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. A copy of a well-written paper must be filed with the instructor before credit is given.

EDEC 460. Nursery -- Kindergarten Education. (PTE) (3). This course is designed to acquaint the student with theories and practices for the education of

nursery-kindergarten aged children with an emphasis on curriculum, organization, and scheduling.

EDEC 462. Classroom Management in Early Childhood. (3). This course is concerned with problems involved in working with young children, paraprofessionals, and parents.

EDEC 463. Diagnostic Teaching in Early Childhood. (3). This course is concerned with tools appropriate for measuring a young child's progress in learning and with techniques of individualizing instruction.

EDEC 464. Introduction to Early Childhood Education. (3). This course is designed to identify sound educational practices which are predicated upon basic principles of child growth and development. Base learnings in child growth and development are translated into implications for teaching, classroom management, curriculum organization, and a positive learning environment.

EDEC 467. Compensatory Programs in Early Childhood. (3). This course examines the origin, purpose, and nature of selected model programs designed for compensatory early childhood education. Focus is placed upon the sociological and cultural elements which influence the design of programs for educationally disadvantaged children.

ELEMENTARY EDUCATION

EDEL 312. Introduction to Elementary School Curriculum. (3). A course to introduce and instruct prospective teachers in elementary school curriculum. Emphasis will be on open classroom, team teaching, continuous progress, self-contained classroom, education change as it affects the curriculum, classroom management, and relationship of the various subject areas to each other and to accomplishing goals of education.

EDEL 330. Improvement of Instruction in Mathematics in the Elementary School. (PTE) (3). A comprehensive analysis of the meaning theory, developmental methods of teaching, what to teach, grade placement of content, methods of instruction including concrete and semi-concrete materials, and means of evaluating achievement.

EDEL 330. Teaching Handwriting and Spelling in the Elementary School. (PTE) (3). A detailed consideration of content, methods, instructional material and evaluation in the fields of handwriting and spelling. The student demonstrates competency in spelling and in manuscript and cursive handwriting.

EDEL 340. Improvement of Instruction in English in the Elementary School. (PTE) (3). This course is the basic course in the teaching of English in the elementary school. It considers the scope and nature of an adequate program of instruction in English and is concerned primarily with the identification of content to be taught and methods and materials to be used.

EDEL 350. Improvement of Instruction in Social Studies in the Elementary School. (PTE) (3). A detailed basic consideration of objectives, construction and use of units, problem solving, selection and grade placement of content, methodology including the use of concrete experiences, audio-visual materials, group processes, questioning, reading, and techniques of evaluation.

EDEL 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. A copy of a well-written paper must be filed with the instructor before credit is given.

EDEL/MAS 472. Evaluation and Selection of Bilingual and Bicultural Materials. (PTE) (2). The discussion of material selection principles. Evaluation of bilingual and bicultural materials for the elementary school. Course covers learning level and interests of bilingual children in the elementary school.

EDEL/MAS 474. Teaching in a Second Language in the Elementary Bilingual and Bicultural School. (PTE) (3). Prerequisite, MAS 300 or permission of instructor. This course is designed to prepare the elementary bilingual and bicultural teacher to teach Spanish as a second language or English as a second language. Special consideration is given to methods of instruction, selection of materials, and student evaluation.

EDUCATIONAL MEDIA

EDEM 195. Library Resources, Organization and Usage. (3). A practical study emphasizing the efficient use of library resources in academic work and in current and ongoing personal educational experiences. Library organization and services and a basic approach to the planning and methodology of research are covered.

4-EDEM 330. Instructional Materials -- Problems of Organization, Storage and Retrieval. (3). A basic knowledge of the philosophy, terminology and practices used in the preparation, storage and retrieval of instructional materials is important to Media Center personnel. This information is also valuable to classroom teachers, particularly those who are using many materials to individualize instruction.

EDEM 410. Introduction to Educational Resources. (3-5). Introduces students to most of the materials, both print and nonprint, available for instruction; each is demonstrated, and psychological basis for use is discussed as well as its characteristics, advantages and disadvantages; designed to be of value to all interested in education.

4-EDEM 420. Design and Construction of Audio-Visual Materials. (3). Provides experience in the production of teaching materials using equipment and facilities available to most teachers. Includes preparation and mounting of pictures and the production of graphic materials, slides and recordings.

EDEM 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. One copy of a well-written paper must be filed with instructor before credit is given.

EDEM 434. Reference Materials: Basic School Reference Service. (3). A discussion of suitable reference materials for elementary and secondary school resource centers. Covers selection principles and use of reference materials.

EDEM 460. Television in Education. (4). Educators are exposed to the use of television as an effective educational tool at all grade levels, and are provided basic instruction in ETV equipment, methods, and administration. Involvement in actual ETV development on the UNC campus will be encouraged to give practical experience in a working situation.

FOUNDATIONS OF EDUCATION

EDF 308. Workshop in Foundations of Education. (1-6). An opportunity for undergraduate students to study problems in foundations of education. The area to be covered in any one workshop will be determined by the workshop subtitle. No subtitle may be repeated for credit.

EDF 365. Basic Concepts of Education. (PTE) (5). A conceptual approach to the problems and issues facing educators in contemporary American Society. Special emphasis is placed upon the sociological, anthropological, historical and structural foundations of American Education. Problems and issues are analyzed as they relate to the classroom teacher at each level. Instructors take different approaches to this course. Notify the Department of Foundations of Education for information.

EDF 380. Women in Education. (3). A course designed to increase awareness and understandings relative to the role and status of women involved in all areas of American Education. Emphasis will be on how women educators "see" themselves, how they are perceived by others, and how are such perceptions related to the materials, methods and purposes of schooling.

EDF 422. Individual Studies. (Maximum 4). Qualified students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

4-EDF 445. Comparative Studies in International Education. (12 or 15). A comparison will be made of selected countries in Asia and the Pacific which will be studied on the campus and in home study and will be followed by travel to the selected countries. Schools and universities will be visited and an opportunity will be provided to make comparison of the countries visited with education in the United States.

4-EDF 475. History of Education in the United States. (3). This course is based on material in the most recent texts on the history of education in the United States.

EDF 485. Philosophy of Education. (PTE) (3). Prerequisite, EDF 365. An introductory course in which the student considers the basic problems of knowledge, truth, reality, and value as perceived by the various schools of philosophic thought. The traditional philosophic positions are translated into educational schools of thought and application is made to the specific problems of education.

EDUCATIONAL FIELD EXPERIENCES

4-EDFE 270. School and Community Aide. (1-4). (May be repeated.) Open to students at any level who are considering a career in education or a related field. One hour of credit granted for every twenty hours of aide work. Aide experiences depend on the school or organization where the student is assigned, and upon the interests and competencies of the student. Emphasis is on the human relations involved in working with adults and/or young people in an instructional setting. Offered all four quarters, including a "September Experience" option which permits students to be assigned as aides in schools during the period between the start of public schools and the beginning of the UNC fall quarter. S/U final mark.

EDFE 360. Introduction to Teaching: Primary Continuum. (PTE) (2). Student engages in directed participation in a teaching situation four hours per week under the supervision of a master elementary teacher in the Laboratory School and arranges for one additional conference hour. S-U final mark.

EDFE 361. Introduction to Teaching: Intermediate Continuum. (PTE) (2). Course description same as EDFE 360.

EDFE 362. Introduction to Teaching: Middle School. (PTE) (2). The course is designed for secondary and/or elementary education majors interested in working with the middle school aged child in grades 6, 7, and 8. You will have the opportunity to interact with students on an individual, small group, and large group basis. Each student will spend four hours a week in the classroom plus one seminar. S-U final mark.

EDFE 363. Introduction to Teaching: Business. (PTE) (2). Student is assigned to a specific class in his major or minor area under supervision of a Laboratory School instructor. Student will meet with the class and supervising teacher five hours a week. Students will have opportunities for planning, executing, and evaluating learning activities for students. S-U final mark.

EDFE 364. Introduction to Teaching: Communication. (PTE) (2). The student gains firsthand experience in typical classroom responsibilities: roll-taking/record-keeping; tutoring individuals; directing teacher-pupil confer-

ences; preparing materials and teaching a lesson; evaluating student progress. As a junior member of the department team, he attends class daily and has a conference once a week with his supervising teacher. S-U final mark.

EDFE 365. Introduction to Teaching: Fine Arts. (PTE) (2). Student is assigned to a specific class in his major or minor area under supervision. He will meet with the class and the supervising teacher five days per week. S-U final mark.

EDFE 366. Introduction to Teaching: Foreign Language. (PTE) (2). To be taken concurrently with FL 341, either fall or winter quarter. Students will participate in teaching throughout the quarter making visual aids and plans for various lessons. Students will be video taped. Meets four times per week plus one conference with the master teacher. S-U final mark.

EDFE 367. Introduction to Teaching: Health, Physical Education and Recreation. (PTE) (2). Course description same as EDFE 363.

EDFE 368. Introduction to Teaching: Home Economics. (PTE) (2). This course is designed to give the student experience of actually working with and presenting lessons to laboratory school students. The student is required to spend four hours a week in the classroom plus one conference period a week with the instructor. S-U final mark.

EDFE 369. Introduction to Teaching: Industrial Arts. (PTE) (2). Student is assigned to a specific teaching situation in the public schools in his major area. The student is also required to visit selected schools in reorganized districts and large urban areas. S-U final mark.

EDFE 370. Introduction to Teaching: Mathematics. (PTE) (2). Here the prospective teacher observes and actively participates in the practice of teaching methods. An opportunity is provided to become acquainted with the personalities, learning abilities, and limitations of pupils, as well as to have guided classroom experiences. Students will meet with the class and supervising teacher daily and arrange one additional conference period weekly. S-U final mark.

EDFE 371. Introduction to Teaching: Music. (PTE) (2). Course description same as EDFE 363.

EDFE 372. Introduction to Teaching: Science. (PTE) (2). Participation as teaching assistant in one Laboratory School science class meeting five periods per week. One to two hours outside preparation per week and conferences as arranged. Experiences with individualized, small group, and whole class instruction and other duties assigned by supervisor. Enroll in SCED 441 same quarter. S-U final mark.

EDFE 373. Introduction to Teaching: Social Sciences. (PTE) (2). To be taken concurrently with EDCI 341. The student is assigned to a specific secondary school class in the Laboratory School where through a series of clinical experiences he or she participates in activities that illustrate and demonstrate principles of teaching practice and involve the application and testing of learning theory, methods, and techniques. Five days per week plus one seminar hour. S-U final mark.

EDFE 374. Introduction to Teaching: Theatre Arts. (PTE) (2). Student engages in directed participation five hours per week. Responsibilities: class participation, preparing and teaching lessons, evaluating pupil progress. S-U final mark.

EDFE 379. Introduction to Teaching: Inner City. (PTE) (2). Student engages in directed participation in a teaching situation four hours a week under the supervision of a master teacher in an inner city school. One additional hour of conference each week is arranged with the instructor. S-U final mark.

EDFE 380. Simulation Experiences in the Human Relations of Teaching. (PTE) (3). Open to all students interested in a career in education or related fields. Emphasis in teacher-pupil, teacher-parent, and teacher-administrator relationships through a variety of simulation activities. Participants are encouraged to enroll concurrently for at least one hour of credit in EDFE 270: School and Community Aide. S-U final mark.

EDFE 420. Supervised Teaching: Special Education -- Elementary Level.

(PTE) (18). Meets the "student teaching" requirement for teacher certification. Designed to allow students the opportunity to bridge the gap between theory and practice in the teaching of handicapped children on the elementary level. Opportunity is provided for the student to use special methods, materials and techniques, and to progressively assume the responsibilities related to teaching. S-U final mark.

EDFE 422. Individual Study in Student Field Experience. (1-4). (May be repeated.) Qualified undergraduate students may pursue a special study related to the real school classroom under the direction of an Education Field Experience Area Coordinator. S-U final mark.

EDFE 430. Supervised Teaching: Special Education -- Secondary Level. (PTE) (18). Meets the "student teaching" requirement for teacher certification. Designed to allow students the opportunity to bridge the gap between theory and practice in the teaching of handicapped children on the secondary level. Opportunity is provided for the students to use special methods, materials and techniques, and to progressively assume the responsibilities related to teaching. S-U final mark.

EDFE 440. Supervised Teaching: Pre-School Level. (PTE) (18). Meets the "student teaching" requirement for teacher certification. Provides for the practical application, under supervision, of the principles of learning and the techniques of instruction in the classroom. Specifically designed for pre-school level experience. S-U final mark.

EDFE 450. Supervised Teaching: Elementary Level. (PTE) (18). Meets the "student teaching" requirement for teacher certification at the elementary level. Includes the regular one-quarter 18 credit hour student teaching as well as a variety of paid and unpaid extended field experiences. S-U final mark.

EDFE 460. Supervised Teaching: Secondary Level. (PTE) (18). Meets the "student teaching" requirement for teacher certification at the secondary level. Includes the regular one-quarter 18 credit hour student teaching as well as a variety of paid and unpaid extended field experiences. S-U final mark.

EDFE 470. Supervised Teaching: Vocational Education. (PTE) (18). Designed for student who will apply for a vocational credential to teach vocational programs in Colorado. Students will be placed with state approved vocational supervising teachers. Program limited to approved teaching subject areas. S-U final mark.

EDFE 480. Advanced Supervised Teaching: Elementary Level. (PTE) (3-18). Designed for experienced teachers who need additional student teaching for elementary certification, and for students who have completed regular elementary student teaching but who want or need additional field experience work in an elementary school. Could be a partial term classroom experience during any of four university quarters. S-U final mark.

EDFE 490. Advanced Supervised Teaching: Secondary Level. (PTE) (3-18). Designed for experienced teachers who need additional student teaching for secondary certification in a particular subject area, and for students who have completed regular secondary student teaching but who want or need additional field experiences in the same subject area. Could be a partial term classroom experience during any of four university quarters. S-U final mark.

READING COURSES

4-EDRD 130. College Reading Study Skills. (2). A course designed to enable college students to develop proficiency in the reading study skills required of them in regular college courses. As differentiated from a remedial course, the course develops skills, which will include flexibility in reading and promote vocational growth and reading skills.

4-EDRD 131. Speed Reading. (2). A course designed for college students and mature readers to increase their rate of reading and to develop flexibility in reading

rates through completion of various reading exercises.

EDRD 310. Improvement of Instruction in Reading in the Elementary School. (PTE) (3). A detailed consideration of the content to be taught and the methods and materials to be used in the teaching of reading from kindergarten through the sixth grade.

EDRD 314. Improvement of Instruction in Literature in the Elementary School. (PTE) (2). A survey of children's literature that is appropriate for grades through the sixth. Chief emphasis on modern selections. Consideration of interests and abilities governing the choice of literature in the first six grades.

EDRD 411. Approaches to Reading Instruction. (PTE) (3). Prerequisite, EDRD 310 and EDFE 450 or permission of instructor. This course is designed to acquaint students with various approaches to reading instruction in the elementary school, including basal readers, language experience, individualized, augmented alphabet, phonic, linguistic, and programmed approaches. Objective observation and evaluation will be incorporated among course activities.

EDRD 420. Reading in the Secondary School. (3). Suggested for English majors, undergraduates preparing to be secondary content area teachers, and graduate students with no background in reading instruction. Course content: Reading theory, concept of reading level, reading as skills development, detection of individual differences in reading ability, scope and sequence of skills development, reinforcement of reading skills.

EDRD 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. A copy of a well-written paper must be filed with the instructor before credit is given.

EDRD 440. Practicum in Diagnostic Oral Reading. (1). Prerequisite, enrollment in or completion of EDRD 411 or 420. A practicum designed to develop sensitivity to the use of oral readings for diagnostic purposes. A student will spend 20 hours listening to taped readings on electronic notebooks of an entire class or on remedial students.

SPECIAL EDUCATION AND REHABILITATION

4-EDSE 100. Education of Exceptional Children. (3). A survey of the characteristics and educational needs of impaired and gifted children. Designed as an overview of the field for undergraduate students in special education, general education, nursing, counseling and other related personnel.

EDSE 160. Introduction to Speech Correction. (3). A survey of identifying characteristics, causes, diagnosis and treatment pertaining to the common speech disorders.

EDSE 250. The Structure of Language. (3). A syntactical and morphological approach to language as it applies to the child. Stress will be placed on the understanding of the structure of the English language, as well as an understanding of how language is learned.

4-EDSE 260. Introduction to Phonetics. (3). The formation and characteristics of American English speech sounds and the phonetic symbols used to represent these sounds. Application of this knowledge is made to pronunciation and articulation.

EDSE 264. Introduction to Clinical Practicum I. (2). Prerequisite, EDSE 160. An introduction to the Speech Pathology Clinic in terms of principles, procedures and forms. Clinical observations and participation will be arranged. S-U final mark.

4-EDSE 265. Acoustics of Speech. (3). The physics of sound as it relates to speech and hearing; the transmission of sound; instrumentation used in the analysis of sound.

EDSE 266. Speech and Language Development. (3). Normal language development (articulation development emphasized) together with aspects of genetic and linguistic bases of speech.

EDSE 267. The Auditory and Speech Mechanisms. (5). The speech and hearing mechanisms in terms of development, structure and physiology.

EDSE 270. Pathologies of the Auditory Mechanism. (3). Prerequisite, EDSE 267. Concentrated study of abnormalities and diseases of the auditory mechanism including the outer ear, middle ear, inner ear and central auditory system. Special lectures by medical personnel will be included.

EDSE 274. Clinical Principles in Audiology. (Maximum 6). Observation of supervised diagnosis and therapy in the audiology clinic. May be taken concurrently with EDSE 370 and EDSE 372.

EDSE 290. Orientation to Rehabilitation and Related Services. (3). A course which provides the basic introduction to rehabilitation, social welfare, employment service, corrections, and related services. An orientation to the field experience and the position of the Rehabilitation and Related Service major in current society; a study of the impact of past, current, and pending legislation upon this profession.

EDSE 301. Behavioral Objectives and Educational Programming for Exceptional Children. (1). Complete self-instructional learning module requiring no class attendance except scheduled testing period. Competency assessed through a series of criterion measures. Content focuses on writing, classifying and evaluating goals and learning objectives and the relationship to educational programming.

EDSE 302. Counseling Parents of Exceptional Children. (3). This course is designed to present the techniques of working with parents of special education, general education, nursing, counseling and other related personnel.

EDSE 304. Introduction to Measurement of the Handicapped. (3). This course is designed to develop an understanding of the results of educational tests. Emphasis is on understanding problems encountered in testing children who are visually, acoustically, orthopedically, mentally handicapped or speech defective; and interpretation of test results in light of the various handicaps.

EDSE 305. Educational Prescription and Programming for Exceptional Children. (4). Prerequisites, EDSE 304, EDRD 310. Techniques of educational evaluation and program planning which can be used by classroom teachers for the individualization of instruction.

EDSE 306. Identification of Learning Disabilities in Early Childhood. (3). Course designed to introduce the student to the learning disabilities of early childhood which are highly resistant to modification by conventional remedial techniques.

EDSE 308. Workshop in Special Education. (Maximum 4). A workshop for beginning teachers and clinicians. Topics will be introduced such as: observation techniques, programming for the handicapped, community relations, child development as related to exceptional children, evaluation of children for placement. Materials prescribed by specific workshop as offered.

EDSE 309. Introduction to Special Education Student Teaching. (PTE) (2). Prerequisite, EDSE 100. A course designed to provide the special education student with direct participation in classrooms for the handicapped under the supervision of a master teacher. The experience will consist of four hours per week in the special education laboratory school and one additional hour per week in arranged conference. S-U final mark.

EDSE 310. Introduction to Mental Retardation. (4). Prerequisite, EDSE 100 or 602. A study of the social, emotional, physical, and mental characteristics of the mentally retarded child. Methods of classifying, diagnosing and treating retarded children will be discussed from medical, psychological, sociological, and educational points of view.

EDSE 311. Education of the Trainable Mentally Retarded. (4). Prerequisite, EDSE 310. Organization of special class and school programs for trainable mentally retarded children. Diagnosis and classification. Development of teaching materials and techniques. Community organizations and parent education.

EDSE 312. Seminar: Teaching the TMR. (2). Prerequisites, EDSE 100, 310, 311. A course designed to provide the student with opportunities to participate in educational programs for the TMR before his actual student teaching experience and to relate these field experiences with in-class presentations of materials through a weekly one hour seminar.

EDSE 320. Introduction to the Education of Socially and Emotionally Disturbed Children. (3). An introduction to concepts, practices, and trends in education for emotionally disturbed and socially maladjusted children, an orientation to the dynamics, personality characteristics and needs of emotionally handicapped and socially maladjusted children is provided.

EDSE 326. Introduction to Teaching Learning Disabled Children. (3). Overview of the field of learning disabilities including concepts, practices, and trends.

EDSE 330. Care and Pathology of the Physically Handicapped. (3). Prerequisite, EDSE 100 or 602. A course designed for teachers in special education. Medical and educational problems in the areas of the crippled (cerebral palsy, muscular dystrophy, etc.) and other health impaired (cardiac, epileptic, etc.) will be discussed.

EDSE 331. Problems of Teaching the Physically Handicapped. (3). Methods of teaching physically handicapped children; evaluation of techniques and teaching procedures with the various types of physically, handicapped children; study of available material; curriculum planning with adaptations; and aids used in the education of the physically handicapped child.

EDSE 350. Pathology and Introduction to the Hearing Impaired. (3). History and philosophy of education of the deaf. Structure of the ear and causes of deafness. Problems in organization, support and maintenance of programs for deaf and hard of hearing children. Presentation of types of instruction given in various schools, the oral methods, the combined method, the Rochester method and the acoustic method.

EDSE 356. Manual Communication Skills: S.E.E. (2). Course includes introduction and training for use of Seeing Essential English and the manual alphabet.

EDSE 357. Speech Reading. (3). Speech reading theory and practice. Some educational problems of the speech reading teacher. Methods used for the instruction of children and adults. Correlation with auditory training, reading, and speech correction. Different approaches used with hard-of-hearing children and the deaf.

EDSE 358. Auditory Training and Hearing Aids. (3). Prerequisite, EDSE 370. Emphasis is placed on methods of developing auditory discrimination in hearing impaired children through various techniques aimed to support the speech development program; in addition, a study of individual and group amplification instruments for utilizing all residual hearing will be undertaken.

EDSE 360. Articulation Disorders I. (4). Prerequisites, EDSE 160, 260 or consent of instructor. Causation, diagnosis and treatment of individuals with problems of articulation and delayed speech.

EDSE 361. Voice Disorders I. (3). Prerequisites, EDSE 160, EDSE 267, or consent of instructor. Causation, diagnosis and treatment of voice disorders, particularly those of children.

EDSE 362. Stuttering I. (3). Prerequisite, EDSE 160 or consent of instructor. Causation, diagnosis and treatment of stuttering, especially stuttering in children.

EDSE 363. Introduction to Organic Disorders. (3). Prerequisites, EDSE 160, EDSE 267, or consent of instructor. Causation, diagnosis and treatment for the speech disorders associated with cleft palate, cerebral palsy and aphasia in children and adults.

EDSE 364. Introduction to Clinical Practicum II. (Maximum 4). Customarily 2 being earned for each of 2 consecutive quarters. Prerequisite, EDSE 264. A more extensive view of the Speech Pathology Clinic in terms of professional involvement related to clinical principles, procedures and forms. Clinical observation and participation will be arranged. S-U final mark.

EDSE 365. Language Disorders in Children I. (3). Prerequisite, EDSE 266. Analyses of developmental language disorders and the relationship of language development to other developmental phenomena, as well as an introduction to the evaluation and assessment of language disorders.

EDSE 369. Neurological Bases for Speech and Hearing. (4). Prerequisite, EDSE 267, or consent of instructor. Anatomy and physiology of the nervous systems controlling the speech and hearing mechanisms, together with theories of control.

EDSE 370. Introduction to Audiology. (5). Prerequisites, EDSE 265, EDSE 270 or equivalent, or consent of instructor. Introduction to the area of audiology and audiometry including pure tone testing procedures, methods of speech audiometry, interpretation of results in terms of physical, social and educational handicap. Laboratory sessions will be used to provide practical experience in assessment techniques.

EDSE 372. Advanced Audiometry. (3). Prerequisite, EDSE 370. Theory and practice of advanced audiometric assessment techniques. Special emphasis is placed on interpretation of audiometric findings with special emphasis on the effects of hearing loss on communication.

EDSE 390. Introduction to Social and Rehabilitation Services. (3). Prerequisite, EDSE 290. A survey of the history plus principles, philosophy, and legislation relating to Social Rehabilitation Services. Emphasis will be placed on rehabilitation and rehabilitation process.

EDSE 391. Seminar: Problems in Social and Rehabilitation Services. (3). An approach to the major social problems involved in rehabilitating the handicapped and/or disadvantaged individual in our society. The role of the community as it attempts to solve these problems is considered.

EDSE 394. Practicum in Social and Rehabilitation Services. (Up to 8). Individual observation and supervised experience in working with clients of service agencies. Individual observation and supervised experience in providing services to clients of state and local offices of social service and rehabilitation agencies. S-U final mark.

EDSE 401. Handicapped Students in Regular Classrooms. (3). Introductory course to acquaint non-special education majors with an overview of handicapping conditions, role of special and general educators, identification and assessment procedures, and delivery systems used in serving the handicapped student. This course should be taken prior to EDSE 402 or 403 and is limited to non-special education majors.

EDSE 402. Working with Handicapped Students in the Elementary School. (3). Prerequisite, EDSE 401. This course will overview specific methods and techniques to be used in working with handicapped students in regular elementary schools.

EDSE 403. Working with Handicapped Students in the Secondary School. (3). Prerequisite, EDSE 401. This course will overview specific methods and techniques to be used in working with handicapped students in regular secondary schools.

EDSE 404. The Resource Program Teacher. (3). This course provides undergraduates with an orientation to the various types of resource programs, and personnel, designed to serve handicapped children.

EDSE 411. Vocational Preparation of the Mentally Retarded. (3). Prerequisites, EDSE 100 or 602. Emphasis will be on discussing techniques in the following areas: (1) evaluating vocational fitness, (2) job placement, (3) working with related disciplines, (4) understanding of the implication of vocational experi-

ences on curriculum, (5) on-the-job supervision, and (6) follow-up services.

EDSE 412. Curriculum Development and Methodology for Mentally Retarded: Elementary Level. (4). Prerequisites, EDSE 100 or 602, 310 and EDRD 310. This course will have as its main purpose the development of integrated experience-units for elementary level mentally retarded youngsters.

EDSE 413. Curriculum Development and Methodology for the Mentally Retarded: Secondary Level. (4). Prerequisites, EDSE 100 or 602, 310. Emphasis is placed on content, methods and materials appropriate for teaching junior and senior high school classes for mentally retarded youngsters.

EDSE 414. Problems in Teaching Trainable Mentally Retarded Children. (4). Prerequisites, EDSE 310 and EDSE 311. Technique of developing curriculum, strategies for teaching the trainable mentally retarded child from onset of the school program to the vocational level.

EDSE 415. Vocational Training For TMRs. (4). Prerequisites, EDSE 310, 311, 414 or permission from instructor. Course is designed to acquaint the student with pre-vocational and vocational programs for the trainable mentally retarded in terms of assessment, skill training, job placement, and community living.

EDSE 421. Behavior Management in the Classroom. (3). Emphasis centers on theoretical methodological, and affective competencies utilized in behavior modification techniques as they apply to exceptional children.

EDSE 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

EDSE 440. Survey of Education of Visually Handicapped. (3). Educational, social, emotional implications of visual impairment. Overview of history and current practices in educational and rehabilitational planning. Organization and scope of various educational services -- early childhood through college. Review of public and private agencies, their philosophies and programs. Legislative measures.

EDSE 441. Auditory Comprehension in Children for Classroom Teachers. (3). To promote effective listening in and out of the classroom, the course explores theoretical foundations, sequential development, commercially produced and teacher prepared materials, and special techniques. Practice labs are provided.

EDSE 442. Efficient Visual Discrimination in Children for Classroom Teachers. (3). Identification, classification, and methods of program organization; principles of preparation, selection, effective use of instructional materials for children with limited vision. Adaptation of the school environment considered. Observation, discussion, and administration of tests presented.

EDSE 451. Speech Development for the Hearing Impaired. (6). Prerequisites, EDSE 260, 267, 350, and EDRD 310. A study of various methods commonly used in speech development with the hard of hearing. Integration of speech with other language arts, importance of pre-school programs and parent education.

EDSE 452. Language Development for the Hearing Impaired. (6). Prerequisites, EDSE 250, 266, 350, and EDRD 310. A study of language development techniques commonly used with the hard of hearing, systems of teaching language to deaf, principles of grammar essential to use any system language instruction, development functional language usage, oral and written, meaning and importance of integrated language arts programs.

EDSE 453. Curriculum and Content for the Acoustically Handicapped. (4). Prerequisites, PTE, EDSE 350, EDRD 310. An understanding of the purpose and nature of curriculum and how to plan, implement, and evaluate learning experiences for hearing impaired children, including the ability to design methods of evaluation based upon measurable objectives, select, design, and produce media materials and resources.

EDSE 455. Methods of Teaching Reading to the Hearing Impaired. (3). Prerequisites, EDSE 350, EDRD 310, or 420, EDRD 411. Relationships between expressive and receptive communication skills will be premises. Development of teaching reading readiness skills, reading skills and remedial reading skills for hearing impaired children will be used. All reading skills will be directed toward making the hearing impaired child an independent reader.

EDSE 456. Manual Communication Skills: A.S.L. (2). Training in the use of American Sign Language.

EDSE 459. Undergraduate Seminar in Education of the Hearing Impaired. (3). The course is designed to recapitulate problems encountered in the student field experience. Discussions will be centered around the language and speech problems of the hearing impaired child, and upon the student teacher and the classroom dynamics. S-U final mark.

EDSE 460. Public School Speech Pathology. (3). Prerequisites, EDSE 360, 364, 365, or consent of instructor. Organizational procedures, use of clinical materials, and administrative policies relevant to speech and language programs in public school settings.

EDSE 464. Clinical Practicum in Speech Pathology. (Maximum 12 with 2 hours customarily earned per quarter). Prerequisite, EDSE 364 or consent of instructor. Observation and performance of supervised diagnosis and therapy. S-U final mark.

EDSE 467. Diagnosis in Speech Pathology. (3). Prerequisites, EDSE 360, 364, 365. Techniques of clinical diagnosis and evaluation of persons with speech and language disorders.

EDSE 474. Clinical Practices in Audiology. (Maximum 6). Prerequisite, EDSE 372 or consent of instructor. Observation and performance of supervised diagnosis and the rehabilitation or habilitation of hearing impaired infants, children, adults, and geriatrics.

EDSE 475. Clinical Practices in Rehabilitative Audiology. (Maximum 12). Prerequisite, EDSE 372 or consent of instructor. Observation and performance of supervised therapy in the rehabilitation of acoustically handicapped individuals. S-U final mark.

EDSE 480. Outdoor Education for Special Populations. (3). This course will provide undergraduate and graduate students preparing for leadership positions with the handicapped opportunities to become acquainted with this approach to instruction. Field experiences following the interdisciplinary approach will give special consideration to the needs of the handicapped.

EDSE 491. Interviewing Techniques in Social and Rehabilitation Services. (3). The theory and practice of interviewing as applied in social and rehabilitation services is explored and discussed. Emphasis will be placed on interview techniques that enable the individual to elicit accurate information and getting access to material otherwise unavailable, reduce bias, and not restrict or distort the flow of communication. Demonstration and practice will be an integral part of the instructional process.

EDSE 492. Casework Techniques in the Social and Rehabilitation Services. (3). Prerequisite, EDSE 491 or consent of instructor. This course will provide the student with an understanding in-depth of the principles and techniques involved in casework procedures in social and rehabilitation service agencies. It will also develop proficiency in casework techniques and processes.

EDSE 494. Supervised Field Practice in Social and Rehabilitation Services. (15). Prerequisite, Core courses must be completed. A supervised field practice will constitute an integral portion of the total education and training program for the undergraduate major in Rehabilitation and Related Services. Supervised field practice consists of a minimum of 400 clock hours of work, lasting at least one full term of approximately 10 weeks. It will attempt to integrate the academic know-

ledge into a practical setting where the student can become totally involved in providing services to persons seeking help from various agencies.

Written application must be submitted to Department of Social and Rehabilitation Services at least one quarter prior to quarter of field experience. S-U final mark.

ENGLISH EDUCATION

EED 341. Methods and Materials for Teaching Language and Composition in the Secondary School. (PTE) (4). Prerequisite to student teaching. Methods and materials for teaching language and composition in the secondary schools. Includes curriculum and classroom organization, evaluation, procedures and materials, relationship of language and composition to the total secondary program. Teaching techniques are a point of emphasis.

EED 401. Workshop in the Teaching of English. (PTE) (Maximum 9). A series of workshops in special problems in the teaching of English, conducted by authorities in the field.

EED 402. Methods and Materials for Teaching Literature in the Secondary School. (PTE) (5). Methods and materials for teaching literature in the secondary schools. Principles for the selection of literature for high school pupils. Use of media in relation to literature. Includes curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of literature to the total secondary program. Teaching techniques are a point of emphasis.

EED 405. The Teaching of Language. (PTE) (4). A study of language learning and teaching, including the philosophy of English and the evaluation of inductive and deductive procedures. An analysis of some of the "new grammars" in current textbooks with implications for the secondary English curriculum.

4-EED 406. Literature for Adolescents. (4). Study of that reading material which provides a transition from children's literature to literature for adults. Attention concentrated upon junior novels, junior biographies, and their authors, as well as upon trends and evaluative standards.

ENGLISH

4-ENG 100. Writing Clinic. (No credit.) A laboratory designed to help students improve their writing.

1-ENG 101. Elementary Composition I. (3). The first of the two quarters of elementary expository writing, with introduction to functional grammar, sentence structure, punctuation, and paragraph organization.

1-ENG 102. The College Research Paper. (3). The second quarter of elementary expository writing, with instruction in diction, style, tone, logical thinking, the organization of well-developed reports, and a research paper.

1-ENG 103. Basic Technical Writing, (3). A study of the basics of communication essential to the technician, engineer, and scientist; an analysis of technical writing's order of presentation, sentence structure, and use of illustration, with emphasis on arranging and stating information clearly.

1-ENG 105. Communications on a Theme. (4). Themes for the course will be chosen from ideas of historical influence and/or contemporary problems. Readings and class discussion will serve as background for writing essays and investigating other modes of communicating ideas.

4-ENG 111. Introduction to Poetry. (4). Critical approaches to poetry. Qualified students may be exempted by examination.

4-ENG 112. Introduction to Fiction. (4). Critical approaches to short stories and novels. Qualified students may be exempted by examination.

4-ENG 113. Introduction to Drama. (4). A study of selected plays, ancient and modern, to develop the student's skills in dealing with drama as literature.

4-ENG 211. Medieval Literature. (4). A study of selected works from the Old English and Middle English periods.

4-ENG 212. Renaissance Literature. (4). A study of English poetry and prose of the Renaissance. Emphasis is placed on the work of Spenser, Jonson, Marlowe, Bacon, the Metaphysical poets, and Milton.

4-ENG 213. The Restoration and Eighteenth Century. (4). A study of major writers of the period with attention to their influences on subsequent ideas and literary forms.

4-ENG 214. The Romantic Movement. (4). The development of English Romanticism; its social and philosophical backgrounds. Wordsworth, Coleridge, Byron, Shelley, and Keats; with some consideration of the essayists and minor poets.

4-ENG 216. American Literature to the Civil War. (4). A study of American literature during the formative years of the colonial period and during the early years of the republic, emphasizing the religious and political traditions from which the literature sprang.

4-ENG 217. American Literature: The Civil War to 1914. (4). A study of selected American writers and/or themes from the years 1865 to 1914.

4-ENG 218. Early Victorian Prose and Poetry. (4). A survey course covering a number of early Victorian writers and the themes running through their writings. Special emphasis upon major intellectual currents of the age, such as Utilitarianism, Transcendentalism, Medievalism, and attitudes toward science and technology.

4-ENG 219. Later Victorian Prose and Poetry. (4). A survey course covering a number of later Victorian writers and the themes running through their writings. Special emphasis upon intellectual currents of the age, such as the dilemmas raised by industrialism, the increasing impact of science, and new aestheticism, and higher criticism.

4-ENG 220. English Literature: 1900 to 1939. (4). A study of English literature from approximately 1900 to the beginning of World War II, as selected by the instructor.

4-ENG 221. English Literature: 1940 to the Present. (4). A study of English literature from approximately 1940 to the present, as selected by the instructor.

4-ENG 225. American Literature: 1914-1939. (4). An intensive study of selected American writers and/or themes of the years 1914-1939.

4-ENG 226. American Literature: 1940 to the Present. (4). An intensive study of selected American writers and/or themes of the years 1940 to the present.

4-ENG 230. Lectures on Literary Themes. (2). (Maximum 8). The study of several works of literature centered around a specific theme. Topics will be designated by subtitle. No subtitle may be taken more than once for credit.

1-ENG 240. Creative Writing: Introduction to Poetry. (4). An introduction to the techniques involved in writing poetry.

1-ENG 241. Creative Writing: Introduction to Fiction. (4). An introduction to the techniques involved in writing fiction.

4-ENG 301. Shakespeare: Early Plays. (4). The reading and understanding of the early plays of Shakespeare.

4-ENG 302. Shakespeare: Later Plays. (4). The reading and understanding of the later plays of Shakespeare.

1-ENG 319. Advanced Expository Writing. (4). Prerequisites, ENG 101, 102. For upper division and graduate students with adequate preparation in grammar and composition. Application of the elements of style to the development of effective prose.

1-ENG 320. The English Language. (4). A history of the development of the

English language, the historical basis of usage and grammar and the sources of the English vocabulary.

1-ENG 321. Generative-Transformational Grammar. (4). Prerequisite, ENG 320. A study of the generation of English sentences; blocks, kernels (phrase-structure rules), transformations (single and double base); conceptual postulates, operations, and processes underlying a generative-transformational grammar.

4-ENG 325. Studies in Science Fiction. (4). Reading and discussion of works of science fiction and a view of science fiction's history and relevance.

1-ENG 340. Creative Writing: Advanced Poetry. (4). Prerequisite, ENG 240 or permission of instructor. A course for students to improve their writing of poetry.

1-ENG 341. Creative Writing: Advanced Fiction. (4). Prerequisite, ENG 241 or permission of instructor. A course for students to improve their writing of fiction.

4-ENG 360. Chaucer. (4). An introduction of the language and literature of Geoffrey Chaucer.

4-ENG 401. Greek and Comparative Mythology. (4). A study of Greek myths as one of the important sources of literary allusion and imagery and comparison of Greek myths with those of other cultures to show what is common to all mythologies.

4-ENG 402. The Short Story. (4). The study of typical modern short stories to observe the methods of modern writers and the interpretation of our present-day life embodied in this form of literature.

4-ENG 403. Techniques of the Novel. (5). A study of seven or eight important English and American novels to show different techniques which have been used to reveal the novelists' artistic insight.

4-ENG 404. Modern Literature about Childhood and Adolescence. (4). A study of the concept of childhood and adolescence in the writing of twentieth-century British and American authors, with emphasis on the ideas of innocence and initiation.

4-ENG 405. Contemporary American Drama. (4). A comprehensive view of the best dramatic literature of the modern American theater.

4-ENG 406. Modern Drama Since Ibsen. (4). A study of the developments in modern European and American drama since the time of Ibsen.

4-ENG 407. Advanced Studies in Poetry. (4). A study of some of the formal aspects of poetry (prosody, stanzaic and "named" forms, and the like), of types (lyric, narrative, dramatic), and of the poets' use of language.

4-ENG 408. Elizabethan Drama Exclusive of Shakespeare. (4). The drama from 1558 to 1642; the major dramatists, stage conditions, acting companies, and changes in dramatic form and subjects reflecting the life of the times.

4-ENG 409. Literary Criticism. (4). A study of the theory and history of literary criticism of Plato to Wayne C. Booth, with some application of critical theory.

4-ENG 410. History of Ideas in Literature. (4). An intensive chronological study of various of the significant themes in literature.

4-ENG 411. Biography and Autobiography. (4). A selection of critical essays concerning the genre of biography and autobiography followed by the reading of seven or eight widely varied examples. Particular interests of individual students in the class will be considered.

4-ENG 415. Literature of the Old Testament. (4). A study of selected books of the Old Testament with emphasis on their literary qualities, and on the moral and religious progress they reveal.

4-ENG 416. Literature of the New Testament. (4). A comparative study of the Gospels, followed by a study of other New Testament writings and of the historical and cultural background of the period in which they were written.

1-ENG 418. Grammatical Analysis. (4). A study of comparison of grammatical systems that have been devised for the description of the English language. Ap-

proximately equal time will be given to the theoretical formulations and assumptions underlying structural and traditional grammars. Some time will be spent surveying the texts that advocate each system.

1-ENG 419. Advanced Topics in Syntax. (4). Prerequisite, ENG 321. A study of selected topics of concern to current linguistic theory. Topics selected will be studied from two currently opposed generative-transformational positions.

1-ENG 420. Stylistics. (4). Prerequisite, ENG 321. A study of the linguistic bases of stylistics, with special attention to the properties of literature and literary texts. The three major twentieth century theoretical stances will be considered.

4-ENG 430. Studies in World Literature. (4-12). The study of a particular theme, form or problem that cuts across periods and national boundaries. Topic will be designated by subtitle. No subtitle may be taken more than once for credit.

4-ENG 440. Literature and the Death of God. (4). A consideration of what has been called "the death of God," especially as has been attested to by late 19th-century and 20th-century writers.

4-ENG 441. Colloquium in Literature. (4-12). The study of one great work of literature or of a small group of such masterpieces which are closely related either in form or idea. The selections vary with the needs of students and the interest of the instructor. Particular studies will be designated by subtitles. No subtitle may be taken more than once for credit.

4-ENG 450. Studies in Russian Literature. (4). A study of selected Russian writers to acquaint students with Russia's unique culture and social milieu.

ENVIRONMENTAL STUDIES

4-ENST 110. Introduction to Environmental Studies. (3). This course is designed to introduce beginning students to the environmental problems. It will provide the student with an overall understanding of the complexity of these problems. The interdisciplinary approach will provide a broad foundation for group discussions and student-faculty interchange.

3-ENST 120. Man's Attitude Toward His Physical and Social Environments. (3). Prerequisite, ENST 110 recommended. This course will study the nature of attitude formation and change with particular reference to the development and relationship of western man's "unecological" attitudes to current environmental problems. The practicality and morality of inculcating "ecologically fit" attitudes in the young and the modifying "unecological" attitudes in adults will be explored.

3-ENST 130. The History of the Environmental Movement. (3). The course is designed to focus on the evolution of the environmental movement through its preservationists, conservationists, and environmentalists phases. In addition, the course will evaluate the prospects for the future particularly with regard to the creation of an environmental ethic in the American people.

5-ENST 210. Science of the Environment. (3). A study of the chemical and physical aspects of pollution and the environment, and the basis for improvement, limited by chemical and physical laws.

5-ENST 220. Population Dynamics and Genetic Probabilities. (3). Methods of animal population analysis with particular reference to human populations. Includes consideration of population size, its regulation and factors influencing changes in size; statistical methods applicable to population studies; genetic variation within populations and between different populations, and lateration of the gene pool with its implications for the future of man.

3-ENST 230. Economics of Natural Resources. (3). Concepts, theories and institutions relating to both public and private resource use and policy; analytical methods for evaluating alternative resource use patterns in both the public and private sector.

3-ENST 240. Politics and the Environment. (3). An intensive study of environmental destruction which has emerged as one of the most salient political issues for policy-makers in this era. Policies, laws, and their consequences are investigated as well as the local, state, and national political processes and institutions insofar as they affect the environment.

5-ENST 250. Man's Atmospheric Environment. (3). The structure and nature of the atmosphere as it relates to man and his varied activities; the role of inversions on pollution concentrations; principles and elements of air pollution; the ozone layer and man's impact on it; climatic modification.

5-ENST 255. Man and His Geological Environment.

The role of geology in Man's interaction with his environment. Geological aspects of urban growth, land-use planning, and natural hazards; problems of water resource managements, waste disposal, and pollution; exploitation of mineral resources and related environmental implications.

5-ENST 260. Ecological Interpretations. (3). This course is based on recognition of the existence of functional and structural ecosystems. The interpretation of these systems in relation to man's survival is the main aim of this course.

3-ENST 270. Social Implications of Ecology. (3). A view of ecology as it applies to human groups, particularly in the urban setting, and the value system associated with present ecological practices: consumerism, materialism, alienation. Galbraith's social balance and the tactics of community organization and change agents.

5-ENST 280. Natural Resources and Technology. (3). This course is a study of the rise of agricultural, industrial, domestic, transportation and environmental technologies and their impact on natural resources and the environment.

5-ENST 300. The General Systems Approach. (4). (3 lecture, 2 laboratory.) The course is designed to introduce the student to General Systems Theory. The systems approach and the IBM 370 computer will be employed to solve selected environmental problems. Emphasis will be placed on the general systems approach as an analysis and management tool to serve as a basis for making decisions pertinent to a sanative coexistence between man and the natural environment.

5-ENST 310. Future Environments and Ecosystem Modification. (1). Prerequisites, all 100 and 200 ENST courses. This course will be concerned with man's place in future environments, which result from ecosystem modification. Topics to be included are: Crisis in the city, organism adaptability, economic and social pattern and environmental impact planning and development.

5-ENST 350. Environmental Pollution and Man's Health. (3). This course is designed to acquaint the student with many of the current environmental problems and relate how these problems directly or indirectly affect the health of man.

4-ENST 361. Art and the Environment. (3). An in-depth identification with the process of art as it relates to the different environments of human existence.

EARTH SCIENCE

5-ESCI 105. Earth Science. (3). The purpose of this course is to help students gain a basic understanding of some aspects of Planet Earth and its place in the Universe. Various topics, such as the Solar System, our weather, the origin of landscapes, oceans, space travel, air pollution, and continental drift, will be treated.

5-ESCI 111. Earth Science Mini-Course. (1). A variety of specific Earth Science topics will be scheduled each quarter under this heading, and students will receive credit for as many different ones as they take. Most of the mini-course will be three weeks long.

5-ESCI 484. Earth Sciences Field Experiences. (Maximum 15). Prerequisite, consent of instructor. In-depth field studies in astronomy, geology, meteorology,

and/or oceanography in regions both within and outside the United States. Field work will be preceded by preparatory work on the UNC campus. Specific areas and topics to be investigated will be indicated in the Schedule of Classes each time the course is offered.

5-ESCI 499. Seminar in Earth Science. (2). Prerequisite, consent of instructor. The unifying concepts and principles of the earth sciences and various aspects of teaching earth science in secondary schools will be discussed in seminar format.

FINE ARTS

2-FA 108. Drawing for Non-Majors. (3). Specifically designed for students who have little or no experience in art. Course will consist of studio work, field trips and discussion of works from slides, books and periodicals.

2-FA 110. Art History Survey I. (4). A general survey of western art from Antiquity to the end of the Medieval period. Emphasis is placed on major movements, methods of analysis, historical criteria, changes, and development of styles.

2-FA 111. Art History Survey II. (4). A general survey of western art including the arts of the Renaissance, Baroque, Romantic, Impressionistic and Modern periods. Emphasis is placed on major movements, methods of analysis, historical criteria, changes, and development of styles.

2-FA 113. Lettering. (2). A study of basic lettering forms and their variants, layout and design, manuscript writing, showcards and posters.

2-FA 114. Elementary Crafts Design. (2). Various approaches and uses of simple paper construction suitable for use in the elementary art program.

2-FA 115. Elementary Earthenware. (2). A primitive approach to the making of objects in clay. The course will cover clay prospecting and preparation, clay forming methods, and firing without a kiln.

2-FA 121. Foundations Lecture I. (2). Theory and Discussion of perceptual skills. Must be taken concurrently with FA 122.

2-FA 122. Foundations Studio I. (3). Practical experience in observation and identification skills; visual cataloging; understanding the impact of the non-visual senses; visual relationships. Must be taken concurrently with FA 121.

2-FA 123. Foundations Lecture II. (2). Theory and discussion of conceptual skills. Must be taken concurrently with FA 124.

2-FA 124. Foundations Studio II. (3). Practical experience in rationale for creativity; generation, exploration, and extension of ideas; discovery and identification of theme. Must be taken concurrently with FA 123.

2-FA 125. Foundations Lecture III. (2). Theory and discussion of Communicative and expressive skills. Must be taken concurrently with FA 126.

2-FA 126. Foundations Studio III. (3). Practical experience in beginnings of personal philosophy; quality art; criticism; personal imagery, matching materials to concept; presentation. Must be taken concurrently with FA 125.

2-FA 202. Figure Drawing. (3). The principles of drawing applied to the human figure. Study from life emphasizing essential anatomy and aesthetic relationships.

2-FA 203. Introduction to Water Color Painting. (3). Purpose and experience in painting with watercolor.

2-FA 207. Problems in Design. (3). Problems associated with form and function in design with emphasis on physical space.

2-FA 212. Art of the Non-European Worlds. (4). A general history of non-European art, including the arts of India, China, Japan, Africa, the North American Indian, Oceanic and Pre-Columbian areas. Emphasis is placed on methods of analysis, historical criteria, changes and development of styles.

2-FA 215. Crafts: Design on Fabrics. (3). A study involving the process of silk

screen, batik, hooking, stitchery, and weaving-without-a-loom with their relationship to textile design application.

2-FA 216. Craft Expression in Construction. (3). An experimental approach to the problems of working with contemporary materials in: mosaics, copper enameling, woodcraft, paper mache, modeling and carving.

2-FA 217. Introduction to Pottery. (3). Permission of the instructor. The design and construction of pottery in coil and slab techniques with emphasis on form and texture. General background in clays, glazes, and firing.

2-FA 218. Handloom Weaving Techniques. (3). A study of the basic fundamentals of threading and weaving on four harness looms: emphasis on the basic weaves.

2-FA 220. Introduction to Painting. (3). Permission of the instructor. A study of the basic principles and techniques of painting.

FA 224. Elementary Art. (3). Practical creative experience in a wide variety of media. To be taken concurrently with FA 225. (Art majors and minors see FA 244-245.)

FA 225. Methods of Teaching Art in the Elementary School. (2). Includes philosophy, teaching techniques, procedures, materials and evaluation. A brief experience in an elementary classroom provided where possible. To be taken concurrently with FA 224. (Art majors and minors see FA 244-245.)

2-FA 227. Ceramic Design. (3). Prerequisite, FA 217 or permission of the instructor. An exploration of various methods of constructing large handbuilt forms with an emphasis on sculptural considerations.

FA 229. Art for the Exceptional Child. (3). Experiences with materials and techniques in the arts are integrated with considerations of the aesthetic therapeutic values of creative activities for the exceptional child.

FA 244. Elementary Art For Art Majors and Minors. (3). Practical experience in adapting the basic media and techniques of the artist to art activities for the elementary child. Restricted to art majors and minors. To be taken concurrently with FA 245.

FA 245. Methods of Teaching and Coordinating Art in the Elementary School. (2). Includes philosophy, teaching techniques, procedures, materials and evaluation. A brief experience in an elementary classroom provided where possible. Restricted to art majors and minors. To be taken concurrently with FA 244.

2-FA 258. Introduction to Sculpture. (3). Permission of the instructor. Basic technology of sculpture, clay and plaster modeling, and simple moldmaking. Elements of three-dimensional design related to sculpture problems.

2-FA 259. Printmaking. (3). Permission of the instructor. Technical instruction in traditional intaglio methods: Drypoint, Etching, Engraving, Mezzotint, Bitten lines, Soft ground, Lift ground, Aquatint.

2-FA 270. Introduction to Jewelry and Silversmithing. (3). Permission of instructor. Basic forming forging, soldering, casting techniques and finishing incorporated in creative jewelry techniques.

2-FA 302. Life Drawing. (3). Prerequisite, FA 202. Study from life emphasizing individual interpretation, pictorial composition, inventive media.

2-FA 303. Watercolor Painting. (3). Prerequisite, FA 203. Watercolor painting with special emphasis on composition and design.

2-FA 305. Problems in Advanced Design. (3). Prerequisite, FA 207. Practical application of design theories with emphasis on individual student experiences.

2-FA 307. Sculpture: Methods and Materials. (3). Prerequisite, FA 258. Theoretical and practical experience in traditional and experimental approaches to making sculpture.

2-FA 308. Workshop in Fine Arts. (3). Workshops in specialized area of Fine Arts conducted by specialists in the field. The subject to be completed in any one workshop will be determined by subtitle. No subtitle may be repeated for credit.

2-FA 309. Intermediate Printmaking. (3). Prerequisite, FA 259, or permission of the instructor. Creative intaglio methods: etching, drypoint, soft ground, lift ground, stenciling, touche, glue and light sensitive methods.

2-FA 310. Advanced Intaglio and Relief Printmaking. (3). Prerequisite FA 259. Individual development in creative color printmaking. Color etching, mixed media mono and dry point.

2-FA 315. Crafts: Design on Fabrics. (3). Prerequisite, FA 215. Exploring old and new techniques of fabric decoration.

2-FA 316. Craft Expression in Construction. (3). Prerequisite, FA 216. Experimental approach to the problems of working with contemporary materials in mosaics, copper enameling, wood craft, paper mache, modeling and carving.

2-FA 317. Pottery. (3). Prerequisite, FA 217. Introduction to throwing on the potter's wheel. Emphasis will be placed on techniques of centering, opening and raising clay into basic pottery forms.

2-FA 318. Hand Loom Weaving Techniques. (3). Prerequisite, 218. Investigation and exploration of the various techniques suitable for present-day weaving.

2-FA 319. Silk Screen Printing Process. (3). Prerequisite, FA 259. A study of various methods and techniques in the graphic process of silk screening, with applied problems in all the processes.

2-FA 320. Oil Painting Studio. (3). Prerequisite, FA 220. Advanced study in oil painting to provide the student with more time to develop individual expression and mastery of the medium.

2-FA 321. Interpretive Drawing. (3). Prerequisite FA 202. Study of nature, still-life, imagination. Emphasis on individual interpretation, pictorial composition, inventive media.

2-FA 327. Ceramic Design. (3). A study involving the application of various ceramic decorative processes to hand built and wheel thrown clay forms.

2-FA 331. Sculpture Studio. (3). Prerequisite, FA 258. Individual application of design and technical skills in making sculpture.

2-FA 335. Aesthetic Education. (3). A course for pre-service, in-service, and graduate students in education. It is an interdisciplinary approach, through the arts (visual arts, language arts, speech and dramatic arts, music), to involve students in affective learning situations where the intuitive and cognitive dimensions of problem solving are integrated into the development of specific learning activities.

2-FA 337. Glaze Formulation. (3). Prerequisite, FA 217. An exploration of ceramic glazes as related to their use in pottery studio.

FA 339. Leading Ideas in Art for Teachers. (Elem/Sec.) (2). Prerequisite, two hours of EDFE 270. FA 339 must be completed prior to EDFE 365, Introduction to Student Teaching in the Secondary School, Fine Arts; FA 341, Methods of Teaching in the Secondary School, Fine Arts; and/or FA 244, Elementary Art for Art Majors and Minors; FA 245, Methods of Teaching and Coordinating Art in the Elementary School. The study of the philosophy of art education in American schools as an integral part of the education of the citizens of a democracy.

2-FA 340. Craft Studio. (3). An in-depth workshop in one specific craft technique; developing skills and individual expression. Will be listed under separate sub-heading each session.

FA 341. Methods of Teaching in the Secondary School, Fine Arts. (3). Prerequisite, FA 339. This course is a prerequisite to student teaching. Includes curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of the subject area to the total secondary program. Teaching techniques are a point of emphasis. Must be taken concurrently with EDFE 365.

2-FA 350. Intaglio and Relief Printmaking. (3). Prerequisite, FA 259. Problems in intaglio printmaking including technical process, etching and monoprints.

- 2-FA 360. Art of the Ancient Near East.** (4). A survey of the arts and history of Egypt and Mesopotamia.
- 2-FA 362. Far Eastern Art.** (4). A survey of the arts and culture of India, China, and Japan.
- 2-FA 363. Pre-Columbian Art.** (4). A study of the history and arts of meso-America with emphasis on Olmec, Maya, Miztec, Zapotec, Aztec, Toltec civilizations and related sub-groups.
- 2-FA 364. Medieval Art.** (4). A detailed study of the 12th, 13th, and 14th century art as it relates to Medieval philosophy.
- 2-FA 365. Classical Art.** (4). This course traces the development of the culture and related arts of the ancient world with emphasis on Aegean, Greek, and Roman civilization.
- 2-FA 366. Renaissance Art.** (4). A detailed study of Renaissance Art with emphasis on the humanistic aspects.
- 2-FA 367. Baroque Art.** (4). An in-depth study of the Art of the Mannerist and Baroque Periods.
- 2-FA 368. Primitive Art.** (4). A study of the arts, concepts and cultures of tribal societies; with emphasis on African, Oceanic, and American Indian.
- 2-FA 369. American Art.** (4). Introduction to the history and arts of America, from the colonial period to the twentieth century.
- 2-FA 370. Jewelry Design and Silversmithing.** (3). Prerequisite, FA 270. Basic casting design and techniques including charcoal, sand and centrifugal casting together with methods of stone setting.
- 2-FA 380. Nineteenth Century Art.** (4). The development of the art of the western world through the nineteenth century from the revivalist styles to the brink of modern art.
- 2-FA 381. Modern Art 1905-1945.** (4). An in-depth survey of the major art movements of the first half of the twentieth century from the development of Matisse and Picasso through Surrealism.
- 2-FA 382. Modern Art 1945 to Present.** (4). An in-depth survey of the major avant-garde art movements in the United States and Europe since 1945.
- 2-FA 383. African Art.** (4). The relationship of art to life in sub-Saharan Africa. A cross-cultural survey of types, styles, history and values of arts ranging from personal decoration to the state festivals, stressing Ashanti, Ife, Benin, Yoruba, Camaroon.
- 2-FA 390. Contemporary Imagery and Ideas.** (3). A study of current imagery and ideas prevalent in the main stream of contemporary aesthetic practice.
- 2-FA 402. Life Drawing** (3). Prerequisite, FA 302. Study from life emphasizing individual interpretation, pictorial composition, inventive media.
- 2-FA 403. Watercolor Painting.** (3). Prerequisite, FA 303. Individual problems in water mediums with special emphasis on specific techniques, materials, and design objectives suitable for developing personal expression.
- 2-FA 405. Problems in Advanced Design.** (3). Prerequisite, FA 305. Practical application of design theories with emphasis on individual student experiences.
- FA 406. Special Problems in Art Education.** (3). Supervised research and reporting of student design and originated problems in art education.
- 2-FA 407. Sculpture: Methods and Materials.** (3). Prerequisites, FA 258, 307. Theoretical and practical experience in traditional and experimental approaches to making sculpture.
- 2-FA 409. Intermediate Printmaking.** (3). Prerequisite, FA 309. Advanced creative intaglio methods; etching, drypoint, sugarlift ground, mixed media with monoprint, photo engraving.
- 2-FA 410. Advanced Intaglio and Relief Printmaking.** (3). Prerequisite, FA 310. Advanced color intaglio and relief printmaking. Woodcut, etching and mono-

print mixed media.

2-FA 415. Crafts: Design on Fabrics. (3). Prerequisite, FA 215. Exploring old and new techniques of fabric decoration.

2-FA 416. Craft Expression in Construction. (3). Prerequisite, FA 216. Experimental approach to the problems of working with contemporary materials in mosaics, copper enameling, wood craft, paper mache, modeling and carving.

2-FA 417. Pottery. (3). Prerequisite, FA 317. Intermediate throwing on the potter's wheel. The forming of bowls, vases, pitchers, lidded pots and related forms with experience in stacking and firing combustible fuel kilns.

2-FA 418. Hand Loom Weaving Techniques. (3). Prerequisite, FA 218. Investigation and exploration of the various techniques suitable for present-day weaving.

2-FA 419. Silk Screen Printing Process. (3). Prerequisite, FA 319. Laboratory problems in practical advertising design with emphasis on mass media with silk screen print.

2-FA 420. Oil Painting Studio. (3). Prerequisite, FA 320. Advanced study in oil painting to provide the student with more time to develop individual expression and mastery of the medium.

2-FA 421. Interpretive Drawing (3). Prerequisite, FA 321. Study of nature, still-life, imagination. Emphasis on individual interpretation, pictorial composition, inventive media.

FA 422. Individual Studies, Fine Arts, (1-4). Individual studies in fine arts.

2-FA 425. Figure Painting Studio. (3). Prerequisites, FA 220, 202. Painting from the human figure.

2-FA 427. Ceramic Design. (3). A study of mold making techniques. Plaster, wood, cardboard and related materials will be used in the forming of clay objects.

FA 430. Seminar in Art Education. (Elem/Sec.) (2). Prerequisite, EDFE 460. Research of philosophical issues in contemporary elementary and secondary art education.

2-FA 431. Sculpture Studio. (3). Prerequisites, FA 258, 331. Individual application of design and technical skills in making sculpture.

FA 432. The Curriculum in Art Education. (3). Prerequisite, EDFE 460. A course designed to help the student understand the preparation of curriculums for use at the level of his educational emphasis.

2-FA 433. Mixed Media Painting Studio. (3). Prerequisite, FA 220. Experimental approaches to problems in painting emphasizing a variety of media and techniques.

2-FA 437. Glaze Formulation. (3). Prerequisite, FA 337. A study of clay and clay bodies for studio use. Emphasis will be combining clays to suit the various needs of the individual potter and general classroom needs.

2-FA 459. Intaglio and Relief Printmaking. (3). Prerequisite, FA 359. Advanced creative intaglio printmaking including advanced technical process and monoprint mixed media, photo engraving.

2-FA 470. Jewelry Design and Silversmithing. (3). Prerequisite, FA 370. An experimental approach to the problem of contemporary silver jewelry, including the exploration of combining wood, bone, and stones.

UNC PROGRAMS IN COMPARATIVE ARTS/FINE ARTS

FA 308. Workshop in Fine Arts: Mosaics, Intaglio, and Intarsio - In Florence. (3). Will meet for six hours a week to study the technical application and historical background of these techniques.

FA 308. Workshop in Fine Arts: Filmmaking and Photography Techniques-In Florence. (3). Will meet for six hours a week and given the basic techniques of filmmaking and photographic processes. Stress will be on the observation of those artistic patterns that go beyond normal photography.

FA 320. Oil Painting Studio-In Florence. (3). Advanced study in oil painting to provide the student with more time to develop individual expression and mastery of the medium.

FA 331. Sculpture Studio-In Florence. (3). Individual application of design and technical skill in making sculpture. Emphasis is on significant form and expression.

FA 340. Craft Studio-In Florence. (3). An in-depth workshop in one specific craft technique; developing skills and individual expression. The course will be listed under separate sub-heading each session.

FA 359. Intaglio and Relief Printmaking-In Florence. (3). Problems in an intaglio printmaking including technical process, etching and monoprints.

FA 365. Classical Art-In Florence. (3). An in-depth study of classical art.

FA 367. Baroque Arts-In Florence. (3). An in-depth study of the Art of Mannerism and Baroque styles.

FA 398. Dante, Giotto, and Giovanni Pisano-In Florence. (3). A study of similarities found in different artistic media, and the search for an environment common to all the artists of the Middle Ages.

FA 398. Seminar in the Arts-In Florence. (3). Intercultural team-teaching seminar in which all artistic problems will be analyzed and discussed.

FA 398. Workshop in Crafts-In Florence. (3). Designed for advanced students only with techniques of various crafts of the area being introduced.

FA 398. Monographs on Living Florentine Artists-In Florence. (3). Limited to advanced students; worked on an individual one-to-one basis; each study will reflect the fruits of the collaboration between the artist and the student.

FA 398. Museum Science and Restoration of Works of Art-In Florence. (3). A behind-the-scene study of museum, organization, architectonic design, illumination problems, logistics of movement, selection problems, and advantage of the expertise of one of the world's foremost laboratories for restoration of art.

FA 398. Contemporary Art-In Florence. (3). A look at modern works connecting the past and the present.

FA 398. History of Architecture-In Florence. (3). Study of Italian architecture from Classical and Etruscan to modern architecture.

FA 398. Renaissance Sculpture-In Florence. (3). A study of the culture at that particular period of time and how it is manifest through the sculptures studied, conducted in class as well as in related museums. A critical and philosophical analysis is made, connecting the past and the present.

FA 398. Renaissance Painting-In Florence. (3). A study of the culture at that particular period of time and how it is manifest through the painting studied, conducted in class as well as in related museums, etc. A critical and philosophical analysis is made, connecting the past and the present.

FA 398. Medieval Tuscan Art-In Florence. (3). A study of the art of the Middle Ages as compared to the writings and philosophies of the time. Classes will often be held in churches and museums.

FA 398. Comparative Urbanistics-In Florence. (3). A study of the science of urbanistics as it relates to the different cultural patterns; the class is conducted so that urbanistics can be read as an artistic language.

FA 398. Museum and Studio Experiences-In Florence. (3). An opportunity to absorb unhurriedly and privately the communications offered by the works of museums; in smaller groups, students will be able to learn firsthand various aspects, problems, techniques and philosophies of practicing artisans, artists and

craftsmen and their work through visits to their studios.

FA 420. Oil Painting Studio-In Florence. (3). Advanced study in oil painting to provide the student with more time to develop individual expression and mastery of the medium.

FA 430. Seminar in Art Education-In Florence. (2). Research and philosophical issues in contemporary elementary and secondary art education.

FA 431. Sculpture Studio-In Florence. (3). Individual application of design and technical skills in making sculpture. Emphasis is on significant form and expression.

FA 459. Intaglio and Relief Printmaking-In Florence. (3). Advanced creative intaglio printmaking including advanced technical process and monoprint mixed media.

FOREIGN LANGUAGES

FL 131. Foreign Language House. (1). Prerequisite, permission of the department. This course is designed to give students a practical experience in the use of their foreign language. Students speak their language at all times and participate in various activities sponsored by the language house. Opportunities to learn about the culture of the countries, as well as to develop a fluency in the language, are provided. Course may be repeated for a total of 3 hours credit. *SU* grading.

FL 331. Teaching Foreign Language in the Elementary School. (1-3). Prerequisite, intermediate standing or permission. Students will cooperate in planning, creating and presenting foreign language materials in a clinic capacity at the elementary level. The emphasis will be oral.

FL 341. Methods of Teaching in the Secondary School. (PTE) (3). Prerequisite to student teaching. Taken in the department in which student teaching is done. Includes curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of the subject area to the total secondary program. Teaching techniques are a point of emphasis.

1-FL 410. Linguistics. (3). A brief survey of the world's chief languages, their geographical distribution, main cultural features and appearance. In more detailed, classification of the Indo-European languages, with particular stress on historical development, basic grammatical structure, resemblances, differences and relationships of English, French, German and Spanish.

FL 431. The Teaching of Foreign Languages. (4). Prerequisite, two years of foreign language. A study of problems in the teaching of foreign languages at the secondary and elementary school levels. Includes development of content for course of study, organization of learning materials, procedures in teaching, testing and evaluating.

FL 432. Teaching Foreign Language in the Elementary School. (3). Especially for teachers of the elementary school level, but including all levels of instruction. A study of today's practical values, aims, methods, approaches, procedures, and means and materials for attaining success in teaching modern foreign languages.

FRENCH

1-FR 101. Elementary French I. (5). Summer Quarter: Must enroll for FR 102 and 103. Introduction to idiomatic spoken and written French by means of vocabulary learning and the study of the structure of French. Class activities regarding grammar and cultural readings are limited realistically to spoken and written French. Audio and Phonetic laboratory aids will be used to the extent that they may benefit the student's pronunciation and accurate fluency.

- 1-FR 102. Elementary French II. (5).** Summer Quarter: Must enroll for FR 101 and 103. A continuation of FR 101.
- 1-FR 103. Elementary French III. (5).** Summer Quarter: Must enroll for FR 101 and 102. A continuation of FR 102.
- 1-FR 201. Intermediate French I. (4).** Prerequisites, two years of high school French or one year of college French. Grammar review, study of idioms, imitative composition. Drill in use of the phonetic alphabet.
- 1-FR 202. Intermediate French II. (4).** Prerequisite, two years of high school French or one year of college French. This course aims at developing the student's ability to express himself in correct and idiomatic French. (This course may be taken without having had FR 201.)
- 1-FR 203. Intermediate French III. (4).** Prerequisite, Two years of high school French or one year of college French. Reading of one play and several short stories, with exercises and discussions in French based on the reading. (The course may be taken without having FR 201 and 202.)
- 1-FR 280. Seminar in French Drama. (3). (Maximum 6).** To give students an opportunity to study the various dramatic forms found in French literature. Students will stage scenes from the works studied both in class and publicly as an evening performance. Material will be selected from the 17th, 18th, and 19th centuries.
- 1-FR 310. Intermediate French Conversation. (3).** Prerequisite, two years of college French. A course designed to increase the ability of each student to use spoken French in everyday situations. A study of some of the principles of French diction will be included. The course will be conducted in French.
- 1-FR 311. Intermediate French Composition. (3).** Prerequisite, two years of college French. A course designed to perfect the student's ability to express himself in French, through the use of translation passages and free compositions, and to provide an active review of certain grammatical problems. The class will be conducted in French.
- 1-FR 312. Intermediate French Syntax and Stylistics. (3).** Prerequisite, two years of college French. A study of the more complex elements of French syntax and the common difficulties incurred in sentence structure. A study of styles employed in French literature, and the methods of studying them. The class will be conducted in French.
- 4-FR 318. Literature of the Middle Ages and the Renaissance. (3).** Prerequisite, two years of college French. FR 415 recommended previous to this course. A study of French literature from its beginnings in the Middle Ages through its development during the Renaissance. The selected readings will be examined within their historical and cultural context. The class will be conducted in French.
- 4-FR 319. Seventeenth and Eighteenth Century Moralists. (3).** Recommended prerequisite, FR 415. This course treats the predominant literary trends of the 17th and 18th centuries that were represented by the moralists. The major dramatists and essayists who represent this trend, such as Moliere, Pascal, La Rochefoucauld, La Fontaine, Montesquieu, Diderot and Voltaire will be studied. This course will be conducted in French.
- 4-FR 320. Nineteenth Century French Prose. (3).** Prerequisite, two years of college French or equivalent. The rise of French prose in the form of the novel, the short story and the theatre from post-revolutionary France to the beginning of the twentieth century. The course will be conducted in French.
- 4-FR 325. The Romantic Movement. (3).** Prerequisite, two years of college French. FR 415 recommended previous to this course. This course deals with the French romantic movement from its beginnings in the 18th century to its rise and fall in the 19th century. The course will be conducted in French.
- 1-FR 400. Problems in Oral French. (3).** Prerequisite, two years of college French, or equivalent. To enable the student to reach a high level of accuracy and

fluency in oral French. Time will be spent working on individual problems so that each student will be able to correct and strengthen his particular shortcomings. French phonetics will also be studied.

FR 401. Study Abroad Program: Coursework. (8). Prerequisite, two years college French or permission of the department. This course is designed to give students a practical experience in the use of French. Study will include formal instruction in conversation, composition, and culture at the foreign study center. To be taken with FR 402.

FR 402. Study Abroad Program: Project. (4). Prerequisite, two years college French or permission of the department. This course is designed to give students an opportunity to research the contemporary and historical cultural phenomena of France through the completion of an area studies project in the region of the study center. This course is to be taken with FR 401.

4-FR 410. French Civilization. (3). Prerequisite, two years of college French. The study of French civilization and culture, including the historical, economic, political, and artistic development of the country from prehistoric times to the present. The class will be conducted in French.

3-FR 411. Contemporary France. (3). Prerequisite, two years college French. The study of the customs and institutions of modern France, including the investigation of social customs, the educational political and economic systems, and the activities which make up the life style of the contemporary Frenchman. The course will be conducted in French.

4-FR 415. Explication De Textes. (3). Prerequisite, two years of college French. The study of the French methods of studying literature called "explication de textes," which includes a discussion of the different literary genres and the analysis of the individual literary selections representing these genres. The class will be conducted in French.

1-FR 420. Advanced Conversation. (3). Prerequisite, FR 310 or permission of instructor. A course designed to promote fluency in conversation beyond the level of the everyday situation. Topics of current interest will be discussed and additional vocabulary and idiomatic expressions studied. The course will be conducted in French.

1-FR 421. Advanced Grammar. (3). Prerequisite, FR 312 or permission of instructor. A course designed to help the student understand the more difficult grammatical structures of the language and their use in basic sentence patterns. Special emphasis will be placed on structures which present special difficulties in the teaching of the language. The course is conducted in French.

FR 422. Individual Studies. (1-4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

4-FR 450. Twentieth Century French Theater. (3). Prerequisite, two years of college French. The main currents of French theater in the twentieth century; including the Avant-Garde movement. Emphasis will be placed on Cocteau, Giraudoux, Montherlant, Anouilh, Sartre, Camus and Ionesco. The class will be conducted in French.

4-FR 451. Twentieth Century French Prose. (3). Prerequisite, two years of college French. The main currents of French prose in the twentieth century. Emphasis will be placed on Gide, Proust, Mauriac, Malraux, St-Exupery, Sartre, Camus, and the "nouveau roman" novelists. The class will be conducted in French.

4-FR 459. Trends in French Poetry. (3). Prerequisite, permission of instructor. The study of the major poetic movements from the sixteenth to the twentieth century including the Pleiade, the Romantic movement, symbolism and contemporary poetry. The class is conducted in French.

FR 490. French for Reading Knowledge I. (No credit). Prerequisite, none. The course will be conducted to help graduate students prepare for the Ph.D. language

reading examination in French. The basic grammatical structures of the language will be introduced from a traditional viewpoint.

GEOGRAPHY

3-GEOG 100. World Geography. (5). World survey of the interrelationships of man and his culture to the climates, animal life, minerals, soils and surface features of the earth.

3-GEOG 120. Physical Geography I. (3). The study of the relationship between man and his physical environment, with an emphasis on the climatic and edaphic qualities of the earth.

3-GEOG 121. Physical Geography II. (3). The study of the relationship between man and his physical environment, with an emphasis on landforms -- their characteristics, distribution, and effects upon human settlement.

3-GEOG 122. Cultural Geography I. (3). Cultural Geography directs its attention to the origin, distribution, and influence of those elements of culture which give characteristic expression to an area; literally, man's role of adapting to and modifying his natural environment through his varying cultural means to suit his own needs and desires. "Relating habits to habitats."

3-GEOG 123. Cultural Geography II. (3). The study of man's economic basis as found in the development and utilization of those natural resources at his disposal. Emphasis will be given to man's use of commodities derived from the sea and forest, agriculture, mining and manufacturing. A basic approach to studying human response to the provisions of nature as it relates to cultural development.

3-GEOG 148. Anglo-America. (5). A study of regions and their interdependence. Land use, social and economic problems emphasized.

3-GEOG 312. Economic Geography. (5). Geographic and economic conditions affecting the products, industries, commerce and resources of the world. Special emphasis on the United States.

3-GEOG 318. Australia and the Pacific. (2). A regional consideration of the advantages and limitations of the physical and cultural environment, population distribution, and economic development of Australia, New Zealand, Melanesia, Micronesia, and Polynesia.

3-GEOG 326. Africa. (5). Relationships between the physical and cultural patterns. Land use, resource development, social and political problems.

3-GEOG 336. Geography of Mexico and the Caribbean. (3). An analysis and comparison of Mestizo Mexico and the highly varied islands of the Caribbean with their strong European-African heritage. Emphasis is placed on social and economic problems of Mexico as well as her role as a leading Latin American country.

3-GEOG 337. Geography of Central America. (3). A study of the physical and cultural conditions of the Central American countries. Attention will be given to current economic and social problems facing these populations.

3-GEOG 338. South America. (3). A study of the countries of the South American continent. Physical features and patterns will be analyzed but the major emphasis in the course will be upon such cultural characteristics as land utilization, agriculture, resource development, settlement and migration patterns and processes of industrialization.

3-GEOG 342. Geography of the Mediterranean. (2). A study of the unique physical and cultural characteristics of Spain, southern France, Italy, and Greece with significant reference to Israel, Egypt, and northwest Africa. Special attention will be devoted to an examination of the major economic and political problems identified with this region.

3-GEOG 343. Western Europe. (3). A study of the relationships between the

physical and cultural environments, including land use, resources, economic and political problems.

3-GEOG 344. Asia. (3). The countries of Asia in terms of their physiography, climates, regions, cultural landscapes, social organizations and economic activities.

3-GEOG 348. Physical Geography of the United States. (4). Prerequisites, GEOG 120 and 121, or permission of instructor. The study of the major climatic, edaphic, vegetational, and landform patterns of the United States, with an emphasis on Colorado. Weekend field trip.

3-GEOG 350. Geography of Colorado. (3). A study of the geographical and human resources of Colorado. The course is concerned with the physical features, climate, landform regions and natural resources of the state and their utilization and conservation; agricultural, mining, manufacturing, water supply, transportation, commerce and industry; population problems, state government and current problems in the growth and development of Colorado.

3-GEOG 353. Geography of the Great Plains. (2). A study of the physical and cultural landscapes of the great plains. Emphasis will be placed on the unifying character of the physical environment and those aspects of culture that have contributed in making this a distinct geographic region.

3-GEOG 355. Population Geography. (3). Investigates the distribution of world population through the related topics of migration, settlement, urbanization and utilization of natural resources.

3-GEOG 356. Agricultural Geography. (2). An analysis of numerous agricultural systems, including subsistence and commercial, tropical and mid-latitude examples. Students will investigate the relationship of agricultural systems to physical and cultural conditions.

3-GEOG 357. Transportation Geography. (3). A study of the mechanism of areal exchange, emphasizing modes and networks of transportation and their effect on the spatial distribution of human activities.

3-GEOG 360. Political Geography. (3). The study of political phenomena as it relates to a particular geographic setting. Considerable attention will be given to answering the question of "what politico-geographic factors contribute to the strength or weakness of states?" Topics of study will include: concept of territorial expansion, global overpopulation, national resources, territorial sea, and warfare. Adequate time will be devoted to class discussion.

3-GEOG 364. Maps and Their Uses. (2). The course presents the basis for an effective use of maps and globes. It is designed to develop the skill of map reading and map interpretation.

3-GEOG 365. The Soviet Union. (5). A regional analysis of the geographic conditions, their historical importance, and their relation to economic, social, and political problems in the Soviet Union and to its position in world affairs.

3-GEOG 370. Urban Geography: Historical. (3). A study of the origin of cities and an analysis of the structure of preindustrial societies.

3-GEOG 371. Urban Geography: Systematic. (3). A study of the theories of urban structure, urban society and urban form.

3-GEOG 372. Urban Geography: Comparative. (3). Prerequisites, GEOG 370 and 371. A course designed to compare and contrast cities in various culture areas of the world, with particular emphasis on the West European city, the Socialist city, the preindustrial city, and the city in newly developing countries.

3-GEOG 392. Field Course in Geography. (3-15). (Undergraduate and Graduate). Study and application of the techniques used in solving of geographic problems in the field, together with the effective presentation of the results of such studies.

3-GEOG 402. Cartography. (4). A fundamental course on the theory and practice of maps and graphic representation. Two one-hour lectures and two credit hours for

arranged laboratory work.

3-GEOG 490. Problems in Geography. (Maximum 9). A series (three) of advanced undergraduate research seminars. Each seminar will be conducted by an instructor who specializes in the regional or systematic study upon which the seminar is based (e.g., Latin America, Africa, Urban, Economic).

GEOLOGY

Courses in geology are administered by the Department of Earth Sciences.

5-GEOL 100. General Geology. (4). (3 lecture, 2 laboratory.) This course presents an introduction to the minerals and rocks that make up the Earth's crust, the building-up processes of vulcanism and diastrophism, the counter processes of weathering and erosion, the interior of the Earth, and Earth history. Field trips required. Not open to earth sciences majors.

5-GEOL 110. Introduction to Geology. (3). A non-lab course to introduce students to the science that deals with the materials which compose the earth, plate tectonics, vulcanism, erosional processes, the origin of mountains and other landforms, earthquakes and the earth's interior, and the history of the earth. Not open to Earth Sciences majors. Students may not receive credit for both GEOL 110 and GEOL 100.

5-GEOL 201. Principles of Geology I. (4). (3 lecture, 3 laboratory.) The first of three basic geology courses designed for Earth Science majors. Earth materials, the process of vulcanism, metamorphism, and diastrophism, geologic structures, earthquakes, and the nature of solid earth and its interior will be thoroughly investigated. Field trips required. Students cannot receive credit for both GEOL 100 and 201.

5-GEOL 202. Principles of Geology II. (4). (3 lecture, 3 laboratory.) Prerequisite, GEOL 201. The second of three basic geology courses designed for Earth Science majors. The processes of weathering, mass movements, and erosion by the agents of streams, glaciers, wind, waves and currents, and groundwater will be thoroughly investigated, along with the resulting landforms. Some attention will be given to the development of soils and to interpretation of topographic maps and aerial photographs. Field trips required. Students cannot receive credit for both GEOL 100 and 202.

5-GEOL 203. Principles of Geology III. (4). (3 lecture, 3 laboratory.) Prerequisites, GEOL 100 or 202. The third of three basic geology courses designed for Earth Sciences majors. Geologic time, the principles and techniques used to decipher geologic history from rocks, the origin of the earth and subsequent development of its physical features, and the origin and evolution of life on earth will be investigated. Laboratories will emphasize work with fossils and required field trips.

5-GEOL 320. Mineralogy. (5). (3 lecture, 6 laboratory.) Prerequisite, GEOL 100 or 202. This course includes introductory work in crystallography, optical crystallography, descriptive and determinative mineralogy, and the study of mineral occurrences and associations. The laboratory stresses identification of minerals by means of physical and chemical techniques. One Saturday field trip required.

5-GEOL 330. Introductory Petrology. (4). (2 lecture, 4 laboratory.) Prerequisites, GEOL 100 or 201. A study of igneous, sedimentary, and metamorphic rocks: their origins, descriptions, and bases for classifications.

5-GEOL 340. Paleontology. (4). (3 lecture, 3 laboratory.) Prerequisites, GEOL 100 or 203 or consent of instructor. This course is a study of fossil animals and plants -- their morphologies, classifications, life histories, trends of evolution, ecologies, and their uses as stratigraphic tools.

5-GEOL 370. Structural Geology. (4). (3 lecture, 3 laboratory.) Prerequisites, GEOL 100 or 202. This course deals with the mechanics of rock deformation, and the geologic structures of the Earth's crust--their description and classification, theories and facts regarding their origins, and methods of investigating them.

5-GEOL 410. Environmental Geology. (3). Prerequisites, GEOL 100 or 202. The role of geology in man's interaction with his environment. Geological aspects of urban growth, land-use planning, and natural hazards; problems of water resource management, waste disposal, and pollution; exploitation of mineral resources and related environmental implications.

5-GEOL 420. Optical Crystallography and Petrography. (5). (3 lecture, 6 laboratory.) Prerequisites, GEOL 320. In the classroom theories and methods of optical crystallography are investigated, and the optical properties of minerals are discussed. In the laboratory various petrographic techniques are learned including use of the petrographic microscope for identifying mineral grains in immersion media and in rock thin sections.

5-GEOL 425. Economic Geology. (3). Prerequisite, GEOL 320. In this course the origins, geologic occurrences, uses, and conservation of the Earth's metallic and non-metallic mineral deposits will be investigated.

5-GEOL 450. Sedimentology. (4). (3 lecture, 3 laboratory.) Prerequisites, GEOL 203 or consent of instructor. A study of processes of sedimentation, environments of deposition, and genesis, classification, and analysis of sedimentary rocks.

5-GEOL 455. Stratigraphy. (4). (3 lecture, 3 laboratory.) Prerequisites, GEOL 203 or consent of instructor. Principles and techniques of analyzing and interpreting sedimentary rock strata to determine the geologic story of the earth. Regional stratigraphy of northeastern Colorado will be investigated.

5-GEOL 460. Geomorphology. (4). (3 lecture, 3 laboratory.) Prerequisites, GEOL 100 or 202. Origin and evolution of landforms with emphasis on fluvial processes--hydraulic and dynamic characteristics of streams; morphology of drainage basins; landscape evolution by stream sculpture and deposition; lithologic, climatic, and structural controls.

5-GEOL 464. Glacial and Quaternary Geology. (3). Prerequisite, GEOL 100 or 202. A survey of geologic phenomena which characterized the Quaternary Period with emphasis on the behavior of glaciers--their dynamics, growth and recession, associated landforms and sediments, and climatic implications.

5-GEOL 468. Introduction to Soils. (4). (3 lecture, 3 laboratory.) Prerequisite, GEOL 100 or 202, and CHEM 105 or equivalent. Physical, chemical, and biological properties of soils, soil-forming processes and controls description and classification of soils, and applications of soils to Quaternary stratigraphy. Emphasis will be placed on field and laboratory experience.

5-GEOL 480. Geologic Field Methods. (5). (3 lecture, 6 laboratory.) Prerequisites, GEOL 203. An introduction to the techniques employed by the field geologist to obtain and record information from rocks in the field. Using standard geological field equipment each student will conduct investigations and prepare a geologic map of an area of moderately complex structure in the foothills west of Loveland.

5-GEOL 490. Rocky Mountain Geology. (3). Prerequisite, GEOL 203. This course seeks to apply the student's geologic knowledge to regional problems in the Rocky Mountains. Emphasis is placed on the use of an extensive geological literature dealing with the Rocky Mountain area, particularly Colorado. Two-day field trip required.

5-GEOL 495. Marine Geology. (3). Prerequisite, GEOL 203 or consent of instructor. A study of marine geological processes and forms, including continental margin and oceanic basin structure and geomorphology, marine sedimentation, nearshore processes and coastal landforms.

GERMAN

1-GER 101. Elementary German I. (5). To develop four lingual skills (listening, speaking, reading, writing) with stress on the first two. Emphasis on developing accurate pronunciation and ability to use German actively with minimum translation, using controlled drills, dialogs, and free conversation. Supplementary work in the language laboratory is required. Language structure is covered inductively.

1-GER 102. Elementary German II. (5). A continuation of GER 101.

1-GER 103. Elementary German III. (5). A continuation of GER 102.

GER 105. Tirolean Folk Dance. (1). The course is designed to teach Tirolean Folk Dance in the German language with student participation also in German. The academic goal is the advancement of proficiency in German and to familiarize students with the folk dances so that they will know how to teach the dances if they teach German in public schools.

1-GER 106. Contemporary German Drama. (2). Prerequisite, one year college German or equivalent. Study of a representative contemporary German Play or several skits. This will be studied and scenes will be performed in public and in class. The course will be conducted in German.

1-GER 201. Intermediate German I. (4). Prerequisite, one year college German or placement by examination. A continuation of GER 103. While stress is placed on oral skills, language structure is analyzed in detail. Reading and writing increase to balance proficiency in all four skills. Well-chosen reading materials and intermediate text with conversational approach used with continued drill in the language laboratory.

1-GER 202. Intermediate German II. (4). Prerequisite, GER 201. A continuation of GER 201.

1-GER 203. Intermediate German III. (4). Prerequisite, GER 202. A continuation of GER 202.

4-GER 318. Eighteenth Century German Literature. (3). Prerequisite, two years of college German. The general trends of German literature in the eighteenth century. Emphasis will be placed on the Halle Poets; Lessing, Wieland, Herder, and Goethe. Readings and lectures in German.

4-GER 319. Nineteenth Century German Literature. (3). Prerequisite, two years of college German. The main trends of German literature of the nineteenth century, especially the Romantic Movement. Emphasis will be placed on the later work of Goethe and the writings of Schiller. Readings and lectures in German.

4-GER 320. Twentieth Century German Literature. (3). Prerequisite, two years of college German. The most important aspects of twentieth-century German literature: neo-romanticism, symbolism, expressionism, and other movements. Readings and lectures in German.

4-GER 325. Post War Literature Since 1945. (3). Prerequisite, two years of college German. The course will deal with the re-emergence of the short story and the "Horspiel," two predominant forms used by German writers since 1945. The course will be conducted in German.

1-GER 335. Intermediate German Conversation. (4). Prerequisite, two years of college German. A course designed to increase the ability of each student to use spoken German in practical, everyday situations. The class will be conducted in German.

1-GER 336. Advanced German Composition. (4). Prerequisite, two years of college German. The course aims at helping the student to become familiar with a large number of idioms and to acquire flexibility of expression in written composition.

1-GER 337. Advanced German Grammar. (4). Prerequisite, two years of college German. The course is intended for students who have mastered the elements of German grammar and have gone through at least one full grammar review. A

study of the more complex elements of German syntax and the common difficulties incurred in sentence structure.

4-GER 343. Faust. (3). Prerequisite, two years of college German. To enable students to become acquainted with the greatest masterpiece of German literature. The work will be read and analyzed as it reflects Goethe's life and time and the conditions of Eighteenth Century Germany. While stress will be placed on *Faust*, Part I, Part II will also be discussed. The course will be conducted in German.

1-GER 345. Phonetics of the German Language. (3). Prerequisite, three years of college German or permission of instructor. An analytical survey of the German language. Regional and historical variations along with the high German sound shift will be examined. The course will also attempt to help students correct and perfect their pronunciation.

1-GER 400. Problems in Oral German. (3). Prerequisite, three years of college German or permission of instructor. To provide advanced oral training. Stress will be on sharpening the pronunciation, comprehension, and fluency of conversational ability of the student. Individual problems will be discussed and aided by means of drills, tape work in the language laboratory and outside help. Course may be taken twice with departmental consent.

GER 401. Study Abroad Program: Coursework. (8). Prerequisite, two years college German or permission of the department. This course is designed to give students a practical experience in the use of German. Study will include formal instruction in conversation, composition, and culture at the foreign study center. To be taken with GER 402.

GER 402. Study Abroad Program: Project. (4). Prerequisite, two years of college German or permission of the department. This course is designed to give students an opportunity to research the contemporary and historical cultural phenomena of Germany through the completion of an area studies project in the region of the study center. To be taken with GER 401.

4-GER 410. German Civilization. (3). Prerequisite, two years college German. The study of German civilization and culture, including the historical, economic, political, and artistic development of the country from prehistoric times to the present. The class will be conducted in German.

GER 422. Individual Studies. (1-4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

4-GER 430. German Poetry. (3). Prerequisite, three years college German or permission of the instructor. A survey of German lyrical poetry from the *Minnesang* to the present. Selections will include a representative sampling from the 17th, 18th, 19th and 20th Century and will be analyzed according to form, style and content.

4-GER 431. Die Novelle. (3). Prerequisite, two years of college German. The course will deal with the genre of Novelle from Kleist to those contemporary authors making use of this form. The form Novelle will be considered primarily as an art form. The course will be conducted in German.

4-GER 440. Medieval Literature. (3). Prerequisite, two years of college German. The main emphasis will be placed on writings produced during the humanistic and reformation periods. Consideration will also be given to the fold epic, the courtly epic and the courtly lyric of the 12th and 13th centuries. The course will be conducted in German.

4-GER 441. Goethe. (3). Prerequisite, two years of college German. This course is designed as an introduction to the life and work of Germany's greatest classic. Special emphasis is placed upon developing understanding of Goethe's *Weltanschauung* and his contributions to *Sturm and Drang*. Classicism and Romanticism. The course will be conducted in German.

HOME ECONOMICS

- 3-HEC 101. Self Identification.** (2). Course designed to assist in developing self awareness through use of critical thought, problem solving, exploration of feelings and expression.
- 2-HEC 108. Investigating the Home Economics Profession.** (2). (1 lecture, 2 laboratory.) Prerequisite, HEC 101. Career awareness opportunities; opportunity to focus on the roles and responsibilities, professional and personal outcomes from each major occupational area within home economics.
- 2-HEC 171. Design in Living.** (3). Introduction to basic design concepts, applying these to a variety of uses. Consideration given to the development of aesthetic preferences.
- 2-HEC 181. Basic Textiles.** (5). (3 lecture, 4 laboratory.) Fundamentals of fibers, yarns, fabric construction methods and the selection, use and care of textiles.
- HEC 190. Fundamentals of Clothing Construction.** (3). (1 lecture, 4 laboratory.) Basic principles of garment construction, fitting and pattern alteration are presented.
- 2-HEC 193. Creative Clothing Construction.** (4). (2 lecture, 4 laboratory.) Prerequisites, HEC 171, 190 or satisfactory performance on competency exam. Construction of garments of special fabric using methods appropriate to the pattern and fabric. Speed techniques of tailoring included.
- 3-HEC 211. Management for Effective Living.** (3). Prerequisite, minimum sophomore level. Analysis of needs, values, attitudes, goals, standards, resources and decision making basic to managing individual roles.
- 3-HEC 212. Management Dynamics.** (3). Prerequisite, HEC 211. Designed to analyze concepts underlying the management process, and to establish guidelines basic to judicious use of family resources in goal attainment.
- 3-HEC 221. Human Relationships.** (3). Focuses attention on the total person, emphasizing influence of attitudes, needs, beliefs, values and goals and how these affect personal and family living.
- 3-HEC 233. The Child Within the Family.** (3). Major concepts and theories of child development based on empirical findings and applied to the child in the family setting. Skills of interacting with children developed through observation and role play.
- 2-HEC 241. Techniques of Food Preparation.** (4). (2 lecture, 4 laboratory.) Food selection, preparation, storage, and meal service.
- 2-HEC 242. Principles of Food Preparation.** (4). (2 lecture, 4 laboratory.) Prerequisite, HEC 241 or successful completion of competency exam: HEC 250 or 251. Physical and chemical changes which occur during processing, storage and preparation of foods.
- HEC 249. Food/Nutrition Modules.** (1). Prerequisites vary according to module. The modules will comprise a variety of subjects, methods and techniques related to foods. No one subject may be repeated for credit.
- 2-HEC 250. Principles of Human Nutrition.** (3). Prerequisite, basic knowledge of chemistry. Essential nutrients and their functions in promoting total well-being of the individual. For students who are not dietetic, nutrition, or nursing majors.
- HEC 251. Nutrition I.** (3). Prerequisite, CHEM 130. Essential nutrients and their metabolic function in promoting total well-being of the individual. Nutrient requirements during different stages of the life cycle are evaluated.
- 2-HEC 308. Workshops in Home Economics.** (1-4). Provide opportunities to investigate various issues in Home Economics and meet specific needs of students. Each workshop will have a subtitle and no subtitle may be repeated for credit.
- 3-HEC 321. Role Behavior in the Intimate Environment.** (4). Examination of various factors which underlie individual and situational role expectations and behaviors as well as changing role patterns.

- 2-HEC 325. Home Nursing.** (2). Principles of home nursing procedures demonstrated and opportunities provided for laboratory experience.
- HEC 340. Basic Food Preparation and Service.** (4). (2 lecture, 4 laboratory.) Prerequisites, HEC 250 or 251; CD 333. Study of food selection and preparation. Preschool and early childhood ed majors.
- HEC 349. Food/Nutrition Modules.** (1). Prerequisites vary according to module. The modules will comprise a variety of subjects, methods and techniques related to foods. No one subject may be repeated for credit.
- 3-HEC 351. Geriatric Nutrition.** (3). Nutrition principles applied to change needs of the elderly, keeping in mind Bio-Psycho-Social factors influencing food intake.
- 2-HEC 353. Diet Therapy.** (3). Prerequisites, HEC 251, ZOO 250. Fundamental principles involved in the treatment of disease through diet. Emphasis given to modification of normal diet.
- HEC 354. Diet Therapy.** (1). Prerequisites, HEC 251, ZOO 250. Taught concurrently with NURS 300, 330. Fundamental principles in modifying a basic diet pattern to meet changing needs through the life continuum. Clinical conferences included.
- HEC 355. Diet Therapy.** (1). Prerequisites HEC 251, ZOO 250. Taught concurrently with NURS 301, 335. Fundamental principles in treatment of disease through diet. Emphasis on normal diet modification for mental or physiological stressors of a Chronic nature. Clinical conferences included.
- HEC 356. Diet Therapy.** (1). Prerequisites HEC 251, ZOO 250. Taught concurrently with NURS 302, 340. Fundamental principles involved in dietary intervention with acutely ill patients. Clinical conferences included.
- HEC 362. Demonstration Techniques.** (2). (1 lecture, 3 laboratory.) Prerequisites for dietetic majors HEC 242; all other majors HEC 193, 242. Theory and practice in conducting educational and commercial demonstrations of equipment and principles used in all areas of home economics.
- HECV 363. Introduction to Curriculum in Home Economics Education** (3). Purpose, content, and organization of curriculum. Emphasis placed on social, psychological and economical influences on program development.
- HECV 367. Principles and Practices of Evaluation in Home Economics Education** (3). Prerequisites, EDFE 368, HEC 363. Emphasis on the examination and development of formal and informal evaluation devices for use in evaluating student growth and development in the home economics classroom.
- HEC 369. Laboratory Management and Maintenance.** (1). Prerequisites, HEC 181, 193, 211, 242 and 363. Techniques for management of resources in the educational setting. Organization and management of the department's budgeting and accounting procedures, acquisition of supplies and equipment.
- 2-HEC 371. Design for Shelter.** (3). (2 lecture, 2 laboratory.) Prerequisite, HEC 171. Basic planning concepts applied to the design of living space appropriate to a variety of situational needs. Content includes construction techniques, systems for temperature control, electrical requirements, financing fundamentals.
- 2-HEC 372. Design for Interiors.** (3). Prerequisites, HEC 171, 371. Planning principles related to furnishing shelter applied to a variety of situational needs. Materials, construction techniques, processes and quality features investigated in order to provide criteria for satisfactory decision making.
- 2-HEC 374. Consumer Aspects of Household Equipment.** (4). (2 lecture, 4 laboratory.) Principles are studied and techniques developed in selection, methods of operation and care of household equipment.
- HEC 381. Leisure Time Activities.** (4). (2 lecture, 4 laboratory.) Focus on problems of elderly and how leisure time activities may lead to psychological, sociological and physical benefits, enhance self esteem and promote continued interest in a productive life.

HEC 382. Consumer Textiles. (3). Selection, care and use of household and clothing textiles.

2-HEC 384. Seminar in Textiles and Clothing. (3-5). Prerequisites, HEC 181, 193 or permission of instructor. Research, discussion of topics of current interest in the fields of textiles and clothing.

HEC 392. Survival Sewing. (3). A course designed to learn to construct camping equipment and sportswear for outdoor activities. Techniques of sewing with leather, stretch fabric, wind and water repellent fabrics, and down filled garments will be included. Field trips to manufacturers will be included.

3-HEC 393. Field Experiences in Cultural Awareness. (Up to 15). Opportunity to develop appreciation of cultural and historical backgrounds and contributions of various population groups in the USA or foreign countries.

2-HEC 395. Fashion Design -- Flat Patterns Drafting. (4). (2 lecture, 4 laboratory.) Prerequisite, HEC 193. Introduction to principles of fashion design through the application of flat pattern methods. A personal master pattern will be developed and used in creating an original design.

3-HEC 415. Consumer Education. (3). Background of information relevant to analyzing and resolving consumer problems and relating social and psychological factors to consumer behavior.

HEC 419. Home Management Practicum. (3). Prerequisites, HEC 242, 249 (Meal Planning & Service), 250 or 251, and 343. Application must be made one quarter in advance. Opportunities are provided to make decisions in managing resources.

2-HEC 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. A paper must be filed with the instructor and chairman.

HECV 432. Teaching Child Development and Family Living in Secondary Schools. (3). Particular skills needed in planning and teaching child development and family living in the secondary schools. Special emphasis given to program planning techniques necessary in Child Care Occupations and the organization of a playschool.

2-CD 439. Parent Education. (3). Relationships between parents, children and teachers. Emphasis is on resources for meeting problems through cooperative interaction.

3-HEC 444. Food for a Small Planet. (3). (2 lecture, 2 laboratory.) World food supply, ecological problems and nutritional effects of traditional American diets investigated with emphasis on alternative diets and foods.

2-HEC 445. Experimental Food Studies. (4). (2 lecture, 4 laboratory.) Prerequisites, HEC 242, 251. Opportunity to determine effects of temperature, time, and different manipulations on foods. Commercial products tested and compared with home methods of preparation.

HEC 446. Food Service Administration. (3). Prerequisites, HEC 242, 251. Principles of operation of food systems, emphasizing financial and production controls; menu planning and evaluation, recipe standardization and technical operations.

2-HEC 447. Quantity Food Purchasing and Preparation. (4). (1 lecture, 6 laboratory.) Prerequisite, HEC 446. Meal planning, techniques of food purchasing and application of food preparation principles to large quantity food service. Facilities of student dining halls, university center, and the school lunch program are used as laboratories.

HEC 448. Organization and Management of Food Service. (3). Prerequisite, HEC 447, BUS 180. Principles of organization, personnel management and financial control; layout, selection of design; equipment selection; use of work measurement and data processing.

HEC 449. Food/Nutrition Modules. (1). Prerequisites vary according to module. Modules will comprise a variety of subjects, methods and techniques related to

foods. No one subject may be repeated for credit.

3-HEC 451. Nutrition II. (3). Prerequisites, HEC 251, CHEM 281. In-depth study of human and animal nutrition.

3-HEC 456. Infant and Child Nutrition. (3). Prerequisites, HEC 250 or 251, CD 331. Principles in nutrition for maternal, infant, and child health.

HECV 460. Occupational Home Economics Education. (3). Prerequisites, HEC 363, EDFE 368. Overview of occupational home economics program at the secondary, post secondary and college levels to prepare a student for the role as teacher coordinator in home economics occupational programs.

HECV 462. Preparation for Teaching Vocational Home Economics. (3). Prerequisite, HEC 363. Strategies for successful student teaching experience. Take concurrently with EDFE 368. S-U Grading.

HECV 464. Home Economics Youth Organization. (2). Knowledge and background for organizing and implementing a Future Homemakers of America Chapter as part of the home economics program.

HEC 481. Advanced Textiles. (3). (2 lecture, 2 laboratory.) New and modified fibers. New fabrication methods, textured yarn and modern finishes.

HECV 482. Seminar in the Improvement of Teaching Vocational Home Economics. (2). Prerequisite, EDFE 470. Evaluate student teaching preparation for employment.

2-HEC 494. Tailoring. (4). (2 lecture, 4 laboratory.) Prerequisite, HEC 193 or permission of instructor. Develop skill in the construction of tailored garments.

HEC 497. Evolution of Fashion. (3). Development of costume through the ages and its influence on designs of present day clothing. Development of costumes in the couturier houses of Europe and America.

HEC 499. Consumer and Fashion Market. (3). Family and individual clothing problems and the relationship of fashion to manufacture and composition of clothing.

HISTORY

HIST 130. Western Civilization I. (4). A survey of Western Civilization with a focus on the development of the Near East, the Aegean World, Rome, and her successor kingdoms, through Charlemagne.

HIST 131. Western Civilization II. (4). A survey of Western Civilization emphasizing the development of the medieval monarchies, the rise of the state, and the assertion of the Christian Commonwealth (from Charlemagne up to 1789).

HIST 132. Western Civilization III. (4). The interaction of world politics from the French Revolution to the present. Nationalism, romanticism, and totalitarianism are among topics discussed.

HIST 170. United States History, 1607-1815. (4). United States history to 1815; European background of American history, the age of discovery and colonization, the imperial rivalries, the revolution and the new nation, nationalism and sectionalism.

HIST 171. United States History, 1816-1899. (4). The War between the states, reconstruction, the emergence of modern America, the United States as a world power, the new nationalism.

HIST 172. United States History, 1900 to Present. (4). United States History 1900 to the present. The new Freedom, World War I, prosperity and depression, the New Deal, the long armistice, World War II, post-war problems since 1945.

HIST 175. Unit Survey of United States History. (4). A thematic survey of American history to the present. Concentration will be on the social, political, diplomatic, economic, and religious forces which have shaped America's past and

continue to influence its destiny. Not open to history majors or minors.

4-HIST 210. Intellectual and Cultural History of Medieval Europe, 4th-16th Centuries. (3). A survey of history from the end of ancient times to the beginnings of Modern Europe. Open to sophomores.

4-HIST 220. Intellectual and Cultural History of Early Modern Europe, 1600 to 1800. (3). A survey of intellectual and cultural developments of the period 1600-1800, emphasizing the Age of Science, Age of Reason, and the Enlightenment. Open to sophomores.

4-HIST 230. Intellectual and Cultural History of Modern Europe, 1800 to the Present. (3). A survey of intellectual and cultural developments from the Romantic period to the present. Open to sophomores.

4-HIST 240. Survey of Asian History. (4). A survey of the historical and cultural transformations occurring within the Great Traditions of East and Southeast Asia. Among topics discussed will be the Asian response to the West.

4-HIST 250. Geographic Influences in United States History. (2). Relationship of geography to the discovery, exploration, settlement, and development of the United States.

4-HIST 254. History of the Early West. (4). The westward movements beginning with the settlement of Jamestown in 1607 and dealing with the development of the colonial west, organization of the Northwest Territory, the land laws, Indian wars, fur trappers' frontier, the Cumberland Road, coming of the steamboat-canal era, and the early settlement of Texas.

4-HIST 256. History of Colorado. (3). A study of the growth and development of Colorado: Indian influence; Spanish, French, and American explorations; historical development; early settlements; gold and silver rushes, pioneer life; territorial problems; the growth of agriculture, industry, livestock production; economic, social and cultural progress; political progress; governmental organization; problems of recent and present-day Colorado.

4-HIST 258. The Hispano in the American Southwest. (3). Examination of the historical heritage of the Hispano in the southwestern states of New Mexico, Arizona, California, and Texas, plus southern Colorado, will be made in this course from the coming of Coronado in 1540 to the present. Hispano movements and contributions during the Spanish, Mexican, territorial, and modern periods will be stressed. Although political and economic developments will be emphasized, social and cultural movements also will be covered.

4-HIST 265. American Social and Industrial History. (4). A study of the major social, industrial, and cultural forces shaping American attitudes and values, especially those of the White Anglo-Saxon Protestant majority in regard to its relationships with Indians, Blacks, and Chicanos.

4-HIST 277. History of the Black Man in America I. (4). An introduction to the Black African heritage. The course will analyze the following: the slave system in the United States; Black resistance to slavery and involvement in the American Revolution; the role of the free Black man prior to the Civil War.

4-HIST 278. History of the Black Man in America II. (4). A study of the Black man's role during the Civil War and the significance of the Reconstruction period. Black opposition to the growth of Jim Crow practices in the United States, their relationship to the labor movement, the plight of the Southern tenant farmer, and the philosophies of Black thinkers, particularly Booker T. Washington and W.E.B. DuBois.

4-HIST 279. History of the Black Man in America III. (4). A survey of twentieth-century developments, including the migration of Blacks to the north, the growth of the Black urban ghetto, the Garvey movement and the Harlem Renaissance, life under the New Deal and during World War II, the "Civil Rights" movement of the late 1950's and early 1960's and the Black Power movement.

4-HIST 285. The Quest for Security: The United States and its Military From 1770-1970. (3). The course will survey the development of American military and

- naval policy from its inception before the American Revolution to the rise of the modern military-industrial complex.
- 4-HIST 296. Dissent in America: An Historical Survey.** (3). The course will survey the thought and actions of selected Americans who have dissented from the prevailing ideological consensus of their day.
- 4-HIST 299. Introduction to Historical Research.** (3). This course introduces the student to the tools and methodology of the professional historian and examines the current function and status of the teacher-historian in our society today.
- 4-HIST 300. The Early Colonial Period: 1492-1689.** (4). This course will investigate in-depth the background of European colonization, the Age of Discovery and Exploration, the founding of the first British Colonial empire, and the history of that Empire until 1689.
- 4-HIST 301. Eighteenth Century America: 1689-1763.** (4). An investigation in-depth of the development of the North American British colonies in the 18th Century. Emphasis is placed on the origin of the Empire and on the colonial economy, political structure, and society.
- 4-HIST 302. Emergence of the New Nation: 1763-1789.** (4). An examination of the background of the American Revolution, Declaration of Independence, the Articles of Confederation, and the framing of the United States Constitution as well as the changing social, economic, and political patterns discernible in the revolutionary generations.
- 4-HIST 306. Constitutional History of the United States to 1865.** (4). The study of the origins of the Constitution from the colonial background; political philosophy of the eighteenth century; the drafting and ratification of the Constitution; and the subsequent molding of its terms by executive, legislative, and judicial pressure up to 1865.
- 4-HIST 308. American Intellectual History to 1865.** (4). The course deals with the individuals, works, and schools of thought in the history of ideas in American culture from the Puritanism of the colonial period to the Romanticism of antebellum America.
- 4-HIST 310. Great Men in American History.** (3). A biographical approach to American history focusing on the lives and contributions of such great Americans as Franklin, Washington, Hamilton, Jefferson, Marshall, Jackson, Lincoln, Holmes, Theodore Roosevelt, Wilson, and Franklin Roosevelt.
- 4-HIST 316. History of the Trans-Mississippi West: 1821-1890.** (4). Examination of the Westward movement from the settlement of Texas to the end of the frontier. Major topics are: frontier monetary problems, relations of Mormons to the westward movement; pre-emption and homestead acts; forty-niners and fifty-niners; transcontinental railroads; and the range-cattle industry.
- 4-HIST 321. The Foundations of American Foreign Policy: 1775-1889.** (4). A survey of American diplomatic history from the war for independence to 1889, emphasizing the problems of expansion and relations with major European, Latin American, and Far Eastern countries.
- 4-HIST 327. Cultural Background of Western-Soviet Russian Relations.** (15). The background of Soviet Russia's relations with the West is studied on campus for five weeks followed by a study tour of selected Western European capitals, Leningrad and Moscow. Excursions are made to Oxford, Versailles, Peterhof and Zagorsk or other places of historical importance.
- 4-HIST 330. History of Latin America: Colonial Period.** (4). A survey of Spanish America and Brazil from their discovery, conquest and colonization through the Bourbon and Braganza reforms.
- 4-HIST 331. History of Latin America: National Period.** (4). A survey of the Latin American countries from their wars of independence through the Cuban Revolution.
- 4-HIST 340. History of Africa to 1800.** (4). A general history of the African continent from earliest times to the beginning of the 19th century.

4-HIST 341. History of Africa, 1800-1885. (4). A survey of 19th century Africa prior to colonial rule emphasizing the spread of Islam, the end of the slave trade, the creation of new empires, and the first modern contact with the Europeans.

4-HIST 350. Ancient History. (4). The life and institutions of the Ancient Near East and Greece, cultural development, living conditions, and recent archaeological discoveries.

4-HIST 358. History of Medieval Europe. (4). An examination of the basic political, social, and economic facts and interpretations of medieval Europe from the fall of the Roman Empire to the Renaissance.

4-HIST 360. History of Medieval Thought. (4). An advanced study of medieval life and civilization from the beginning of the Middle Ages to about 1300. The course will emphasize medieval philosophy, theology, literature, art and culture from Augustine to Dante.

4-HIST 363. The Old Regime: 1648-1789. (4). A study of the political, social, economic, intellectual, and cultural developments, beginning with the Thirty Years' War and ending with the French Revolution.

4-HIST 370. Constitutional History of Medieval England. (4). The development of English, legal, constitutional and administrative institutions from the Anglo-Saxon period to 1485. Emphasis will be placed on the development of the common law, the system of courts, juries, and representative institutions. The course is especially recommended for pre-law students.

4-HIST 371. History of England, 1471-1660. (4). The course will emphasize the political and constitutional stability reached in England during the two centuries following the Hundred Years' War. Constitutional, social, and economic development will be stressed.

4-HIST 372. History of England, 1660-1832. (4). The course will trace the developments in English constitutional, political, economic, and social life from the restoration to the great reform bill. Emphasis will be placed on the growth of aristocratic power and the beginning of the Industrial Revolution.

4-HIST 375. Foundations of the 2nd Reich. (4). A survey of German history stressing the foundations of the second Reich under Bismarck to the outbreak of World War I. Special emphasis will be laid on Bismarck, his diplomacy, Germany's social and economic developments, and the German role in the outbreak of World War I.

4-HIST 378. Russian History from the Beginning to Alexander I, 860-1801. (4). A survey of the main political, economic, social and cultural developments from the establishment of Kievan Russia through the rise of Muscovy and the reigns of Peter the Great and Catherine the Great.

4-HIST 379. Imperial Russia: 1801-1917. (4). To provide a comprehensive overview of the salient characteristics of Russian civilization from the turn of the nineteenth century to the February Revolution of 1917. Emphasis will be placed on the movement toward more representative government and the effort to overcome economic backwardness.

HIST 382. History of Spain and Portugal, 1469-Present. (4). A survey of Spanish and Portuguese history which will treat topics including the Reconquista, marriage of Ferdinand and Isabella, Inquisition, colonization in the New World, decline of the Hapsburg Monarchy, Bourbon rule, loss of empire, fall of monarchy, failure of democracy, Civil War, twentieth century Fascism.

4-HIST 385. Europe: 1815-1870. (4). A study of the period from the Congress of Vienna through the unification of Germany. Includes the history of ideas, development of political history, and socio-economic changes.

4-HIST 386. Diplomatic History of Modern Europe: 1914-1939. (4). A specialized course in the study of European diplomacy, its methods and accomplishments, utilizing lectures and analyses of basic documents and treaties.

4-HIST 390. History of China to 1840. (4). The history of China to 1840 will be

considered from the point of view of political and cultural development.

4-HIST 394. History of Japan to 1868. (4). The history of Japan up to 1868 will be considered from a cultural and political aspect. Emphasis also is placed upon social development.

4-HIST 395. The United States and Asia. (4). An historical analysis of the American role in Asia, concentrating in particular on the American impulses towards China, Japan, Vietnam and the Philippines, and the American impact on these societies since the 1890's.

HIST 400. Senior History Seminar. (Maximum 12). A seminar primarily for history majors stressing, at an advanced level, the methods, content and application of history.

4-HIST 404. The Early Republic, 1789-1815. (4). The study of the establishment of a new federal government, the administration of Washington, Adams, Jefferson and Madison, the emergence of a national economy, the rise of political parties, the growth of American nationalism, and the War of 1812.

4-HIST 405. Nationalism and Sectionalism in America, 1815-1848. (4). A detailed survey of the period 1815-1848 in American history. Major topics examined include post-1815 nationalism, political trends of the Jacksonian Era, the development of sectionalism, religion and reform, expansion and the Mexican War.

4-HIST 406. The Civil War and Reconstruction. 1848-1877. (4). A detailed survey of the period 1848-1877 in American history. Major topics examined include political upheavals of the 1850's, growth of southern nationalism, Civil War years, and problems of the Reconstruction Era.

4-HIST 407. The Gilded Age: 1868-1892. (4). Examination of the political, economic, social, and cultural developments in the United States during the Gilded Age from Grant's inauguration to the defeat of President Harrison in 1892. Industrial expansion and the low tone of political morality will be stressed.

4-HIST 408. Era of Reform: 1892-1917. (4). A study of the reform movements that were a response to America's great industrial transformation of the late nineteenth century. Agrarian agitation, Populism and Free Silver, Progressivism, and Wilson's New Freedom will be stressed.

4-HIST 411. Recent United States History, From 1918 to the Present. (4). A cultural, political, and economic history of the United States from the "Red Scare" of 1919-1920, the "roaring twenties," and the Great Depression to the present, emphasizing the New Deal, world war and "police actions," and such aspects of the social rebellion as Black Power and other minority "power" movements.

4-HIST 415. The Emergence of the United States as a Great World Power, 1889-1945. (4). A survey of American diplomatic history from 1889 to 1945, emphasizing the problems of peace and war and the internationalist-isolationist conflict in the first half of the twentieth century.

4-HIST 416. The Diplomacy of World Power: 1945 to the Present. (4). An analysis of the theory and practice of American foreign policy since World War II, emphasizing the origins, history, and significance of the Cold War.

4-HIST 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter on a problem. A well-written paper must be filed with the instructor and chairman before credit is given.

4-HIST 423. Constitutional History of the United States Since 1865. (4). The development of Constitutional interpretation from the post Civil War era. A study of Supreme Court decisions tracing changing interpretation during the eras of Laissez Faire, Populist-Progressivism, the New Deal, through the present.

4-HIST 425. American Intellectual History since 1865. (4). The course deals with the individuals, works, and schools of thought in the history of ideas in American culture from the Naturalism of the post-Civil War period to the New Conservatism.

- 4-HIST 427. History of American Labor.** (4). A survey of the organized labor movement in the United States from colonial times to the present, emphasizing the post-Civil War.
- 4-HIST 430. History of Mexico, 1519 to the Present.** (4). An in-depth study of Mexico from the conquest of the Aztecs and the Mayas through the Revolution of 1910 and its aftermath.
- 4-HIST 435. History of Argentina, Brazil and Chile, 1500 to the Present.** (4). An in-depth study of the ABC countries from the discovery of Brazil through the *justicialismo* of Peron, the *Estado Novo* of Vargas, and the flirtations with socialism in Chile. To be offered every other year.
- 4-HIST 437. History of the Andean Republics, 1532 to the Present.** (4). An in-depth study of the Andean Republics from the conquest of the Incas through contemporary movements for social reform. To be offered every other year.
- 4-HIST 440. History of Africa, 1885 to the Present.** (4). A study of the impact of imperialism and colonialism upon Africa, the growth of nationalism and the independence movements, with emphasis on the development of the African states, their politics, economics, and society.
- 4-HIST 451. History of Greece.** (4). An advanced course in the history of Ancient Greece placed in the context of the river valley civilization of the Near East. Emphasis is placed on the various aspects of Hellenic and Hellenistic life and culture in the light of recent archaeological and historical discoveries.
- 4-HIST 452. Roman History.** (4). An advanced study of Roman Civilization from the founding of the Republic to the decline of the Empire. Roman life, institutions and cultural heritage are emphasized.
- 4-HIST 458. History of the Renaissance.** (4). A study of political, social, economic, religious and cultural development from 1300-1500.
- 4-HIST 459. History of the Reformation.** (4). This course in Reformation history will provide the advanced student with the basic political, religious, social and economic facts and interpretations from about 1517 to about 1648.
- 4-HIST 460. History of England, 1832 to the Present.** (4). A study of the development of political liberalism in England and of the role which she has played in the modern world. The rise of the British empire will also be studied.
- 4-HIST 465. French Revolution and Napoleon.** (4). A study of the causes of the Revolution, its classical pattern, the rise of nationalism, and the significance of Napoleon in France and abroad.
- 4-HIST 466. History of Modern France: 1815 to the Present.** (4). The course will examine significant political and constitutional issues in French history from the fall of Napoleon I to the present-day. It will focus on the Restoration regimes, the Second Empire, and the Third, Fourth, and Fifth Republics.
- 4-HIST 470. History of Modern Germany.** (4). A survey of German history from World War I, including analysis of events from the outbreak of World War I to the present, through the reading of original sources and documents.
- 4-HIST 478. History of the Soviet Union.** (4). Surveys the political, social, economic, cultural history of the Soviet Union from 1917 to the present. Continuity with pre-Soviet Russia is emphasized as well as change.
- 4-HIST 485. Europe: 1870-1914.** (4). A study of political, social, economic, intellectual, and diplomatic developments from the Franco-Prussian War to the beginning of World War I.
- 4-HIST 486. Contemporary World History.** (4). An advanced study of world developments in recent times which will investigate the period from about 1900 to the present. The course will discuss the ideologies of communism, socialism, fascism, and democracy in their world setting.
- 4-HIST 487. Recent Diplomatic History of Modern Europe: 1939 to the Present.** (4). A specialized course in the study of recent European diplomacy, its methods and accomplishments, utilizing lectures and analyses of basic documents

and treaties.

4-HIST 490. Revolutions in Modern Times. (4). The four great revolutions of the Western world, namely, the English, American, French, and Russian revolutions are compared in a search for causes and possible patterns of revolution. Post-World War II revolutions are analyzed to find economic, social, and intellectual causes of the revolutionary period of today.

4-HIST 492. History of Modern World Communism. (4). An examination of Communist thought and doctrine since the mid-nineteenth century to the present, leads to a comparison of the theory with the reality of Communist practices. The course concludes with an analysis of the disintegration of the world communist movement.

4-HIST 493. Europe and the Age of Colonial Expansion, 1870-1970. (4). The course will survey the development of European colonialism and imperialism from its inception in the late 19th century to the end of the colonial period.

4-HIST 494. World Population History: 1348 to the Present. (4). A survey of world population movements from the eve of the Black Death through the latest censuses with emphasis on the interrelationships between demographic trends on the one hand and ecological and historical developments on the other.

4-HIST 495. Modern Southeast Asia. (4). An historical analysis of those areas of Southeast Asia which have been recently thrust into collision with the modern world. Included will be a study of Thailand, Burma, Indonesia, Vietnam, and the Philippines.

4-HIST 496. History of Modern China and Japan. (4). An advanced study of China and Japan in modern times, beginning with the impact of western powers in the mid-nineteenth century to the present-day. Emphasis will be on internal changes in political, social, economic and cultural aspects of the nations studied.

4-HIST 497. History of India and Pakistan. (4). A brief history of the peoples of the Indian subcontinent from early times to the present. Emphasis will be placed on the rise and decline of various cultures, Indo-Islamic culture, the advent of the English and their contribution to the birth of nationalism and the organization of India and Pakistan as independent states.

HEALTH, PHYSICAL EDUCATION AND RECREATION GENERAL EDUCATION COURSES

These courses are numbered from 101-191 inclusive with courses numbered from 101 to 190 counting towards the completion of the electives in the General Education Program. These activity courses are graded on an individualized option basis with the student electing either satisfactory-unsatisfactory or a letter grade for the course on a non-revocable basis. These courses may be repeated for credit upon recommendation of an HPER instructor. When an activity is offered at more than one level of skill it will be noted in the printed class schedule. Skill standards are posted on school bulletin boards.

2-HPER 101. Field Sports. (1).

2-HPER 102. Winter Sports. (1).

2-HPER 103. Badminton. (1).

2-HPER 104. Archery. (1).

2-HPER 105. Movement Fundamentals (1).

2-HPER 106. Tumbling. (1).

2-HPER 108. Gymnastics. (2).

2-HPER 109. Physical Fitness and Conditioning. (1).

2-HPER 110. Orienteering. (1).

2-HPER 111. Softball. (1).

2-HPER 112. Tennis. (2).

- 2-HPER 113. Soccer. (1).
- 2-HPER 114. Wrestling. (1).
- 2-HPER 115. Volleyball. (1).
- 2-HPER 116. Golf. (2).
- 2-HPER 118. Basketball. (1).
- 2-HPER 119. Rugby Football. (1).
- 2-HPER 120. Bowling. (1).
- 2-HPER 122. Fencing. (2).
- 2-HPER 125. Swimming. (1).
- 2-HPER 126. Skiing. (1).
- 2-HPER 127. Horsemanship. (1).
- 2-HPER 128. Roller Skating. (1).
- 2-HPER 129. Basic Mountaineering. (1).
- 2-HPER 130. Modern Dance. (1).
- 2-HPER 131. Dance Performance. (1). Prerequisite, consent of instructor.
- 2-HPER 132. Jazz Dance. (1).
- 2-HPER 133. Social Dance. (1).
- 2-HPER 134. Folk Dance. (1).
- 2-HPER 135. American Square and Couple Dance. (1).
- 2-HPER 136. Ballet. (1).
- 2-HPER 138. Senior Life Saving. (2).
- 2-HPER 139. Water Safety Instructors Course. (2). Prerequisite, HPER 138.
- 2-HPER 140. Freshman Football. (1).
- 2-HPER 141. Varsity Football. (1).
- 2-HPER 142. Freshman Basketball. (1).
- 2-HPER 143. Varsity Basketball. (1).
- 2-HPER 144. Freshman Wrestling. (1).
- 2-HPER 145. Varsity Wrestling. (1).
- 2-HPER 147. Varsity Gymnastics. (1).
- 2-HPER 149. Varsity Swimming. (1).
- 2-HPER 150. Freshman Baseball. (1).
- 2-HPER 151. Varsity Baseball. (1).
- 2-HPER 153. Varsity Track. (1).
- 2-HPER 155. Varsity Tennis. (1).
- 2-HPER 157. Varsity Golf. (1).
- 2-HPER 160. Intercollegiate Basketball (Women). (1).
- 2-HPER 161. Intercollegiate Gymnastics (Women). (1).
- 2-HPER 162. Intercollegiate Swimming (Women). (1).
- 2-HPER 163. Intercollegiate Track (Women). (1).
- 2-HPER 164. Intercollegiate Tennis (Women). (1).
- 2-HPER 165. Intercollegiate Golf (Women). (1).
- 2-HPER 166. Intercollegiate Volleyball (Women). (1).
- 2-HPER 167. Intercollegiate Field Hockey (Women). (1).
- 2-HPER 168. Intercollegiate Softball (Women). (1).
- 2-HPER 191. Personal and Family Health. (3).

Designed to provide very practical and usable information and discussions concerning health problems or health concerns of the college student. Such topics as medical aspects of pollution, drug usage, sexuality, family planning, venereal disease, and consumer health will be discussed as well as other critical health problems confronting the U.S. today.

SPECIAL CERTIFICATION COURSES

Water Safety: HPER 138, 139.

First Aid: HPER 262, 263, 264, 269.

Driver and Traffic Safety Education: Teachers assigned to teach the subjects of driver education, traffic safety, and related courses in Colorado must have

successfully completed 18 quarter hours of college level courses as follows: Required, HPER 471, Safety Education, 3 hours; HPER 474, Driver and Traffic Safety Education I, 3 hours; and HPER 475, Driver and Traffic Safety Education II, 3 hours for a total of 9 hours. The remaining 9 hours may be elected from a variety of elective courses designed to improve teaching competency in this area of specialization. All teachers assigned to teach the subject of Motorcycle Safety Education must meet all of the above requirements plus completion of the course Motorcycle Safety Education. Students may secure complete information from the Department of Health and Safety Education.

PROFESSIONAL COURSES FOR SCHOOL MAJORS AND MINORS

Courses numbered 200 and higher are intended primarily for the professional preparation of degree candidates completing a major or a minor in the school.

HPER 200. Introduction to Health Education or Physical Education or Recreation. (2-3). Designed to orient freshman majors with the breadth, scope, and nature of the professional program in health education or physical education or recreation.

GERO 205. Introduction to Gerontology. (4). A survey of the characteristics and special needs of older adults in contemporary society. Designed as an overview of the field of gerontology with emphasis on problems, services, and the need and opportunities for professional educated workers in the field.

2-HPER 205. Issues in Health. (3). A comprehensive and intensive study of the major contemporary individual and social health problems relating to family life, sex education, the use of stimulants, narcotics, hallucinogens, alcohol, tobacco, and other crucial health problems.

5-HPER 220. Anatomical Kinesiology. (3). (1 laboratory to be arranged.) A study of the structural components of human movement with special attention being given to the analysis of movement problems.

2-HPER 221. Mechanical Kinesiology. (3). (1 laboratory to be arranged.) Prerequisite, HPER 220, PHYS 160. A study of the mechanical components of human movement with special attention being given to the analysis of movement problems.

5-HPER 222. Physiological Kinesiology. (3). (1 laboratory to be arranged.) A study of the physiological components of human movement with special attention being given to the analysis of movement problems.

3-HPER 223. Psychological Kinesiology. (3). (1 laboratory to be arranged.) A study of the neuropsychological components of human movement with special attention being given to the analysis of movement problems.

2-HPER 224. Maturational Kinesiology. (3). (1 laboratory to be arranged.) Prerequisites, HPER 222 and 223. A study of the maturational components of human movement with special attention being given to the analysis of movement problems.

HPER 227. Coaching and Officiating of Gymnastics. (2). Prerequisite, HPER 285. Designed to prepare the student in the techniques and strategies of coaching competitive gymnastics, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

HPER 228. Coaching and Officiating of Track and Field. (Woman). (2). Prerequisite, HPER 277. Designed to prepare the student in the techniques and strategies of coaching competitive track and field events, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

HPER 229. Coaching and Officiating of Field Sports. (2). Prerequisite, HPER 271, 272. Designed to prepare the student in the techniques and strategies of coaching competitive field sports, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

HPER 230. Coaching and Officiating of Volleyball. (2). Prerequisite, HPER 274. Designed to prepare the student in the techniques and strategies of coaching competitive volleyball, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

HPER 231. Coaching and Officiating of Basketball (Women). (2). Prerequisite, HPER 273. Designed to prepare the student in the techniques and strategies of coaching competitive basketball, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

HPER 232. Coaching and Officiating of Tennis. (2). Prerequisite, HPER 284. Designed to prepare the student in the techniques and strategies of coaching competitive tennis, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

HPER 233. Coaching and Officiating of Swimming. (2). Prerequisite, HPER 139. Designed to prepare the student in the techniques and strategies of coaching competitive swimming, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

HPER 234. Coaching and Officiating of Softball. (2). Prerequisite, HPER 278. Designed to prepare the student in the techniques and strategies of coaching competitive softball, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

HPER 235. Teaching Experience Seminar. (1). To provide early teaching experience prior to taking the Methods course. To give opportunity for discussion and group reaction of problems. To provide experienced leadership to assist in solving problems of teaching.

HPER 236. Introduction to Health Aspects of Gerontology. (3). This course is designed to introduce the student to current basic aspects of health factors influencing aging. A brief introduction to current theories and scientific research regarding the aging process will be presented.

HPER 237. Human Sexuality. (3). This course is designed to acquaint the student with current issues and trends in human sexuality concepts. Controversial issues regarding sexuality and sex education will be presented to provide learning experiences to enhance related physiological, psychological and sociological knowledge to form of philosophical basis for individual and public education.

HPER 238. Contemporary Issues in Drug Abuse. (3). This course is designed to provide the student with current information concerning the physiological, psychological, and sociological aspects of drug use, misuse, and abuse. The availability and function of drug abuse programs and agencies dealing with prevention and rehabilitation will also be presented as will current research and effective teaching methods and materials.

HPER 245. Tumbling, Apparatus and Self-Testing Activities for the Elementary School Child. (2). To aid the student in planning and teaching developmental activities for the elementary school age child through the use of tumbling, apparatus and self-testing activities.

2-HPER 252. Social Recreation. (2). Designed to prepare the student for effective planning and leadership in the area of social recreation activities. Special attention is given to programs for church and school groups as well as to activities appropriate for family groups within the homes.

HPER 253. Camp Counseling. (3). An introductory course to acquaint the student with methods of leadership in camping activities. Special attention is given to the development and application of outdoor skills to the camping situation.

HPER 255. Modern Dance Techniques and Composition. (4). Prerequisites, HPER 256, 293, 294. Basic techniques, movement analysis and composition for the advanced dance student.

2-HPER 256. Improvisation and Composition Forms. (2). Prerequisites, HPER 293, 294. This course provides instruction in the improvisational approach to creative dance and the sequential and contrapuntal compositional forms. Emphasis is placed on form and structure of composition.

2-HPER 262. Standard First Aid and Personal Safety. (2).

2-HPER 263. Advanced First Aid and Emergency Care. (3). Prerequisite, HPER 262.

HPER 264. Instructor's Course in Standard First Aid and Personal Safety. (1). Prerequisite, HPER 262, 263.

HPER 265. Recreation Skills in Sports and Games. (3). An introductory course, designed to acquaint the undergraduate Recreation major with the skills necessary to organize and conduct activities in the area of individual, dual, and team sports and games, with emphasis on the lifetime approach.

HPER 266. Outdoor Recreation Skills. (2). This course is designed to acquaint the student with experiences whereby he or she may acquire knowledge and skill in the many outdoor activities.

HPER 267. Recreation Skills in the Recreation Center, and on the Playground. (3). An introductory course designed to acquaint the undergraduate Recreation major with the skills necessary to organize and conduct the numerous kinds of activities which are included in the modern center and playground program.

HPER 269. Instructor's Course in Advanced First Aid and Emergency Care. (1).

HPER 270. Analysis and Movements of Weight Training and Conditioning. (1). Principles, methods, and techniques of weight training for athletics.

HPER 271. Analysis and Movements of Soccer. (1). Movement skills, rules, and strategies.

HPER 272. Analysis and Movements of Field Hockey. (1). Movement skills, rules, and strategies.

HPER 273. Analysis and Movements of Basketball. (2). Movement skills, rules and strategies.

HPER 274. Analysis and Movements of Volleyball. (2). Movement skills, rules and strategies.

HPER 275. Analysis and Movements of Wrestling. (2). Movement skills, rules, and strategies.

HPER 276. Analysis and Movements of Football or Flag Football. (2). Movement skills, rules, and strategies.

HPER 277. Analysis and Movements of Track. (2). Movement skills, rules, and strategies.

HPER 278. Analysis and Movements of Baseball or Softball. (2). Movement skills, rules, and strategies.

HPER 279. Analysis and Movements of Self Defense. (1). The purpose of this course is to provide students with the necessary skills to protect themselves in all situations.

HPER 280. Analysis and Movements of Badminton. (1). Movement skills, rules, and strategies.

HPER 281. Analysis and Movements of Fencing. (1). Movement skills, rules, and strategies.

HPER 282. Analysis and Movements of Bowling. (1). Movement skills, rules, and strategies.

HPER 283. Analysis and Movements of Swimming. (2). Movement skills, rules, and strategies.

HPER 284. Analysis and Movements of Tennis. (2). Movement skills, rules, and strategies.

HPER 285. Analysis and Movements of Tumbling and Gymnastics. (2). Movement skills, rules, and strategies.

HPER 286. Analysis and Movements of Archery. (1). Movement skills, rules, and strategies.

HPER 287. Analysis and Movements of Golf. (1). Movement skills, rules, and strategies.

HPER 288. Physical Education Activities for the Elementary School. (2). Designed for, required of, and restricted to majors and minors in elementary education. Content deals with basic principles and activities including in a well-rounded program of physical education for the elementary school.

HPER 289. Analysis and Movements of Skiing. (1). Movement skills and methods of teaching skiing.

HPER 290. Analysis and Movements of Folk and Square Dance. (2). Fundamental and advanced skills of folk and square dance.

HPER 291. Rhythmic Education in the Elementary School. (2). Methods and materials of creative dance, singing games and folk dances including the movement exploration approach.

HPER 293. Analysis and Movements of Modern Dance. (2). The analysis and techniques of movement in relation to the aspects of time, space, and force.

HPER 294. Problems in Dance Composition. (2). Prerequisite, HPER 293. Problems in dance composition include rhythmic analysis and accompaniment for dance.

HPER 296. Rhythmic Analysis and Dance Accompaniment. (2). Prerequisites, HPER 293, 294. A course designed to present the fundamental principles of rhythm and dance accompaniment through practical dance application.

HPER 297. Analysis of Swimming Techniques (Women). (1). Prerequisite, HPER 283. Analysis of swimming and diving and synchronized swimming techniques.

HPER 298. Instructional Media in Health, Physical Education and Recreation. (2). To help the student to learn the techniques of constructing teaching aids and improvised equipment and to develop resourcefulness, initiative, and creativity in the use of materials at hand to implement learning.

2-HPER 299. Community Health. (3). Designed to introduce the student to major health problems and various community health programs, agencies, and services which relate to solutions of community based problems. It is structured to include discussions of methods used to control community health problems in today's society.

HPER 301. Health Education in the Elementary School. (PTE) (2). Designed to give the prospective elementary teacher a foundation in school health education, including health services, healthful school living, and health instruction. In addition, opportunity to develop skills in organizing and presenting learning experiences in a comprehensive and sequential health curriculum, including standard and controversial topics, will be provided.

HPER 325. Teaching of Sports. (PTE) (2). Prerequisites, HPER 271, 272, 273, 274, 277, 278, 280, 284, 285, and 295. A consideration of the basic techniques of sports including skills, rules and strategies, emphasizing teaching procedures.

HPER 326. Teaching of Dance. (PTE) (2). Prerequisites, HPER 290, 292, 293, 294. Teaching procedures of dance activities for the physical education major student.

3-HPER 337. Socio-Psychological Concepts of Leisure. (3). It is the purpose of this course to familiarize the student with basic sociological and psychological concepts of leisure.

HPER 340. Health and Physical Education for the Handicapped. (3). Discussion of basic characteristics of the handicapped as related to participation in physical education, recreation, and outdoor education. Emphasis is placed on interests, needs, limitations, and potentialities of the handicapped. Special consideration is given to types of activity programs, modification of activities, and approach to teaching the mentally and physically handicapped.

2-HPER 342. Modern Concepts of Health and Disease. (3). Designed to discuss in-depth the mechanism of disease and its effect on the human body. Discussions will include current theories of and defenses against disease and analysis of the major diseases which affect the various systems of the body.

HPER 343. Methods and Observation of Health Education. (PTE) (5). This course is designed for the purpose of demonstrating effective presentation of health information through the utilization of various educational media, qualified resource persons, special exhibits, experiments and presentations, and community resources available beyond the classroom. Observation and direct exposure to first hand learning experiences will be provided whenever possible. Various instructional procedures, techniques, and methods will be utilized.

HPER 344. Methods and Observation of Teaching Physical Education in the Elementary School. (PTE) (3). A study of mental, emotional, physical and social needs of children of elementary school age levels, and the planning of a program, selection of materials and methods of teaching physical education at these levels.

HPER 345. Methods and Observation of Teaching Physical Education in the Secondary School. (PTE) (2). A study of planning, materials, and methods in physical education for the secondary school based on mental, physical, and social needs of the student at various age levels.

HPER 346. Assistant Teaching. (1). Prerequisite, 345 or may be taken concurrently with HPER 345. Designed to afford undergraduate students an opportunity to teach under close supervision with immediate feedback and discussion with the supervising teacher.

5-HPER 350. Introduction to Environmental Health. (3). This course is designed for the undergraduate student of all disciplines within the University. An interdisciplinary approach involving the relationships of environmental pollution to the ecosystem in which we live and man's health will be emphasized. The major areas of environmental pollution; i.e., water pollution, air pollution, solid waste, pesticides, radioactive wastes, and population pressures will be analyzed.

HPER 361. Coaching of Football. (PTE). (2). Prerequisite, HPER 276. The techniques and strategy of coaching football, with emphasis upon type of formations, defense, play series, rules, and football coaching in general.

HPER 362. Coaching of Basketball. (Men). (PTE) (2). Prerequisite, HPER 273. Theory and practice in scouting, charting, scoring, timing, and officiating. Principles of successful modern offensive and defensive play. Procedures in developing and utilizing playing personnel.

HPER 363. Coaching of Track and Field. (Men). (PTE) (2). Prerequisite, HPER 277. A study of the techniques of coaching the various events in track and field, the rules, and the methods of conducting track events.

HPER 364. Coaching of Baseball. (PTE) (2). Prerequisite, HPER 278. Techniques and procedures in developing individual and team play. Defensive baseball: pitching, catching, infielding, outfielding, strategy. Offensive baseball: batting, base-running, strategy.

HPER 365. Coaching and Officiating of Wrestling. (2). A study of the techniques and strategy of coaching competitive wrestling with theory and practice provided in officiating, scoring, timing, and scouting of wrestling meets.

HPER 368. Programs in Recreation. (4). Prerequisite, HPER 200. Designed to prepare the student for effective planning of varied types of recreation programs. Special attention is given to programs for public playgrounds, community centers, and such special groups as the aging, teenagers, young adults, and the handicapped.

HPER 369. Therapeutic Recreation. (3). Adaptation of recreation activities to meet the varying needs of handicapped individuals in hospitals, schools, homes, recreation and rehabilitation centers. Reports, discussions, observations, and visitations.

HPER 380. Prevention and Care of Sports Injuries. (2). Prerequisites, HPER 220, 221. Intensive course in care and treatment of athletic injuries with time devoted to each specific injury. The etiology, pathology, sign and symptoms, treatment, and adapted activities will be given for the major injuries.

HPER 381. Practical Experiences in Care of Athletic Injuries. (1). (May be repeated for total of 4 hours credit.) Prerequisite, HPER 380. Practical application and experience in the prevention, management, and rehabilitation of injuries occurring in the school athletic program.

HPER 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

HPER 426. Tests and Measurement in Physical Education. (PTE) (3). Designed to give the student a foundation in techniques of evaluation, including elementary statistical procedures, the preparation and administration of skill and written tests, and the use of other evaluative materials in the field.

HPER 432. Adapted Physical Education. (PTE) (3). Prerequisites, HPER 220, 221. Developmental, remedial, and corrective programs in physical education. Emphasis is given to adaptations which are designed to meet the needs of individuals requiring special attention above and beyond the regular physical education program.

HPER 435. Educational Interpretations of Health, Physical Education and Recreation. (PTE) (3). A foundational approach to interpretations and objectives of physical education, health education, and recreation in general education. Designed to assist the mature professional major in developing a sound philosophic background for continued growth in the professional field.

3-HPER 436. Sociological Interpretations in Physical Education and Sport. (PTE) (3). The purpose of this course is to examine basic sociological concepts and issues, group dynamics theories and attitudes and value formation as they apply to sport and physical education.

HPER 440. Perceptual -- Motor Theories. (3). Designed to help the student understand the background of the perceptual-motor movement and plan a program of perceptual-motor activities.

HPER 441. Administration of Intramural Sports and Student Recreation Programs. (2). (Laboratory required.) The administrative problems confronted by the Intramural Director: organization, supervision, scheduling, facility management, financing, equipment, and evaluation.

HPER 445. Instructional Media in Health, Physical Education, and Recreation. (2). The purpose of this course is to help the student to learn the techniques of constructing teaching aids and improvised equipment and to develop resourcefulness, initiative, and creativity in the use of materials at hand to implement learning.

HPER 450. Administration of Physical Education. (PTE) (3). A study of administrative problems in physical education for men and women dealing with budget and finance, legal aspects, purchase and care of equipment and supplies, programs, public relations, intramural activities, and class organization.

HPER 451. Administration of Community, Park and Recreation. (5). Prerequisite, HPER 368. The course is concerned with the organization and administration of the community recreation program. Eleven essential areas of this subject are studied: fact-finding, survey, legal aspects, municipal organization, department organization, financing, records and reports, publicity, public relations, leadership, and program.

HPER 452. Internship in Recreation. (18). Prerequisites, HPER 368, 369, 451, 472. A course designed primarily to help students make the transition from the classroom to the practical situation. Opportunity is provided for students to assume the normal responsibilities involved in the conduct of various kinds of recreation activities. One quarter of full-time activity is required.

GERO 453. Internship in Gerontology. (18). A course designed primarily to help the senior student majoring in Gerontology make the transition from the classroom to the practical situation. One quarter of full-time placement is required.

HPER 454. Internship in Health. (9-18). This course is designed to give the health major (non-teaching) the opportunity to work with official and/or voluntary health agencies. The experience will provide specific assignments and responsibilities for the intern under the guidance and supervision of the cooperating agency and the staff in the Department of Health and Safety Education. At the conclusion of the internship experience, a written evaluation will be submitted to the department of purposes of evaluation and recording.

HPER 456. Workshop in Modern Dance. (4). Prerequisites, HPER 255, 256, 293, 294. Problems connected with the staging of dance performances.

4-HPER 457. Dance History and Philosophy. (4). History and development of dance as it is culturally determined and the philosophy influencing dance.

HPER 459. Dance Production in High School and College. (2). Prerequisites, HPER 293, 294, 456. A practical application and principles which serves the presentation of dance. The course deals with a choreographic problem, the invention, manipulation, direction and production involving theatre application of set, and costume and light design.

2-HPER 460. Outdoor Recreation. (4). Emphasis will be placed on initiating and developing outdoor recreation programs through multi-disciplinary (team approach), involving state and national professional education associations, governments, organizations, and private agencies.

HPER 464. Sports officiating for Men. (1-4). Designed for coaches, administrators, and officials. Considers general principles and philosophy of officiating as well as study of the mechanics of officiating the sports for men in the school program.

HPER 470. Administration of Athletics. (3). The administrative problems confronted by the coach: management of athletic events, schedules, budgets, finances, athletic facilities and equipment, awards, public relations, and insurance.

HPER 471. Safety Education. (3). A comprehensive course for preparing teachers and school administrators to assume responsibility for safety education and accident prevention programming in school and public service.

HPER 472. Recreation Leadership. (4). Reading, reports and projects covering the philosophy, methods, and materials for the recreation leader.

HPER 474. Driver and Traffic Safety Education I. (3). Fundamentals, principles, practices and content of high school driver education and traffic safety programs. Primary emphasis is placed on teaching the classroom phase of driver and traffic safety education.

HPER 475. Driver and Traffic Safety Education II. (3). Study of problems related to administration, instruction, evaluation and research in driver and traffic safety education programs. This course will also include directed laboratory experiences in teaching off-street driving through the use of simulation and multi-vehicle driving range and on-street driving through the use of dual control automobiles.

HPER 480. Adult Fitness Principles. (3). A course designed to familiarize the student with the special exercise needs of the adult including the use of exercises as a preventive measure in the degeneration of aging.

HPER 495. Senior Seminar. (4). Research, observation, participation, presentation, and discussion of current events by students aimed at developing a personal and professional philosophy for their chosen profession.

HUMANITIES (Administered by English Department)

4-HUM 201. The Classical Ages: Greece and Rome. (4). Selected studies in Western culture from its beginnings to the decline of Rome.

4-HUM 202. The Middle Ages and the Renaissance. (4). Selected studies in Western culture from the decline of Rome to the seventeenth century.

4-HUM 203. The Age of Reason to the Age of Romanticism: 17th Through 19th Century. (4). Selected studies in Western culture from the seventeenth through the nineteenth century.

4-HUM 204. The Twentieth Century. (4). Selected studies of Western culture during the twentieth century.

4-HUM 205. The Literature and Arts of the Orient. (4). An introduction to the literature, arts, and thought of the Orient.

4-HUM 210. Themes or Problems in the Humanities. (4-12). An interdisciplinary study of one of the recurring themes in the development of civilization OR of a great philosophical, esthetic, social or political problem as reflected in the arts, music, literature, philosophy.

4-HUM 211. Foundations of Humanities. (6). Introduces the students to primary disciplines in the Humanities--history, literature, art and music--emphasizing unique qualities of analysis and critical thinking both peculiar and common to those disciplines. Additionally, the course teaches fundamental skills in writing essays and critical analyses, and offers basic instruction in research paper writing.

4-HUM 212. Case Studies, in the Humanities. (6). Introduces the students to case studies on particular problems and topics in the Humanities, among them, "Which was Socrates?", "What is a Gospel?", "Hamlet," and "Mendelssohn's Rediscovery of Bach."

4-HUM 213. Humanities and Industrialization. (6). Examines the topic of nineteenth century industrialization, emphasizes the inter-relationships among the arts and the social and technological forces.

4-HUM 220. Man, the Measure. (4). This course begins with a study of the classical Greek idea of levels of being, from its appearance in Plato's *Timaeus* and traces it through literature and art of the Middle Ages, Renaissance, and beyond.

4-HUM 221. The Christian World in Collision. (4). Religious reaction in the Christian era, studying the development of Christianity and its relation to existing religions, early heretics such as Wyclif, Huss, Jeanne d'Arc and Luther, the impact of science, and the growing interest in Eastern beliefs and their influences on twentieth century Christianity.

4-HUM 222. The Romantic Revolt. (4). A thematic approach to the cyclic process of Romanticism, from the Renaissance to the twentieth century. The course will involve discussion and analysis of the central themes of Romanticism, such as primitivism, wonder and mystery, transcendentalism, sympathy found in Nature, and the emphasis upon imagination over reason and realism.

4-HUM 223. The Academy and the Garden. (4). Hypothesis: Since the seventeenth century, practitioners of the Arts and Sciences have struggled to construct for themselves a semi-sacred place; non-political, non-normative, the groves of academe would flourish in innocence and amorality. Critical examination of this hypothesis will focus on a variety of materials drawn from the seventeenth through twentieth century.

4-HUM 226. The Divided Self. (4). Since simple self is also compound self, and often complex, this course studies perspectives in the divided self from Plato and Augustine to Dostoevsky and Rollo May.

4-HUM 240. Cultural and Historical Origins of Myth. (4). Primary attention is given to theories explaining the origins of myths. Students will investigate the value and validity of these theories through specifically selected primary sources. The first quarter focuses on language, cultural and historical phenomena.

4-HUM 241. Psychological Origins of Myth. (4). Primary attention is given to psychological explanations for the origins of myths. Students will apply these theories to specially selected primary sources. These studies will also point to biological or organic theories of origin. Primary sources will include painting and sculpture as well as literature.

4-HUM 251. The Wisdom of India and China. (4). Selected readings in the literature and some of the other arts of India and China. Emphasis will be on the concept of man as it is reflected in the art and literature of India and China.

4-HUM 290. Three Sons of Florence. (4). A study of the Italian Renaissance during the fifteenth and sixteenth centuries, as centered in three important sons of Florence -- namely, Lorenzo Medici (1449-1492), Machiavelli (1469-1527), and Michelangelo (1475-1564).

4-HUM 301. The Art of the Film. (4). An introduction to the major creative filmmakers -- Griffith, Welles, Bergman, Antonioni, etc. -- and to their characteristic technical and thematic concerns.

4-HUM 310. Themes, Topics, or Problems in the Humanities: Florence. (4-12). An interdisciplinary study of literature, art, philosophy, and music which reflect a recurring theme or topic or problem in the development of civilization, especially that of Italy and its influence on other countries.

4-HUM 311. Studies in World Literature: Florence. (4-12). A study of a particular theme, form, or problem as reflected in Italian and other world literatures.

4-HUM 312. Comparative Studies in the Humanities: Florence. (4-12). A comparative study in the art, music, philosophy and literature of Italy and those of other countries.

4-HUM 313. Italian Media: Florence. (3). Studies in the varieties of Italian media, their methods, means, aesthetic principles and audiences.

4-HUM 314. The Italian Humanists: Florence. (3). A study of the rise of humanism in Florence in the fifteenth century, the major contributors to this movement and their ideals.

4-HUM 315. Leonardo, Michelangelo and the Neo-Platonic Academy: Florence. (3). A study of two outstanding artists and the Italian Renaissance and the relationship of their thought and art to the Neo-Platonic Academy.

4-HUM 316. Italian Folk Arts: Florence. (3). A study of how ancient beliefs, customs, and cultural patterns have been transmitted and are manifest in the language, art, and the attitudes of Italians today.

4-HUM 317. Medieval Philosophy: Florence. (3). Studies in the philosophy of the Middle Ages, including the Christianization of Greek and Roman thought; Augustine, Anselm, Aquinas, Ockham; the problem of universals; faith and reason.

4-HUM 318. Poetry and Photography: Florence. (3). Studies of the writing and traditional poetic forms and free verse related to the visual imagery of poetry.

4-HUM 377. Origins of the Gospels I. (3). An introduction to the four Gospels of the Bible, in particular an investigation into the sources and texts which make up the present Gospel narratives of the New Testament.

4-HUM 378. Origins of the Gospels II. (3). Prerequisite, HUM 377. Investigation into the reason for more than one Gospel and peculiarities of each Gospel and the similarities they share.

4-HUM 411. Advanced Course in the Humanities. (4-12). A study of one or more great literary or artistic works in relation to history, philosophy, and other arts.

INDUSTRIAL ARTS

2-IA 111. Bicycle Maintenance. (1). A course to acquaint student with general repair and maintenance of modern bicycles, both foreign and domestic. Topics such as purchasing, lubrication, tire care, brakes and transmissions will be studied: S-U final mark.

2-IA 118. General Plastics (Synthetic Materials). (3). A general introduction to the field of plastics, emphasizing the study of materials and processes of the industry. Content includes the basic processes of casting, reinforcing, lamination, expandable materials, assembling and finishing.

2-IA 141. Graphic Arts Fundamentals. (3). Experience with the fundamental operations used in school graphic arts shops. Information about tools, machines, and materials.

2-IA 150. Wood Processing. (3). Development of basic skills and knowledge in planning and layout, lumber and lumbering, purchasing and measuring of wood materials, methods of fastening and adhering, basic upholstery, elementary finishing and joinery with hand and portable electric tools.

2-IA 161. Principles of Drafting. (3). Lettering, freehand sketching, geometric construction, orthographic projection, sectional views, and dimensioning in drafting.

2-IA 164. Industrial Design. (3). The principles of design as related to materials, construction techniques, and their application to industrial arts problems and areas.

2-IA 170. General Metals. (3). An introduction to the materials and processes of the metals industry with emphasis on foundry, sheet metal, bench metal, heat treatment of metals and industrial production methods.

2-IA 180. General Electricity. (3). Designed as an introductory course to the basic principles and applications of electricity/electronics. Emphasis placed on types of electricity/electronic laboratory equipment, soldering, component symbols, and terminology, electron theory, magnetism, methods of producing electricity, resistance, current voltage and Ohm's Law in series, parallel and series-parallel circuits.

2-IA 190. Introduction to Power. (2). A study of energy sources and the machines that convert energy into useful work. Emphasis given to broad overview of entire field of power and its importance to technology.

IA 210. General Bookbinding. (3). Development of basic skills in hand bookbinding applicable to elementary or junior high school arts programs.

IA 215. Industrial Crafts. (3). Design, construction and demonstration experiences in the crafts areas of graphic arts, leather, metal, plastics, wood, similar areas and materials as they apply to industrial arts shop, general shops, school crafts and club activities, and recreational craft programs.

2-IA 216. Leathercraft. (3). Development of the basic skills in leathercraft, including designing, tooling, carving, and constructing leather projects for the industrial arts programs, such as general shop, camp activities, and recreation programs.

IA 219. Plastics. (2). Emphasis on techniques, skills and design in the use of industrial plastics materials, includes the basic processes of molding, thermoforming, foaming materials and machining.

IA 221. Technology: Its impact on Society. (3). This course will deal with the impacts of industry and technology on our modern day society. Emphasis placed on invention, power and energy, transportation and communication, new materials, agriculture and construction, and socio-economic impacts. Implications to the environment, urban areas, psychology, sociology, politics and human beings will be discussed. An outlook will be presented to view technology as an intellectual discipline.

IA 241. Graphic Arts. (2). The relationship of the processes used in school graphic arts shops to industry. Consumer information is developed and occupational opportunities are explored.

2-IA 256. Upholstery. (2). Techniques and processes in the various types of upholstery for all grade levels.

2-IA 257. Woodturning. (2). Basic skills and related techniques in faceplate and spindle woodturning.

IA 261. Pictorial Drafting. (2). Prerequisite, IA 161. Object description and pictorial drawing. Emphasis is on auxiliary views, isometric, and perspective drawings.

2-IA 272. Gas and Electric Welding. (3). An introductory course in the area of gas and electric welding, welding technology and non-destructive testing of welds.

IA 281. Electro-Mechanical Equipment and Measuring Instruments. (2). Prerequisite, IA 180. An introductory course in alternating current and applications of electro-magnetic principles. Emphasis on AC-DC motors and generators, alternators, meter movements, operation/calibration of oscilloscopes, inductance, capacitance, resonance, wiring and illumination, and basic semi-conductor theory.

IA 291. Internal Combustion and Reciprocating Engines. (3). A study of two-cycle and four-cycle reciprocating engines. Emphasis placed on principles of operation, systems of basic engines, such as ignition (spark and compression), cooling, fuel, lubricating, and electrical.

2-IA 299. Understanding the Automobile, a Course for Women. (3). An introductory study of the mechanical systems of the automobile. Emphasis is on explanation of operational problems and basic maintenance exercises. All presentations and exercises organized for those having little or no knowledge of technical aspects of the automobile. S-U final mark.

IA 308. Workshop. (1-6). This course is concerned with the instructional problems of the participants; however, the problems attached would vary according to the experts conducting the workshop. Each workshop will have a subtitle and no subtitle may be repeated for credit. Not open to graduate students.

IA 314. Understanding Home Maintenance Activities. (3). Course is designed to provide opportunities for students to study, understand and experience the variety of maintenance, repair and constructional activities that are necessary and commonly performed in and about the home.

2-IA 315. General Crafts. (3). Basic techniques, construction and demonstration in industrial arts crafts with simple tools and inexpensive materials, including laboratory experiences in such areas as blockprinting, bookbinding, braiding, leather, metal crafts, mosaic, plastics, silk screening and woodcrafts.

IA 320. Course Organization in Industrial Arts. (3). Criteria underlying the organization of a course of study in industrial arts. Techniques by which courses are developed or revised. Each student prepares a course of study in the field of his interest.

IA 325. Equipment Maintenance in Industrial Arts. (3). Techniques of maintenance and repair of tools and machines used in industrial arts laboratories. Management and selection of supplies used in the various materials areas are covered.

IA 330. Methods of Teaching in the Secondary School Industrial Arts. (PTE) (3). Methods of teaching in the junior-senior high school. Includes curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of the special area to the total secondary program. Teaching techniques are a point of emphasis. S-U final mark.

IA 335. History and Philosophy of Industrial Arts. (3). A basic understanding of the history of industrial arts, with emphasis on developing an individual philosophy. A study of the conflicts and relationship of philosophy to actual practice in a functional program of industrial arts.

IA 336. Principles of General Shop Organization. (5). Introduction to the

concepts of organization and administration together with history, philosophy, and development of the general shop. Emphasis will be placed on objectives, program planning, equipment selection, and methods of teaching. Areas to be included are: bookbinding, leather, ceramics, and art metal.

IA 340. Graphic Arts Design and Layout. (3). A study of the origin, development and application of the principles of design in the field of typography. Special emphasis is on the selection and use of type and illustrations for printing layout.

2-IA 342. Basic Photography. (3). Fundamentals of camera, lens, photographic materials, and processing. Photography as a means of communication through picture planning and practical photography.

1-IA 345. Publication Production. (5). A study of printing as it relates to the field of journalism. The basic areas covered will be news photography, layout and design, and production. Time will be spent on practical applications of each of the three areas.

IA 350. Woodworking Technology. (5). Prerequisite, IA 150. The study of woods, materials, and equipment related to the woodworking area. Laboratory emphasis is on woodworking tools and machines.

IA 353. Furniture and Cabinet Making. (3). Prerequisite, IA 350. Design and construction of period and modern furniture, study of production methods of industry, upholstery, and woodfinishing.

2-IA 354. Woodfinishing. (2). Techniques and processes in woodfinishing. Experience with traditional and new types of materials. A study of the needs of public school shops in this area of work.

IA 357. Careers in the Building Construction Industry. (3). To develop an awareness of construction occupations. Students will experience some tool skills of various trades. The course will be based on the IACP junior high school curriculum.

IA 359. Construction Activities in the Elementary Classroom. (3). This course is designed to acquaint people with the background and methods for teaching constructional activities at the elementary school level. They will become familiar with tools and materials that can supplement the ongoing curriculum. Emphasis will be directed toward an integrated program of activity related to and reinforcing the public school subject matter content and related to recreational and personal purposes.

IA 362. Working Drawings. (3). Prerequisite, IA 161. Deals with detail drawings, assembly drawings, piping drawings, structural drawings, welding drawings, and simple duplicating processes such as diazo, ozalid, blueprinting and xerography.

IA 363. Graphic Solutions. (2). Orthographic projection principles applied to graphic representation, solution of problems in space and developments and intersections.

2-IA 371. Art Metal and Metal Spinning. (3). Elementary course in art metal work including tooling, etching, forming, piercing, enameling, and spinning.

2-IA 373. Jewelry Design and Construction. (3). Basic processes in jewelry construction including soldering, casting, stone cutting, simple silversmithing, and use of appropriate equipment.

IA 374. Machine Tool Operation. (2). An introduction to machine tool operation including engine lathes, shapers, drill presses, surface grinders and precision measurement.

IA 383. Electronic Hardware and Components. (2). A study of the manufacture, application and function of electronic hardware and components used in industry. Emphasis placed on introduction to electronics communications, semiconductor theory, transistors, vacuum tubes, cathode ray tubes, crystal fabrication, uni-junction transistors, field-effect transistors, silicon controlled rectifiers, tunnel diodes and integrated circuits.

IA 384. Electronic Circuitry. (3). A study of the basic circuits, both semiconductor and vacuum tube, used in industry. Emphasis placed on power supplies,

amplifiers, oscillators, AM transmitters, AM receivers, transmission lines, antennas and printed circuits.

IA 391. External Combustion Engines and Nuclear Power. (3). A study of reciprocating steam engines and steam turbines and their generating plants. Study will include the principles of operation, design, construction of the various steam engines and generating plants. Emphasis will also be placed on nuclear energy and its application to the generation of steam by means of the nuclear reactors.

IA 392. Jet, Turbine and Rocket Engine Principles. (2). A study of the various continuous combustion engines. Study will include gas turbines, jets, and rocket engines. Emphasis will be placed on their principles of operation, design, and construction as well as their applications.

IA 417. Industrial Plastics. (3). Development of skills and knowledge in the use of thermosetting and thermoplastic materials with emphasis on industrial applications including the designing and construction of molds and forms.

IA 418. Plastics Technology. (3). Introduction to the industrial processes of the plastic industry with emphasis on molding, casting, thermoforming processes and fabrication

IA 422. Individual Studies in Industrial Arts. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department. Not open to graduate students.

IA 423. Professional Teacher Competencies.(3). Course deals with the ten basic functions of a classroom teacher and the specific tasks which must be performed within each function. Organization of class material is such that competencies are general in nature with no specific area of discipline emphasized. Concentration placed on facilitating instruction, managing the learning environment, improving individual competencies, designing programs, designing instruction, providing professional service, evaluating instruction, evaluating programs, nurturing humaneness and utilizing research.

IA 424. Orientation to Educational Accountability. (3). An introduction to educational accountability and the procedures essential to its implementation. Course will cover terminology, historical development, professional and lay involvement, implications for state departments and means of planning for an accountable program. Some emphasis will be on performance contracting, educational vouchers, and program evaluation.

IA 426. Orientation to Computer Assisted/Managed Instruction. (3). This is an orientation level course in utilizing the computer for both an instructional tool and a management tool. Emphasis will be on systems terminology, basic program language for classroom teachers, and steps of procedure for converting traditional teacher-lecture materials to computer managed instruction. Opportunities to experience an interactive and non-interactive instruction program will also be provided. Discussion will provide information on commercial CAI/CMI systems presently available to public school personnel.

IA 433. Industrial Materials. (3). A study of the origin of the materials used in industrial arts classes and processes involved in the manufacture of each material. Ways of presenting the related information and consumer knowledge of each material are considered.

IA 434. Industrial Occupations. (3). A study of industrial occupations as related to vocational, technical, and industrial arts education. It will include types of occupations, entrance requirements, sources of training, and other related information which would be of benefit to the industrial education teacher.

IA 440. Organization of the Graphic Arts Laboratory. (3). The techniques and objectives of the graphic arts; their historical development and place in our cultural background; art in printing; shop planning, equipment and management; course content and organization.

- 2-IA 442. Black and White Photography.** (5). Advanced exploration of experimental, interpretive, and communicative photography. Emphasis placed upon the improvement of creative photographic and darkroom techniques.
- IA 443. Theory and Practice in Offset Lithography.** (3). Includes copy preparation, camera and darkroom work, stripping and opaquing, plate making and offset press operation.
- IA 444. Problems of Design in the Graphic Arts.** (3). Centered around graphic arts problems found in individual projects, with an emphasis upon teaching students to recognize, appreciate and use the principles of design on the printed page.
- IA 452. Problems in Woodworking.** (3). A study of the problems the specialized teacher of woodworking in secondary schools must meet.
- IA 461. Architectural Drawing.** (3). Deals with the planning and drawing of a complete set of building plans with specifications. Emphasis placed on principles, practices, and techniques of house construction.
- IA 462. Problems in Drafting and Planning.** (3). Objectives, course content, practices and teaching procedures in selected areas of drafting. Problems and assignments are set in terms of individual needs.
- IA 463. Machine Drawing.** (3). Principles of designing machines. Materials, processes and procedures will be discussed. Such areas as limit and tolerance dimensions, types of fits, screw threads and fasteners, and cam and gear drawing are included.
- IA 471. Advanced Art Metal.** (3). An advanced study in art metal including experiences in metal tooling, etching, sinking, raising, enameling and spinning of aluminum, copper and brass.
- IA 473. Advanced Jewelry and Lapidary Work.** (3). Designed to give advanced work in jewelry construction and silversmithing. Student experiences include work in design, lapidary, fabrication, and casting as it applies to jewelry.
- IA 480. Electronic Circuit Applications. (Maximum 9).** A study of electronic hardware and component applications to common circuits found in electronic equipment. Emphasis placed on control circuits, digital computer logic theory, solid state devices, printed circuits, power supplies, amplifiers, oscillators, transmitters, receivers and fundamentals of TV. Class assignments established on individual needs and interests. Amateur radio and various FCC licenses can also be earned in this course. Course may be repeated for credit.
- IA 485. Electronic Communications.** (3). A basic study of radio communications. Emphasis placed on FM transmitters, FM receivers, amateur radio, radio teletype, basic television theory, single sideband and troubleshooting electronic equipment. Opportunity provided to study transistor ignition systems, basic computer circuits and industrial electronic control circuits.
- IA 493. Direct Energy Conversion.** (2). A study of the means of direct energy conversion and the possible applications of such devices. Emphasis placed on thermionics, thermodynamics, solar and photo cell operation, fuel cell, nuclear, and other exotic power generating systems.
- IA 494. Transmission of Power.** (3). A study of the various methods of converting power into useful work. Study will include mechanical, hydraulic, and pneumatic transmission and the physical laws concerning this transmission. Emphasis will also be placed on mechanical drives, hydraulic and pneumatic circuits, pumps, valves, and other equipment used.

THE INSTRUCTOR/COURSE UNIT

- 3-ICU 102. Seminar on Human Values.** (3). Foote. This course is designed to help individuals identify and critique their own values and to help them learn to cope with the value commitments and expressions of others. S-U final mark.

5-ICU 107. Influence of Science on Modern Man. (3). **Sund.** Historical and philosophical development of scientific methods of investigation, their effects on perceptions of modern man and how science affects how we look at life. Modern reactions to the traditional view of science will be emphasized including the Humanistic movement, extra-sensory perception, parapsychology, mystical religions, and their influence on modern scientific endeavor. Dr. Jacob Bronowski's, "The Ascent of Man," text and films serve as a major part of the course.

1-ICU 108. Impact of Computers on Society. (3). **McNerney.** The study of computers and their influence upon society will be the emphasis of this course. The issues of automation and employment, privacy, individuality, and abuse of power will be stressed. The influence of the computer upon education, science, art and music, business, and law enforcement will also be studied.

5-ICU 109. Reaching Beyond the Rational. (3). **Fields.** Discusses a present mood of skepticism about the quantifying, objective methods of science; the rise to a state of acceptance of the scientific method; and concepts which lie between scientific and irrational. It will be shown that the concepts of rationality is a function of our ability to understand the universe.

1-ICU 110. Word Power. (4). **Luere.** The acquisition of new words, and the effective use of them through care and taste; includes levels of usage; urges specific rather than general expression, fresh rather than trite diction; stresses conciseness and exactness of diction; encourages a feeling for words.

2-ICU 112. Folk Furniture and Musical Instruments. (3). **Cordiner.** A creative approach to the design and building of useful objects, utensils or musical instruments based on the apprehension of personal, cultural, social or other need.

2-ICU 113. Chinese Sumi-e Lettering. (3). **Shin.** A study of basic Chinese Sumi-e Lettering. Provides a general understanding of the Chinese cultural experience. Handling and care of brushes, preparing the ink and paper. Holding the brush and brush practice with Chinese Lettering.

5-ICU 114. Science and the Ascent of Man. (3). **Fadner and/or Hamerly.** A non-mathematical study of human history as seen from the scientist's viewpoint, following the recent television series and book by J. Bronowski.

3-ICU 202. Technology: Its Impact on Society. (3). **Jelden.** This course will deal with the impacts of industry and technology on our modern society. Emphasis placed on invention, power and energy, transportation and communication, new materials, agriculture and construction, and socio-economic impacts; implications and impacts on the natural, physical psychic, and social environment. Technology will be viewed as an intellectual discipline.

4-ICU 203. The Many Faces of Hell. (4). **Lackie.** The changing concept of hell in Western thought will be considered in relationship to the endurance of the idea itself. The course will approach the main idea through the disciplines of art, music, and literature. It will consider such questions as: Is the concept of hell actually an attempt to understand the nature of evil? Is sin its own punishment? Must man have free will for the idea of hell to have any poignance? Is the concept of hell more intriguing than that of heaven? And others.

4-ICU 204. Alienation in 20th Century Literature. (4). **Luere.** The course will explore the loss of continuity, direction and identity as themes in literature and preoccupations in life. It will include literature from "Naturalism" through the "Living Theater."

5-ICU 205. Human Sexuality. (3). **Malumphy.** A study of the physiological, psychological, and sociological aspects of human sexuality. Special emphasis will be given to the role of the parents in developing normal and satisfying responses to sexuality.

5-ICU 205. Human Sexuality. (3). **Plakke.** An interdisciplinary study of the human reproductive process including the structure and function of the reproductive organs, genetics of sex fertility, contraception, abortion and birth. Sexual behavior including the heterosexuality, homosexuality, masturbation, morality,

pornography, and social acceptance of sexuality will be considered in light of the latest information available.

2-ICU 206. Contemporary Solutions to Automotive Environmental Pollution and Energy Problems (3). Roy. A course with emphasis on providing information and developing basic skills which all persons may use to lower emissions from their automobiles and increase engine efficiency. A comprehensive review of private and governmental organizations involved in solving or regulating pollution caused by the automobile.

2-ICU 207. Leisure and the Outdoors. (4). Cyphers. A course designed to provide direct experience participation in outdoor pursuits related to the natural environment. Group living experiences in a field campus setting and in an outdoor living situation will be offered. Emphasis will also be given to career opportunities in outdoor related fields.

4-ICU 208. Liberation: Myth to Ms. (5). Willcoxon, Stroud, Schulze. Interdisciplinary approaches will be used to ascertain how myth has affected the identity, roles and attitudes of the "male world" and of women in relationship to themselves and society. Projects will range from traditional research papers to critical and investigative analyses of current efforts toward perpetuating myth or developing "Ms."

3-ICU 210. Death and Dying. (3). Smart. Examining current American views of death and dying from various perspectives of psychology, religion, medicine, and sociology, an attempt will be made to help students explore their own attitudes toward death, including their own. Also the course will deal with grief and mourning and reactions of dying persons to imminent death.

4-ICU 211. Utopias, Dystopias in Literature. (4). Huff. An historical and critical view of fictional societies through selected readings of utopian and anti-utopian literature. Selections will include works of More, Huxley, Vonnegut, and others.

5-ICU 212. Earth Science for Mountaineers. (3). Stanesco. This class is designed to increase one's understanding of the mountain environment. It will focus on aspects of geology and meteorology of interest to the hiker and climber. Topics will include the development of mountain topography, rock characteristics, glaciers, weather and snow conditions. Several Saturday field trips will be required.

2-ICU 213. Theatre: A place to be Somebody--Else. (3). Norton. A course designed to aid the student in defining Theatre through the use of his own inner resources, experience and dramatic instinct.

2-ICU 214. Leisure--Yesterday, Today, and Tomorrow. (2). Dixon. An orientation to concepts of leisure with consideration of the role it plays in society and in an individual's life. Discussion includes a historical and philosophical perspective of leisure, leisure in modern society, leisure services provided in the community, and education for leisure as a multidiscipline concern.

4-ICU 218. Asian Studies: The Great Traditions of China. (3). Santos, Ayer, Edgerton. An interdisciplinary introduction to the cultures of Asia, with special attention to the historical development, socio-economic patterns, political traditions, and religious, philosophical, literary and artistic accomplishments of the Chinese.

4-ICU 219. Asian Studies: The Great Traditions of South Asia. (3). Edgerton, Ayer, Santos. An interdisciplinary introduction to the culture of India and South Asia with special attention to the historical development, socio-economic patterns, political traditions, and religious, philosophical, literary and artistic accomplishments of the area.

4-ICU 221. Japanese Literature, Art, and Zen. (4). Brewer. A study of the literature and arts of Japan as they reveal characteristics of one of that country's pervasive systems of thought: Zen Buddhism.

4-ICU 222. Introduction of Folklore. (4). Stallings. An introduction to some of the basic genres of folklore, with an examination of the relationship between

folklore and the arts and of that between folklore and society.

4-ICU 223. An American Identity. (4). **Rea.** This class will attempt to grapple with that nagging question of the American character, and will demand that the student attempt to determine to what extent he or she is the product of various cultural forces.

4-ICU 224. Romanticism from the Renaissance to the Present. (4). **Varner.** A multi-disciplinary, thematic approach to the cyclic process of Romanticism, from the Renaissance to the twentieth century. The course will involve discussion and analysis of the central themes of Romanticism, such as primitivism, wonder and mystery, transcendentalism, sympathy found in Nature, and the emphasis upon imagination over reason and realism.

2-ICU 225. The Science and Strategy of Football. (3). **Blasi.** A course designed to develop an appreciation and knowledge of modern American football. Emphasis is placed on understanding and enjoying the game from the viewers' standpoint.

2-ICU 226. General Kinesiology: A study in Human Movement. (3). **Barham, Peterson, Sage.** An introduction to the scientific analysis of motor performance. Special emphasis is given to the mechanical, physiological and psychological components of performance. These components will be studied in both the classroom and laboratory settings.

1-ICU 227. The Communicating Environment. (4). **Kearns.** The course combines theoretical with practical knowledge through readings in utopian literature and recent discussions of community design and through applied study of the immediate environment--Greeley, UNC, etc. Architectural forms, city layouts, and the relationships between the human and natural environment serve as sources for research and discussion.

2-ICU 301. Ethno-Gormandistics. (3). **Grable.** A study of various cultures--their histories, customs, and cuisine. Typical foods of each culture studied will be prepared and sampled by the class as an aid to understanding and appreciating the people. S-U final mark.

4-ICU 304. The American Nightmare: Protest Against the Dream. (4). **Willcoxon, Bowles.** The components of the American Dream will be discussed, with students then determining what areas of protest against the Dream and what areas of protest against the lack of realizations of the Dream should be analyzed.

4-ICU 305. Pop! Went the Dream. (4). **Bowles, Willcoxon.** An attempt to determine the nature of popular culture and the extent to which its development is related to the American Dream. Such typical manifestations as art, motion pictures, radio, television, music reading matter, and sports will be examined with each student determining his own area of interest.

4-ICU 306. Born in the Grave? (4). **Brand.** Perhaps the American Dream is dead. However, some insist in dreaming on. This course deals with those dreamers who grant that we are, in some ways, among the ruins. The course probes the possibilities of our being born in the grave and challenges participants with the possibilities of reconstruction.

1-ICU 307. Casinos, Gambling and Game Simulation. (3). **Heiny.** Study of alternative decisions and their probabilities, odds, and payoffs in gambling games. Lotteries, numbers, racetracks, and athletic betting will be covered. The premiums, payoffs, and odds in insurance investing will be investigated. Simulation of games computer will be used for instruction. No math or computer prerequisite. S-U final mark.

4-ICU 308. Contemporary Christian Theology. (3). **Merx.** A survey of the contemporary Christian theologians and their treatment of the fundamental questions of God and Man. The relationships between theology and the disciplines of Science and the Arts will be discussed.

4-ICU 309. Ethical Values and Children's Literature. (3). **Hodapp.** This course will delve into the underlying and explicit moral values found in children's literature. The literature will encompass folk tales to modern children's literature. The

course will culminate in the creative effort of the student in creating a children's story.

3-ICU 310. Effective Parenting. (3). Sawatzky. A study of parenting techniques based upon the Transactional Analysis model. Includes a comparative study of theories regarding the emotional needs of children through growth and development, and information about effective parenting messages and techniques as well as parent messages and behaviors that are disruptive or destructive.

4-ICU 314. Images of Women in Literature. (4). Wilson. Open to men and women. Investigation of stereotypes, dreams, roles, and goals of women manifested in creative works by and about women. Poetry, fiction, drama, and happenings of various countries, time-periods, and techniques will be analyzed and compared; secondary examples will be chosen from essays, art, and the popular arts.

4-ICU 317. Latin American Magical Realism in Short Story and Novel. (3). Hoffman. The course is an introduction to the best of the recent Latin American novelists and short story writers. Authors to be studied are Jorge Lues Borges, Julio Cortazar, Carlos Fuentes, Juan Rolfo and Gabriel Garcia Marquez.

2-ICU 319. Sexism in Management: Changing Roles for Men and Women. (3). Holmboe, Saam. Ideas, theories and models from various disciplines will be applied to management problems created by recent legislation concerning sex discrimination. Students will be given opportunities to investigate their leadership styles, their behavioral roles in small groups, their reactions under stress and competition, their unique problems, their bargaining behavior, and their relationships and expectations of the sexes under these conditions.

4-ICU 320. The Question of Love. (3). Malnati. A study of the diverse expressions and imitations of love in the lyrics of Dante, Petrarca and Boccaccio as they relate to their own 20th century question of love.

3-ICU 321. The Environment: Student Political Impact. (3). Anders. The course will provide 1) personal paractical application of existing legal and political means for the protection of the environment, 2) an open forum for the determination of means for gaining a public awareness of environmental problems, 3) possible personal and group solutions to those problems. S-U final mark.

1-ICU 322. The Lore and Logic of Chess. (4). Anders. This course will explore the philosophical concepts which underlie the evolution of chess; introduces the mechanisms by which computers make chess move decisions; develop judgement, logic and imagination in selecting from an infinite number of chess moves. S-U final mark.

1-ICU 323. Finding Creative Voices. (4). Myers. An experience of involvement in a creative community, with the works of C.S. Lewis, J.R. Tolkien, and Dorothy Sayers providing impetus for personal experimentation in written and oral communication. Emphasis on their philosophy of creativity and appreciation of the living voice.

3-ICU 324. Politics, Technology, and Political Science. (2). Mazurana, Watson. A revolution in the science and technology of knowledge and communication involving computers and electronic media has substantially altered the environment of contemporary politics, public administration, and political science. The purpose of this course is to explore the interconnections between practical politics, the academic discipline of political science, and these revolutionary changes in the contemporary era.

4-ICU 325. The Writer: Artist or Political Animal. (4). Kiefer. A study of the tension that exists between a writer's personal fidelity to transcendent inner vision and his political-social responsibility to reshape the world from which he borrows his images. Major authors studied: Alexander Solshenitsyn, Richard Wright, Daniel Berrigan and Samuel Beckett.

4-ICU 326. The Court of Louis XIV. (3). Brown. An examination of the art, music and literature of the court of Louis XIV, and the social and moral values which they reflect. Ideas to be discussed include role-playing, the trend toward the ceremonial,

class distinction and ethics as seen through authors such as Racine, Moliere and Pascal.

3-ICU 328. Introduction to the Science of Creative Intelligence. (4). Neff. A systematic inquiry into creative intelligence, the basis of an individual's ability to develop his full potential for both study and ongoing process of life. Through seminars dealing with a variety of disciplines (behavioral, natural and physical sciences, education, etc.) inquiry will be made into individual potential.

5-ICU 329. Philosophical Concepts of Science. (3). Fadner. A non-mathematical study of philosophical problems in science as viewed by scientists, including topics such as social influences in the rise of science, causality, determinism, inter-dependence of natural objects, correspondence principle, conservation principles, particle-wave duality, measurement, the validation of theories, free will.

5-ICU 330. Colorado Geology. (3). Shropshire. Various aspects of Colorado geology, including rocks, minerals, landforms, fossils, mining activities, oil and gas, oil shale, geologic history, and environmental aspects, will be explored in an informal atmosphere. A four-day field trip will be taken to investigate geological features in their natural setting.

4-ICU 331. A Total Vision of Drama. (3). Princic. Using the televised program entitled "Classic Theatre: The Humanities in Drama," this course attempts to provide a total vision of drama—that is, both reading a play and seeing it performed. This course will also include the historical, literary, philosophic, and psychological implications of drama.

3-ICU 332. Who Rules America? (4). Perchlik, Cleere. An analysis of the nature of power and of the means of attaining it in contemporary society. Particular attention will be paid to the theoretical and real conflict between participatory democracy and elitist and special interest government. Recent sociological, economic, and political developments will be discussed.

4-ICU 333. Mythology and the Arts. (4). Harrison. A study of Greek and world myths as important sources of inspiration and allusion in literature, music, and the pictorial and sculptured arts. A comparison of Greek myths with those of other cultures to show what is common to all mythologies will be made.

3-ICU 400. Sociology of Sport in American Society. (3). Sage. The main objective of this course is to utilize basic sociological concepts and theories for an analysis of sport in American society.

3-ICU 401. The Economics of Defense Spending. (3). Keddington. Designed for people seeking further knowledge of national economics. Focus is on defense spending and the roles in defense played by the Executive and Legislative branches, consumers, fiscal and monetary policy, investment, and trade. The impact of inflation, government controls, unemployment, and changing social priorities on military managers is analyzed.

5-ICU 402. Science and Christianity. (3). Peeples. A partial and non-denominational examination into the roles of the natural sciences and the Christian religion in the life of today. Emphasis is placed upon such topics as the origin of life, origin of man, purpose of being, man and his environment, family relations and future of society.

INTERDISCIPLINARY COURSES

ID 100. Individual Study Skills Seminar. (2). Prerequisite, enrollment in the Special Needs Program. An individualized course designed to meet the specific needs, on any educational level, of each student in one or all of the following areas: reading efficiency, comprehension, writing, spelling, vocabulary, word-attack skills, skimming and scanning, listening techniques, note taking, general or specific content area study skills.

ID 101. Individual Study Skills Learning Lab. (2). Prerequisites, ID 100, an enrollment in the Special Needs Program. A course designed to attack the specific weaknesses of each individual student and to develop the necessary study techniques essential for academic success. The Learning Lab will utilize the following techniques to attack the learning problems: tutoring, counseling, group discussions, resource lectures, use of instructional materials, reading machines, career development planning and effective living program. General or specific content area study skills may be repeated.

ID 102. Writing Composition/Grammar Laboratory. (2). To be taken concurrently with EDRD 130 and enrollment in the Special Services Program. A laboratory class designed to help students develop their written communication abilities.

ID 103. College Speech Communication Laboratory. (2). Prerequisites, ID 100, 101, 102, and EDRD 130. A course designed to develop the student's spoken communicative skills. Emphasis will be on the development of interpersonal communication abilities. Students will be taught how to articulate ideas and feelings through practice in discussion groups both as leaders and participants. Also stressed will be the methods necessary to initiate successful research practices through the use of the University library facilities.

4-ID 148. Introductory Seminar in Women's Studies: Women in Crisis. (3). An introductory course, designed primarily for student minoring in Women's Studies. Through individual projects and group processes, the student will explore herself/himself in relation to woman's world. Special emphasis will be placed on attitude formation, gender role-learning, self-images, needs, values, fears, and aspirations.

4-ID 176. The Idea of America. (5). The American Studies approach will be used to present a survey analysis of how the development of art, architecture, music, literature, and thought influenced and reflected the American experience and used to trace the significance of our past experience to present concerns.

ID 350. Race, Poverty, and Change in Urban America. (3). This course is to be presented by the departments of Anthropology, Economics, Geography, Political Science, and Sociology introducing concepts relative to urban spatial structure, its uses, economics, dynamics, and political organization, and the sociological and biological concepts of race.

ID 375. Human and Race Relations. (4). This course is designed to contribute to the student's awareness of social and race relations in the United States. Emphasis is given to the social positions, values, and aspirations, and political organization of Blacks and Mexican Americans. An interdisciplinary approach is used and the course is team taught.

ID 423. Microteaching. (2). The course endeavors to have teachers improve in their teaching competence by presenting micro teaching episodes, video and/or audio taping them, evaluating the tape, and humanistic questioning and discussion techniques will be stressed.

4-ID 448. Women's Studies: Senior Seminar. (3). Designed primarily for students minoring or taking a core-course program in Women's Studies, the senior seminar focuses upon materials students learned in disciplinary areas, using these ideas and techniques to develop interdisciplinary methodologies and concepts for understanding sexism and feminist approaches to combat it.

ITALIAN

1-ITAL 101. Elementary Italian I. (5). Introduction to idiomatic spoken and written Italian by means of vocabulary learning and the study of the structure of Italian. Class activities regarding grammar and cultural readings are limited realistically to spoken and written Italian. Audio and phonetic laboratory aids will

be used to the extent that they may benefit the student's pronunciation and accurate fluency.

1-ITAL 102. Elementary Italian II. (5). A continuation of ITAL 101.

1-ITAL 103. Elementary Italian III. (5). A continuation of ITAL 102.

INDIVIDUAL TUTORIAL

ITP 201. Individual Tutorial. (Maximum 15). Study with a faculty tutor on individualized projects which may involve library, laboratory, or independent field work. The nature and duration of each project will be determined by consultation between student and tutor. One to fifteen hours of ungraded credit.

ITP 401. Individual Tutorial. (Maximum 15). Study with a faculty tutor on individualized projects which may involve library, laboratory, or independent field work. The nature and duration of each project will be determined by consultation between student and tutor. One to fifteen hours of ungraded credit.

JOURNALISM

1-JOUR 100. Introduction to Journalism. (2). Orientation and analysis of the American mass media and related services. For the beginning journalism and non-journalism student. Advanced students not admitted.

1-JOUR 101. Beginning Photojournalism. (3). A practical, non-technical study of photography including the mechanics of cameras, dark room equipment, how to tell a picture story, photograph techniques with an emphasis upon composition, and use of the camera for school publications.

1-JOUR 105. Newswriting. (4). Prerequisite, completion of a college course in English composition, or pass a Journalism Department proficiency test covering English composition, principles and practice in gathering, writing, and editing news and short feature articles. Some typing experience is needed.

1-JOUR 115. Advanced Newswriting. (4). Prerequisite, JOUR 105. Principles and practice in writing and editing news from assignment and beats; writing editorials; use of both commercial and educational news sources.

JOUR 200. Journalism Internship. (2). (Maximum 12). Practical experience in at least two of the following areas (prerequisites noted in parentheses); advertising (JOUR 284); newspaper (JOUR 105, 115, 250); news service (JOUR 105, 115); sports writing (JOUR 105, 115); radio (JOUR 105); publications (JOUR 250, 255); photography; sponsorship; consumer affairs writing (JOUR 105, 115 and a background in economics, home economics, and business).

JOUR 201. Advanced Photojournalism. (3). The use of the camera in various picture taking situations; techniques of developing and printing.

JOUR 250. News Editing. (3). Principles and practice in editing copy and pictures, writing headlines; use of editorial judgement.

JOUR 255. Publications Layout. (3). Copy and picture layout for the printed media.

JOUR 284. Techniques of Advertising. (3). A copywriter's approach to the study of advertising. Emphasis is on creating copy both for print and broadcast advertising, and the layout and illustration of advertisements.

1-JOUR 297. Feature Writing for News Media. (3). Prerequisites, JOUR 105, 115. Analyzing, researching, and writing the longer feature with emphasis on current subjects usable in the local press.

JOUR 301. Teaching Secondary School Journalism. (PTE) (3). Methods of teaching, use of teaching materials, and use of communications theory applied to journalism teaching.

JOUR 324. Direct Mail Advertising. (1). The technique and procedure of creating the mailing piece as well as securing of a productive mailing list.

JOUR 325. Media Planning. (1). Methods and procedures used in planning the media mix to be used in an advertising campaign. Emphasis given to use of advertising in newspapers, magazines, radio, and television.

JOUR 326. Advertising Regulation. (1). Study of controls on advertising by use of professional codes, postal laws, and federal and state regulatory agencies.

JOUR 360. Community Newspaper. (3). Prerequisites, JOUR 105, 115, 250, 284. Production, circulation and advertising management; bookkeeping and supply ordering; buying; ownership regulations for the smaller daily and weekly.

JOUR 391. Interpretive Reporting. (3). Prerequisites, JOUR 105, 115, and 297. Covers wide-range of investigative reporting; studies procedures of getting information; techniques of writing.

JOUR 392. Critical Writing. (3). Prerequisite, JOUR 105, 115, and 297. Principles and practices in writing reviews of drama, music, books.

JOUR 395. Fundamentals of Public Relations. (3). Develops understanding of basic concepts of human relationships in school, business and government communication. Studies technical skills to produce several types of publications, plan various types of public relations programs.

1-JOUR 397. Master Journalists and their Times. (3). A concentration on the great American and British journalists, emphasizing their writings, standards of journalism, and their contributions to journalism and to society.

1-JOUR 399. Press and Current Affairs. (3). Examination of criticisms of the American print and broadcasting press, the ways the press covers and comments on current domestic and foreign news, and the influence of the media and top journalists on public affairs.

JOUR 401. Scholastic Publications. (3). Analysis of purposes and problems of school newspapers and yearbooks; techniques in advising newspapers, yearbooks, and magazines.

JOUR 402. Teaching by Newspaper and Broadcast. (2). Use of newspaper-in-the-classroom program for teachers of varied study areas, and use of radio and television to supplement classroom instruction.

JOUR 408. Workshop: Techniques of Producing Publications. (3). Designed for students to participate in preparation and production of various types of publications.

JOUR 410. Newsmen's Workshop. (2). The purpose of this workshop is to provide students of journalism and other interested students an opportunity to hear lectures by professional newsmen. These newsmen who will be editors, editorial writers, copy editors, and reporters will discuss news as they handle it in their daily work.

JOUR 445. Writing for Radio. (3). Prerequisites, JOUR 100, COMM 140 or equivalent. To acquaint the student with the principles, techniques, and forms of writing for radio.

JOUR 450. Journalism Intern. (15). Prerequisites, JOUR 105, 115, 250, 284, and 297. One quarter of full-time work off-campus with a news medium.

JOUR 470. Press Computamation. (3). Current use of computerized techniques and automation to edit, produce, and distribute newspapers, magazines and broadcast matter. By classroom discussion, visits of representatives, and field trips.

1-JOUR 492. Ethics and Libel. (3). Prerequisite, Upperclassman. Study of current ethical and legal problems of the printed and broadcast media; designed for the newsman, publisher-manager, school administrator, and journalism teacher.

JOUR 494. Writing Profiles. (3). Prerequisites, JOUR 105, 115. Considers subjects for profiles, how to do research and interviews, and preparation of manuscript; sources for sales.

JOUR 495. Writing for Magazines. (3). Prerequisites, JOUR 105, 115, 297. Surveys market for types of material used; how to find a subject and how to write it to fit requirements of a publication; techniques of editing and placing manuscripts.

1-JOUR 496. Opinion Formation. (3). Analysis of opinion and propaganda and the relationship of the media to opinion formation.

MEXICAN AMERICAN STUDIES

MAS 101. Introduction to Mexican American Studies. (4). A general course designed to provide an understanding of Mexican American Studies. This course provides a background for more effective understanding of the other courses in the MAS department. This course also analyzes the relative position of the Mexican American community in the general Anglo American society.

MAS 102. Oral, Reading, and Written Spanish Communication: I. (3). Prerequisite, comprehension of Spanish. A course in oral and written Spanish designed to treat the particular linguistic problems of the Mexican American student or the student who has mastered the basic skills in the language. Emphasis is on Southwestern culture. Grammar is treated inductively.

MAS 103. Oral, Reading, and Written Spanish Communication: II. (3). Prerequisite, MAS 102. A continuation of MAS 102. Oral and written expression and vocabulary building are intensified. Some grammar analysis is introduced, but emphasis is on usage.

MAS 104. Oral, Reading, and Written Spanish Communication: III. (3). Prerequisite, MAS 103. A continuation of MAS 103. Cultural selections are expanded to include Mexico and other hispanic countries along with current cultural problems of the Southwest. Much emphasis is placed on synonyms, idioms, and expressions or a means of perfecting the speaking and writing skills of the student.

2-MAS 260. Mexican American Dance Production in the Bilingual Bicultural School. (2). (1 lecture, 1 laboratory.) History of the origin and development of Spanish, Indian, Mexican and Mexican American dance in a bilingual bicultural school program. Dealt with will be the choreographic, set and costume, problems involved in the direction and production of a cultural Mexican American school program.

MAS 270. History of Mexico I. (3). This course will cover the significant aspects of Mexican history and civilization from 1500 to 1810. Emphasis will be on the conquest of the Mexican nation by the Spaniards, the growth of New Spain, significant events of the colonial period and the reemergence of the Mexican Nation, which lead to independence.

MAS 280. History of Mexico II. (3). A study of historical events from 1810 to 1920. Emphasis will be on the growth of the Mexican Republic; its relations with the United States. The loss of lands to the United States, The Mexican War and American capitalism in Mexico.

MAS 290. Oral, Reading and Written Spanish Communication. (3). A continuation of MAS 104.

MAS 300. Advanced Oral, Reading, and Written Spanish Communication. (3). This course stresses the use of fluent and functional Spanish-Mexican communication.

3-MAS 302. Social Stratification in the Mexican American Community. (3). Designed to help the student understand the social, economic, political and religious differences in the Mexican American community, this course will investigate the socialization process within the Chicano community. Special emphasis will be given to the study of contrasting differences and similarities between the Chicano,

Hispano, Spanish American and the Mexican American.

4-MAS 304. Bicultural Systems. (3). This course studies the dominant cultures in the American Southwest, the Spanish-Mexican Culture and the Anglo-American Culture. This is designed to help the student understand the problems facing culturally different people. The effects of cross cultural conflict on family values and individual behavior patterns.

4-MAS 306. History of the Chicano in the Southwest. (3). This course studies the predecessor of the present-day Chicano. The heritage of the Spaniard, the Indian and the Mestizo are examined. Special emphasis on the contributions made by these people in the development of the Southwest.

4-MAS 308. Survey of Mexican Literature. (3). This course will study the Great Mexican authors and poets, such as Sor Juana Inez, Jose Joaquin De Lizardi, Manuel Almirano and others that have influenced contemporary literature.

1-MAS 310. Linguistics Applied to Chicano Spanish. (3). A linguistic analysis of the Spanish spoken in the Southwest emphasizing similarities and differences with universal Spanish.

4-MAS 410. Survey of Contemporary Chicano Literature. (3). A survey of present-day literature that deals with social protest. Other literature that has contributed to the rich literary heritage of the present-day Chicanos will also be studied.

4-MAS 412. Mexican American Art. (3). A course whose purpose is to familiarize the student with the great Mexican artists and their artistic creations. This course will also explore the rich artistic heritage that has been passed on to the present-day Mexican American.

4-MAS 414. Mexican American Philosophical Thought. (3). A study of major philosophical views on problems and of ethics effecting the contemporary Mexican American thought.

MAS 472. Evaluation and Selection of Bilingual and Bicultural Materials. (PTE) (2). The discussion of material selection principles. Evaluation of bilingual and bicultural materials for the elementary school. Course covers learning level and interests of bilingual bicultural children in the elementary school. May also be taken as EDCI 472.

MAS 474. Teaching in a Second Language in the Elementary Bilingual and Bicultural School. (PTE) (3). This course is designed to prepare the elementary bilingual and bicultural teacher to teach Spanish as a second language or English as a second language. Special consideration is given to methods of instruction, selection of materials and student evaluation. May also be taken as EDEL 474.

MAS 481. History and Philosophy of Bilingual Education. (PTE) (3). An introductory course into the history of bilingual education: A consideration of the major educational points of view considering the monolingual and bicultural approach to education. May also be taken as EDCI 481.

MATHEMATICS

1-MATH 100. Elementary Slide Rule. (1). Principles of operation of the slide rule and illustrations of its application to problem solving in the physical sciences are covered.

1-MATH 110. Mathematics and the Liberal Arts. (3). The purpose of this course is to display several topics from mathematics. These topics are presented in an intuitive manner and in such a way as to help those students who feel they need to know more about mathematics. This course is not open to mathematics majors or minors.

1-MATH 115. Essentials of Mathematics I. (3). Prerequisite, two years of high school algebra. The purpose of this course is to present the essential concepts of

algebra to students of business, economics, sociology, education and others. Topics include graphing, equations, matrices, logarithms, simple trigonometry, and analytic geometry. The course is not open to mathematics majors or minors.

1-MATH 116. Essentials of Mathematics II. (3). Prerequisite, MATH 115 or a recent background in high school algebra. The course continues with further topics in algebra, trigonometry and analytic geometry but especially considers concepts of calculus from an intuitive point of view. The course is not open to mathematics majors or minors.

1-MATH 117. Elements of Mathematics. (3). For the student without an extensive background in high school mathematics. Topics covered: signed numbers, fractions, integer, exponents, factoring polynomials, polynomial arithmetic, linear equations, ratios and percentages.

1-MATH 123. Intermediate Algebra. (5). Prerequisite, one year of high school algebra and one year of high school geometry. This is a course in algebra covering the elementary concepts of algebra through quadratic equations. Emphasis is placed on the function concept. Systems of linear equations are considered.

1-MATH 124. College Algebra. (5). Prerequisite, MATH 123 or a full year of modern, second-year high school algebra. This course is basically a treatment of quadratic, exponential, and logarithmic functions. The systems of integers, rational numbers, real numbers, and complex numbers are included. Some topics from matrices and the theory of equations are included.

1-MATH 125. Plane Trigonometry. (5). Prerequisite, MATH 124. This is a course in modern plane trigonometry which emphasizes the circular functions and their applications. The inverse trigonometric functions and trigonometric identities are emphasized. Complex numbers are covered through DeMoivre's theorem.

1-MATH 127. Elementary Functions. (5). For the student who has had a good background in high school mathematics (three years or more) but who needs to review the development of those skills which are required in the calculus. Topics covered include polynomial functions, exponential and logarithmic functions, trigonometric functions, vectors, analytic geometry, and polar coordinates.

1-MATH 131. Calculus with Analytic Geometry I. (4). Prerequisite, MATH 125 or 127. A combined course in analytic geometry and calculus. Fundamental principles of beginning analytic geometry including different forms of the equations of a straight line are developed. Elementary phases of both differential and integral calculus, along with various applications of these subjects are considered.

1-MATH 132. Calculus with Analytic Geometry II. (4). Prerequisite, MATH 131. A continuation of MATH 131.

1-MATH 133. Calculus with Analytic Geometry III. (4). Prerequisite, MATH 132. A continuation of MATH 132.

3-MATH 180. Computers and Their Impact Upon Society. (3). The study of computers and their influences upon society will be the emphasis of this course. In addition to the issues concerning the impact of the computer upon society, the BASIC language, flowcharting, and simple computer design will be studied. Opportunity for "hands-on" computer experience will be provided.

1-MATH 191. Basic Mathematics I. (3). The first of a two-course sequence which is particularly pertinent for the prospective teacher of arithmetic and presenting arithmetic and algebra from a modern approach. Topics include the natural numbers, integers, rational numbers, real numbers, relations, functions, and equations. Emphasis is placed on understanding mathematical structures.

1-MATH 192. Basic Mathematics II. (3). Prerequisite, MATH 191. A continuation of MATH 191.

1-MATH 193. Informal Geometry. (3). Basic concepts of plane and solid geometry including points, lines, angles, planes, solids, congruence, similarity, parallelism, areas, volumes, polygons, and circles.

1-MATH 201. Basic Mathematical Logic. (3). Prerequisite, MATH 193 or MATH

131, or consent of instructor. A course designed to introduce the student to those tools and techniques of logic as applied to mathematics. Introduces terminology and basic forms of logic along with concepts of truth value. Statement calculus and treatment of proof are discussed. The restricted predicate calculus is analyzed and applications to mathematics are discussed.

1-MATH 202. Theory of Sets. (3). Prerequisites, MATH 193, or MATH 131, or consent of instructor. An introduction to the theory of sets from an axiomatic point of view. Topics included are properties of sets, relations, functions, finite and infinite sets, cardinal and ordinal numbers.

1-MATH 234. Calculus with Analytic Geometry IV. (4). Prerequisite, MATH 133. A continuation of MATH 133.

1-MATH 250. Elementary Probability Theory. (4). Prerequisite, MATH 133. Discrete and continuous probability, conditional probability, Bayes theorem; one-dimensional random variables and the expected values of random variables; Bernoulli, binomial, Poisson, geometric, hypergeometric and multinomial probability laws; probability distributions of uniform, normal, exponential, Gamma and Chi-squared type random variables.

1-MATH 280. Beginning Computer Programming in Basic. (3). (2 lecture, 2 laboratory.) This is an elementary computer programming course designed to familiarize the non-math major with the fundamentals of flowcharting and with the writing of computer programs in the BASIC language. The programs which are written will involve nontechnical applications of computer programming and be of a general nature.

1-MATH 305. Mathematics of Finance. (5). Prerequisite, MATH 123. This course offers the student an opportunity to apply his elementary mathematics of arithmetic and algebra to problems of business. Such topics as simple and compound interest, annuities, installment buying, and life insurance are considered.

1-MATH 321. Introduction to Modern Algebra I. (4). Prerequisite, MATH 132. This course provides an introduction to the topics and concepts of abstract algebra including basic notions of set theory, elementary mathematical logic, linear algebra and abstract or modern algebra.

1-MATH 322. Introduction to Modern Algebra II. (4). Prerequisite, MATH 321. A continuation of MATH 321.

1-MATH 323. Introduction to Modern Algebra III. (4). Prerequisite, MATH 322. A continuation of MATH 322.

1-MATH 325. Elementary Linear Algebra. (4). Prerequisite, MATH 321. This course presents an introduction to vector spaces and matrix theory including row operations, determinants, independence and linear transformations.

1-MATH 330. Mathematics for the Sciences I. (3). Prerequisite, one year of high school algebra is desirable. Open to all students except mathematics majors, this course emphasizes the applications of algebra and trigonometry for students of earth science, biology, and others. Topics include linear equations, exponents, graphing, systems of equations, trigonometric functions, and quadratic equations.

1-MATH 331. Mathematics for the Science II. (3). Prerequisite, MATH 330. This is the second of a three-quarter sequence. Topics include exponential and logarithmic functions, vectors, matrices, polynomial functions, elements of analytic geometry, and curve fitting.

1-MATH 332. Mathematics for the Sciences III. (4). Prerequisite, MATH 331. This is the last in the three-quarter sequence of courses. Topics include limits, the derivative, uses of the derivative, integration, and differential equations. The course is taught from a functional and practical use point of view.

1-MATH 341. Introduction to Modern Geometry I. (4). Prerequisite, MATH 132. A course designed to prepare the prospective teacher of high school geometry in the way the subject matter will be covered in a modern course. The structure of geometry will be emphasized through the axiomatic approach. The basic ideas of points, lines and planes will be given along with primitive concepts and axioms

needed to structure the geometry rigorously. Topics such as separation on curves and surfaces, congruence, measure, and parallelism will be covered.

1-MATH 342. Introduction to Modern Geometry II. (4). Prerequisite, MATH 341. A course which will give the prospective teacher of high school geometry an extension into the field of geometry beyond high school scope. Areas covered include constructions, use of loci in plane geometry and the theorems of Ceva, Menelaus, Stewart, Euler, and Ptolemy.

1-MATH 351. Introduction to Statistical Analysis. (3). Prerequisite, MATH 123 or consent of instructor. This is a service course in statistical inference and the techniques used in organizing data. Topics include frequency distributions, histograms, measures of central tendency, measures of dispersion, probability, distributions, point estimation, interval estimation and testing hypotheses.

1-MATH 380. Computer Programming. (4). (3 lecture, 3 laboratory.) Prerequisite, MATH 124. This course in computer programming is designed for mathematics and science students in the arts and sciences. Programs will be written in the FORTRAN IV and BASIC and run on the IBM 360 and the Hewlett-Packard 2007A system. Programs are chosen for their applicability to the secondary classroom.

1-MATH 395. Activities in Elementary Mathematics. (2). Prerequisites, MATH 191, 192. Students explore topics in elementary mathematics in an informal laboratory/discussion environment and develop a packet of materials and equipment suitable for later use in the elementary school, middle school, or early junior high school. S-U final mark.

1-MATH 401. Foundations of Arithmetic. (3). Designed to provide opportunity for elementary and junior high teachers and supervisors to acquire the understandings of arithmetic essential for effective teaching. Areas to be covered include the structure of our number system and operations in it, special numbers.

1-MATH 403. Structure of Numbers. (3). Prerequisite, MATH 132. A rigorous development of the real and complex numbers. Beginning with Peano's axioms for natural numbers, the integers are developed by extension. The rational and real number systems are then obtained as successive extensions. Complex numbers are structured from pairs of real numbers. The nature of isomorphism is stressed.

1-MATH 411. Topics in Mathematics. (1-3). (Maximum 12). Prerequisite, approval of instructor. Topics from mathematics not available through existing courses and which reflect the specific interest of available instructors or the specific needs of students. Topics from geometry, analysis, algebra, statistics, numerical analysis, topology, number theory or other areas may form the focus of an offering of this course.

1-MATH 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

1-MATH 432. Basic Analysis I. (4). Prerequisite, MATH 234. The first course of a sequence of three courses which will extend the student of calculus and analysis into the mathematical rigor and logic of analysis. This course will cover the following topics: real numbers developed through the Dedekind cut definition, some introductory topological topics, limits, continuity, differentiability, and Riemann integral.

1-MATH 433. Basic Analysis II. (4). Prerequisite, MATH 432. A second course in a sequence of three courses. The topics to be covered in this course will be as follows: sequences and series, functions of several real variables and integrals of functions of several variables.

1-MATH 434. Basic Analysis III. (4). Prerequisite, MATH 433. The third course in a sequence of three courses. From the background built up in the first two courses, this course will consider certain special topics of application. Some of the topics to be considered will be chosen from the following: implicit functions; appli-

cations to geometry; the gamma and beta functions; line, surface, and space integrals; vector notation; Bessel functions; elliptic integrals.

1-MATH 435. Differential Equations I. (4). Prerequisite, MATH 234 or taken concurrently. A study of the theory and solution of differential equations. Ordinary differential equations are treated along with numerous applications.

1-MATH 436. Differential Equations II. (4). Prerequisite, MATH 435. A continuation of MATH 435. Topics to be covered include series solutions of differential equations, systems of equations, partial differential equations, Fourier series and boundary value problems.

1-MATH 451. Mathematical Statistics and Applications I. (4). Prerequisite, MATH 132 or MATH 331. A presentation of statistical theory, techniques, and applications. The student should have the basic rudiments of differentiation and integration. Topics to be covered: probability theory, random variables, probability distributions, sampling procedures, point and interval estimations, tests of hypothesis, decision theory, regression, correlation, analysis of variance, time series and nonparametric statistics.

1-MATH 452. Mathematical Statistics and Applications II. (4). Prerequisite, MATH 451. A continuation of MATH 451.

1-MATH 453. Mathematical Statistics and Applications III. (4). Prerequisite, MATH 452. A continuation of MATH 452.

1-MATH 464. Introduction to the History of Mathematics. (3). Prerequisite, MATH 133. A survey of the history of mathematics from antiquity to the present with emphasis upon both the development of mathematics concepts and the people involved in this development.

1-MATH 481. Computer Mathematics I. (4). (3 lecture, 3 laboratory.) Prerequisites, MATH 133, MATH 380 or permission of instructor. A continuation of MATH 380. This course consists of advanced FORTRAN and advanced BASIC as they apply to elementary mathematics. The student will program for the IBM 360 and Hewlett-Packard 2007A.

1-MATH 482. Computer Mathematics II. (4). (3 lecture, 3 laboratory.) Prerequisites, MATH 133, MATH 380 (MATH 481 is recommended as a prerequisite). This course deals with two new languages, ALGOL and PL (1) each basic to the field of computer science. Mathematical applications of these languages will include elementary numerical analysis.

1-MATH 483. Computer Mathematics III. (4). (3 lecture, 3 laboratory.) Prerequisites, MATH 133, 380. This course will explore the assembly languages of the Hewlett-Packard 2007A mini-computer system and the IBM 360. Unique mathematical applications of assembly languages will be stressed.

1-MATH 491. Theory of Equations. (4). The study of properties of polynomials and methods of finding roots of polynomial equations.

MATHEMATICS EDUCATION

MED 341. Methods of Teaching Mathematics. (3). For prospective teachers of middle school, junior and senior high school mathematics students. Opportunity provided for gaining skill in constructing teaching strategies, understanding curriculum problems, and applying basic theories in teaching and learning mathematics. (Prior early field experiences desirable. Must enroll in EDFE 370 simultaneously. Cannot count toward mathematics major or minor.)

2-MED 370. Mathematical Instruments and Surveying. (4). Prerequisite, MATH 125. A course designed to show the teacher of mathematics some of the techniques and instruments used in many of the practical problems of measurement. Instruments studied are the slide rule, the sextant, and various instruments used in land surveying.

MED 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

4-MED 471. Instructional Materials in Secondary School Mathematics (3). (2 lecture, 3 laboratory.) Prerequisite, MATH 131. This course introduces the student into the rich areas of possible sources of instructional materials which can be used for instructional purposes in the secondary school. Areas studied will include aesthetic values of mathematics, instructional models, historical materials, classroom equipment, recreational materials, and calculating devices.

METEOROLOGY

Courses in meteorology are administered by the Department of Earth Sciences.

5-MET 110. Climate and Man. (3). A general education course designed to explore the interrelationships between man and climate. The influence of climate on historical events as well as modern activities. Man's impact on climate. Climatic fluctuation.

5-MET 200. General Meteorology. (4). (3 lecture, 2 laboratory.) A basic course in meteorology for non-Earth Sciences majors. The atmosphere, its composition and circulation; pressure, temperature, wind, humidity, clouds and precipitation, air masses and fronts; simple weather observation and map analysis.

5-MET 301. Elements of Meteorology. (4). (3 lecture, 2 laboratory.) Structure and composition of the atmosphere. Weather elements of pressure, temperature, humidity, radiation, and precipitation, and instruments used in their observation. Atmospheric stability, adiabatic diagrams, clouds and their processes of formation. Plotting and interpretation of weather charts. Students cannot receive credit for both MET 200 and 301.

5-MET 302. Dynamic Meteorology. (4). (3 lecture, 2 laboratory.) Prerequisite, MET 301 or consent of instructor. A continuation of principles developed in MET 301. Atmospheric motion, the general and secondary circulations, jet streams, Rossby waves, vorticity, air masses, cyclogenesis, frontogenesis, hurricanes and tornadoes.

5-MET 320. Climatology. (3). The physical basis of climate will be considered briefly. Main consideration will be given to climatic classification, the regional distribution of climates around the world, with specific attention on the climates of Colorado, and to the relationships of climate to agriculture, housing, water resources, transportation, and other human activities.

5-MET 330. Physical Meteorology. (3). Prerequisites, MET 200 or 301 or MET 500. A detailed discussion of radiation processes in the atmosphere. Physical processes of cloud development and the growth of precipitation particles. Atmospheric electricity. Weather modification.

5-MET 440. Synoptic Meteorology. (4). (2 lecture, 4 laboratory.) Prerequisites, MET 302 or MET 500. In-depth treatment of fundamental topics such as air masses, fronts and their movement, long- and short-waves in the upper atmosphere, and the development of mesoscale storm systems. Elementary analysis and forecasting exercises in the laboratory will apply these topics to current weather situations, utilizing maps of the National Weather Service.

5-MET 450. Severe Weather Phenomena. (3). Prerequisite, MET 301 or MET 500. A study of the development and structure of thunderstorms, squall lines, tornadoes, and hurricanes.

MEDICAL TECHNOLOGY

This major is administered by the Department of Chemistry.

These courses are open to only the majors in Medical Technology.

MTEC 450. Urinalysis and Clinical Microscopy. (4). This is a fundamental course if urinalysis covering the characteristics of urine, qualitative tests for sugars, ketone (or acetone) bodies, and protein, quantitative tests for sugars and protein, and microscopic examination of urine. Kidney function tests, other clinical tests, pregnancy tests and tests on gastric and duodenal contents are included.

MTEC 452. Hematology. (9). This course covers the methods of obtaining blood, determination of hemoglobin, red and white blood cell counts, hematocrit, study of blood smears, platelet count, reticulocyte count, coagulation, clot retraction, bleeding and prothrombin time, direct eosinophile count, fragility of erythrocytes, sedimentation rate of erythrocytes and bone marrow smears preparation and study.

MTEC 453. Pretransfusion Tests and Blood Bank Procedures. (5). This course covers selection and pretesting of donors, copper sulphate method of determining minimum hemoglobin, bleeding of donors, basic theory of blood factors, ABO grouping tests, Rh factor and Rho, (D) typing, cross-matching tests, subgroups A, irregular agglutinins, cold agglutinins, transfusion reactions, emergency transfusions, Rh antibody tests, and Coombs' test.

MTEC 454. Clinical Chemistry. (13). Urine, Cerebrospinal fluid, feces and other biological materials are examined. Preparation of reagents and protein-free filtrates are studied. Colorimetry and photometry chemical tests include blood-sugar, nonprotein nitrogen, urea nitrogen, creatinine, creatine, uric acid, albumin, globulin, acid-base balance, carbon dioxide capacity, chloride, phosphorus, phosphatases, calcium, sodium, potassium, liver function.

MTEC 455. Serology. (3). Principles of serology and immunology, the Kahn test, other flocculation and precipitation tests, colloidal gold and mastic tests, the complement fixation reaction, agglutination and opsonocytaphagic tests, cold agglutinins are studied.

MTEC 456. Medical Microbiology. (12). Culture mediums, sterilization and disinfection, morphology and physiology of bacteria, stains, classification, relation of parasites to disease, techniques for parasitologic examinations, vaccines and filtrates, filtrable viruses, mycology techniques, the superficial fungi, and the deep mycotic infections are studied.

MTEC 457. Histologic Technique. (2). Fixation and hardening of tissue, clearing of tissues, paraffin infiltration and blocking of tissue, sharpening of microtome knife, sectioning of tissues and preparation of sections for staining, routine staining technique, decalcification, frozen sections, special or differential staining methods, histochemistry, technique of exfoliative cytology are studied.

MUSIC

MUS 100. Recitals, Concerts and Productions. (no credit.) All undergraduate students enrolling in the School of Music as majors are required to attend major recitals and concerts on a regular basis as part of their course program. For specific requirements, see the School of Music *Applied Music and Performance Handbook*.

2-MUS 101. Sight-Singing and Theory I. (4). Sight-reading of standard music materials, pitch and rhythmic dictation, symbols of music notation, staff, clefs, scale construction in major and minor keys and intervals. Class meets for four days plus a fifth day of keyboard lab.

2-MUS 102. Sight-Singing and Theory II. (4). Prerequisite, MUS 101. Continuation of sight-reading, ear training, and dictation; elementary theory to include

study of intervals and inversions, triads and inversions, construction of principal and secondary chords, melody writing, and elementary form study. Class meets for four days plus a fifth day of keyboard lab.

2-MUS 103. Sight-Singing and Theory III. (4). Prerequisite, MUS 102. Continuation of sight-reading, ear training and dictation; chords of seventh and ninth, cadences, analysis, and ear training of standard harmonic materials. Class meets for four days plus fifth day of keyboard lab.

4-MUS 140. Music Appreciation. (2). A non-technical course aiming to increase the enjoyment and appreciation of music by the listener with little or no previous background. This course will be devoted largely to listening and discussion of the assigned listening.

4-MUS 141. Music Literature and Styles I. (2). The two-fold purpose of this course is to foster an appreciation for the best in music and to provide the student with basic music information in the fields of media, terminology, chronology, biography, repertoire and stylistic analysis.

4-MUS 142. Music Literature and Styles II. (2). The two-fold purpose of this course is to foster an appreciation for the best in music and to provide the student with basic music information in the fields of media, terminology, chronology, biography, repertoire and stylistic analysis.

4-MUS 143. Music Literature and Styles III. (2). The two-fold purpose of this course is to foster an appreciation for the best in music and to provide the student with basic music information in the fields of media, terminology, chronology, biography, repertoire and stylistic analysis.

MUS 150. Beginning Jazz Improvisation. (2). Prerequisite, MUS 101, 102. This course will teach the student basic skills necessary to create and perform jazz solos involving rather simple chord progressions, harmonic structures and rhythmic frameworks. Also covered will be effective techniques and materials used in teaching these skills to secondary level students.

2-MUS 160. Beginning Class Piano I. (1). This is a course designed to fit the needs of the music major or non-major who does not have a background in piano. This includes reading skills, technique, and style necessary to the playing of simple accompaniments, community songs and other piano music used in the public schools.

2-MUS 161. Beginning Class Piano II. (1). This is a course designed to fit the needs of the music major or non-major who does not have a background in piano. This includes reading skills, technique, and style necessary to the playing of simple accompaniments, community songs and other piano music used in the public schools.

2-MUS 162. Beginning Class Piano III. (1). This is a course designed to fit the needs of the music major or non-major who does not have a background in piano. This includes reading skills, technique, style necessary to the playing of simple accompaniments, community songs and other piano music.

2-MUS 163. Beginning String Instruction I. (1). A study, through performance, of the problems of string playing and the available literature for teaching in heterogeneous and homogeneous groups so that the student will be able, upon graduation, to establish string classes with full knowledge of the problem of string playing and their solution.

2-MUS 164. Beginning String Instruction II. (1). A study, through performance, of the problems of string playing and the available literature for teaching classes in heterogeneous and homogeneous groups so that the student will be able, upon graduation, to establish string classes with full knowledge of the problems of string playing and their solution.

2-MUS 165. Beginning String Instruction III. (1). A study, through performance, of the problems of string playing and the available literature for teaching classes in heterogeneous and homogeneous groups so that the student will be able, upon graduation, to establish string classes with full knowledge of the problems of

string playing and their solution.

2-MUS 201. Advanced Sight-Singing and Theory I. (3). Prerequisite, MUS 103. A continuation of mus 103. Written work will include cadences, inversions, diatonic modulations and all non-harmonic tones. Keyboard labs, harmonic dictation, and written theory will be correlated. Class meets three days a week plus one-half hour keyboard lab.

2-MUS 202. Advanced Sight-Singing and Theory II. (3). Prerequisite, MUS 201. A continuation of MUS 201 but primary emphasis in the work in seventh chords, altered chords, and chromatic modulation. Class meets three days a week plus one-half hour keyboard lab.

2-MUS 203. Advanced Sight-Singing and Theory III. (3). Prerequisite, MUS 202. A continuation of MUS 202 but primary emphasis in the written work will be placed upon studies of 20th century techniques, with student compositions performed and evaluated in class. Class meets three days a week plus one-half hour keyboard lab.

2-MUS 204. Music Fundamentals. (2). An introduction to music fundamentals for non-music majors with little or no musical background. Basic skills in music will be developed through group singing, rhythmic experience, musical listening, rudimentary piano techniques and other instrumental skills. Class is required for elementary education majors and special education majors. Elementary education majors should arrange to take MUS 204, 205 and 206 in sequence. Offered each quarter. Class may be challenged.

2-MUS 205. Experiencing Music for Elementary Teachers. (1). Prerequisite, MUS 101 or MUS 204. Development of song repertoire and performance confidence through singing, conducting small ensembles and playing autoharp, recorder, bells, and rhythm instruments. Required for elementary education majors who should take MUS 204, 205 and 206 in sequence. Offered each quarter.

MUS 206. Music Methods and Materials for Elementary Teachers. (2). Prerequisites, MUS 101 or 204 and 205. A comprehensive course for the elementary classroom teacher covering the teaching of musical concepts through singing, rhythm activities, listening and playing instruments, including the integration of handicapped children in the music class. Required for elementary education majors. Elementary education majors should arrange to take MUS 204, 205 and 206 in sequence. Offered each quarter.

MUS 207. Guitar in the Classroom. (1). Prerequisite, MUS 101 or MUS 204. An introduction to playing guitar as an instrument to acquaint children with their singing heritage in U.S. Folk Music. Guitar required.

MUS 210. Introduction to Music Education. (2). Prerequisite, MUS 103. An introduction course for prospective teachers of music covering the place of music in the school program, recent trends in school music, the qualifications of the music teacher, and a consideration of beginning instructional problems. For music majors only.

2-MUS 230. String Ensemble. (1).

2-MUS 231. Brass Ensemble. (1).

2-MUS 232. Woodwind Ensemble. (1).

2-MUS 233. Percussion Ensemble. (1).

1-MUS 234. Piano Ensemble. (1).

2-MUS 235. Guitar Ensemble. (1).

4-MUS 240. History of Music I. (3). Prerequisites, MUS 101, 102, and 103. The historical change in music from earliest times to the end of the sixteenth century with emphasis on the changes in style.

4-MUS 241. History of Music II. (3). Prerequisite, MUS 240. A study of historical changes which took place in music in the Baroque period (1600-1750) and the Classic period (1750-1800) with emphasis on changes caused by the new monodic style found in opera, and the beginning of instrumental music.

4-MUS 242. History of Music III. (3). Prerequisite, MUS 241. A study of the musical changes caused by the Romantic, Post-Romantic and Impressionistic periods from 1800 to 1920.

MUS 250. Intermediate Jazz Improvisation. (2). Prerequisite, MUS 101, 102, 103. Beginning Jazz Improvisation or demonstrated equal knowledge and proficiency. This course will further develop the student's ability to create and perform jazz solos involving more complex chord progressions and more complex rhythmic and formal frameworks. Also covered will be effective techniques and materials used in teaching these skills to secondary level students.

2-MUS 260. Intermediate Class Piano I. (1). This is a course in functional piano designed to fit the needs of the music major or non-major who has a slight background in piano. In this course is included the teaching of reading skills, techniques, and style necessary to the playing of simple accompaniments, community songs and other piano music used in the public schools.

2-MUS 261. Intermediate Class Piano II. (1). This is a course in functional piano designed to fit the needs of the music major or non-major who has a slight background in piano. In this course is included the teaching of reading skills, techniques, and style necessary to the playing of simple accompaniments, community songs and other piano music used in the public schools.

2-MUS 262. Intermediate Class Piano III. (1). This is a course in functional piano designed to fit the needs of the music major or non-major who has a slight background in piano. In this course is included the teaching of reading skills, techniques, and style necessary to the playing of simple accompaniments, community songs and other piano music used in the public schools.

2-MUS 269. Individual Performance in Voice for Those With Non-Voice Emphasis. (2). Instruction will concentrate on the fundamental principals of voice production such as proper breathing for singing, diction, resonance, etc. Development of rhythmic and melodic accuracy will receive primary consideration. Work on the fundamentals of good singing will be carried through the entire program.

2-MUS 270. Individual Performance in Voice (2-4).

2-MUS 271. Individual Performance in Piano. (2-4).

2-MUS 272. Individual Performance in Organ. (2-4).

2-MUS 273. Individual Performance in Strings. (2-4).

2-MUS 274. Individual Performance in Woodwinds. (2-4).

2-MUS 275. Individual Performance in Brass. (2-4).

2-MUS 276. Individual Performance in Percussion. (2-4).

2-MUS 277. Individual Instruction in Composition. (2-4).

2-MUS 278. Individual Performance in Harp. (2-4).

2-MUS 279. Individual Performance in Guitar. (2-4).

2-MUS 280. Mixed Concert Choir. (1). Membership in the concert choir is limited to approximately 60 singers. This organization performs a wide-range of choral literature from the classics to the music of contemporary composers. The organization is recognized widely for its excellence as a choral performing group. It is in demand throughout the region for concert appearances.

2-MUS 281. University Chorus. (1). Membership to the group of some 70 singers is open to all university students on an audition basis. The chorus performs concerts of its own on campus as well as joining with the Concert Choir in large works for chorus and orchestra.

2-MUS 282. University Singers. (1). A selected group of approximately 35 voices open by audition only. The repertoire for this group is extremely varied, ranging from motets of the Renaissance to contemporary songs to the Bach b-minor mass.

2-MUS 283. Women's Concert Choir. (1). The women's choir is open to all women students who enjoy singing the literature for women's voices. This group performs for many local community and university events. Elementary education majors are

especially urged to apply for membership.

2-MUS 284. Varsity Men's Glee Club. (1). Membership is open to the entire male student body. A love of singing is the main requirement for registration. No formal audition is necessary. The Varsity Men's Glee Club affords an opportunity for men from all schools and departments to participate in the great tradition of men's ensemble singing while performing a wide-range of literature before university and community audiences.

2-MUS 285. Opera Workshop. (1-3). Workshop offering practical experience in production of a musico-dramatic show. Techniques of acting, singing, directing, and other facets necessary for preparation of a show for public performance will be offered.

2-MUS 286. Chorus and Orchestra Workshop. (1). Conducted by authorities nationally known in their fields of specialization. The purpose of the workshop is to provide information about current important ideas in each field of knowledge.

2-MUS 288. Opera Orchestra. (1). This group rehearses as a pit orchestra for performances of opera and musical comedy.

2-MUS 289. Laboratory Orchestra. (1). A laboratory course to provide practice orchestra experience on stringed instruments. Orchestral materials and the use of them for continued development of string students will be discussed and demonstrated.

2-MUS 290. Symphonic Wind Band. (1). The Symphonic Wind Band is limited in enrollment to approximately 80 members. This organization performs the best literature available for the band. Over the years this UNC band has become known throughout the region for its excellence as a concert organization. The Symphonic Wind Band presents many concerts during the year, and takes an annual tour.

2-MUS 291. Concert Band. (1). The Concert Band is open to all band performers who wish a more limited band experience than is provided by the Symphonic Wind Band. This band studies, rehearses, and presents advanced forms of concert band literature.

2-MUS 292. Marching Band. (1). Open to all students regardless of major field who have had high school band experience. A study and practice of the fundamentals of drill and presentation of marching maneuvers and pageants at athletic events. Required during Fall Quarter for all wind and percussion students on campus in the instrumental music education program who plan to teach in the secondary schools and wish certification.

2-MUS 293. Varsity Band. (1). Open to all students regardless of major who have had high school band experience. To provide music for athletic and university functions. To read material suitable for use by high school band.

2-MUS 294. Jazz Ensemble. (1). The instrumentation in a Jazz Ensemble is designed for brass, woodwind and rhythm players. This unit is concerned with jazz idiom music: show music, dance music, and concert jazz. The goal of this type of ensemble is to give the student a thorough training in preparation for teaching at both the secondary and college levels. Members of the Jazz Ensemble who are music majors must be enrolled in a major ensemble.

2-MUS 295. University Brass Choir. (1). A select performing ensemble of 15 to 20 brass students with added percussionists when necessary. Concentration is upon familiarization of literature for the brass instrumental media as well as upon development of musical sensitivity, phrasing, style and intonation.

2-MUS 296. University Symphony Orchestra. (1). The University Symphony Orchestra is open to all students by audition. The organization performs and reads the standard repertoire of the modern symphony orchestra. Quarterly concerts are given on campus in addition to one tour taken yearly. The orchestra also participates in a Spring Quarter chorus and orchestra event.

2-MUS 297. Chamber Orchestra. (1). A select group of approximately 20 string students chosen by audition from the membership of the Symphony Orchestra. The Orchestra performs and reads literature from the Baroque to the present-day,

specializing in material specifically designed for chamber orchestra.

MUS 301. Counterpoint. (3). Prerequisite, MUS 203. A study of the five species of counterpoint through four parts (or voices); the invention, canon, and fugue; a seminar on the construction and form as applied to contrapuntal technique.

MUS 302. Homophonic Forms. (3). Prerequisite, MUS 203. The purpose of this course is to acquaint the student with the structure of homophonic forms, beginning with the motif and continuing to the analysis of the sonata, rondo, and variation forms.

MUS 303. Instrumentation. (3). Prerequisite, MUS 203. A course planned to develop knowledge and skill in arranging and orchestrating for various combinations of instruments from a few instruments to a full symphony orchestra.

MUS 310. Teaching Elementary General Music. (PTE) (3). Comprehensive study of the role of music with today's children (K-6) including the integration of handicapped children in the music class.

MUS 311. Teaching Middle-Junior High School General Music. (PTE) (3). Comprehensive study of the role of music with today's students (middle and junior high school).

MUS 313. Teaching Instrumental Music. (PTE) (3). This course will endeavor (1) to present the various aspects of instrumental music in the public schools, both physical and musical; (2) to assist the student in making a systematic preparation for the task of developing a well-rounded instrumental music program.

4-MUS 315. Music and Recreation. (2). The following aspects of recreational music will be stressed: singing and leading of community songs; formation, training, and operation of community performance groups; learning to play some of the simple social instruments and becoming proficient in helping others to listen to music intelligently. For non-music majors.

MUS 316. Teaching Music Listening. (3). Music majors prerequisites, MUS 210 and 310. Non-music major prerequisites, MUS 206 and 310. Exploring teaching methodology and materials within structured school music listening programs.

4-MUS 317. Children's Song Literature. (3). Music major prerequisite, MUS 310. Non-music major prerequisite, MUS 204, 205, and 206. A course designed to acquaint the teacher with the song literature available for children. For elementary classroom teachers, music teachers, and supervisors.

MUS 318. Music Activities for Classroom Teachers. (3). Broad range of innovative teaching ideas explored which nurture musicality in children.

2-MUS 320. Instrumental Techniques and Conducting I. (1). Prerequisites, MUS 101, 102, 103. The technique, practice and principles of instrumental conducting. The development of effective hand and baton technique. Drill and examples of the various meter patterns, tempo, style, dynamics, musical terms, study and preparation of the musical score. Extensive experience in interpretation of materials using the laboratory band and orchestra.

2-MUS 321. Instrumental Techniques and Conducting II. (1). Prerequisite, MUS 320. The techniques and practice of instrumental conducting. The development of hand and baton technique. Meter patterns, tempo, style, dynamics, musical terms, study and preparation of the musical score. Extensive experience in interpretation of materials using the laboratory band and orchestra.

2-MUS 322. Instrumental Techniques and Conducting III. (1). Prerequisite, MUS 321. The techniques and practice of instrumental conducting. The development of hand and baton techniques. Meter patterns, tempo, style, dynamics, musical terms, study and preparation of the musical score. Extensive experience in interpretation of materials using the laboratory band and orchestra.

2-MUS 323. Choral Techniques and Conducting I. (1). Prerequisites, MUS 101, 102, 103, 141, 142, 143. This course is designed to develop a basic conducting technique for the choral musicians. Meter patterns, preparatory beats, cueing and releases are studied and applied. Ideas relative to tone production diction, blend,

balance and intonation are discussed. Musical scores are prepared and conducted.

2-MUS 324. Choral Techniques and Conducting II. (1). Prerequisite, MUS 323. This is a continuation of the work begun in 323. Stress is placed on the mastery of some of the larger, more complex scores. Irregular beat patterns, up-beat pickups and other advanced technical problems are studied and methods for solving them developed.

MUS 325. Choral Conducting and Literature for the High School. (1). Prerequisite, MUS 324. A study, performance, and conducting of choral literature from all periods of composition conducive for use in varying junior and senior high school vocal situations. Each student will be required to develop an extensive bibliography of various literature types.

4-MUS 340. Survey of History and Literature of Jazz. (2). A survey of the history and literature of jazz music from its beginnings to the present. This course is open to all students.

4-MUS 341. Music and the Related Arts. (2). A study of the relationship of music, painting, architecture, poetry, dance, drama, sculpture, film, with emphasis on the humanistic values of the arts and their impact on the philosophical and social problems of our time. Technical analysis will be restricted to a minimum, while meaning and interpretation will be stressed. This course is open to all students.

4-MUS 344. Music in American History and Culture. (3). The purpose of this course is to examine selected areas of American music in a historical and cultural framework. Material to be discussed includes musical traditions of various ethnic groups. Music composed as a result of certain events or for particular purposes, and the use specifically of American elements in classical music.

4-MUS 345. Musical Cultures of the World I. (3). Prerequisite, one of the following -- MUS 141, 142, 143, 204, or consent of the instructor. A survey of selected musical cultures in Asia, North Africa, and the Near East, (China, Japan, Indonesia, India, Thailand, Iran, Morocco, and related areas). Musical instruments, theoretical systems, performance practices, the role of music in society, and the relationship of music to the other arts will be covered.

4-MUS 346. Musical Cultures of the World II. (3). Prerequisite, one of the following -- MUS 141, 142, 143, 204, or consent of the instructor. A survey of selected musical cultures in American (Eskimo, North and South American Indian), Africa south of the Sahara (Ghana, Dahomey, Chad, Mali, Zaire, Mozambique, Uganda and related areas), Australia, and Oceania. Musical instruments, performance practices, the role of music in society, and the relationship of music to other arts will be covered.

4-MUS 347. Musical Cultures of the World III. (3). Prerequisite, one of the following -- MUS 141, 142, 143, 204, or the consent of the instructor. A survey of European folk music, Afro-American Folk Music, and Latin American Folk Music. Style and structures as well as origin, mode of transmission, and function of the music will be covered.

MUS 350. Traditions in Piano Literature I: Baroque to Present. (2). Prerequisite, limited to piano majors or to others with approval of instructor. A course investigating stylistic trends and interpretation of the piano literature from the Baroque period to the present.

MUS 351. Traditions in Piano Literature II: Baroque to Present. (2). Prerequisite, MUS 350. A course investigating stylistic trends and interpretation of the piano literature from the Baroque period to the present.

MUS 352. Traditions in Piano Literature III: Baroque to Present. (2). Prerequisite, MUS 351. A course investigating stylistic trends and interpretation of the piano literature from the Baroque period to the present.

2-MUS 358. Woodwind Class. (1). This course is required of all music majors with vocal, piano, and general music emphasis (BA in Music Education). The fundamentals of woodwind instruments and training literature for woodwinds will be covered.

2-MUS 359. Guitar Class. (1). This class is open to non-guitar majors for the purpose of studying the fundamentals and literature of the guitar.

2-MUS 360. Voice Class. (1). For beginning voice students, particularly elementary majors and majors in instrumental music. Course includes fundamentals of singing, interpretation and solo repertoire.

2-MUS 361. Flute and Saxophone Class. (1). To develop a teaching knowledge of the flute and saxophone, their individual problems, their functions and their possibilities. To acquaint the prospective teacher with the pedagogic and concert literature, to develop an understanding of the problems of tone production and to acquire sufficient skill to demonstrate the instruments.

2-MUS 362. Clarinet Class. (1). To develop a teaching knowledge of the members of the clarinet family, their specific problems, their functions and their possibilities. To acquaint the prospective teacher with the pedagogic and concert literature and develop sufficient skill to demonstrate the instruments.

2-MUS 363. Double Reed Class. (1). To develop a teaching knowledge of the oboe and bassoon, their individual problems, their functions, and their possibilities. To acquaint the prospective teacher with the pedagogic and concert literature, to develop an understanding of the reed and to acquire sufficient skill to demonstrate these instruments.

2-MUS 364. Trumpet and French Horn Class. (1). A concentrated course in trumpet and French horn to develop a teaching knowledge of the instruments and to develop enough playing skill to demonstrate good tone, technique, and breath control.

2-MUS 365. Low Brass Class. (1). To develop a teaching knowledge of trombone, baritone, and tuba. To acquire sufficient skill for purposes of demonstrate.

2-MUS 366. Percussion Class. (1). To develop a teaching knowledge of percussion instruments, their possibilities, their functions, their difficulties and how to best overcome them, to acquire sufficient skill for purposes of demonstration.

2-MUS 367. Brass and Percussion Class. (1). This course is required of all music majors with vocal, piano, and general music emphasis (BA in Music Education). The fundamentals of brass and percussion instruments and brass and percussion training will be covered.

2-MUS 368. String Class. (1). To develop a teaching knowledge of the characteristics of the strings, their resources, their difficulties and how best to overcome them. To study the basic principles of string performance and to acquire some technical facility by daily practice.

MUS 400. Pedagogy of Music Theory. (3). Prerequisites, MUS 203, 301, 302, 303. This course is designed to familiarize potential theory teachers with methods and materials available for the teaching of theory courses on all levels, and to provide them with practical experience in theory teaching under the guidance of qualified instructors. (Observation and practice teaching will be required in this course and will be arranged at the convenience of the teacher and student.)

2-MUS 401. Improvisation. (2). Improvisation is one of the most natural forms of musical expression. The course starts with simple vocal and rhythmical improvisations and proceeds to group improvisation, using prepared charts which indicate mood, tempo, form, and the structural role, leading or accompanying, of each instrument.

MUS 402. Polyphonic Form.s (3). A study of the forms, techniques and literature of the 17th, 18th, and 19th century polyphonic music.

5-MUS 403. Acoustics of Music. (3). A study of the physical properties of sound and musical instruments: frequency, amplitude, waveforms, wave motion, resonance, the harmonic series, tuning and temperament, as compared with the psycho-acoustical properties; timbre, pitch, loudness, masking. Emphasis is placed on practical applications in music.

2-MUS 404. Piano Accompanying. (2). Prerequisite, piano proficiency level II or

above. The course is designed to develop proficiency in accompanying solo vocal and choral performance, solo instrumental performance, and accompanying instrumental ensembles and performing chamber music ensembles. Technical and interpretive problems relating to accompanying are discussed and explored. A weekly laboratory workshop provides opportunity for performance. Extensive familiarity with major repertoire is stressed.

MUS 405. Sixteenth-Century Counterpoint. (3). Prerequisite, MUS 301. This course is a study of the style of sixteenth-century polyphonic music. Emphasis will be placed on actual music of the period rather than arbitrary theoretical concepts. Composers to be included in the study are Palestrina, Lassus, Des Pres, Victoria, Morales and others.

MUS 408. Introduction to String Pedagogy. (2). This course is designed to introduce future string teachers to the pedagogical writings of master violinists and cellists. Students should have enough technique on an instrument to try out the concepts presented in the various sources.

2-MUS 409. Stage and Opera Techniques. (1-3). Study of proper selection of opera and operetta; its organization and procedures for casting and tryouts. Rehearsal procedures, scenery, lighting, costuming and makeup; advertising, tickets and programs, and other basics necessary to production of a public performance.

MUS 410. Introduction to Vocal Pedagogy. (2). The study of the problems related to establishing basic techniques for singing.

MUS 411. Methods and Materials for Class Instrumental Instruction. (3). A course designed to give the student practical experience in the organization and teaching of heterogeneous wind instrument classes. The course will stress the improvement of teaching methods and the creation of original materials for class work.

MUS 412. Instrument Repair and Care. (2). Study of the care and repair of band and orchestral instruments. Practical experience in instrument repairs which requires a minimum amount of equipment, skill and time.

MUS 413. Philosophical and Psychological Foundations in Music Education. (3). An introduction to important philosophical and psychological thought which has influenced music education.

MUS 414. Music for Children with Learning Disabilities. (3). Prerequisite, MUS 206 (non-music majors); MUS 310 (music majors). A course designed to help with the process of integrating children with learning disabilities into the elementary school general and instrumental music programs, and the change of music in special needs programs.

MUS 415. Piano Literature I. (2). Prerequisite, piano performance level II or above. Keyboard music from the earliest beginnings through the English Virginalists and other national schools (French, Italian, and German) up to and including Couperin, Rameau Scarlatti, and Handel.

MUS 416. Piano Literature II. (2). Prerequisite, piano performance level II or above. This portion of the series will be concerned with the keyboard works of Bach, the Bach sons, Haydn, and Mozart. Special attention will be given to the piano concertos of Mozart.

MUS 417. Piano Literature III. (2). Prerequisite, piano performance level II or above. This section will deal with the piano works of Beethoven and Schubert. Beethoven's Sonatas will be thoroughly reviewed and their relation to Schubert's work in that form will be explored.

MUS 418. Piano Literature IV. (2). Prerequisite, piano performance level II or above. The beginnings of Romanticism as evidenced in the work of Weber will be studied. Special consideration will be given to the work of the leading composers of the German Romantic School: Mendelssohn, Schumann, and Brahms.

MUS 419. Piano Literature V. (2). Prerequisite, piano performance level II or above. The contribution of Chopin and Liszt will be studied in detail. The signifi-

cance of Debussy, as representative of the Impressionistic School, will be considered.

MUS 420. Piano Literature VI. (2). Prerequisite, piano performance level II or above. This course will be devoted to the literature of the modern period. The work of Ravel, Bartok, Stravinsky, Schoenberg, and Prokofieff will be examined. Recent trends will be discussed.

MUS 422. Individual Studies in Music. (1-4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

MUS 423. Practicum in Band Conducting and Performance. (3). A laboratory course in advanced band conducting and performance. Supervised conducting experience under actual conditions is provided. Marching and football band performance will also be covered.

MUS 424. Practicum in Choral Conducting and Performance. (3). A workshop course in advanced choral conducting and performance. Provides opportunity for supervised conducting, analysis of choral materials, problems of choral organization, a study of the literature of choral conducting and practices.

MUS 425. Practicum in Orchestral Conducting and Performance. (3). A workshop course in advanced orchestral conducting and performance. Provides opportunity for supervised conducting, analysis of orchestral material, problems of organization, a study of the literature of orchestral conducting and practice.

MUS 428. Orchestral Excerpts Class (Brass). (1). Prerequisite, available upon recommendation of the student's applied teacher only. Depending on the need, separate excerpt classes in trumpet, horn and low brass will be offered. Course may be repeated for credit.

2-MUS 430. String Ensemble. (1).

2-MUS 431. Brass Ensemble. (1).

2-MUS 432. Woodwind Ensemble. (1).

2-MUS 433. Percussion Ensemble. (1).

2-MUS 434. Piano Ensemble. (1).

2-MUS 435. Guitar Ensemble. (1).

4-MUS 441. Choral Literature. (3). An historical study of the stylistic trends, musical characteristics, and performance practice of choral music.

4-MUS 442. Choral Literature from 1750. (3). A study of the stylistic trends, musical characteristics and performance practice of choral music written after 1750.

4-MUS 443. Instrumental Literature. (3). A study of instrumental literature for school groups. The high school band and orchestra, materials for class and individual instruction, and small instrumental ensembles.

MUS 444. Marching Band Techniques. (2). A workshop to provide materials and suggestions to band directors and prospective band directors. To assist with the planning of individual football shows and pageantry.

4-MUS 445. Vocal Repertoire: German Art Song. (2). A course in performance of nineteenth and twentieth century German Art Song, with particular emphasis upon style and diction.

4-MUS 446. Vocal Repertoire: French Art Song. (2). A course in performance of nineteenth and twentieth century French Art Song, with particular emphasis upon style and diction.

4-MUS 447. Vocal Repertoire: Italian Song. (2). A course in performance of songs and airs before the nineteenth century, with particular emphasis upon style and diction.

4-MUS 448. Collegium Musicum (1). This performing group is concerned with little performed music of all types. The goal of the organization is to give the student

experience in preparing and performing early music, music for unusual media and experimental music of all types. Admission with the approval of the instructor.

4-MUS 449. History of Musical Instruments. (3). A study of the development of musical instruments from the distant past to the present. Specific notice will be made of their growth into families of instruments and their usage in musical practice.

MUS 450. Dalcroze-Eurhythmics in the General Music Classroom. (1). This course is designed to help develop the musical sensitivity of children through movement and rhythms based on the Dalcroze-Eurhythmics concepts.

MUS 451. Kodaly--His Impact on American Music Education. (1). A workshop approach on the music teaching of the Hungarian composer-music educator and ways of adapting those methods to the classrooms of the United States.

MUS 452. Orff Schulwerk in American Achools. (1). The study of Orff approaches to music teaching; its philosophy, methodology, and adaptation into the music curriculum.

MUS 453. Creativity in Music Education. (1). Through a workshop approach, students will explore topics such as: defining and evaluating music creativity, and developing creative music experiences for school children.

MUS 454. Non-Performance Music Courses in the Senior High School. (1). An investigation of current developments in general music, theory, history, and humanities related to the senior high school curriculum. A study of courses, content, scheduling, and innovative practices.

MUS 455. The History of Music Education in the United States. (1). An overview of music education in the United States from its beginning to the present.

MUS 456. Tests and Measurement in Music. (1). This course is designed to acquaint students with the use of tests in music, procedures of administration and analysis. A study is also made of aptitude tests, achievement tests, and measurement of accountability through behavioral objectives.

MUS 457. Public Relations in School Music. (1). Prerequisite, MUS 210. A consideration of how to work effectively with faculty, staff, parents, merchants, news media, fellow professionals, and general public.

MUS 458. Public School Music Management. (1). Prerequisite, MUS 210. The course will present the problems of management in grades K-12. It will include areas of scheduling, financing, programming, certification, school law, insurance, purchasing, festivals, professional responsibility, and other concerns relative to the course title.

MUS 460. Principles of Violin and Viola Teaching. (2). This is a laboratory course which includes observation and participation and instruction in group and individual violin and viola.

MUS 461. Principles of Piano Teaching I. (2). Prerequisite, piano performance Level II or above. A laboratory course including observation and participation in group and individual piano instruction. The beginning pianist and individual differences. Readiness and normal progress defined. Musicianship and music reading approach through piano study. Basic keyboard techniques. Criteria for selecting teaching materials.

MUS 462. Principles of Piano Teaching II. (2). Prerequisite, MUS 461. Studio procedures. Demonstrations of specific musical and technical problems and their possible solutions. Guided teaching. Keyboard experience in the school music program. Individual differences in sight-reading ability, musicianship, and literature and materials.

MUS 463. Principles of Piano Teaching III. (2). Prerequisite, MUS 462. Studio management. Piano teaching as a profession. Class members will assume responsibility for teaching one or more pupils at beginning and intermediate levels with clinical study of problems involved. Adjudication. Public performance. Recital planning. Basic teaching repertory and representative styles.

2-MUS 469. Individual Performance in Voice for Those With Non-Voice Emphasis. (2). Instruction will concentrate on the fundamental principles of voice production, such as proper breathing for singing, diction, resonance, etc. Development of rhythmic and melodic accuracy will receive primary consideration. Work on the fundamentals of good singing will be carried through the entire program.

2-MUS 470. Individual Performance in Voice. (2-4).

2-MUS 471. Individual Performance in Piano. (2-4).

2-MUS 472. Individual Performance in Organ. (2-4).

2-MUS 473. Individual Performance in Strings. (2-4).

2-MUS 474. Individual Performance in Woodwinds. (2-4).

2-MUS 475. Individual Performance in Brass. (2-4).

2-MUS 476. Individual Performance in Percussion. (2-4).

2-MUS 477. Individual Instruction in Composition. (2-4).

2-MUS 478. Individual Performance in Harp. (2-4).

2-MUS 479. Individual Performance in Guitar. (2-4).

2-MUS 480. Mixed Concert Choir. (1). Membership in the concert choir is limited to approximately 60 singers. This organization performs a wide-range of choral literature from the classics to the music of contemporary composers. The organization is recognized widely for its excellence as a choral performing group. It is in demand throughout the region for concert appearances.

2-MUS 481. University Chorus. (1). Membership to the group of some 70 singers is open to all university students on an audition basis. The chorus performs concerts of its own on campus as well as joining with the Concert Choir in large works of chorus and orchestra.

2-MUS 482. University Singers. (1). A selected group of approximately 35 voices open by audition only. The repertoire for this group is extremely varied, ranging from motets of the Renaissance to contemporary songs to the Bach b-minor mass.

2-MUS 483. Women's Concert Choir. (1). The women's choir is open to all women students who enjoy singing the literature for women's voices. This group performs for many local community and university events. Elementary education majors are especially urged to apply for membership.

2-MUS 484. Varsity Men's Glee Club. (1). Membership is open to the entire male student body. A love of singing is the main requirement for registration. No formal audition is necessary. The Varsity Men's Glee Club affords an opportunity for men from all schools and departments to participate in the great tradition of men's ensemble singing while performing a wide-range of literature before university and community audiences.

2-MUS 485. Opera Workshop. (1-3). Workshop offering practical experience in production of a musico-dramatic show. Techniques of acting, singing, directing, and other facets necessary for preparation of a show for public performance will be offered.

2-MUS 486. Chorus and Orchestra Workshop. (1). Conducted by authorities national known in their fields of specialization. The purpose of the workshop is to provide information about current important ideas in each field of knowledge.

2-MUS 488. Opera Orchestra. (1). This group rehearses as a pit orchestra for performances of opera and musical comedy.

2-MUS 489. Laboratory Orchestra. (1). A laboratory course to provide practice orchestra experience on stringed instruments. Orchestral materials and the use of them for continued development of string students will be discussed and demonstrated.

2-MUS 490. Symphonic Wind Band. (1). The Symphonic Wind Band is limited in enrollment to approximately 80 members. This organization performs the best literature available for the band. Over the years this UNC band has become known throughout the region for its excellence as concert organization. The Symphonic

Wind Band presents many concerts during the year, and takes an annual tour.

2-MUS 491. Concert Band. (1). The Concert Band is open to all band performers who wish a more limited band experience than is provided by the Symphonic Wind Band. This band studies, rehearses, and presents advanced forms of concert band literature.

MUS 492. Marching Band. (1). Open to all students regardless of major field who have had high school band experience. A study and practice of the fundamentals of drill and presentation of marching maneuvers and pageants at athletic events. Required during Fall Quarter for all wind and percussion students on campus in the instrumental music education program who plan to teach in the secondary schools and wish certification.

2-MUS 493. Varsity Band. (1). Open to all students regardless of major who have had high school band experience. To provide music for athletic and university functions. To read material suitable for use by high school band.

2-MUS 494. Jazz Ensemble. (1). The instrumentation in a Jazz Ensemble is designed for brass, woodwind and rhythm players. This unit is concerned with jazz idiom music: show music, dance music, and concert jazz. The goal of this type of ensemble is to give the student a thorough training in preparation for teaching at both the secondary and college levels. Members of the Jazz Ensemble who are music majors must be enrolled in a major ensemble.

2-MUS 495. University Brass Choir. (1). A select performing ensemble of 15 to 20 brass students with added percussionists when necessary. Concentration is upon familiarization of literature for the brass instrumental media as well as upon development of musical sensitivity, phrasing, style and intonation.

2-MUS 496. University Symphony Orchestra. (1). The University Symphony Orchestra is open to all students by audition. The organization performs and reads the standard repertoire of the modern symphony orchestra. Quarterly concerts are given on campus in addition to one tour taken yearly. The orchestra also participates in a Spring Quarter chorus and orchestra event.

2-MUS 497. Chamber Orchestra. (1). A select group of approximately 20 string students chosen by audition from the membership of the Symphony Orchestra. The Orchestra performs and reads literature from the Baroque to the present-day, specializing in material specifically designed for chamber orchestra.

NURSING

2-NURS 100. Orientation to Nursing. (2). An introduction to health care and nursing. Explores historical and contemporary issues and the relationships that exist in health care delivery.

NURS 200. Techniques and Skills in Nursing Practice I. (2). (6 laboratory.) Prerequisite, School of Nursing Clinical Level I Status*. A laboratory course involving simulation and living laboratory experiences which enable the student to achieve beginning clinical nursing skills in assisting patients in activities of daily living. S-U final mark.

NURS 201. Techniques and Skills in Nursing Practice II. (2). (6 laboratory.) Prerequisite, School of Nursing Clinical Level I Status*. ZOO 251 (May be taken concurrently). A laboratory course involving simulation and living laboratory experiences which enable the student to achieve beginning clinical nursing skills in medical and surgical asepsis. S-U final mark.

NURS 202. Techniques and Skills in Nursing Practice III. (2). (6 laboratory.) Prerequisite, School of Nursing Clinical Level I Status*. ZOO 250 (May be taken concurrently). A laboratory course involving simulation and living laboratory

*Clinical Level I Status requires application to and acceptance by the School of Nursing. (See admission criteria, P. 109. UNC Bulletin 1976-77.)

experiences which enables the student to achieve beginning clinical nursing skills in therapeutic nursing measures. S-U final mark.

2-NURS 205. Conceptual Foundations of Nursing Practice I. (2). A study of man as an open system with emphasis placed upon the common life processes. These processes will be viewed as they occur within the individual from conception to death.

NURS 208. Nursing Workshop. (1-3). An opportunity to study problems in nursing. The area to be covered in any one workshop will be determined by the workshop subtitle. No subtitle may be repeated for credit. S-U grading system.

2-NURS 210. Conceptual Foundations of Nursing Practice II. (2). An introduction to basic principles of human behavior as they relate to the process of communication. Emphasis will be placed on increased self-awareness and its effect upon the therapeutic relationship.

2-NURS 215. Conceptual Foundations of Nursing Practice III. (2). Prerequisite, ZOO 250 (May be taken concurrently). A study of Holistic man as he functions within the basic needs framework. Emphasis will be placed upon identification of the degree of equilibrium, stressors, and adaptive mechanisms which exist in the individual.

2-NURS 220. Conceptual Foundations of Nursing Practice IV. (2). A study of teaching-learning principles as they are applied in the nurse-client relationship. Learning styles of self and others will be explored and opportunities will be provided for evaluation of one's own teaching effectiveness.

2-NURS 225. Conceptual Foundations of Nursing Practice V. (2). Prerequisite, NURS 205, 210, 215, 220 (May be taken concurrently.) An introduction to Nursing Process as the basis for professional nursing practice. The components of the process which include assessment, planning, implementation, and evaluation will be utilized in simulated situations.

NURS 300. Process of Professional Nursing I. (5). (15 laboratory). Prerequisite. Clinical Level II status*. Clinical application of the theory of nursing intervention with individuals of all age groups with developmental stressors. Emphasis on childbirth, child growth and development, and problems of aging. (To be taken concurrently with NURS 330.)

NURS 301. Process of Professional Nursing II. (5). (15 laboratory). Prerequisite, Clinical Level II status*. Clinical application of the theory of nursing intervention with adults and children with chronic health stressors. Emphasis is placed on supporting life style adjustments to mental or physiological stressors of a chronic nature. (To be taken concurrently with NURS 335.)

NURS 302. Process of Professional Nursing III. (5). (15 laboratory). Prerequisite, Clinical Level II status*. Clinical application of the theory of nursing intervention with adults and children acutely ill with medical, surgical and/or mental health problems. Emphasis is placed on hospitalized patients. (To be taken concurrently with NURS 340.)

NURS 305. Selected Concepts and Theories in Professional Nursing I. (2). Prerequisite, NURS 205, 210, 215, 220, 225, or permission of instructor. First in a six-quarter series of courses which build upon bio-physical sciences, psychosocial sciences and current research findings to offer the student an opportunity to synthesize a core of knowledge about increasingly complex, selected processes of life, change, and professional nursing.

NURS 310. Selected Concepts and Theories in Professional Nursing II. (2). Prerequisite, NURS 205, 210, 215, 220, 225, or permission of instructor. Second in a six-quarter series of courses which build upon bio-physical sciences, psychosocial sciences, and current research findings to offer the student an opportunity to

*Clinical Level II status requires satisfactory completion of: NURS 200, 201, 202, 205, 210, 215, 220, 225. (See statement on Promotion, page 110, UNC Bulletin, 1976-77.)

synthesize a core of knowledge about increasingly complex, selected processes of life, change, and professional nursing.

NURS 315. Selected Concepts and Theories in Professional Nursing III. (2). Prerequisite, NURS 205, 210, 215, 220, 225, or permission of instructor. Third in a six-quarter series of courses which build upon bio-physical sciences, psychosocial sciences, and current research findings to offer the student an opportunity to synthesize a core of knowledge about increasingly complex, selected processes of life, change, and professional nursing.

NURS 330. Professional Nursing in Speciality Area I. (3). Nursing intervention with individuals of all age groups with developmental stressors.

NURS 335. Professional Nursing in Specialty Area II. (3). Nursing intervention with adults and children with chronic health stressors.

NURS 340. Professional Nursing in Specialty Area III. (3). Nursing intervention with adults and children acutely ill with medical, surgical and/or mental health problems.

2-NURS 350. Psychopathological Concepts in Nursing. (2). Prerequisite, PSY 120 or PSY 121. Classification, psychodynamics, and psychogenesis of behavioral deviations.

2-NURS 360. Pathophysiological Concepts in Nursing. (4). Prerequisite, ZOO 250. Theory of common pathophysiological processes and syndromes. Pathogenesis and symptoms of frequently occurring diseases presented using the organ systems approach.

The 400 level nursing courses listed below will not be offered after 1976-77. These courses will be replaced by new courses as indicated in the School of Nursing program plan on page 109.

NURS 400. Community Nursing. (10). (5 lecture, 15 clinical laboratory.) Prerequisites, NURS 302, 303, 304. An introduction to the philosophy and principles of Community Nursing. Emphasis is given to the role of the nurse in family and community health service. Responsibilities and activities of the nurse in generalized and specialized community nursing programs are studied. Guided Community Health Nursing field practice is provided in various community settings.

2-NURS 401. Public Health Sciences and Resources. (3). A study of the conceptual framework, practices and resources derived from the field of Public Health. Special emphasis is given to official and voluntary agencies and individual commitment to community affairs relating to health.

NURS 402. Nursing of Children. (10). (5 lecture, 15 clinical laboratory.) Prerequisites, NURS 302, 303, 304. A study of the child as an individual and as a member of a family unit. Emphasis is placed upon normal growth and development and includes recognition of the effects of pathology on the child from infancy through adolescence. The concept of nursing process (assessment, planning, intervention, evaluation) is the theoretical framework utilized.

NURS 403. Advanced Medical-Surgical Nursing. (11). (4 lecture, 21 clinical laboratory.) A study of the nursing care of patients with complex problems requiring medical and surgical intervention. Major emphasis on concepts and mechanisms for effective leadership in assessment, intervention and evaluation for a group of patients in acute health care agencies.

2-NURS 404. Trends in Nursing. (3). Prerequisites, NURS 302, 303, 304 or permission of instructor. A study of trends, problems and issues in present-day nursing. Contemporary social forces are studied in relation to their influence on the development of nursing. Emphasis is on the responsibilities of the professional nurse in an increasingly complex system of health and medical care.

NURS 408. Nursing Workshop. (3). An opportunity for registered nurses to increase their nursing knowledge and skills. The area to be covered in any one

workshop will be determined by the workshop subtitle. No subtitle may be repeated for credit. S-U grading system.

NURS 422. Individual Studies. (1-4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

OCEANOGRAPHY

Courses in oceanography are administered by the Department of Earth Sciences.

5-OCN 110. Man and the Sea. (3). A course to introduce the various aspects of man and technology concerning the oceans. Considers food and minerals from the sea, underwater habitats, submersibles, diving, recent technological developments, pollution and international political implications of the oceans.

5-OCN 200. General Oceanography. (4). (3 lecture, 2 laboratory.) An introduction to the field of oceanography for non-science majors. The geological, physical, chemical and biological aspects of the oceans and ocean basins will be treated.

5-OCN 301. Principles of Oceanography I. (3). A descriptive treatment of the historical, geological and technological aspects of oceanography including oceanographic tools and techniques, exploration and exploitation, origin of the oceans and ocean floors, marine sediments and geomorphology. Students cannot receive credit for both OCN 200 and 301.

5-OCN 302. Principles of Oceanography II. (3). Prerequisite, OCN 301. A descriptive treatment of the physical and biological aspects of the ocean, including the general character of water masses, ocean circulation and currents, waves, tides, the distribution and ecology of marine organisms and the general productivity of the ocean.

OUTDOOR EDUCATION

OED 250. Outdoor Education and Environmental Awareness. (3). A course designed to develop appreciation and awareness for the natural environment through direct experience participation in any environmental settings. Cognitive learnings will be taught followed by definite concentration on affective and psychomotor learnings. The interdisciplinary approach, involving faculty from other disciplines and resources persons with special expertise, will be utilized.

OED 308. Workshop in Outdoor Education. (1-5). This workshop is designed to provide undergraduate students with an understanding of the broad interdisciplinary approach to Outdoor Education. Direct experience participation in the outdoors will be provided related to all academic disciplines. Faculty from all disciplines and other resource specialists will be involved in the instructional offerings. Emphasis will be placed on the cognitive, affective, and psychomotor domains.

OED 350. Education for Leisure Through Outdoor Education. (4). Emphasis will be placed on the unique contribution Outdoor Education can make toward educating people for their leisure. An analysis will be made of selected educational programs with specific leisure education programs. Contributions made by local, state, national, and private agencies will be emphasized.

OED 401. Practicum in Outdoor Education. (Maximum 4). Open only by invitation to undergraduate students. Supervised professional activity in the student's major field with a minimum equivalent of two hours per day during a ten week quarter. One copy of a well-written paper must be filed with the instructor

before credit is given.

OED 450. Programs in Outdoor Education. (3). A course designed to acquaint the student with the varied programs in Outdoor Education in the state and nation. Traditional and innovative programs will be explored and analyzed to determine the feasibility and effectiveness of these programs in meeting educational and societal needs.

OED 460. National Outdoor Leadership School Wilderness Expedition. (Maximum 5). A basic National Outdoor Leadership School Wilderness course which includes a 32 day backpacking expedition, wilderness and mountaineering experiences, including: leadership, wilderness camping, cooking, nutrition, conservation, first aid, trail techniques, map and compass navigation, ecological awareness, fishing, basic mountaineering, expedition planning, and many other skills pertinent to the wilderness setting.

PHILOSOPHY

4-PHIL 100. Introduction to Philosophy. (4). An in-depth first course in philosophy. Student becomes familiar with philosophic problems of lasting relevance and alternative methodologies for treatment. Reference made to classical and contemporary philosophers and to utilization of philosophic analysis to present-day concerns.

4-PHIL 150. Morality and Individual Ideals. (4). An introduction to and a consideration of selected problems in normative and critical ethics, from early Greek to contemporary thought, with emphasis on the notions of personal responsibility and the "good life".

4-PHIL 201. History of Ancient Philosophy. (4). Ancient Philosophy from the Presocratics to Plotinus. The emergence of philosophical cosmology from mythopoeic cosmogony; the Socratic ethical turn; Plato; Aristotle; Hellenistic and Roman development; Neoplatonism.

4-PHIL 202. History of Modern Philosophy. (4). Modern philosophy from Descartes through Kant. Emphasis is given to the Cartesian relation to the classical tradition; the turn to subjectivity; rationalism; empiricism; the transcendental turn; the influences of mathematics, the natural sciences and religious beliefs.

4-PHIL 203. History of Recent Philosophy. (4). Recent philosophy, including German Idealism, the Hegelian synthesis, and its break-down (Kierkegaard, Marx, Nietzsche), Bergson, American Philosophy (James, Royce).

4-PHIL 270. Philosophies of India. (4). An introduction to selected schools of Indian philosophy, with emphasis on the problems of knowledge and the self.

4-PHIL 305. Contemporary Philosophical Movements. (3). Prerequisite, PHIL 202. A consideration of philosophy in the twentieth century, including Phenomenology (Husserl, Heidegger), Existentialism (Sartre, Jaspers, Camus, Marcel), Analysis (Russell, Moore, Wittgenstein), Positivism (Carnap, Ayer).

4-PHIL 312. History of Medieval Philosophy. (3). Prerequisite, PHIL 201. A consideration of philosophy in the middle ages, include Greek and Roman influences and the confrontation with Christianity; Augustine; Anselm; the controversy over universals; the Neoplatonic, Nominalist and Aristotelian schools; Jewish and Islamic thought; German mysticism; late scholasticism; conflicts and attempted reconciliations of reason with revelation; Cusa and Bruno.

4-PHIL 315. Existentialism. (3). Prerequisite, three hours of philosophy. Consideration and evaluation of the existentialist movement in philosophy including its relation to classical thought, Negative and positive influences; theistic existentialism (Jaspers, Marcel, Buber, Berdyaev); atheistic existentialism (Heidegger, Sartre, Camus); radical finitude and authenticity; nonobjects; shipwreck, meaning and death.

4-PHIL 330. Aesthetics. (3). Classical and contemporary philosophical theories of beauty and art; including such topics as the relation of art to morals, truth and play; the nature of creativity; aesthetic experience and aesthetic evaluation; the concept of representation.

1-PHIL 340. Formal Logic. (4). A study of traditional and recent formal logic, including symbolic logic. Stress placed on methods and techniques of formalization, applications to problem-solving, syllogisms, truth-functions, quantification. Consideration of presuppositions and possible limitations of formal analysis.

1-PHIL 345. Seminar in Logic and Language. (3). A variable content course, designed for the student who wishes to pursue studies in formal logic, as well as related interests such as history of logic, ordinary and ideal languages, inductive logic, etc. Student may receive up to 15 hours credit via different subtitles.

4-PHIL 350. Moral Philosophy. (3). Contemporary moral philosophers seek to reduce the complexity of concrete moral dilemmas by making such questions decidable without reducing their significance. To this end, human justice, happiness, freedom, responsibility, and rights will be examined, as will classical sources, skepticism about moral language and insights from social and psychological science.

4-PHIL 355. Social Philosophy. (3). Classical and contemporary social thought with emphasis on the principles of democracy, fascism, Marxism, and utopianism, in light of the questions of society, the social, and the constitution of man.

4-PHIL 360. Philosophy of History. (3). Prerequisite, three hours of philosophy. Examination of speculative and critical philosophies of history, with emphasis on Augustine, Hegel, Marx, and critical issues of explanation, selection, casual attribution. Cyclic, theocentric and voluntaristic models; relation of data to interpretive scheme; historicism, design and the absurd.

4-PHIL 365. Philosophy of Technology. (4). Student will investigate alternative theories, concepts and meanings of "technology." Focus placed upon effects of technology on social, political, individual values and goals, and changes in American ideology.

4-PHIL 370. Philosophy of Religion. (3). Prerequisite, three hours of philosophy. Philosophical investigation of religious language and religious experience. Emphasis is placed on such topics as: the source and dimension of the holy, what is "God" a name for, proofs for and against the existence of God, transcendence, immanence, hierophany, pantheism, mysticism. Classical and contemporary philosophical theories of religion will be examined.

4-PHIL 375. Philosophy of Science. (3). Prerequisite, three hours in philosophy or one course in scientific methodology. A critical survey of the classical and modern problems underlying scientific operations. Emphasis is placed upon analysis of selected conceptual frameworks: logic of inquiry in the natural and social sciences; substantive and methodological concepts of cause, prediction, determination, generalization, error.

4-PHIL 380. Problems and Methods of Philosophy. (3). Prerequisite, three hours of philosophy. Variable content course which student may elect more than once. Such topics as skepticism, realism, phenomenology, free will, philosophy of mythology, inductive logic, concepts and reference, etc. The student becomes immersed in one philosophic problem and alternative methodologies for treatment.

4-PHIL 405. Studies in the History of Philosophy. (3). Prerequisite, six hours in philosophy, or instructor's consent. An intensive investigation into one selected work, or thinker, or school of intrinsic or historical merit in pre-19th Century philosophy. A variable content course for which the student may receive up to 15 hours credit.

4-PHIL 415. American Philosophy. (3). Prerequisite, three hours in philosophy. A critical study of the "Golden Age" of American philosophy, including Continental and English influences. Pragmatism (Pierce, James), Idealism (Royce), Essentialism (Santayana), Process philosophy (Whitehead), Naturalism (Dewey), and

contemporary developments.

4-PHIL 422. Individual Studies. (Maximum 4). Prerequisite, instructor's consent. Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on one problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

4-PHIL 430. Epistemology. (3). Prerequisite, six hours of philosophy. Examination of classical and contemporary theories of the meaning and criteria of knowledge, truth, and reference. Such topics as truth and time; certitude, synthetic and analytic propositions, necessary and contingent truth, concepts and percepts, illusion and lies, constituting and constituted egos, etc.

4-PHIL 440. Metaphysics. (3). Prerequisite, six hours of philosophy. Examination of such concepts as Being, substance, causation, reality, process, in the light of recent and contemporary thought, including the sceptical and positivist stances.

4-PHIL 480. Studies in 19th and 20th Century Philosophy. (3). Prerequisite, PHIL 201 or 202 or 203. Intensive analysis of selected figures, movements, and problems in recent and contemporary philosophy. Such topics as: Schopenhauer and Bergson, Nietzsche, Mill and Bradley, Positivism, Later Heidegger, Wittgenstein, Marcel and Royce, Ethical Emotivism, Husserl and Russell, etc. Variable content course which student may elect more than once.

4-PHIL 495. Directed Research in Philosophy. (3). (Maximum 6). Consent of instructor and chairman. Unscheduled course designed for (a) students minoring in philosophy with intent for entering philosophy graduate program. (b) prospective majors. Student completes textual analysis of one philosophic work using commentaries, articles, monographs or becomes immersed in techniques, problems, solutions, defenses of one philosophic school. May be elected twice.

4-PHIL 499. Thesis in Philosophy. (3). (Maximum 6). Senior standing and 21 hours in Philosophy. Unscheduled course designed for students intent upon entering graduate programs in Philosophy. Student completes approved topic thesis exhibiting philosophic acumen, research expertise, analytic and synthetic ability. Preferred: three credits per quarter for two consecutive quarters.

PHYSICS

5-PHYS 100. Conceptual Physics. (3). (2 lecture, 3 laboratory.) Non-mathematical approach to basic physics for the non-science student. Emphasis will be placed upon history and philosophy of physics and upon relating concepts of physics to environment. No credit towards physics major or minor.

5-PHYS 150. Principles of Physics. (5). (4 lecture, 3 laboratory.) An introduction to the basic concepts of physics, including mechanics, thermodynamics, wave motion, electricity and magnetism, and atomic and nuclear physics. Not open to physics majors or minors.

5-PHYS 160. Principles of Motion. (3). (2 lecture, 3 laboratory.) A study of translatory and rotational motion which will include concepts of forces, momentum, and energy. The presentation of the material will be descriptive and the emphasis will be toward the applied.

5-PHYS 255. Elements of Computer Programming. (3). (2 lecture, 3 laboratory.) Prerequisite, MATH 123 or equivalent. A non-theoretical applied course in elementary computer programming. A large portion of this course will involve the student programming the 360 computer system. *Not open to students with previous programming training.*

5-PHYS 260. Introduction Physics -- Mechanics. (4). (3 lecture, 3 laboratory.) Prerequisite, MATH 123 or consent of instructor. The first quarter of the introductory course treating classical and modern mechanics.

5-PHYS 261. Introductory Physics -- Heat, Sound and Light. (4). (3 lecture, 3 laboratory.) Prerequisite, PHYS 260. The second quarter of the introductory course treating classical and modern heat, sound, and light.

5-PHYS 262. Introductory Physics -- Electricity and Magnetism. (4). (3 lecture, 3 laboratory.) Prerequisite, PHYS 260. The third quarter of the introductory course treating classical and modern electricity and magnetism.

5-PHYS 263. Radioactivity. (3). (2 lecture, 3 laboratory.) A non-mathematical course in the detection and evaluation of various atomic and nuclear radiations. Topics to be covered include elementary atomic and nuclear theory, types of radiation and detectors, biological and medical applications, radioactive dating, x-rays, laboratory experience in the use of radiation detectors.

5-PHYS 265. General Physics -- Mechanics. (5). (4 lecture, 3 laboratory.) Prerequisite, MATH 132, or taken concurrently. The first quarter of the general course in physics covering the laws, principles, and generalizations of mechanics.

5-PHYS 266. General Physics -- Electricity. (5). (4 lecture, 3 laboratory.) Prerequisites, PHYS 265 and MATH 133. The second quarter of the general course in physics covering the principles, laws, and generalizations in electricity.

5-PHYS 267. General Physics -- Sound, Light, and Heat. (5). (4 lecture, 3 laboratory.) Prerequisites, PHYS 266. The third quarter of the general course in physics treats the laws, principles, and generalizations concerning sound, light and heat.

5-PHYS 268. Modern Physics. (4). (3 lecture, 3 laboratory.) Prerequisite, PHYS 262 or concurrent PHYS 267. Fourth quarter of the general course in physics, intended as a terminal course. Not countable towards physics major or minor. An elementary study of concepts of physics formulated since 1900, including atomic and nuclear physics. The laboratory will include detection and evaluation of atomic and nuclear radiation.

5-PHYS 302. Philosophical Concepts of Physical Science. (3). Prerequisite, one course in philosophy or one course in physics. A non-mathematical study of philosophical problems in physics, including causality and determinism, measurement, conservation principles, particle-wave duality, the uncertainty principle, the correspondence principle, the validation of physical laws, universal conclusions from locally valid laws, the broad structure of science, free will.

5-PHYS 361. A.C. and Electronics I. (5). (4 lecture, 3 laboratory.) Prerequisite, PHYS 262 or PHYS 266. A study of alternating current circuits and instruments, electrical measurements, power supplies, amplification by vacuum tubes, transistors, oscillators, bridges.

2-PHYS 364. Elementary Photography. (3). (2 lecture, 3 laboratory.) An introductory course covering the basic elements of photography. Topics include developing, printing and enlarging and the use of photography in the teaching of science. *Not recommended for students with previous photography laboratory experience.*

5-PHYS 365. Mechanics I. (4). Prerequisites, PHYS 266 and MATH 133. First course of a sequence of two courses. Topics covered include Newton's Laws, statics of particles and rigid bodies, work and energy, particle motion in a constant field and one dimensional oscillatory motion.

5-PHYS 366. Electricity and Magnetism I. (4). Prerequisites, PHYS 266 and MATH 133. First course of a sequence of two courses. An advanced study in electric fields, electric potential, magnetic fields and induced electromotive force.

5-PHYS 367. Optics I. (4). (3 lecture, 3 laboratory.) Prerequisites, PHYS 267 and MATH 133. A study of geometric optics including the theory of thin lenses, thick lenses, spherical mirrors, lens aberrations, and a survey of optical instruments.

5-PHYS 368. Atomic Physics. (5). (4 lecture, 3 laboratory.) Prerequisite, PHYS 266 concurrent with MATH 234. PHYS 365 recommended. A study of modern physics concepts including probability quantization, x-rays, wave properties of

matter, Heisenberg's uncertainty principle, the Schrodinger equation, the simple atom.

5-PHYS 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

5-PHYS 462. Electronics II. (4). (3 lecture, 3 laboratory.) Prerequisite, PHYS 361. A study of servo systems, operational amplifiers, pulse shaping, switching, and tuning, digital counting, solid state devices.

5-PHYS 465. Mechanics II. (3). Prerequisites, PHYS 365, MATH 234. Second course in a sequence of two courses. Topics covered include motion of systems of particles, rigid body motion in a plane and in three dimension, central field motion, accelerated reference systems.

5-PHYS 466. Electricity and Magnetism II. (3). Prerequisites, PHYS 366, MATH 234. Second course in a sequence of two courses. A course which deals with the theory of dielectrics, the magnetic properties of matter and an introduction to electromagnetic theory.

5-PHYS 468. Nuclear Physics I. (5). (4 lecture, 3 laboratory.) Prerequisites, PHYS 267, MATH 234, PHYS 368 or CHEM 451 or PHYS 268 plus consent. A study of special relativity, nuclear reactions, decay schemes, sub-atomic particles, high energy reactions, the detection and evaluation of nuclear radiation.

PHYS 469. Solid State Physics. (4). Prerequisite, PHYS 368. A study of free electron theory of solids, semiconductor theory, imperfections in solids, transport properties, and statistical distributions.

POLITICAL SCIENCE

3-PSCI 100. National Government of the United States. (5). Origin and adoption of the Constitution, basic principles of the American constitutional system, the machinery of popular control, and the structure of the national government. Not open to students taking PSCI 101 or PSCI 102. Not open to PSCI majors or minors.

3-PSCI 101. United States Government I. (3). An introduction to the foundations of the United States national political system. Democratic theory, majoritarianism and constitutionalism will be discussed. The roles of the electorate, interested groups, political parties, and civil liberties will be analyzed. Not open to students taking PSCI 100. Open only to PSCI MAJORS AND MINORS.

3-PSCI 102. United States Government II. (3). Prerequisite, PSCI 101. A study of the formal policy-making agencies of the United States government. The role and function of Congress, the Presidency and the Judiciary will be analyzed. The latter part of this course will focus on the making of United States foreign policy. Not open to students taking PSCI 100. Open only to PSCI majors and minors.

3-PSCI 103. United States Government III. (3). Prerequisite, PSCI 101 or permission of the instructor. In the first part of this course the national problems and government programs in the fields of business, labor, agriculture, the general economy, and social disorganizations will be studied. Problems of Federalism will be studied. The second half of the course will focus on state and local government.

3-PSCI 106. Contemporary Political Conflict, Consciousness, and Power in the United States. (3). An analysis of current events of American political democracy as they relate to serious political conflict, political consciousness, citizen duty, and political power. Not open to PSCI majors and minors.

3-PSCI 200. Legislative processes. (3). Prerequisites, PSCI 100 or PSCI 101 and 102. A survey of American legislative systems and processes. The structure and organization of legislatures and the process of statute law-making.

3-PSCI 201. State and Local Government. (5). Prerequisite, PSCI 100 or PSCI 101 and 102. The organization of state, county, and municipal governments.

3-PSCI 202. Legislative Processes II. (3-15). Prerequisites, PSCI 100, PSCI 200. Legislative Processes II offers a unique opportunity to combine a substantial amount of self-directed research on the part of a student under the supervision of the instructor with actual field experience as an observer and assistant to an elected member of the Colorado State Legislature.

3-PSCI 205. Civil Liberties in the United States. (3). An analysis of judicial, executive and legislative actions which have threatened, violated and promoted civil liberties in the United States. Particular attention will be given to free speech, press and assembly, church-state relations, due process and the nationalization of the Bill of Rights.

3-PSCI 206. Politics and the Consumer. (3). An analysis of political action, past and present, aimed at protecting consumers in the economic market place. Legislative and administrative consumer law will be discussed. Political tactics of consumer advocacy will be analyzed in case studies and actual field projects.

3-PSCI 207. Politics of Feminism. (3). The study of the role of women in American politics and a description and analysis of the political factors and tactics used by feminists in moving toward their goals. Special attention will be given to an evaluation of contemporary feminist politics. The sexist bias of American political institution will be explored.

3-PSCI 210. European Political Systems. (4). A comparative analysis of the political systems of selected European nations, including Great Britain, France, and West Germany.

3-PSCI 220. International Relations. (4). An introductory study of the basic principles and problems of the international political system.

3-PSCI 250. Introduction to Research in Political Science. (3). An introduction to the discipline of political science. Special attention will be devoted to library resources and the writing of research papers. A bibliographical essay on a topic chosen by the student will be required. Primarily intended for majors.

3-PSCI 300. Public Opinion and Pressure Groups. (4). A study and analysis of the nature and role of public opinion and pressure groups in American politics. This course analyzes the techniques used in forming, manipulating, and measuring public opinion, and studies the process by which pressure groups use and compete with public opinion in the formation of public policy.

3-PSCI 301. Problems in United States Government. (3). Prerequisites, PSCI 100 or PSCI 101 and 102. The constitutional and extra-constitutional factors affecting the legislative process, the conduct of administration, the budgetary and fiscal policies of the government, and the control of foreign relations.

3-PSCI 302. The President and the Bureaucracy. (3). An intensive examination of the role of the President and the Federal bureaucracy in the national political system. Emphasis is placed on the concepts and techniques of presidential leadership and the Executive branch's relationship with Congress, the Judiciary and the public. Sources of constitutional authority and power, and problems of contemporary Presidential policy making are examined.

3-PSCI 303. The Administration of Justice. (4). A comprehensive analysis of the judicial process including the appellate and jurisdictional aspects of the legal system in the United States. The focus of the course is on the administration of criminal justice including the arrest, trial, and rights of prisoners.

3-PSCI 305. The Politics of Bureaucracy. (4). This course focuses on the organization and management of governmental bureaucracies. Special emphasis will be placed on the politics of bureaucracies and continuity problems of control, accountability, personnel and finance.

3-PSCI 310. East European Government and Politics. (4). A study of the governments and political systems of the East European states of East Germany,

Poland, Czechoslovakia, Hungary, Bulgaria, Romania, Yugoslavia, and Albania. Internal politics and external relationships with one another and with the Soviet Union will be given special attention.

3-PSCI 320. American Foreign Policy. (4). An analysis of the development of recent American foreign policy, especially since World War I.

3-PSCI 325. Politics and Conflict in the Middle East. (4). Focus will be on the structure, development and policies of major Middle Eastern political systems. Domestic and international conflicts and relations to the major powers will be discussed.

3-PSCI 330. Natural Law, Divine Law, and Human Virtue. (3). This course in political philosophy is addressed to the above topics and others as they appear in classical and medieval thinkers. Plato, Aristotle, Aquinas, and Luther will be read among others.

3-PSCI 331. Consent, Freedom, and Political Obligation. (3). This course in political philosophy is addressed to the above topics and others as they appear in early modern thinkers. Machiavelli, Hobbes, Locke, Rousseau, and Tocqueville will be read among others.

3-PSCI 332. Equality, Democracy, and Revolution. (3). This course in political philosophy is addressed to the above topics and others as they appear in modern thinkers. Paine, Saint-Simon, Marx, Lenin, and J.S. Mill will be read among others.

3-PSCI 340. Field Research and Study in Political Science, (3-15). Field Research and Study in Political Science offers an opportunity to combine a substantial amount of self-directed research on the part of the student under the supervision of the instructor with actual field experience as an observer and assistant to a public (governmental) policy maker.

3-PSCI 343. Politics and the Environment. (4). Prerequisites, PSCI 100 or 101, 102; ENST Introductory Seminar 110 (optional) or permission of instructor. An intensive study of environmental policies and policy making in selected countries, but with an emphasis on the United States. Political actors, institutions, processes and policies of government/groups are investigated.

3-PSCI 400. Political Parties. (3). Prerequisites, PSCI 100 or PSCI 101 and 102. The organization and techniques of political parties in the United States, the voting behavior of the electorate and the problems relating to the machinery of representative democracy.

3-PSCI 401. Minority Politics. (3). A study of the political techniques and strategies by which ethnic, racial, religious, and economic minority groups have achieved socio-economic goals through the political system. Electoral and non-electoral politics will be evaluated.

3-PSCI 402. Urban Politics. (4). A study and analysis of city government and politics. Attention will be given to structure, reorganization, and finance with special emphasis on political forces and strategies operating with the metropolitan areas of the United States. The problems of urban disorganization, mass transit, housing, and minority representation will be covered.

3-PSCI 410. Government and Politics of Asia. (4). A comparative study of the major political system of Asia, including China, Japan, India, and Indochina.

3-PSCI 411. Government and Politics of Latin America. (4). A comparative study of the political systems of Latin America.

3-PSCI 412. The Politics of the Developing Areas. (4). A study of the politics of developing areas, with particular emphasis on Africa, Asia and the Middle East; concepts of development, modernization and nation-building.

3-PSCI 413. Political Systems of Sub-Saharan Africa. (4). Analysis of major types of political systems in Sub-Saharan Africa with case studies of selected countries exemplifying each type. Special problems of multiracial and multicultural societies.

3-PSCI 414. Government and Politics of the Soviet Union. (4). An intensive inquiry into the institutions and processes of the government of the Soviet Union.

3-PSCI 421. The United Nations. (3). The background and organization of the United Nations. Includes a detailed study of the six organic bodies of the United Nations and its subsidiary agencies.

PSCI 422. Individual Studies. (1-4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

3-PSCI 425. Soviet Foreign Policy. (4). An analysis of recent and contemporary problems in the relations of the Soviet Union with Western, neutralist, and other communist nations.

3-PSCI 426. Foreign Policies in Asia. (4). This course examines the foreign policies of China, Japan, and India with special reference to the superpower rivalry between the United States and the Soviet Union in the post World War II era.

3-PSCI 430. Majority Rule and Minority Rights. (3). An analysis of the American contribution to thought on such subjects as authority and obligation in civil society. Special attention will be paid to the themes of majority rule, minority rights, and civil disobedience and to the thought of Madison, Thoreau, Niebuhr, and Dewey. No prerequisites, but familiarity with American politics and the tradition of political philosophy would be helpful.

3-PSCI 435. Problems in Political Philosophy. (3). Prerequisites, two of PSCI 330, 331, 332, 430. Selected problems or philosophies will receive close and lengthy attention. Familiarization with a considerable literature and a substantial paper will be required.

PSYCHOLOGY

3-PSY 120. General Psychology. (3). (Taught every quarter.) A basic course in which psychological principles, methods, theories and research findings are studied. Attention is given to perception, cognition, maturation, motivation, learning, individual differences, mental health and their physiological correlates. Practical applications are made to give each student opportunities to modify his behavior.

3-PSY 121. Introduction to Psychology I (4). An introductory survey of psychology as a science, basic statistics, learning, perception, sensation, motivation, and physiological psychology. Required for majors and minors.

PSY 122. Introduction to Psychology II. (4). An introductory survey of intelligence, personality, growth and development, maturation, socialization, abnormal psychology, social psychology, memory, cognition, and emotion. Required for majors and minors.

PSY 123. Current Orientations in Psychology. (3). Survey of predominant contemporary "forces" in psychology (emphasizing psychoanalytic, behavioristic, humanistic and transpersonal forces). The complimentary contribution of each force to our understanding of human behavior and potential will be examined. Images of man implicit in different psychological orientations will be discussed.

3-PSY 161. Group Process and Human Relations. (3). Fall, Winter, Spring. Prerequisite, majors only. A freshman seminar for undergraduate psychology majors designed to give students an understanding of principles which undergird human relations in groups. Personal involvement and group processes are important aspects of the course.

PSY 201. Principles and Philosophies of Guidance. (3). (Taught every quarter.) A general introduction to guidance; a study of the guidance activities, and their use in industry, business, the classroom, and the professions.

PSY 222. Exploration Seminar. (2). Prerequisites, sophomore psychology majors only. Students majoring in psychology will research, report, and discuss topics of mutual interest. These topics may be related to traditional areas of research and theory in psychology or may launch out into relatively unexplored areas. The focus is on the personal involvement and unique interests of each student in the seminar.

PSY 230. Human Growth and Development. (5). This course is designed to be an introduction to the basic concepts and issues of growth and development. The course considers the individual from conception through senescence. Emphasis is placed on cognitive, affective, psychomotor and social development throughout the lifetime of individuals.

PSY 240. Human Learning and Cognition. (3). A basic course in learning from the cognitive viewpoint. Confined to verbal learning, memory, information processing, concept learning and problem solving.

PSY 241. Animal Learning. (3). Prerequisite PSY 121 or permission of instructor. Techniques, findings and theories on learning and retention in animals and the role of non-human research findings as a model for human learning.

PSY 250. Humanistic Psychology. (3). Humanistic psychological systems, conceptualizations, models, methods, tools and research are explored as a mean of developing better understanding of self and others, more effective interactions, increased sensitivity, and more humanistic and existentially meaningful lives.

PSY 251. Transpersonal Psychology. (3). An introductory overview of the emergent Fourth Force in psychology, including such topics as religious, mystical and peak experiences; yoga; meditation; cosmic unity; parapsychology; hypnosis; playfulness; maximal sensory awareness; metaneeds; and transcendence of self.

3-PSY 255. The Psychology of Emotional Adjustment. (3). (Taught every quarter.) This course will emphasize individual adjustment to the psychological stresses arising from internal (personal) and external (environmental) sources. Special emphasis will be placed upon the varied reaction patterns of individuals toward coping with common and unique stress factors. Consideration will also be directed to stress and reaction with regard to racially and physically different individuals.

3-PSY 265. Social Psychology. (3). Prerequisites, PSY 120, 122 or permission of instructor. Designed to explore the interdependent effects of individuals as members of society. Topics may include the group as a system, communication, attitudes, conformity, persuasion, competition and power, and leadership.

PSY 271. Psychological Testing and Measurements. (3). Prerequisites, RSM 203 or equivalent. Required of PSY majors. Emphasis will be on an introduction to psychological test theory and interpretation of results. Group versus individual tests (cognitive, affective and psychomotor domains), reliability, validity, standardization procedures will be discussed.

PSY 275. Experimental Psychology. (5). Prerequisites, RSM 203, majors only. This is a course designed to introduce the student to experimental and other psychological research, and provides practical experience in reviewing, conducting and reporting psychological research.

PSY 314. Issues in Education Psychology. (PTE) (Maximum 3). Prerequisite, PSY 120. This module is a flexible module providing opportunities to try out potential new modules or offer temporary ones. The actual content is thus not restrictively defined. A group of students may suggest particular issues not covered by other modules of interest and importance to them. Instructors may suggest topics of special interest to them.

3-PSY 341. Phenomenological Approaches to Perception. (3). Study of factors influencing openness to experience (e.g., physiological capacities, time, opportunity, need, expectations, language, perception of self). Understanding the dynamics of behavior from an internal frame of reference will be emphasized. The multidimensionality of perceptual possibilities and consequent implications for educational processes will be explored.

3-PSY 343. Sensory and Perceptual Processes. (4). Prerequisite, PSY 121 or permission of instructor. A review of sensory mechanisms in man including vision, audition, olfaction, etc., and coverage of research and theory about organization and interpretation of sensory input. Lab will apply psychophysical and other specialized techniques.

PSY 344. Altered States of Consciousness. (3). Prerequisite, PSY 251. A course designed to extend the understanding of behavior through an in-depth examination of altered states of consciousness. States of consciousness in which the individual feels qualitative or quantitatively-measured shifts in mental functioning are physiologically, psychologically, and philosophically investigated. Personal experiences, in non-chemically produced altered states, will be investigated.

PSY 345. Parapsychology. (3). A basic course designed to examine present and past research in the areas of extra-sensory perception, telepathy, precognition, clairvoyance, psychokinesis, and other phenomena that may fall within the realm of parapsychological or psi-phenomena. Attention is given to testing techniques and the psychology of the field.

PSY 349. Educational Psychology. (5). Prerequisites, PTE, PSY 120. A course designed to assist prospective teachers to build competence in understanding and guiding physical, mental, social and emotional development from infancy to adulthood and in understanding and utilizing the teaching-learning process through applications of principles of learning, motivation, readiness, transfer, individual differences and evaluation.

3-PSY 350. Psychology of Actualization. (3). Prerequisite, PSY 250. A course designed to study man's desire for self-fulfillment the tendency for him to become actualized in what he is potentially. The course studies the ideas of idiosyncratic health as an alternative to the adjustment theory of psychological health and the growth of the human potential movement.

PSY 361. Human Awareness Laboratory. (2). Prerequisite, permission of instructor. An experiential class designed to provide students with direct feedback regarding the way they relate with others. Through group interaction the student has the opportunity to improve communication, correct self-defeating attitudes and behaviors, and become more accepting of himself and others. (COURSE MEETS FOR A MINIMUM OF 30 HOURS PER QUARTER.)

PSY 365. Psychology of Prejudice. (3). Taught every quarter. A course designed to assist students to understand in-depth the basic causes of prejudice and the learning of prejudicial behavior. Experiences are provided for greater understanding of people and the processes for diminishing the degree of prejudice by the individual.

PSY 369. Ecological Psychology. (3). Literature from the areas of learning, social psychology, and ethology will be examined in order to consider how the characteristics of an environment affect the behavior of organisms, what the implications are for behavior when an environment is altered, and how the principles of behavior might be employed to insure man's survival.

PSY 375. Research Methodologies. (4). Prerequisite, RSM 203. A survey of research methodologies other than experimental approaches. Methods of historical, philosophical and descriptive research utilizing correlation, survey, sampling techniques, choice of independent and dependent variables, data-gathering, naturalistic observations, case studies, longitudinal and cross-sectional studies will be included. The student will be expected to participate in a laboratory.

PSY 422. Individual Studies. (Maximum 4). (Taught every quarter.) Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

PSY 425. Seminar: Psychological Issues. (3). (Taught every quarter.) This is one of the culminating experiences in the major or minor. Students will study, report, and discuss psychological issues and problems which they identify in their

class observation and study experiences. They will also review and discuss research findings and conduct small research projects of their own.

PSY 431. Infancy and Childhood. (3). This course is designed to concentrate on human development from conception to (not including) preadolescence. Special emphasis will be given to the physical, mental, social and emotional development of infants and children.

PSY 432. Preadolescence and Adolescence. (3). This course considers theories of preadolescence and adolescence, physical and intellectual development, emotional and social adjustment, family and social factors, adolescent alienation, entering adulthood and related issues.

PSY 433. Maturity and Aging. (3). This course examines the concerns and decisions met during maturity. Interrelationships among physiological, sociological and psychological variables which affect aging will be explored. Roles of the aging in our society and psychological reactions to death will be considered.

PSY 442. Experimental Analysis of Behavior. (3). Prerequisite, PSY 121, 15 hours in Psychology, majors only. Students will examine the theoretical basis for individual organism research and the principles of learning that underlie such an approach. The students will be required to participate in a conditioning laboratory to develop competence in techniques.

3-PSY 443. Motivation. (3). Prerequisite, PSY 121 or permission of instructor. The following motivational concepts and related research may be considered: drive, goal direction, incentive, reinforcement, external stimulation, emotion, homeostasis, biological aspects, instinct and self-actualization.

PSY 444. Psycholinguistics. (3). Prerequisite, PSY 240. The study of encoding and decoding in order to account for the facts of language and the use of language by human beings. The course may contain an outline of modern approaches in the acquisitions of language and research in psycholinguistics.

PSY 445. Social Learning and Behavior Modification. (3). Prerequisite, PSY 442 or permission of instructor. A course in applied learning theory giving emphasis to the roles played by vicarious, symbolic and self-regulatory processes, e.g., modeling, imitation, desensitization, and cybernetics. Students will be required to apply operant and social learning principles in dealing with behavior in an educational, clinical, or other social setting.

PSY 457. Theories of Personality. (3). Prerequisites, PSY 120 or PSY 122. General psychological systems of personality theory used to explain personality functioning and development are explored and applied. (These systems may include type-trait, behavior-learning, psychoanalytic and neopsychoanalytic, and perceptual-field personality theory.)

3-PSY 458. Abnormal Psychology. (3). Prerequisites, PSY 122 or PSY 255. The course designed to give an understanding of abnormal behavior, its causes, symptoms, characteristics, classifications and prevention.

PSY 460. Paraprofessional Helpline Training. (3). Permission of instructor. Course provides instruction and supervised practice in establishing and maintaining helping relationships, providing crisis intervention, using both campus and community resources and referral agencies. Class will be taught by means of reading assignments, audio-video tapes, demonstrations, in-class role playing, and on-phone practice. Successful completion of course, students are expected to work for the campus helpline phone service on a volunteer basis for one additional quarter.

PSY 463. Sociodrama. (2). A laboratory course combining lecture, discussion, and reactions to readings with focus on the activity involved in the technique of sociodrama.

PSY 464. Sociometry. (2). A laboratory course combining lecture, discussion, and reactions to readings with focus on the sociometric technique.

PSY 465. Psychology of Human Sexuality. (3). Attempts to develop awareness of and sensitivity to sex as an individual difference that affects learning and

motivation throughout life. Social, biological, and psychological basis for sex differences and institutional structures will be examined as well as socialization processes in the development of sex role identity.

PSY 466. Industrial Psychology. (3). Students will study the basic methods used by psychologists in selection, placement, training, and motivation of industrial personnel. They will examine the psychological factors involving inter-personal relations influencing morale, production, job satisfaction, etc.

PSY 467. Psychology of Social Change. (3). An analysis of the sources and organization of power relations in the community and various institutions. Techniques for utilizing change-producing process within institutions.

PSY 468. Psychology of Women. (3). Theoretical bases and issues from psychology regarding and influencing the traditional concept of the "female personality," i.e., psychoanalytic theory and definitions of neurotic behavior, motivation, achievement needs, identity, ego-strength and self-esteem, and the inter-dependent influences upon the development of the "weaker sex."

PSY 480. Physiological Psychology. (5). Prerequisite, introductory biology or zoology course and PSY 121 or permission of instructor. Introduction to neuroanatomy and neurophysiology. Functional relationship between nervous system and behavior, review of sensory and motor processes and investigative procedures. Biochemical correlations of learning and other behaviors will be considered.

3-PSY 481. Comparative Psychology. (4). Prerequisite, PSY 121 or permission of instructor. Innate and learned, individual and social, normal and abnormal behavior of insects, fish, amphibia, reptiles, birds, and mammals. Ethological and experimental techniques will be explored in lecture and laboratory.

PSY 482. Behavioral Genetics. (3). Prerequisite, BIO 131 or BIO 231 also PSY 120 or 121. This course will deal with the genetic basis of behavior in man and animals, and contemporary issues in this expanding area including: genetic counseling, eugenics, intelligence and genetic correlates of psychopathology.

PSY 490. Development of Psychological Ideas and Systems. (3). Survey of the origins and development of psychological ideas and systems. Includes discussion of the psychology of science; goals, laws, paradigms, and the evolution of science as a human endeavor. (Students should be advised that many graduate schools in psychology recommend this to be taken at the undergraduate level.)

PSY 491. Field Experience. (5-15). Prerequisite, advanced standing and permission of the instructor. Majors only. Minimum of 5 hours required for majors. Either full or part-time experience for one quarter or for extended quarters working with professionals in psychology. Arrangements with the instructor and the supervisor must be completed during the quarter prior to registration.

PSY 499. Special Topics in Psychology. (Maximum 4). This course is scheduled on an irregular basis to explore special areas in psychology and will carry a subtitle. If successful, the course may later be added to the curriculum as a regular course. Check in the Psychology office to learn of topics currently planned.

RESEARCH AND STATISTICAL METHODOLOGY

RSM 203. Introductory Statistical Methods. (3). Basic statistical concepts and techniques; comprehension of research and literature in education and the other behavioral sciences using elementary statistical methods.

RSM 312. Basic Principles of Test Construction and Utilization. (2). Principles underlying construction of teacher-made and standardized achievement tests; types, uses, and interpretation of derived scores; factors influencing reliability and validity; recent developments in educational and psychological measurement; does not require specific statistical skills but relates statistical concepts to test interpretation.

RSM 323. Introduction to Information Processing and Computers. (3). Introduces the computer, its nature, use and impact on education and society. Involves basic concepts, programming and applications. Requires no previous knowledge of computer fundamentals.

RUSSIAN

1-RUS 101. Elementary Russian I. (5). An introduction to spoken and written Russian with a view toward giving the student a sound knowledge of the structure of the language and high-frequency vocabulary. Audio-visual aids will be used as needed.

1-RUS 102. Elementary Russian II. (5). A continuation of RUS 101.

1-RUS 103. Elementary Russian III. (5). A continuation of RUS 102.

1-RUS 201. Intermediate Russian I. (4). Prerequisite, RUS 103. Review of Russian Grammar, imitative composition and the reading of intermediate Russian texts.

1-RUS 202. Intermediate Russian II. (4). Prerequisite, RUS 201. A continuation of RUS 201 but emphasizing more intensive reading, oral reports, advanced composition and more extensive conversation.

1-RUS 203. Intermediate Russian III. (4). A continuation of RUS 202. More intensive reading, oral and written reports, advanced composition, translation.

4-RUS 305. Survey of Russian Literature I. (3). Prerequisite, two years college Russian or permission of instructor. The course is designed to introduce students to masterpieces of Russian literature from beginning to end of the eighteenth century. Introduction to the life and work of Russia's greatest classics.

4-RUS 306. Survey of Russian Literature II. (3). Prerequisite, two years college Russian or permission of instructor. The course is designed to introduce students to masterpieces of Russian literature of the nineteenth century.

4-RUS 307. Survey of Russian Literature III. (3). Prerequisite, two years college Russian or permission of instructor. The course is designed to introduce students to masterpieces of Russian literature of the twentieth century.

1-RUS 335. Russian Conversation. (3). Prerequisite, two years college Russian or equivalent. The course is designed to develop the basic speech habits for control of spoken, conversational Russian through exercise in reproducing of episodes in the student's own words.

1-RUS 336. Advanced Russian Composition. (3). Prerequisite, two years of college Russian or permission of instructor. The course is designed to increase the student's fluency in the language through the use of original compositions, translations, and resumes.

1-RUS 337. Advanced Russian Grammar. (3). Prerequisite, two years college Russian or permission of instructor. A study of Russian syntax and the common difficulties in sentence structure. Emphasis is on many exceptional grammatical rules in Russian.

4-RUS 341. Pushkin. (3). Prerequisite, three years college Russian or permission of instructor. Life and works of A. Pushkin. Emphasis on his contribution as "The Son of Russian Literature." The course will converse in Russian.

SCIENCE EDUCATION

SCED 151. Introductory Science Field Experiences. (2). (Maximum 6.) A course which provides prospective science teachers with practical experience in the classroom and community during their freshman, sophomore, and junior years.

SCED 260. Integrated Elementary Science Teaching Methods I. (1). Co-requisite, SCI 260, 261 or 262. This course integrates methods of elementary science teaching with content. Opportunities for field experiences provided. Open to freshman and sophomore elementary education majors.

SCED 261. Integrated Elementary Science Teaching Methods II. (1). Co-requisite, SCI 260, 261, or 262. This course integrates methods of elementary science teaching with content. Opportunities for field experiences provided. Open to freshman and sophomore elementary education majors.

SCED 262. Integrated Elementary Science Teaching Methods III. (1). Co-requisite, SCI 260, 261, or 262. This course integrates methods of elementary science teaching with content. Opportunities for field experiences provided. Open to freshman and sophomore elementary education majors.

SCED 276. Testing and Evaluation in K-12 Science. (3). This course will provide students with a survey, analysis, design and trial use of evaluation and measurement devices appropriate for use in assessing the achievement of curricular objectives in K-12 science teaching. Students will examine several instruments including achievement, attitude, rating scales, questionnaires, judgment scales of products, interviews, controlled-observation techniques, socio-metric techniques, anecdotal records, stereographic reports and sound tape recordings.

SCED 360. Science for the Handicapped. (2). An opportunity for students to examine commercial materials, to modify existing materials, and to develop science study units relating to science and the handicapped child. An individualized approach will be used to allow each student to concentrate on areas of special interest. Micro-teaching will be utilized--"live" on video tape. Appropriate for pre-school, elementary, and secondary majors.

SCED 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written report must be filed with the instructor before credit is given.

SCED 441. Methods of Teaching Secondary School Science. (3). Prerequisite, PTE. Co-requisite, EDFE 372. Prerequisite to student teaching. Includes a curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of the subject area to the total secondary program. Teaching techniques are a point of emphasis.

SCED 442. Methods of Teaching Science in the Middle School/Junior High School. (3). Prerequisite PTE. Co-requisite, EDFE 372. Prerequisite to student teaching. Includes curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of the subject area to the total secondary program. Teaching techniques are a point of emphasis.

SCED 470. Teaching Science in the Elementary School. (PTE) (3). (2 lecture, 3 laboratory.) The purpose of this course is to develop a knowledge of objectives, methods, and materials which the teacher will need for providing learning activities, and for teaching a functional elementary science program. Laboratory activities are included.

SCED 475. Science for the Preschool Child. (3). The purpose of this laboratory centered course is to develop a knowledge of objectives, methods and materials, which the early childhood teacher will need for providing learning activities.

SCIENCE

These courses are taught by the appropriate departments.

4-SCI 100. History of Science and Modern Man. (3). The course endeavors to trace the historical and philosophical development of scientific methods of investigation, their effects on the perceptions of modern man and the contemporary reactions to them. The class will be restricted to an enrollment of 30.

5-SCI 103. Physical Science. (3). A general survey of special topics which are of current interest to society. Emphasis will be placed on the physical science concepts associated with these topics. Treatment will be non-mathematical.

5-SCI 106. Reaching Beyond the Rational. (3). This course discusses a present mood of skepticism about the quantifying, objective methods of science. The rise to a state of acceptance of the scientific method and a concept of a clockwork universe will be traced. Some concepts and ideas which lie on the ragged edge between scientific and irrational will be presented.

5-SCI 107. Energy: Man and the Crisis. (3). A non-mathematical study of the basic concepts of energy as it relates to man and his environment. Topics include fundamental principles and limitations of energy conversion, man's energy requirements, environmental impact of large scale energy uses, energy sources -- fossil, nuclear, solar. The underlying causes of the impending energy crisis will be covered in detail and possible future energy technology alternatives will be discussed.

4-SCI 108. Science and Society. (3). The relationship of science to society is investigated and discussed. An historical approach is used to show the growth of science and development of public attitudes toward science. Present relationships between science and society are emphasized.

5-SCI 109. Relativity and Cosmology. (3). A non-mathematical treatment of the concepts of special and general relativity, leading to a discussion of a variety of cosmological models. The "big bang" and steady-state theories of cosmology are covered, as well as expanding, closed, and open models.

5-SCI 110. Sights and Sounds. (3). A descriptive study of the wave motion to sound and light. Emphasis will be placed on sound associated with music and musical instruments, and on light associated with art.

SCI 150. A laboratory Introduction to Earth Science. (1). (2 laboratory.) Selected laboratories from Earth Science Curriculum Project, independent investigations, and related projects will comprise this laboratory-oriented course.

4-SCI 210. Values -- Act (1) On Environment. (3). A general education interdisciplinary course which provides students with opportunities for first hand investigation of environmental problems such as air and water pollution, population studies, and use of natural resources including land and energy. Controversial environmental issues are presented and value clarifying techniques used to examine students' relationships to their environments.

5-SCI 260. Earth Science Concepts for Elementary Teachers. (3). (2 lecture, 2 laboratory.) Co-requisite, SCED 260, 261, or 262. Introductory course in earth science designed especially for elementary education majors.

5-SCI 261. Biological Science concepts for Elementary Teachers. (3). (2 lecture, 2 laboratory.) Co-requisite, SCED 260, 261, or 262. A study of some basic concepts in science with an emphasis on their application to living organisms. The course is designed for elementary education minors interested in a general understanding of science.

5-SCI 262. Physical Science Concepts for Elementary Teachers. (3). (2 lecture, 2 laboratory.) Co-requisite, SCED 260, 261, or 262. A study of some basic concepts in science with an emphasis on their application to the physical world. The course is designed for elementary education majors interested in a general understanding of science.

5-SCI 301. History of the Physical Sciences. (3). The study of the development of the basic concepts and principles of the physical sciences from the Greeks to the modern period stressing its contribution to our cultural heritage and the evaluation of science as an activity of men.

5-SCI 303. Elementary Biological Science. (3). (2 lecture, 3 laboratory.) A content course that emphasizes basic understanding of animal and plant life. Films, laboratory experiences, field work, visual aids, museum study and reading

materials are used to develop the concepts. This course not applicable to a graduate science major.

5-SCI 309. Science for Elementary Teachers. (3). (2 lecture, 3 laboratory.) A subject matter course for elementary majors presenting science concepts and information for elementary teachers. Areas may include light, heat, sound, simple machines, and the interrelationships of things to the physical environment.

SCHOOL OF EDUCATIONAL CHANGE AND DEVELOPMENT

SECD 102. Professional Development Experiences. (1-15). Freshman students in the School of Educational Change and Development may elect professional development experiences that are a part of their program approved by their Resource Board and Advisory Board. The nature of the experiences and the credit hours will be determined by the student's accepted proposal.

SECD 202. Professional Development Experience. (1-15). Sophomore students in the School of Educational Change and Development may elect professional development experiences that are a part of their program approved by their Resource Board and Advisory Board. The nature of the experiences and the credit hours are determined by the student's accepted proposal.

SECD 302. Professional Development Experiences. (1-15). Junior students in the School of Educational Change and Development may elect professional development experiences that are a part of their program approved by their Resource Board and the Advisory Board. The nature of the experiences and the credit hours are determined by the student's accepted proposal.

SECD 402. Professional Development Experiences. (1-15). Senior students in the School of Educational Change and Development may elect professional development experiences that are a part of their program approved by their Resource Board and the Advisory Board. The nature of the experiences and the credit hours are determined by the student's accepted proposal.

SOCIOLOGY

3-SOC 100. Principles of Sociology. (5). A study of social organization, culture, socialization, social stratification, associations, collective behavior, population and ecology with detailed applications to the functioning of society in the United States today.

All of the following Sociology courses have a prerequisite SOC 100 or equivalent.

3-SOC 120. Marriage and the Family. (4). A functional approach to education for marriage and family life, including anticipating marriage, what it means to be married, the making of a family and the nature of family life yesterday, today, and tomorrow.

3-SOC 145. Social Problems. (3). Designed to help the student understand some of the complex problems of our society from a sociological frame of reference. The student will look at such things as poverty, slums, wars, alcoholism, mental illness, drug addiction and prostitution, in the context of American society.

3-SOC 210. Social Movements. (3). A study of the nature of those deviant groups concerned with major social problems. Explores the reasons for people joining, remaining in, and defecting from various unconventional political, economic, religious, and cultist organizations and the effect of these movements on society's processes, goals, and values.

3-SOC 221. The Sociology of Sex Roles. (3). This course is designed to focus on

the changing status of the American woman and its effects on our society. Will study the woman as a daughter, wife, mother, career girl and explore the varieties of roles and effects upon the matrix of our society.

3-SOC 240. Criminology. (4). A general survey of criminal behavior including theories of causation, types of crime, extent of crime, law enforcement, criminal justice, punishment and treatment.

3-SOC 270. World Population Problems. (4). Various theories of population are examined. Methods of discovery are investigated and critical variables including fertility, mortality, and migration are analyzed. The general problem of population is related to major sociological variables to indicate the web of interdependency.

3-SOC 272. The Community. (3). Common features of all communities and differences among communities due to size, ecology, occupation, distinctive history and cultural heritage are examined. The community is seen as a network of interacting social systems comprised of meaningful social groupings, family, religion, economy, local government, health, welfare services, and recreation.

3-SOC 310. Social Psychology. (3). A study of social communication in human groups, the identification of mutually dependent elements in the human group and the study of the human group as an organic whole. The case study approach is used. Emphasis is given to leadership.

3-SOC 311. Collective Behavior. (3). Relevant and appropriate sociological theory is directed to the subdiscipline of collective behavior. Mobs, riots, crowds, crazes, mass behavior, revolutions and reforms are unified through certain theoretical developments that permit the systematic examination of the social strains underlying collective effort and behavior.

3-SOC 312. Mass Communication and Propaganda Analysis. (3). An examination of the structure and policy of mass communications in relation to their economic, political, sociological, and psychological functions. An analysis of propaganda, its techniques, and its impact upon the masses will also be considered.

3-SOC 321. Political Sociology. (3). A sociological analysis of the state as a social organization, the nature and conditions of its legitimacy, the nature of political systems and political behavior in a societal context, and of the interrelationships of political and societal phenomena.

3-SOC 323. Sociology of Religion. (3). A comparative study of the world's major religions, their origins and historical development, their doctrines, literature, customs, and relations to society.

3-SOC 325. Sociology of Medicine. (3). A systematic attempt to relate sociological concepts to the fields of physical health and illness. An overview of socio-cultural aspects of the institution we know as "Medicine." The community and medical care, which will include medical education, the hospital as a social institution, concepts of medical practice.

3-SOC 333. Social Stratification. (3). Presentation of a unified portraits of the class system of present-day America. Course seeks a description of the realities of the American class system, an analysis of the verified knowledge based on systematic research, and treatment of the topic of mobility central to the American open-class system.

3-SOC 334. Sociology of the Future. (3). A Sociological perspective of the future. Attention is given to an analysis of the future from several sociological perspectives, and interpretation of utopian designs for societies of the future, and the theoretical construction of future societies.

3-SOC 337. Soviet Society Today. (4). A sociological analysis of the Soviet Union's social institutions, social problems, and value systems, specifically considering the Communist ideology in theory and practice as revealed in examining the structure, function, and problems of the family, social stratification, nationalities, education, science, the arts, and social welfare programs.

3-SOC 340. Juvenile Delinquency. (4). The problem of delinquency is approached

from the sociological, psychological, and legal points of view. Several sociological theories are proposed as possible causes of delinquency. The various methods by which the delinquent is rehabilitated in correctional institutions are discussed.

3-SOC 341. Sociology of Aging. (3). Survey of theories and research on the social aspects of aging with emphasis on later maturity and old age, social problems of the aged, retirement, and use of leisure by the aged.

3-SOC 345. Sociology of Minorities. (4). A course dealing with the evidence as to all types of intergroup relations; race, nationality, minority groups, income groups, urban and rural groups, and with methods of teaching and measuring intergroup relations.

3-SOC 402. Issues and Perspectives in Sociology. (3-9). This is a variable topic course in sociology. Possible topics will be the sociology of science, art forms, alternative life styles, formal organization or comparative sociology. This course may be taken three times if the topic is different each of the three times.

3-SOC 410. Small Groups. (3). Observing, analyzing, and comparing behavior in various small groups. Emphasis will be upon groups devoted to decision-making and problem solving.

3-SOC 415. The Sociology of Child Development. (3). A sociological approach to the field of child development. The primary emphasis is upon the social situation and how the child grows and develops within its context from birth to maturity.

3-SOC 420. Sociology of Education. (3). A systematic attempt to relate sociological concepts to the educational institution. This course will focus upon a scientific analysis of the social processes and social patterns involved in the educational system.

3-SOC 421. Industrial Sociology. (3). The processes involved in the development of industrial society; social organization of work; internal dynamics of the work plant as a social system; the development of the labor movement in the U.S.; and the dynamics and impact of labor management relations.

3-SOC 422. Independent Study in Sociology. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

3-SOC 424. Sociology of Criminal Law. (4). An inquiry into the origins of criminal law, its administration, and the effect of legal sanctions.

3-SOC 427. Military Sociology. (3). Analysis of the military as a social institution with comparisons to its place in the institutional patterns of other nations. Both the historical aspects and the contemporary institutional position are covered.

3-SOC 432. Occupations and Professions. (3). Description and analysis of selected occupations and professions in American society.

3-SOC 435. Socio-Cultural Change. (3). Presentation of theories of change. Analysis of change as the product of interaction of several factors. Discussion of the effects of technology on change and problems of measurement of change. The processes of change in the underdeveloped countries will be introduced and comparisons with the developed nations will be made.

3-SOC 437. Seminar in American Society Today. (3). An advanced study of the main cultural and social structures of American society, the social relations, beliefs and values which characterize the people of the United States.

3-SOC 447. Social Deviance. (4). A study of social deviancy, particularly in terms of the types, sources, functions, dysfunctions and social control mechanisms that operate relative to these departures from conformity.

3-SOC 450. History of Social Thought. (4). A systematic and historical development of social thought from primitive folk thinking to contemporary theories of society and social relations.

3-SOC 451. Social Theory I. (4). This course includes sociological theory from Auguste Comte to the early 20th Century. It deals with the beginnings of sociology

as a separate discipline up to its full emergence in the academic community. Emphasis is upon the more important theorists and the major schools of theory.

3-SOC 452. Social Theory II. (4). This survey of contemporary sociological theories with particular emphasis on the theories of Parsons, Merton, Homans, Mills and Levy will relate contemporary theories to the thoughts of classical European and American Sociologists.

3-SOC 454. Social Conflict. (4). Analysis of the nature of social conflict, its origins, functions, dysfunctions, and how conflict is resolved or accommodations made to it.

3-SOC 460. Social Research I. (4). The course focuses upon the scientific method as it applies to sociology and the social sciences. Methods and techniques of research, as well as study designs relevant to sociology, are examined.

3-SOC 461. Social Research II. (4). Prerequisite, SOC 460 or equivalent. A continuation of introductory statistics with special emphasis on applied problem solving utilizing both parametric and non-parametric measurements. Also covered are statistics relating to scale verification, concepts of statistical applications, and theories of levels of significance.

3-SOC 478. Urban Sociology. (3). Population, spatial, and social patterns characteristic of modern urban communities. Trends and problems in urban communities such as out-migration and urban blight.

3-SOC 479. Human Ecology. (3). The study of man-nature ecosystems with special regard to man's social role in environment alteration, utilization and destruction. The role of social institutions and processes in conservation and exploitation of natural resources.

For 500 level classes -- see Graduate Catalog.

SPANISH

1-SPAN 101. Elementary Spanish I. (5). A three-quarter sequence in the basic elements of Spanish through the aural-oral conversational approach; intensive and extensive use of aural-oral materials: writing and reading exercises; the use of audio-visual aids and devices to provide practical materials for pronunciation, comprehension, adequate construction, and fluency of expression in the language.

1-SPAN 102. Elementary Spanish II. (5). A continuation of SPAN 101.

1-SPAN 103. Elementary Spanish III. (5). A continuation of SPAN 102.

1-SPAN 201. Intermediate Spanish I. (4). Prerequisite, two years of high school Spanish or one year of college Spanish. Review of the basic principles of the language. Aural-oral orientation through oral and written composition, conversation and audio-visual aids; stressing normal fluency and readiness in the use of Spanish in ordinary communications.

1-SPAN 202. Intermediate Spanish II. (4). Prerequisite, two years of high school Spanish or one year of college Spanish. A continuation of SPAN 201 but emphasizing more intensive reading, oral reports, advanced composition and extensive conversation based on Spanish and Spanish-American culture.

1-SPAN 203. Intermediate Spanish III. (4). Prerequisite, two years of high school Spanish or one year of college Spanish. A continuation of SPAN 202. Based on Spanish-American cultural materials, sources, films, audio-visual materials and a higher level of all-round comprehension and fluent functional use of the language and culture.

SPAN 205. Spanish for Elementary Education Majors. (4). Prerequisite, SPAN 203 or equivalent. Spanish for Elementary Education majors will be taught on a college intermediate level. The purpose of the course will be vocabulary building by intensive reading and conversation. The materials to be used will provide the student with Spanish vocabulary more suited to an elementary specialization.

1-SPAN 310. Advanced Spanish Grammar. (4). Prerequisite, two years of college Spanish. A systematic study of the more complex theories and forms of Spanish grammar, with emphasis on mood, tense, and voice.

4-SPAN 315. Colonial Latin American Literature. (3). Prerequisite, two years of college Spanish. A study of the literature and civilization of Spanish America from the time of the earliest Spanish explorers until the nineteenth century.

4-SPAN 316. Nineteenth Century Latin American Literature. (3). Prerequisite, two years of college Spanish. The literature of the 19th century will be studied with particular emphasis on the development of *Americanismo Literario* and with emphasis on the general movements of Romanticism and Naturalism.

4-SPAN 317. Twentieth Century Latin American Literature. (3). Prerequisite, two years of college Spanish. A study of the main works of the contemporary period of Spanish American Literature.

1-SPAN 325. Advanced Spanish Composition. (3). Prerequisite, two years of college Spanish. A course designed to increase the student's fluency in the language through the use of original compositions, translations, and resumes.

1-SPAN 335. Spanish Conversation. (4). Prerequisite, two years of college Spanish. A course designed to increase the ability of each student to use spoken Spanish in practical, everyday situations. The class will be conducted in Spanish.

1-SPAN 345. Spanish Pronunciation. (4). Prerequisite, two years of Spanish. A study of the mechanics of Spanish pronunciation. Methods of recognizing and correcting pronunciation errors.

4-SPAN 355. Spanish Literature of the Middle Ages. (3). Prerequisite, two years of college Spanish. A study of Spanish literature and civilization from the late medieval period to the Renaissance.

4-SPAN 356. Spanish Literature of the Golden Age. (3). Prerequisite, two years of college Spanish. A study of Spanish literature and civilization of the sixteenth, seventeenth, and eighteenth centuries. Emphasis is placed on Cervantes, Lope de Vega, and Fernando de Rojas.

4-SPAN 357. Nineteenth and Twentieth Century Spanish Literature. (3). Prerequisite, two years of college Spanish. A study of Spanish literature and civilization of the nineteenth and twentieth centuries, with greatest emphasis on the more recent periods.

4-SPAN 375. Spanish and Latin American Drama. (3). Prerequisite, oral facility in the language. Study of the major periods and development of Spanish and Latin American Theatre. Representative dramatists will be studied and scenes and/or works will be staged in class and public performance.

1-SPAN 400. Problems in Oral Spanish. (3). Prerequisite, two years of college Spanish beyond first year, or permission of instructor. A course designed to provide advanced oral training; to help students with persistent individual problems in spoken Spanish to overcome those difficulties.

SPAN 401. Study Abroad Program: Coursework. (8). Prerequisite, two years college Spanish or permission of the department. This course is designed to give students a practical experience in the use of Spanish. Study will include formal instruction in conversation, composition, and culture at the foreign study center. To be taken with SPAN 402.

SPAN 402. Study Abroad Program: Project. (4). Prerequisite, two years of college Spanish or permission of department. This course is designed to give students an opportunity to research the contemporary and historical cultural phenomena of Spain through the completion of an area studies project in the region of the study center. To be taken with SPAN 401.

4-SPAN 405. Latin American Short Story. (3). Study of the Latin American short story from romanticism to the present. To include Quiroga, Borges, Rulfo, Cortazar, Marquez.

4-SPAN 406. Latin American Poetry. (3). Prerequisite, two years of college

Spanish. Concentration will be on four general periods of Latin American poetry: Modernismo, Posmodernismo, Vanguardismo, and Posvanguardismo. These movements will be related to the foreign poetic influences and visual arts of the corresponding periods.

4-SPAN 410. Spanish Civilization. (3). Prerequisite, two years of college Spanish. A course designed to acquaint the student with general trends of Spanish Civilization and Culture, including the historical, economic, political and artistic development of the country from prehistoric times to present.

4-SPAN 415. Twentieth Century Spanish Drama. (3). Prerequisite, two years of college Spanish. A study of Spanish Drama in the 20th century, the School of Benavente, the new Direction of Federico Garcia Lorca, the Post-War Theatre of Alfonso Sastre and Buero Vallejo.

4-SPAN 420. Cervantes. (4). Prerequisite, two years of college Spanish. The life and works of Miguel de Cervantes Saavedra, how he portrays the Spain of his day, and how his works mark the various stages in his career. The class will be conducted in Spanish.

SPAN 422. Individual Studies. (1-4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

4-SPAN 430. A Panorama of Mexican Literature. (3). Prerequisite, two years of college Spanish. The study of Mexican literature from colonial times to the present-day. The class will be conducted in Spanish.

4-SPAN 450. Latin American Culture and Civilization. (3). Prerequisite, two years of college Spanish. A course designed to give the student an understanding of the historical and cultural development of the countries of Latin America. A survey of the major historical events from the pre-Colombian period to the present will be included. Primary emphasis will be placed upon Mexico. The class is conducted in Spanish.

1-SPAN 475. Spanish Reading. (Maximum 4). Prerequisite, two years of college Spanish. Designed to fit the reading abilities and interests of various students. Class meets two days a week for intensive reading. Extensive outside reading is reported in conference.

SPAN 490. Spanish for Reading Knowledge. (No Credit). Prerequisite, none. A course to enable doctoral candidates in other fields to pass the Ph.D. language reading examination in Spanish.

SOCIAL STUDIES EDUCATION

SSED 341. Methods of Teaching Social Science in the Secondary School. (3). Prerequisite, PTE. Prerequisite to student teaching. Includes curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of the subject area to the total secondary program. Teaching techniques are a point of emphasis.

THEATRE ARTS

2-THEA 100, 101, 102. Individual Performance in Theatre. (1 each). Open to all students who desire to participate in production activities of the theatre. A minimum of ten credits is required of Theatre Arts majors. Two credit are required of Theatre Arts minors. S-U final marks.

2-THEA 110. Introduction to Stagecraft. (3). (2 lecture, 2 laboratory. Lab card required.) A study of the arts, terminology, and materials of stagecraft and

the physical theatre plant. Emphasis is placed on basic stage construction, shifting and rigging procedures, and scene painting.

2-THEA 160. Acting I. (Internals). (3). (2 lecture, 3 laboratory. Lab card required.) The emphasis of the course is on the primary needs of acting: concentration, motivation, and believability.

2-THEA 200, 201, 202. Individual Performance in Theatre. (1 each). Open to all students who desire to participate in production activities of the theatre. A minimum of ten credits is required of Theatre Arts majors. Two credits are required for Theatre Arts minors. S-U final marks.

2-THEA 210. Stagecraft. (3). (2 lecture, 2 laboratory. Lab card required.) Prerequisite, THEA 110. A study of advanced construction probes, rigging, and backstage organization and management. The laboratory experiences will include the development of basic skills in mechanical drafting, scenic and properties construction, and advanced painting techniques.

2-THEA 220. Beginning Stage Costuming. (3). (2 lecture, 2 laboratory. Lab card required.) An introduction to the techniques of basic costuming for the theatre: the role of the costumer, pattern and construction, and a familiarity with materials and practices relating to play production.

2-THEA 230. Introduction to the Theatre. (3). An introductory course to the theatre which gives a comprehensive outline of the living stage, its players and craftsmen, and its place in society from primitive theatre to contemporary American and European theatres.

2-THEA 240. Beginning Play Direction. (3). (2 lecture, 3 laboratory. Lab card required.) Prerequisites, THEA 110 and THEA 160. A basic course in the principles of directing a play. The major focus of the course is on contemporary theories and practices of play direction.

2-THEA 260. Acting II (Externals). (3). (2 lecture, 3 laboratory. Lab card required.) Prerequisite, THEA 160. The second course in the principles of acting. The primary focus of the course is on observation, character analysis and research, and the use of the actor's voice and body for external characterization.

2-THEA 261. Stage Make-Up. (2). (1 lecture, 2 laboratory. Lab card required.) A basic course designed to acquaint the student with the principles of the art of stage make-up.

2-THEA 270, 271, 272. Stage Movement. I, II, III. (1 each). A laboratory course in the development of the actor's basic tools, his body and his voice. Emphasis is placed upon skills needed to communicate various realistic modes of movements, strength, agility, and control.

2-THEA 280. Creative Dramatics. (3). (Laboratory arranged. Lab card required.) A discussion-laboratory course in improvisational drama for young people which studies why and how creative dramatics is used in the educational, recreational and dramatic development of children. The laboratory allows students to guide school children (K-8 grades) in creative dramatic activities.

2-THEA 300, 301, 302. Individual Performance in Theatre. (1 each). Open to all students who desire to participate in production activities of the theatre. A minimum of ten credits is required of Theatre Arts majors. Two credits are required of Theatre Arts minors. S-U final marks.

2-THEA 310. Beginning Scene Design. (3). (2 lecture, 2 laboratory. Lab card required.) Prerequisites, THEA 110, 210. A fundamental course in scene design. Emphasis is placed on the aesthetics and styles of stage design and the development of rendering skills and staging concepts.

2-THEA 320. History of Stage Costuming. (4). A study of costume design for the theatre. Emphasis is given to the survey of historical styles of costumes used in the theatre from the primitive times to the present.

2-THEA 340. Directing Period Plays. (3). (2 lecture, 3 laboratory. Lab card required.) Prerequisite, THEA 240. A production course in the directing of plays

from Aeschylus through Ibsen for public performance. Particular attention will be given to the stylistic demands of each period.

2-THEA 341. Directing Experimental Plays. (3). (2 lecture, 3 laboratory. Lab card required.) Prerequisite, THEA 240. A production course in the directing of plays from various contemporary styles: symbolism, expressionism, "theatre of cruelty," "theatre of the grotesque," "theatre of the absurd," and other experimental styles.

2-THEA 342. Directing Musical Theatre. (3). (2 lecture, 3 laboratory. Lab card required.) Prerequisite, THEA 240. A study of specific techniques required of a director for the production of various styles of musical theatre. An historical look at musical theatre. A detailed study of production techniques.

2-THEA 350, 351, 352. Summer Theatre Workshop I, II, III. (12 each.) Prerequisite, acceptance by Theatre Arts staff. Workshop in acting and technical theatre; eight weeks of eight hour daily rehearsal for six summer productions. Undergraduate majors in Theatre Arts receive credit for THEA 210, THEA 220, THEA 260 (with course instructor's permission) and two hours in Individual Performance in Theatre.

2-THEA 353. Theatre Production. (2). (4 laboratory). Prerequisite, acceptance by the Theatre Arts staff director. A laboratory class in the production and presentation of touring theatre before live audiences. Double period, two days a week. Repeatable for eight hours maximum credit.

2-THEA 361. Advanced Stage Make-Up. (2). (1 lecture, 2 laboratory. Lab card required.) Prerequisite, THEA 261. A course designed to prepare the student to produce professional quality make-ups, going beyond the basics into special problems in make-up, group make-ups, three dimensional prosthetics, make-up for other media, and make-up for the educational theatre.

2-THEA 370, 371, 372. Rhythmic and Dramatic Movement I, II, III. (1 each.) Prerequisites, THEA 270, 271, 272. A laboratory course in the continued preparation of the actor's skills in movement. Emphasis is upon the rhythmic demands of various styles of acting, period movement, and stage fighting.

2-THEA 380. Children's Theatre Production. (3). (Laboratory arranged. Lab card required.) Prerequisite, THEA 280, or permission of instructor. A basic production course in the methods and procedures of producing good theatre for children. Study of the literature in the field, technical problems, and the educational values of theatre for children will be emphasized.

2-THEA 390. Chamber Theatre. (3). (Six contact hours per week.) Prerequisites, COMM 170, THEA 240, or permission of instructor. A course designed to acquaint the student with the principles and production techniques of Chamber Theatre.

2-THEA 400, 401, 402. Individual Performance in Theatre. (1 each). Open to all students who desire to participate in production activities of the theatre. A minimum of ten credits is required of Theatre Arts majors. Two credits are required of Theatre Arts minors. S-U final marks.

2-THEA 410. Advanced Staging Techniques. (4). (8 contact hours per week.) Prerequisite, THEA 310. An advanced study and practice of the modern trends and developments in scene design and staging methods and techniques, with emphasis on stage management, new materials, the staging and design of the multi-set production, and the care and maintenance of equipment.

2-THEA 411. Stage Lighting. (2). (1 lecture, 2 laboratory. Lab card required.) Prerequisite, THEA 310. An introduction to lighting theory and lighting design applicable to staging practices.

2-THEA 420. Stage Costuming Design. (4). (2 lecture, 4 laboratory. Lab card required.) Prerequisite, THEA 320. An introduction to costume design with consideration of the media in which costumes can be designed for stage use.

2-THEA 422. Individual Studies. (Maximum 4). Qualified undergraduate stu-

dents outline and spend a minimum of 25 clock hours per quarter hour on a problem relating to their major field under staff supervision. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department. Repeatable for credit.

2-THEA 430. History of the Theatre I. (3). A research study of European theatre and its development from the beginnings until the end of the Middle Ages, including the primitive origins of theatre and the development of Oriental theatres.

2-THEA 431. History of the Theatre II. (3). A research study of European theatre and its development from the Italian Renaissance until the close of the 18th century.

2-THEA 432. History of the Theatre III. (3). A research study of American and European theatre and its development from the beginning of the 19th century to the present.

2-THEA 440. Directing the One-Act Play. (2). Prerequisites, THEA 240, 340, 341. A practicum in play direction giving the student the opportunity to produce a one-act play under staff supervision. Two copies of a well-written paper, defending the purpose and success of the production, and one promptbook will be required.

2-THEA 460. Serious Styles of Acting. (2). (4 contact hours per week.) Prerequisite, THEA 260. An advanced laboratory course in acting, concentrating on Greek tragedy, Elizabethan and Jacobean tragedy and history, the serious drama of the Spanish Renaissance, French neo-classic tragedy, 19th century Romantic drama, Ibsen and Strindberg.

2-THEA 461. Comic Styles of Acting (2). (4 contact hours per week.) Prerequisite, THEA 260. An advanced laboratory course in acting, concentrating on Greek and Roman comedy, farce comedy in the Medieval and Renaissance periods, Commedia dell'Arte, Elizabethan and Jacobean comedy, French neo-classic comedy, English comedy of the Restoration and 18th century, and 19th century farce and comedy.

2-THEA 462. Problems in Acting Conventions. (2). (4 contact hours per week.) Prerequisite, THEA 260. An advanced laboratory course in acting, concentrating on stage dialects and the conventions needed to act such modern dramatic forms as naturalism, expressionism, impressionism, symbolism, "theatre of the absurd," "theatre of cruelty," happenings, and other modern experimental forms.

2-THEA 465. Musical Theatre Repertory I. (2). (4 contact hours per week. Taken concurrently with MUS 468.) Prerequisite, THEA 260. The first of a sequence of three advanced laboratory courses in the acting of musical theatre, concentrating on performance values in singing and acting; this course focuses on the development of believability and the development of emotional life in character and action.

2-THEA 466. Musical Theatre Repertory II. (2). (4 contact hours per week. Taken concurrently with MUS 468.) Prerequisite, THEA 465. The second of a sequence of three advanced laboratory courses in the acting of musical theatre, concentrating on performance values in singing and acting; this course focuses on the development of external characterization for age, modes of production, and stylistic stereotypes.

2-THEA 467. Musical Theatre Repertory III. (2). (4 contact hours per week. Taken concurrently with MUS 468.) Prerequisite, THEA 466. The third of a sequence of three advanced laboratory courses in the acting of musical theatre, concentrating on performance values in singing and acting; this course focuses on advanced movement, stage presence in lead and chorus roles, dialect, and advanced repertoire.

VOCATIONAL TEACHER EDUCATION

4-VTE 210. Career Opportunities and Explorations. (3). This course will provide the student an opportunity to identify teaching careers in Vocational Techni-

cal Teacher Education, as well as Career Opportunities in related occupational areas outside of education. Attention will focus on eight career clusters: Agri-Business Occupations, Business and Office Occupations, Distribution and Marketing Occupations, Health Occupations, Home Economics Occupations, Technical Occupations, Trade and Industrial Occupations and Special Needs Programs and Related Occupations. Students will have an opportunity to meet and discuss career roles with educators and representatives from business, industry and governmental agencies to discuss career roles and to develop a career plan. S-U final mark.

VTE 290. Directed Field Experiences. (Maximum 12). Prerequisite, instructor's permission. This course will provide undergraduate students an opportunity to improve their technical and professional skills and knowledge in a specific occupational field related to their major area of study. Each field experience is carefully planned by the student and instructor to meet the needs of the student. This experience will aid students in their professional development as a Vocational Education teacher. Students should have prior approval from their major adviser. S-U final mark.

VTE 310. Vocational Education Foundations -- Seminars. (3). This beginning course is a closely directed study of vocational education history, legislation, state policies, programs, and contemporary concerns facing vocational educators. The combination design of both large and small group sessions allows for student participation and presentations.

VTE 410. Cooperative Education and Coordination Techniques. (3). Prerequisite, VTE 310. This is a required course for most vocational teachers that provides the student with an analysis of cooperative vocational education programs and describes the specific duties of a teacher-coordinator. Actual problems encountered in coordinating the school program with on-the-job experiences are explored.

VTE 411. Vocational Student Organizations. (1). To be taken concurrently with VTE 412, 413, 414, or 415 seminars. This course provides an introduction to the initiation, organization, and maintenance of a successful vocational student organization. The State Plan requires the local vocational program to have a student organization available to vocational students; therefore, this course has been developed to help the enrollee understand the purpose and function of such organizations as DECA, FBLA/OEA, FHA/HERO, and VICA. Each seminar will give the student further experiences through active participation in the planning and operation of an organization similar to their future student organization.

VTE 412. Distributive Education Clubs of America -- Seminar. (2).

VTE 413. Future Business Leaders of America -- Seminar. (2).

VTE 414. Future Homemakers of America -- Seminar. (2).

VTE 415. VICA and post-Secondary Student Professional Organizations in Health Occupations. (2).

The above seminars are designed to give the specific aims and objectives of the listed vocational student organization(s) and to relate their positions as an integral part of their specific vocational education program. Emphasis will be placed on student participation in developing activities and effective strategies for directing these activities. The two major components of this course will include: a) classroom instruction dealing with the specialized nature of the club, and b) field and/or simulated experiences. All students who enroll in VTE 412, 413, 414, or 415, must also enroll in VTE 411 concurrently.

VTE 418. Adult Vocational Education. (3). The course includes a brief overview of the organization and administration of post-secondary and adult occupational programs. Students are introduced to existing adult vocational programs through examination of current curricula for specific adult programs, field trips, and guest speakers.

VTE 422. Individual Studies in Vocational Education. (Maximum 4). A qualified student spends a minimum of 25 clock hours per quarter hour on a problem which is not included under the regular vocational teacher education program of

instruction. Two copies of a well-written paper must be filed before credit is given, one to be filed with the instructor and one with the chairman of the department. Offered by arrangement.

VTE 430. Vocational Education for Learners with Special Needs. (3). Emphasis is placed on the understanding of the characteristics and unique needs of learners often classified as the "disadvantaged" or, as described by the Vocational Education Act of 1963 and 1968; as "persons with special needs." These are students who have academic, socio-economic, or other handicaps that prevent them from succeeding in vocational education programs. The rationale for and the development of special vocational education programs and field experiences are important aspects of this course.

VTE 488. Seminars in Vocational Education. (Maximum 6). The Vocational Education Seminars are designed for small group participation which focus on specific topics. Each seminar will have a subtitle. No subtitle may be repeated for credit.

ZOOLOGY

Courses in zoology are administered by the Department of Biological Sciences.

5-ZOO 105. Human Biology. (4). (3 lecture, 3 laboratory.) An introduction to human biology with emphasis on general body organization, tissue histology, genetics, embryology, medical parasitology, and a survey of basic organ structure and function. The course is designed to give nursing students a foundation for more advanced courses in human anatomy and physiology. Credit not allowed Biological Sciences majors.

5-ZOO 121. Human Anatomy. (4). (3 lecture, 3 laboratory.) Prerequisites, ZOO 105, or BIO 103. A study of the organ systems of the mammalian body. Structure and integration of organs and organ systems of the human will be emphasized. Laboratory studies will include examination of injected laboratory mammals and cadaver organs.

5-ZOO 156. Elements of Human Physiology-Anatomy. (5). (4 lecture, 3 laboratory.) A class in beginning human physiology stressing the regulatory mechanisms that maintain normal body function. Emphasis is placed on broad, general biological principles as they apply to structure and function. Not open to Biological Sciences majors. Biological Sciences credit not allowed for both ZOO 156 and ZOO 250.

5-ZOO 250. Human Physiology. (5). (4 lecture, 3 laboratory.) Prerequisites, BIO 103 or ZOO 105, ZOO 121 or ZOO 428, CHEM 281 recommended. A detailed presentation of the functions of the organ systems of the human body. Emphasis is placed on the mechanisms involved with the maintenance of normal function.

5-ZOO 301. Principles of Animal Behavior. (4). (3 lecture, 3 laboratory.) Prerequisite, BIO 103. An introduction to the study of animal behaviors. With emphasis on ethology and the ecological significance of behaviors.

5-ZOO 304. Ornithology. (4). (3 lecture, 2 laboratory.) In this course classroom, museum, and field projects are concerned with the habits, habitats, life histories, migration activities, behavior patterns, and economic importance of birds. Students will have an opportunity to learn to identify birds in the field. Field work required. Students must furnish binoculars.

5-ZOO 316. Entomology. (5). (3 lecture, 4 laboratory.) Prerequisites, BIO 101, 103. The study of the principal orders of insects. Specimens are collected locally and prepared by the student for classification and study. The role of insects as vectors in transmission of diseases and some control measures are considered in the latter parts of the course.

5-ZOO 320. Invertebrate Zoology. (5). (3 lecture, 4 laboratory.) A general study of the invertebrate phyla, with a phylogenetic approach. Form, function and evolutionary relationships are stressed. Examples of each group are studied in the laboratory, using live specimens whenever possible. The insects and parasites are not emphasized.

5-ZOO 340. Animal Ecology. (5). (3 lecture, 6 laboratory.) Prerequisites, BIO 101, 102, 103. The study of structure and function of ecosystems. Emphasis will be placed on totality or patterns of relations between organisms including man with their environment. Field trips required.

5-ZOO 351. Medical Pharmacology. (4). (3 lecture, 3 laboratory.) Prerequisites, BIO 103 or ZOO 105, ZOO 121 or ZOO 428, ZOO 250, CHEM 130. A detailed study of the principles underlying absorption, distribution, metabolism and excretion of drugs. Special emphasis will be given to the interaction between drugs and living organisms.

5-ZOO 412. General Parasitology. (5). (3 lecture, 4 laboratory.) Prerequisites, BIO 101, 103. A study of the symbiotic relationships of parasitism as exemplified by typical parasites of man, domesticated and wild animals. Life cycles, pathology, systematics, and host-parasite relationships are stressed.

5-ZOO 427. Vertebrate Embryology. (5). (3 lecture, 4 laboratory.) Prerequisite, BIO 103. A study of the fundamental principles of embryology and developmental anatomy. Development from the zygote through the fetal stage will be considered. Serial sections of chick and pig are used to illustrate the developmental processes discussed in lecture.

5-ZOO 428. Comparative Vertebrate Anatomy. (5). (3 lecture, 6 laboratory.) Prerequisite, BIO 103. A detailed study of the anatomical systems of the vertebrates. The student is expected to make careful dissections of selected vertebrate specimens used for laboratory study.

5-ZOO 441. Faunistics. (5). (3 lecture, 6 laboratory.) Prerequisites, BIO 101, 103. An advanced taxonomy and ecological survey of the local fauna of Colorado with special emphasis on amphibians, reptiles, and mammals. This will include field trips, collection, and classification of the local fauna, and a study of the habits, habitats, and life histories of the local species under the ecological conditions that govern their distribution. Collecting permits are needed.

BOARD OF TRUSTEES 1975-76

GERALD A. CAPLAN, Boulder (1973-1979)*

Chairman

JEAN K. BAIN, Denver (1973-1977)

Vice Chairman

HARLAN BRYANT, Gunnison (1973-1979)

RICHARD M. DAVIS, Denver (1973-1977)

EDDIE LOPEZ, Alamosa (1973-1979)

ALISON ROBINSON, Lafayette (1975-1981)

FLORENCE WINOGRAD, Greeley (1975-1981)

*The first figure in parentheses shows the date of the first appointment, the second figure the date when the present term expires.

J. GILBERT HAUSE, Secretary

ALVIN E. BARNHART, Treasurer

GENERAL ADMINISTRATION

President	Richard R. Bond
Assistant to the President	Jerald B. Johnson
Special Assistant to the President for Equal Opportunity	Juan Trujillo
Vice President for Academic Administration	Frank P. Lakin
Assistant Vice President for Academic Administration	Gilbert D. Roman
Assistant Vice President for Academic Administration and Director of Academic Research	Duane E. Henderson
Coordinator of Academic Services	Kent Stauffer
Dean, School of the Arts	William R. Erwin, Jr.
Dean, College of Arts and Sciences	Robert O. Schulze
Associate Dean	John A. Beel
Dean, School of Business	Ramon P. Heimerl
Dean, College of Education	Bruce W. Broderius
Associate Dean	Richard Bear
Associate Dean	Robert L. Johnson
Director of Laboratory School	Kenneth G. Frisbie
Director, Bureau of Research Services	Donald W. Chaloupka
Dean, School of Special Education and Rehabilitation	Daniel C. McAlees
Associate Dean	Willard E. Jones
Dean, School of Health, Physical Education and Recreation	Robert A. Montgomery
Dean, School of Music	James E. Miller
Dean, School of Nursing	Phyllis Drennan
Dean, Graduate School	Arthur R. Reynolds
Assistant Dean	George Leach
Acting Director of Library Services	Gabor Kovacs
Director, Computer and Data Processing Center	Donald L. Myers
Director, Honors Program	Forrest W. Freese
Chairman, Division of Aerospace Studies	Neil H. Keddington
Associate Vice President of the University and Dean of Academic Development and Evaluation	Barbara H. Mickey
Dean, School of Educational Change and Development	Donald M. Luketich
Dean of Outreach Education	Robert O. Singer
Director, Center for Special and Advanced Programs	Richard J. Wood
Director of International Education	George H. Brooks
Director of Vocational Education	Robert F. Barnes

Director, Sponsored Programs	Helen Lundstrom
Associate Vice President of the University and Dean of Student Services	Theodore M. Nelson
Dean of Students	Gerald Tanner
Associate Dean of Students	James K. Bowen
Associate Dean of Students and Coordinator of Student Services Center	Brangwyn Foote
Assistant Dean of Students	Jean L. Schober
Assistant Dean for Special Services	Ray Romero
Registrar	Charles E. Selden
Director of Admissions	Gary E. Miller
Director of Placement	Warren E. Best
Director of Financial Aids	Mearl M. Kerns, Jr.
Director of Health Services	Wayne H. Ericson
Director of Counseling Center	Bernard C. Kinnick
Director of University Center	George L. Meyers
Director of Housing	Wayne T. Kuncl
Vice President for Administrative Services	Alvin E. Barnhart
Controller	Richard R. Kosht
Personnel Officer	Bruce Matthews
Director, Physical Plant	David Reichert
Director of Public Safety	James E. Wanek
Executive Associate to the President	J. Gilbert Hause
Director, Alumni Relations	Kent Jackson
Director, Intercollegiate Athletics	Virgil Y. Lindahl
Director, University News Service	Eric Lundberg
Director, Publications	Lois Stearns
Director, Sports Information	Gary Morgan

FACULTY 1975-76

WALLACE AAS, Professor of Physics; Chairperson, Department of Physics - B.S., Moorhead State Teachers College; M.A., University of Northern Colorado.

DONALD K. ADAMS, Associate Professor of Education - B.S., Colorado State University; M.A., Ed.D., University of Northern Colorado.

WILLIAM AGAN, Assistant Professor of English - B.A., M.A., San Francisco State College.

GARTH H. ALLEN, Assistant Professor of Business - B.B.A., M.A., J.D., University of Iowa.

MARY L. ALM, Instructor in Library Science, and Coordinator of Acquisitions Service - A.B., University of Colorado; M.A.T., Indiana University; M.L.S., Rosary College.

FRANK W. ANDERS, Assistant Professor of Mathematics - B.S., University of California, Berkeley; M.S., U.S. Naval Post Graduate School.

DARRELL E. ANDERSON, Professor of Psychology; Chairperson, Department of Psychology, Counseling and Guidance - A.B., York College; Ph.D., University of Nebraska.

HUGO A. ANDERSON, JR., Associate Professor of Business; Acting Chairperson, Department of Finance and Insurance - A.B., University of Chicago; M.S., Colorado State University.

JAMES F. ANDERSON, Associate Professor of Economics - Ph.B., University of Wisconsin; M.A., Ph.D., University of Colorado.

MARGARET A. ANDERSON, Instructor in Laboratory School - B.A., University of Northern Colorado.

MARK W. ANDERSON, Instructor in Laboratory School - A.B., M.A., University of Northern Colorado.

VIOLETA S. ANDERSON, B.A., Assistant Professor of College Student Personnel Administration - B.A., York College; M.A. University of Northern Colorado.

PATRICIA A. APPLGATE, Assistant Professor of English - B.A., State College at Iowa; M.A., Colorado State University.

DEAN A. ARNOLD, Professor of History - B.Ed., Eastern Illinois University; M.A., Stanford University; Ph.D., University of Chicago.

WILLIAM R. ARNOLD, Associate Professor of Elementary Education - B.S., Oregon College of Education; M.Ed., Ed.D., University of Oregon.

- KENNETH R. AYER**, Assistant Professor of Anthropology; Chairperson, Department of Anthropology - A.B., San Diego State University; M.A., Stanford University.
- KAREN S. BABICH**, Assistant Professor of Mental Health Nursing - B.S., University of Washington; M.S., Rutgers University.
- ELMER V. BACHENBERG**, Assistant Professor of Library Science; Serial and Special Collection Catalog Librarian - B.A., Peru State College; M.S., University of Illinois.
- SANDRA C. BAIRD**, Instructor in Mental Health Nursing - B.S., M.S., University of Maryland.
- CLIFFORD D. BAKER**, Assistant Professor of Special Education - B.S., Central Missouri State College; M.S., St. Cloud State College; Ed.D., University of Northern Colorado.
- EDWIN D. BAKER**, Professor of Music; Chairperson, Department of Brass and Percussion - B.M., M.M., Indiana University.
- RICHARD F. BALL**, Professor of Art - B.S., State Teachers College, Pennsylvania; M.A., University of Northern Colorado.
- JERRY N. BARHAM**, Professor of Physical Education - B.S., University of Arkansas at Monticello; M.S., Ed.D., Louisiana State University.
- WILLIAM A. BARNARD**, Instructor in Psychology, Counseling and Guidance - B.A., M.A., Western Washington State College.
- ROBERT F. BARNES**, Associate Professor of Vocational Education; Director, Vocational Teacher Education - B.S., Kansas State University; M.S., Ph.D., University of Wisconsin.
- ALVIN E. BARNHART**, Professor of Educational Administration - B.S., Southern Oregon College; M.Ed., University of Oregon; Ed.D., University of Northern Colorado.
- LOREN W. BARTLETT**, Professor of Music; Chairperson, Department of Woodwinds - B.A. in Ed., B.A. in Mus., Eastern Washington State College; M.M.Ed., Oberlin College; Ph.D., University of Iowa.
- PAOLO G. BARUCCHIERI**, Associate Professor of Fine Arts - B.A., Liceo Academia of the Republica de Italia; M.A., University of Northern Colorado; M.A., University of Wisconsin.
- FRANCIS G. BAUER**, Instructor in Men's Physical Education - B.S., M.A., Western State College.
- CHARLES R. BEALL**, Assistant Professor of Business and Vocational Teacher Education - A.B., M.A., Michigan State University.
- RICHARD L. BEAR**, Professor of Psychology, Counseling and Guidance - B.S., Huntington College; M.A., Ball State University; Ed.D., Indiana University.
- JEANNETTE M. BAUDOIN**, Instructor in Medical-Surgical Nursing (Level II) - A.B., State University College of New York; M.S., New York Medical College Graduate School of Nursing.
- JOHN A. BEEL**, Professor of Chemistry - B.S., Montana State College; Ph.D., Iowa State University.
- MARY A. BEHLING**, Professor of Physical Education - B.S., Illinois State Normal University; M.A. University of Northern Colorado; Ph.D., Florida State University.
- JOHN L. BEISEL**, Assistant Professor of Business - B.S., M.B.A., Oklahoma City University.
- THOMAS R. BENICH**, Assistant Professor of Physical Education - B.A., M.A., University of Denver.
- LOIS W. BENNETT**, Assistant Professor of Vocational Teacher Education - A.B., Wichita State University; M.A., Ed.D., University of Northern Colorado.
- WARREN P. BEST**, Associate Professor of College Student Personnel Administration - B.S., Nebraska State Teachers College; M.A., University of Northern Colorado.
- AGNES M. BIEGEL**, Assistant Professor of Medical-Surgical Nursing - B.S.N., Loyola University; M.S.N., Catholic University of America.
- JAMES A. BITTER**, Professor of Special Education - B.A., Marquette University; M.S., University of Wisconsin; Ed.D., University of Northern Colorado.
- MARGARET T. BLAKE**, Associate Professor of Psychology, Counseling and Guidance - B.S. University of Oklahoma; M.S., Ph.D., Iowa State University.
- ROBERT L. BLASI**, Associate Professor of Physical Education - B.S., Colorado State University; M.A., University of Northern Colorado.
- ROBERT L. BLILER**, Assistant Professor of Special Education - B.A., Millikin University; M.S., University of Tennessee; Ed.D., University of Northern Colorado.
- CHARLES T. BLUBAUGH**, Associate Professor of Art - B.F.A., M.A., University of Colorado.
- GEORGE A. BOECK**, Professor of History - B.A., Iowa State Teachers College; M.A., Ph.D., State University of Iowa.

- PAUL E. BOHRER**, Associate Professor of Business - B.S.B.A., M.S., University of North Dakota. C.P.A.
- DAVID N. BOLOCOSKY**, Temporary Assistant Professor of Psychology, Counseling and Guidance - A.B., Clark University; M.S., Nova University.
- RICHARD R. BOND**, Professor of Zoology; President of the University - B.S., Salem College; M.S., West Virginia University; Ph.D., University of Wisconsin.
- JOHN T. BOOKMAN**, Associate Professor of Political Science - B.A., Ph.D., University of Cincinnati.
- WILLIAM W. BOSCH**, Associate Professor of Mathematics - B.S., M.S., North Dakota State University; Ph.D., University of Nebraska.
- ADAH G. BOSSART**, Assistant Professor of Public Health Nursing - B.S., M.S., University of Colorado.
- RICHARD N. BOURASSA**, Assistant Professor of Music - B.M., University of Idaho; M.A., University of Denver.
- JACK A. BOWEN**, Associate Professor of Special Education - A.B., Brigham Young University; B.S., Eastern Oregon College, M.S., Ph.D., University of Utah.
- JAMES K. BOWEN**, Associate Professor of Psychology, Counseling and Guidance - B.S., M.S., in Ed., Kansas State Teachers College; Ed.D., University of Wyoming.
- FRANK BOWLES**, Assistant Professor of English - A.B., Wesleyan University; M.A., University of Northern Colorado.
- D. HAROLD BOWMAN**, Professor of Education; Chairperson, Department of Educational Media - B.S., McPherson College; M.Ed., Ed.D., Wayne State University.
- EUGENE O. BOWSER**, Instructor in University Library; Academic Biblio Librarian - B.S., Kansas State University; M.A., Brandeis University.
- THOMAS E. BOYLE**, Professor of English - A.B., University of Richmond; M.A., Ph.D., University of Illinois.
- MARILYN J. BRADLEY**, Instructor in Community Health Nursing - B.S., University of Delaware; M.S., University of Colorado.
- JOHN M. BRAND III**, Associate Professor of English - A.B., Austin College; B.D., Austin Presbyterian Seminary; Ph.D., Texas Christian University.
- EDWARD N. BRAZEE**, Assistant Professor of Education - A.B., University of New York, Oswego; M.A.T., Colgate University; Ed.D., University of Northern Colorado.
- DOROTHY BRENGARTH-JONES**, Instructor in Sociology - B.S., University of Missouri; M.A., Sacramento State College.
- WANDA E. BREWER**, Associate Professor of English - B.F.A., University of Denver; M.A., Ed.D., University of Northern Colorado.
- CAROLYN K. BRINK**, Instructor in Laboratory School - B.S., South Dakota State University; M.A., University of Northern Colorado.
- BRUCE W. BRODERIUS**, Professor of Education - B.S., St. Cloud State College; M.A., George Washington University; Ed.D., University of Northern Colorado.
- GEORGE H. BROOKS**, Assistant Professor of Social Studies - B.A., Sterling College, Kansas; M.Ed., University of Kansas; Ed.D., University of Northern Colorado.
- DON A. BROWN**, Professor of Education - B.S., M.Ed., Ed.D., University of Oregon.
- GLENDA J. BROWN**, Associate Professor of French; Chairperson, Department of Foreign Languages - B.A., University of Oregon; M.A., Ph.D., University of Illinois.
- JOHN D. BROWN**, Assistant Professor of Business - B.A., M.Ed., Colorado State University; C.L.U.
- LOIS N. BROWN**, Associate Professor of Library Science; Assistant Reference Librarian - A.B., University of Northern Colorado; M.A., University of Denver.
- PHILIP G. BROWN**, Temporary Instructor in Child Development - A.B., University of Utah; M.S. Brigham Young University.
- MARILYN H. BROWNE**, Instructor in Maternity Nursing - B.S., University of Iowa; M.S., University of Colorado.
- BETTY H. BUMGARNER**, Temporary Assistant Professor of Health Education - B.A., Nebraska State College; M.A., University of Northern Colorado.
- GERALD N. BURNS**, Associate Professor of Education - B.A., M.A., University of Northern Colorado; Ed.D., University of Denver.

MARILYN M. BURNS, Associate Professor of Home Economics; Chairperson, Department of Home Economics - B.S., University of Colorado; M.A. University of Northern Colorado.

ARNOLD H. BURRON, Associate Professor of Elementary Education - B.S., Concordia Teachers College; M.A., Ed.D., Ball State University.

DOUGLAS S. BURRON, Associate Professor of Elementary Education; Assistant Chairperson, Department of Elementary Education and Reading - B.S., Concordia Teachers College; M.S., Winona State College; M.A., Ed.D., University of Northern Colorado.

WARREN R. BUSS, Professor of Botany - B.S., M.S., Brigham Young University; Ph.D., Iowa State University.

GREGORY R. BUTTON, Instructor in Laboratory School - A.B., M.A., University of Northern Colorado.

BENJAMIN F. BYERLY, Professor of History - B.A., Kansas State University; M.A., Ph.D., University of Illinois.

ARMOND-DIDIER CADOL, Instructor in French - A.B., M.A., San Diego State University.

RONALD S. CAMP, Assistant Professor of Television (Communication) - B.A., M.A., University of Missouri.

CYNTHIA CARLISLE, Instructor in Physical Education - A.B., University of Northern Iowa; M.A., Southwestern State College.

SHIRLEY M. CARRIAR, Professor of English - B.Ed., Superior State College; M.A., University of Wisconsin; Ed.D., University of Northern Colorado.

THOMAS B. CARTER II, Temporary Instructor in Fine Arts - B.F.A., M.A., University of Colorado.

ANTONIO L. CARVAJAL, Assistant Professor of Special Education - B.S., Sul Ross State University; M.S., East Texas State University; Ed.D., University of Northern Colorado.

TIMOTHY D. CAVANAGH, Professor of Mathematics - B.A., M.A., Sacramento State College; Ph.D., Ohio State University.

DONALD W. CHALOUPKA, Professor of Education - B.S., University of Nebraska; M.A., Ed.D., University of Northern Colorado.

HARALD P. CHRISTENSEN, Professor of Political Science - B.A., M.A., Ph.D., State University of Iowa.

DOROTHE T. CLARK, Assistant Professor of Black Studies; Chairperson, Department of Black Studies - B.Ed., Chicago Teachers College; M.S.T., University of Chicago.

JAMES R. CLARK, Assistant Professor of Aerospace Studies - Lt. Col., U.S. Air Force; B.S., M.S., University of Texas.

AMOS L. CLAYBAUGH, Professor of Elementary Education - B.E., Wisconsin State College; M.S., University of Wisconsin; Ed.D., University of Northern Colorado.

FORD W. CLEERE, Associate Professor of Sociology - B.A., M.A., Los Angeles State College; Ph.D., University of Colorado.

SUSAN J. CLEVENGER, Professor of Psychology, Counseling and Guidance - A.B., Ball State Teachers College; M.A., San Francisco State College; Ed.D., Stanford University.

JOSEPH B. CLITHERO, Associate Professor of Business; Chairperson, Department of Marketing - B.S., M.S., Colorado State University.

MARSHALL S. CLOUGH, Assistant Professor of History - A.B., Columbia University; M.A., Stanford University.

MONTE D. CLUTE, Assistant Professor of Education - B.A., Albion College; M.Ed., Ed.D., Wayne State University.

L. GLEN COBB, Associate Professor of Earth Science - B.A., Louisiana State University; M.S., Ph.D., Texas A&M University.

LADD L. COCHRANE, Assistant Professor of Education - A.B., Hastings College; M.A., Western Michigan State University; Ph.D., Arizona State University.

CAROLYN A. CODY, Associate Professor of Physical Education - B.S., North Texas State University; M.A., University of Northern Colorado.

JOHN P. COGLEY, Instructor in Recreation - B.S., Iowa State University; M.A., University of Iowa.

DAVID B. COLE, Assistant Professor of Geography - A.B., University of Texas, Austin; M.A., Syracuse University; Ph.D., University of Colorado.

CHARLES O. COLLINS, Assistant Professor of Geography - B.A., M.A., University of Northern Colorado; Ph.D., University of Kansas.

- LINDA COMER**, Instructor in Nursing of Children - B.S., University of Illinois; M.S., University of Colorado.
- JAMES H. CONN**, Instructor in Physical Education - A.B., University of Northern Colorado; M.S., Eastern Washington State College.
- BRYAN E. M. COOKE**, Associate Professor of Health Education; Chairperson, Department of Health and Safety Education - B.A., Aligarh Muslim University; M.S., Ph.D., University of Illinois.
- ELLIS P. COPELAND**, Temporary Assistant Professor of Psychology, Counseling and Guidance - A.B., Ph.D., University of Texas, Austin.
- R. EVAN COPLEY**, Associate Professor of Music - B.M., Denver University; M.M., Ph.D., Michigan State University.
- CHARMAINE COPPOM**, Instructor in Music - B.M., Hastings College; M.A., University of Missouri.
- FRANKLIN D. CORDELL**, Professor of Education; Chairperson, Department of Foundations of Education - B.A., M.A., Ph.D., Michigan State University.
- WILLIAM S. CORDINER**, Associate Professor of Fine Arts - B.A., M.A., University of Wyoming.
- JOSE E. CORDOVA**, Assistant Professor of Elementary Education; Director of Bilingual Bicultural Education - B.A., Chico State College; M.A., University of New Mexico.
- ALFRED E. CORNEBISE**, Professor of History - A.B., Wayland College; M.A., Texas Technological College; Ph.D., University of North Carolina.
- MICHAEL A. CORONEL**, Instructor of Fine Arts - A.B., California State University, Northridge; M.A., University of California, Santa Barbara.
- VIRGINIA G. COSTELLO**, Professor of Library Science; Assistant Director of University Library, Collections Development - A.B., University of Nebraska; B.S. in Library Science, Columbia University; M.A., University of Northern Colorado.
- JANE C. COX**, Assistant Professor of Education - B.S., Johns Hopkins; M.A., Ed.D., University of Northern Colorado.
- RICHARD J. CRAWFORD**, Professor of Communication; Chairperson, Department of Communication - B.S., M.A., Southern Illinois University; Ph.D., University of Oklahoma.
- GEORGE L. CROCKETT**, Professor of Science Education - B.S., Utah State University; M.S., Oregon State University; Ed.D., Utah State University.
- JOHN H. CRONIN**, Associate Professor of Special Education - B.A., Nebraska State Teachers College; M.A., Ed.D., University of Northern Colorado.
- NEAL M. CROSS**, Professor of English - B.A., M.A., University of Northern Colorado; Ed.D., Stanford University.
- CARL E. CROSSWHITE**, Assistant Professor of Business - A.B., California State University, Northridge; M.A., University of California, Los Angeles; Ph.D., University of Northern Colorado.
- VINCENT A. CYPHERS**, Professor of Education; Coordinator of Outdoor Education - B.S., Pacific University; M.A., Ed.D., University of Northern Colorado.
- DONNA CYPRET**, Assistant Professor of Music - B.M.E., M.M.E., Wichita State University.
- JOHN A. DAMGAARD, JR.**, Professor of Business - B.A., Colorado College; M.B.A., University of Michigan; Ed.D., University of Utah.
- GUY D'AURELIO, JR.** Assistant Professor of Music - B.S., M.Ed., Kent State University; Ph.D., University of Wisconsin.
- RAYMOND L. DeBOER**, Professor of Communication - B.A., Augustana College; M.A., Ed.D., University of Denver.
- WANDA A. DeBOER**, Assistant Professor of Business - A.B., Friends University; M.A., University of Northern Colorado.
- FRANCIS W. DENNING**, Instructor in Anthropology - B.A., M.A., University of Northern Colorado.
- JAMES A. DeRUITER**, Assistant Professor of Special Education - A.B., Calvin College; M.A., Western Michigan University; Ph.D., University of Arizona.
- SUCHITRA DHAR**, Assistant Professor of Philosophy - A.B., M.A., Calcutta University; M.A., University of California, Berkeley.
- CAROLL, J. DIERKS**, Assistant Professor of Business and Vocational Teacher Education - A.B., University of Denver; M.Bus.Ed., University of Colorado.

- JOHN L. DIETZ**, Associate Professor of Geography - B.S., University of Nebraska; M.A., University of Northern Colorado; Ph.D., Syracuse University.
- RICHARD D. DIETZ**, Associate Professor of Earth Science - B.S., California Institute of Technology; Ph.D., University of Colorado.
- ELSIE DONNEL**, Assistant Professor of Business and Vocational Teacher Education - A.B., Adams State College; M.A., University of Wyoming.
- KENNETH D. DOUGLAS**, Assistant Professor of Business - B.S., Southern Colorado State College; M.S.B.A., University of Denver; Ph.D., University of Northern Colorado.
- JAMES F. DOYLE**, Assistant Professor of English - A.B., University of Wisconsin; M.F.A., University of Iowa.
- PHYLLIS D. DRENNAN**, Professor of Nursing - B.S., University of Denver; M.S., University of Colorado; Ph.D., University of Iowa.
- DIANE C. DRIGOT**, Assistant Professor of Environmental Studies - A.B., Columbia University; M.S., Ph.D., University of Michigan.
- GEORGE DUCKETT**, Instructor in Educational Media - B.S., M.S., University of Northern Colorado.
- WILLIAM L. DUFF, JR.**, Professor of Business; Adjunct Professor of Research and Statistical Methodology - B.A., San Francisco State University; M.Sc., National Economics Institute, University of Stockholm; Ph.D., University of California at Los Angeles.
- DALE DYKINS**, Professor of Music; Chairperson, Department of Theory and Composition - B.M., M.M., College of Music, Cincinnati.
- RONALD K. EDGERTON**, Assistant Professor of History - A.B., DePauw University; M.A., University of Massachusetts; Ph.D., University of Michigan.
- NORMA E. EGENSEG**, Assistant Professor of Home Economics - B.S., Stout Institute; M.A., University of Northern Colorado.
- ROBERT EHLE**, Associate Professor of Music - B.M., Eastman School of Music; M.M., Ph.D., North Texas State University.
- GARTH M. ELDREDGE**, Professor of Special Education - B.A., M.A., Ph.D., University of Utah.
- JAMES G. ELLINGSON**, Associate Professor of Physics - B.Sc., M.Sc., University of Nebraska; M.S., University of Colorado.
- DONALD D. ELLIOTT**, Professor of Mathematics; Chairperson, Department of Mathematics B.S. in Chem, B.S., Bus, M.S., Ph.D., University of Colorado.
- ROBERT D. ELTON**, Instructor in Business - B.S., Dakota State College; M.A., University of South Dakota.
- RICHARD N. EMERSON**, Instructor in Laboratory School - A.B., M.A., University of Northern Colorado.
- BARBARA A. EMMERT**, Instructor in Laboratory School - A.B., M.A., University of Northern Colorado.
- KATHLEEN Y. ENSZ**, Assistant Professor of French - A.B., Pomona College; M.A., University of California, Berkeley.
- CARL O. ERICKSON**, Associate Professor of Education - A.B., M.A., University of Northern Colorado; Ed.D., Illinois State University.
- WILLIAM R. ERWIN, JR.**, Professor of Industrial Arts - B.S., M.S., North Texas State University; Ed.D., University of Houston.
- KENNETH G. EVANS**, Professor of Music - B.A., M.A., University of Northern Colorado; M.F.A., Ph.D., State University of Iowa.
- MARAGARET E. EVERETT**, Professor of Physical Education; Chairperson, Department of Physical Education for Women - B.S., University of Wisconsin; M.A., Ph.D., State University of Iowa.
- WILLARD L. FADNER**, Assistant Professor of Physics - B.S., Purdue University; M.S., University of Wisconsin; Ph.D., University of Colorado.
- GEORGE E. FAY**, Professor of Anthropology - B.A., University of Missouri; M.A., University of Michigan; Ph.D., Interamerican University.
- GEORGE N. FEBINGER**, Associate Professor of Education - B.A., M.A., University of Denver; Ed.D., University of Colorado.
- JOHN R. FERRARO**, Assistant Professor of Special Education - A.B., Jersey City State College; M.A., San Francisco State College.

- EDGAR E. FIELDER**, Professor of Education - B.A., Northwestern State College; M.A., Phillips University; Ed.D., University of Northern Colorado.
- CLARK L. FIELDS**, Professor of Chemistry - B.A., Pasadena College; M.S., Ph.D., State University of Iowa.
- M. FRANCES FINNEGAN**, Associate Professor of English - B.A., Loretto Heights; M.A., University of Colorado; Ph.D., University of Denver.
- FOREST N. FISCH**, Professor of Mathematics - B.A., M.A., University of Northern Colorado.
- JAMES P. FITZGERALD**, Assistant Professor of Biology - B.S., University of Connecticut; Ph.D., Colorado State University.
- MICHAEL W. FLANNIGAN**, Associate Professor of Psychology, Counseling and Guidance - B.A., University of San Diego; M.S., Illinois State University; Ed.D., University of Northern Colorado.
- CHARLES E. FLETCHER**, Assistant Professor of Business - B.S., University of Alabama; M.A., New Mexico Highlands University.
- WILLIAM M. FOLGER**, Assistant Professor of Journalism - B.S., University of Illinois; M.S., Syracuse University.
- BRANGWYN FOOTE**, Assistant Professor of College Student Personnel Administration - B.A., University of Arizona; M.A., Ohio State University.
- BRENDA M. FOOTH**, Instructor in Laboratory School - A.B., Gustavus Adolphus College; M.A., University of Northern Colorado.
- RICHARD FOSTER**, Assistant Professor of Geography - A.B., University of California, Berkeley; M.A., California State University; Ph.D., University of California, Berkeley.
- AUGUSTA M. FOX**, Professor of Educational Research - B.S., M.Ed., Texas A&M University; Ed.D., North Texas State University.
- BARBARA M. FRANCIS**, Assistant Professor of Geography - A.B., College of St. Teresa; M.A.T., St. Louis University; Ph.D., University of Cincinnati.
- CYNTHIA R. FREASE**, Professor of English - B.A., University of Kansas; M.A., University of Minnesota; Ed.D., University of Northern Colorado.
- FORREST W. FREASE**, Professor of English; Chairperson, Department of English - A.B., B.S.Ed., Kansas State Teachers College, Emporia; M.A., University of Kansas; Ph.D., University of Pennsylvania.
- SHIRLEY M. FREEBURN**, Instructor in Nursing - B.S., University of Colorado; M.S., Adams State College; M.A., Augustana College.
- ARMANDO FREYRE**, Assistant Professor of Spanish - B.Lit., B.S., Instituto de la Habana; M.A., University of Denver; LL.D., Universidad de la Habana.
- ROSEMARY FRI**, Assistant Professor of Physical Education - B.S., University of California, Los Angeles; M.A., University of Northern Colorado.
- KENNETH G. FRISBIE**, Professor of Education - B.S., M.S., Kansas State College; Ed.D., University of Kansas.
- RICHARD K. FRY**, Professor of Physics - B.S., M.S., Ph.D., Kansas State University.
- JOHN D. FUELBERTH**, Associate Professor of Mathematics - A.B., Wayne State College; M.A., Ph.D., University of Nebraska.
- SAMUEL GALLEGOS, JR.**, Temporary Assistant Professor of Psychology, Counseling and Guidance - A.B., Adams State College; M.A., Ed.D., University of Northern Colorado.
- JOHN K. GAPTER**, Professor of Botany - B.S., M.S., Ph.D., Colorado State University.
- ANN J. GARRISON**, Assistant Professor of Economics - B.A., M.A., University of Northern Colorado.
- R. BRUCE GARRISON**, Assistant Professor of Business - B.S., M.Ed., Central State University; Ph.D., University of Northern Colorado.
- DENNIS A. GAY**, Associate Professor of Special Education - B.S., Oregon State University; M.S., Ph.D., University of Wisconsin.
- BILL R. GEARHEART**, Professor of Special Education - B.A., Friends University; M.Ed., Wichita State University; Ed.D., University of Northern Colorado.
- ANDREW H. GIBBONS**, Assistant Professor of Educational Media - B.S., M.E., Utah State University; M.L.S., East Carolina University.
- GALE R. GIEBLER**, Associate Professor of Student Personnel-Counseling - A.B., M.S., Fort Hays Kansas State College; Ph.D., Colorado State University.

- JOHN S. GIRAULT**, Professor of Theatre Arts - B.A., University of Denver; M.A., University of Northern Colorado; Ph.D., University of Denver.
- NICHOLAS A. GLASER**, Professor of Elementary Education; Director, Reading Center - B.A., B.Ed., Pacific Lutheran University; M.Ed., Ed.D., University of Oregon.
- DAVID GLASSMAN**, Associate Professor of Education - B.Ed., M.A., University of Toledo.
- DEBBY F. GOES**, Associate Professor of Music - B.M.E., Fort Hays Kansas State College; M.A.T., Colorado State University.
- ANN GOFF**, Associate Professor of Psychology, Counseling and Guidance - B.S., University of Illinois; M.S., Ph.D., Southern Illinois University.
- MARILYN L. GOOD**, Assistant Professor of Child Development - B.S., Colorado State University; M.S., Oregon State University.
- JOHN J. GOTTKO, JR.**, Assistant Professor of Business - A.B., M.B.A., Michigan State University.
- JOYCE K. GRABLE**, Instructor in Home Economics - A.B., M.A., University of Northern Colorado.
- DANIEL GRAHAM**, Associate Professor of Music - A.B., University of Minnesota; M.M., Yale University.
- ROBERT S. GRAHAM**, Professor of French - B.A., Queen's University; M.A., Ph.D., University of Colorado.
- LEROY A. GREEN**, Associate Professor of Educational Media - A.B., Wheaton College; M.A., University of Oregon; Ed.D., University of Northern Colorado.
- ARLENE GREER**, Assistant Professor of Library Science; Coordinator, Map Service; Coordinator, Reference Service - B.A., M.L.S., University of California.
- JAMES B. GREER**, Associate Professor of Library Science; Catalog Librarian - B.A., Texas Christian University; M.A., University of Denver.
- GARY W. GRONBERG**, Assistant Professor of Elementary Education - Ph.B., M.A., University of North Dakota.
- THOMAS GROOM**, Assistant Professor of Social Studies - B.A., Eastern New Mexico University, M.A., University of Northern Colorado.
- LELLOINE GUNNING**, Associate Professor of Elementary Education - B.S., Southwestern State College; M.A., Eastern New Mexico University.
- DAVID M. HAAS**, Assistant Professor of Fine Arts - A.B., West Virginia University; M.A., University of Colorado.
- JAY K. HACKETT**, Assistant Professor of Earth Science - B.S., University of Nebraska; M.N.S., Arizona State University; Ed.D., University of Northern Colorado.
- MABEL B. HALLAN**, Assistant Professor of Maternity Nursing - B.A., St. Olaf College; M.S., Indiana University.
- MARVIN H. HALLDORSON**, Associate Professor of Business; Coordinator of Graduate Studies - B.S.B.A., M.B.A., University of Denver; Ph.D., University of Northern Colorado.
- ROBERT G. HAMERLY**, Professor of Physics - B.S., Western Illinois State College; M.S., University of Illinois; Ph.D., Colorado State University.
- ROBERT G. HAMMOND**, Professor of Industrial Arts; Chairperson, Department of Industrial Arts - B.Ed., Illinois State University; M.A., University of Northern Colorado; Ed.D., University of Missouri.
- BEATRICE E. HANSEN**, Assistant Professor of Business - B.S., Northwestern Missouri State Teachers College; M.A., Teachers College, Columbia University.
- RUTH M. HARBOE**, Assistant Professor of Nursing - B.S., Carnegie-Mellon Institute; M.S., University of Denver.
- MARJORIE L. HARKNESS**, Professor of Elementary Education - B.S., University of Minnesota; M.A., Ed.D., University of Northern Colorado.
- WILLIAM E. HARMON**, Assistant Professor of Botany - A.B., M.A., Ph.D., University of Missouri.
- ROBERT C. HARRIS**, Associate Professor of Business - B.A., M.A., University of Northern Iowa.
- JOHN W. HARRISON**, Professor of English - B.S., Colorado Institute of Technology; M.A., University of Denver; Ph.D., University of Colorado.
- LARRY R. HARRISON**, Instructor in Health Education - B.S., Colorado State University; M.S., University of Texas.

- JAMES D. HAUG**, Assistant Professor of Anthropology - A.B., M.A., University of Colorado.
- LINDA E. HAUGHTON**, Assistant Professor of Spanish - A.B., University of Texas; M.A., Ph.D., University of Arizona.
- ERROL HAUN**, Instructor in Music - B.M., University of Kansas; M.M., University of Illinois.
- J. GILBERT HAUSE**, Professor of College Student Personnel Administration - B.A., M.A., University of Northern Colorado; Ed.D., University of Colorado.
- JAMES P. HAWKINS**, Assistant Professor of Laboratory School - B.A., Ed.M., Adams State College; Ed.D., University of Northern Colorado.
- RUSSELL D. HEATH**, Instructor in Laboratory School - A.B., University of Colorado.
- MARY K. HECKMAN**, Assistant Professor of Medical-Surgical Nursing - B.S., M.S., University of Colorado.
- JEAN A. HEDBERG**, Assistant Professor of Physical Education - B.S., Wisconsin State University; M.A., University of Northern Colorado.
- MARGARET E. HEIMBROOK** Assistant Professor of Zoology - B.S., Muskingum College; M.A., Lehigh University; M.S., University of Wisconsin; Ph.D., Colorado State University.
- BEATRICE B. HEIMERL**, Professor of Research and Statistical Methodology - B.A., St. Cloud State College; M.A., University of Minnesota; Ed.D., University of Northern Colorado.
- RAMON P. HEIMERL**, Professor of Business - B.S., B.Ed., St. Cloud State College; M.A., Ph.D., University of Minnesota.
- ROBERT L. HEINY**, Associate Professor of Mathematics - B.S., Colorado College; M.S., Ph.D., Colorado State University.
- WILLIAM C. HEISS, JR.**, Associate Professor of Health and Physical Education - B.S., University of Illinois; M.A., Columbia University.
- LYNNE R. HEMINGWAY**, Assistant Professor of Theatre Arts - A.B., M.A., University of California.
- DUANE E. HENDERSON**, Associate Professor of Psychology - B.S., M.Ed., Colorado State University; Ed.D., University of Northern Colorado.
- PEGGY E. HENRY**, Associate Professor of Elementary Education - B.S., Northwest Missouri State College; M.A., University of Northern Colorado; Ph.D., University of Iowa.
- JACK HERRICK**, Instructor in Music - B.M., M.A., University of Northern Colorado.
- ROBERT A. HESS**, Assistant Professor of Communication - A.B., Southern Methodist University; M.A., West Texas State University.
- STEPHEN C. HEY**, Instructor in Sociology - A.B., Western Illinois University; M.A., University of Northern Colorado.
- MICHAEL J. HIGGINS**, Assistant Professor of Anthropology - A.B., University of Northern Colorado; M.A., Ph.D., University of Illinois.
- JOSEPH E. HIMMEL**, Professor of Music - B.A., North Central College; M.M., Northwestern University.
- PAUL F. HODAPP**, Assistant Professor of Philosophy - A.B., Western Michigan University; Ph.D., Washington University.
- SAM L. HOFER**, Associate Professor of Library Science; Head, Catalog Services - B.S., M.S., Kansas State Teachers College; M.A., University of Denver.
- D. LYNN HOFFMAN**, Assistant Professor of Business - B.S., Cornell College; M.B.A., University of Iowa.
- MARIA L. HOFFMAN**, Assistant Professor of Spanish - A.B., University of Northern Colorado; M.A., University of Iowa.
- KENNETH E. HOGAN**, Professor of Education; Chairperson, Department of Higher Education - B.A., Ottawa University; M.A., Ed.D., University of Northern Colorado.
- DONALD L. HOLLEY**, Professor of Communication - B.Ed., Illinois State Normal; M.A., University of Illinois; Ed.D., University of Northern Colorado.
- EVELYN L. HOLMBOE**, Assistant Professor of Business - B.S., M.A., Ph.D., University of Minnesota.
- KENNETH D. HOPKINS**, Assistant Professor of Geology - B.A., University of Minnesota; M.S., University of Washington.
- SAMUEL R. HOUSTON**, Professor of Research and Statistical Methodology; Chairperson, Department of Research and Statistical Methodology - B.A. University of California at Los Angeles; M.A., California State University at Los Angeles; M.S., University of Oregon; Ph.D., University of Northern Colorado; Postdoctoral Fellow (Biometry), Yale University.

- CHRISTY A. HOWARD**, Instructor in Women's Physical Education - A.B., Western Washington State College; M.A., University of Oregon.
- JENEAN L. HUCKABY**, Instructor in Laboratory School - B.S., Ball State University.
- CHESTER C. HUFF**, Professor of English - B.S., Indiana University; M.A., DePaul University; Ph.D., University of Colorado.
- RAYMOND H. HULL**, Associate Professor of Special Education; Chairperson, Department of Communications Disorders - A.B., McPherson College; M.A., University of South Dakota; Ph.D., University of Denver.
- JOAN T. HURLOCK**, Assistant Professor of Maternity Nursing - B.S., The John Hopkins University; M.S., University of Maryland.
- KENT L. JACKSON**, Instructor in Education - A.B., M.A., University of Northern Colorado.
- MICHAEL L. JACOBS**, Associate Professor of Education - A.B., M.A., Ed.D., University of Rochester.
- LARRY A. JAMES**, Instructor in Recreation - B.S., M.A., University of Northern Colorado.
- MARLYNN R. JAMES**, Professor of Chemistry - B.S., M.S., Brigham Young University; Ph.D., University of Utah.
- ROBERT S. JAMES**, Associate Professor of Music - B.M.E., M.M., Northwestern University; Ed.D., University of Northern Colorado.
- WILLIAM R. JAMIESON**, Assistant Professor of Music - B.A., M.A., University of Northern Colorado.
- DAVID L. JELDEN**, Professor of Industrial Arts - B.A., Nebraska State Teachers College; M.A., University of Northern Colorado; Ed.D., University of Missouri.
- KAREN JENNISON**, Assistant Professor of Sociology - A.B., University of Kansas; M.A., Washington University; Ph.D., Washington State University.
- BETTY E. JOHNSON**, Instructor in Fine Arts - B.S., Eastern Montana College; M.A., University of Wyoming.
- DANA F. JOHNSON**, Professor of Fine Arts - B.F.A., Ed.D., University of Kansas.
- DORA A. JOHNSON**, Instructor in Vocational Teacher Education - A.B., Colorado State University; M.A., University of Northern Colorado.
- F. MORRIS JOHNSON**, Professor of Industrial Arts - B.A., M.A., University of Northern Colorado; Ed.D., University of Denver.
- J.M. JOHNSON**, Associate Professor of Education - B.A., University of Northern Colorado; M.A., Ed.D., University of Denver.
- ROBERT L. JOHNSON**, Professor of Mathematics - B.A., M.A., University of Northern Colorado; M.S., University of Illinois; Ph.D., University of Colorado.
- XAN S. JOHNSON**, Assistant Professor of Theatre Arts - A.B., University of Wisconsin, Whitewater; M.A., University of Nebraska.
- H. AUDRIE JOHNSTON**, Associate Professor of Mathematics - B.A., Kansas Wesleyan University; M.A., Fort Hays State College.
- DOROTHY C. JONES**, Professor of English - B.A., M.A., Wayne State University; Ph.D., Colorado University.
- WILLARD G. JONES**, Professor of Special Education - B.A., M.S., Kansas State Teachers College; Ed.D., University of Wyoming.
- WILLIAM A. JONES**, Instructor in University Library: Academic Biblio Librarian - A.B., Hope College; M.A., University of Wisconsin; M.L.S., Catholic University.
- RHONDA E. KALEY**, Instructor in Special Education - B.S., M.S., Purdue University.
- ZAHİ S. KAMAL**, Associate Professor of Sociology - B.S., M.S., Colorado State University; Ph.D., Washington State University.
- DAVID L. KAPPAN**, Assistant Professor of Special Education - B.S., Northern State College; M.A., Western Michigan University.
- GERALD E. KARRE**, Assistant Professor of Instrumental Music - B.A., M.A., University of Northern Colorado.
- IDAHLINN KARRE**, Assistant Professor of Laboratory School - A.B., M.A., University of Northern Colorado; Ph.D., University of Colorado.
- EDWARD A. KEARNS**, Associate Professor of English - B.A., M.A., University of Arizona.
- KEVIN C. KEARNS**, Associate Professor of Geography - B.S., Washington University; M.A., Ph.D., St. Louis University.

NEIL H. KEDDINGTON, Professor of Aerospace Studies - Col., U.S. Air Force; B.S., University of Washington; M.B.A., Auburn University.

LOUISE J. KELLER, Professor of Vocational Teacher Education - B.S., Kansas State College, Pittsburg; M.S., Kansas State Teachers College, Emporia; Ed.D., Montana State University.

EDWARD J. KELLY, Professor of Elementary Education - B.A., Defiance College; M.A., Ph.D., State University of Iowa.

CALVIN E. KENNEDY, Professor of Business - B.S., Southeastern Oklahoma State College; M.S., Oklahoma State University; Ph.D., University of Nebraska; C.P.A.

FRANK E. KEPPELER, Associate Professor of German - B.S., University of Illinois; M.A., University of Nebraska.

DAVID W. KETTEL, Assistant Professor of Anthropology - A.B., M.A., University of Toronto; Ph.D., University of Illinois.

RITA B. KIEFER, Assistant Professor of English - A.B., Notre Dame College; M.A., University of Notre Dame.

RALPH R. KING, Professor of Music - B.A., M.A., University of Northern Colorado; Ed.D., University of Denver.

BERNARD C. KINNICK, Professor of Psychology and Counseling - B.A., St. John's University; M.A., University of North Dakota; Ed.D., Auburn University.

RAY B. KNAPP, Associate Professor of Political Science - A.B., Los Angeles State College; Ph.D., University of Southern California at Los Angeles.

ALEXANDER W. KNOTT, Associate Professor of History - A.B., M.A., Ph.D., University of Colorado.

WILLIAM G. KOCH, Professor of Chemistry - B.S., University of Notre Dame; M.A., Montana State University; Ph.D., University of Illinois.

BETTY J. KOLSTOE, Associate Professor of Special Education - B.A., University of Northern Colorado; M.A., University of Denver; Ed.D., University of Northern Colorado.

OLIVER P. KOLSTOE, Professor of Special Education; Chairperson, Department of Mental Retardation - A.B., State Teachers College, North Dakota; M.S., University of North Dakota; Ph.D., University of Iowa.

EUGENE D. KOPLITZ, Professor of Psychology, Counseling and Guidance - B.S., Wisconsin State University; M.S., Ph.D., University of Wisconsin.

GABOR KOVACS, Associate Professor of Library Science; Assistant Director for Public Services - B.A., Air Force Academy, Hungary; M.A., Western Michigan University.

ROGER A. KOVAR, Associate Professor of Chemistry - B.S., Doane College; Ph.D., University of Wyoming.

CAROL J. KOZISEK, Assistant Professor of Special Education - B.S., Alverno College; M.A., University of Northern Colorado; Ed.D., University of Denver.

EDWARD KRAFFT, Assistant Professor of Elementary Education - B.S., Concordia Teachers College; M.A., Washington University.

BEVERLY J. KROSKY, Assistant Professor of Home Economics - B.S., Colorado State University; M.A., Ed.D., University of Northern Colorado.

ROY T. KROSKY, Associate Professor of Education - B.A., M.A., University of Northern Colorado; Ph.D., University of Denver.

JOHN M. KRUGER, Associate Professor of Industrial Arts - B.S., Western Michigan University; M.A., Ed.D., University of Northern Colorado.

WAYNE T. KUNCL, Assistant Professor of College Student Personnel Administration - B.S., M.S., Southern Illinois University.

JACK L. LaBONDE, Assistant Professor of Health and Safety Education - B.A., M.A., University of Northern Colorado.

JOYCE LACKIE, Assistant Professor of English - B.S., Illinois State University; M.A., University of Illinois.

FRANK P. LAKIN, Professor of Psychology - B.A., M.A., University of Northern Colorado; Ed.D., Oregon State University.

J. MELVIN LANE, Associate Professor of Special Education - B.A., State College of Iowa; M.A., Ed.D., University of Northern Colorado.

JARRETT F. LANGE, Assistant Professor of German - B.A., San Jose State College; M.A., Southern Oregon College; Ed.D., University of Georgia.

TIMOTHY J. LARKIN, Temporary Instructor in Recreation - A.B., John Carrol University; M.A., University of Northern Colorado.

- ROBERT W. LARSON**, Professor of History - B.A., M.A., University of Denver; Ph.D., University of New Mexico.
- GEORGE LEACH**, Associate Professor of Education - B.A., M.A., M.S., University of Texas; Ed.D., University of Colorado.
- CARLOS LEAL**, Assistant Professor of Education; Chairperson, Department of Mexican American Studies - A.B., Ed.S., University of Northern Colorado.
- MONRICO LEHNERT**, Assistant Professor of Music - B.M., Wisconsin State University; M.A., University of Connecticut.
- PAUL L. LEHRER**, Professor of Geography - B.S., University of Cincinnati; M.A., Ohio State University; Ph.D., University of Nebraska.
- LAWRENCE A. LEVENSON**, Assistant Professor of Business - A.B., Brown University; M.B.A., University of Kansas.
- A. JUANITA LEWIS**, Professor of Elementary Education; Director, Early Childhood Studies - B.S., West Texas State College; M.A., Ph.D., University of Iowa.
- DANIEL A. LIBERA**, Instructor in Physical Education - B.S., University of Illinois; M.A., San Diego State College.
- VIRGIL Y. LINDAHL**, Professor of Physical Education; Chairperson, Department of Intercollegiate Athletics - A.B., Wayne State Teachers College, Michigan; M.A., University of Northern Colorado; P.E. Director, Indiana University.
- IVO E. LINDAUER**, Professor of Botany - B.S., Colorado State University; M.A., University of Northern Colorado; Ph.D., Colorado State University.
- SANFORD A. LINSCOME**, Associate Professor of Music - B.M.E., McNeese State College; M.M., University of Illinois; D.M.A., University of Texas at Austin.
- JEANNE E. LIPMAN**, Instructor in Laboratory School - B.S., Bradley University.
- JOSEPH E. LIVINGSTON**, Assistant Professor of Special Education - A.B., University of Northern Colorado; M.S., Colorado State University.
- JOHN E. LOFTIS III**, Assistant Professor of English - A.B., University of the South; M.A., Ph.D., Emory University.
- ROBERT L. LONGWELL**, Associate Professor of English and Speech - B.A., Nebraska State Teachers College; M.A., University of Northern Colorado; Ph.D., University of Colorado.
- DAVID L. LONSDALE**, Assistant Professor of History - B.A., M.A., Ph.D., University of Colorado.
- BETTY L. LOWRY**, Professor of Elementary Education - B.A., M.A., University of Northern Colorado; Ph.D., University of Iowa.
- J. MAX LUBBERS**, Professor of Industrial Arts - B.A., M.A., University of Northern Colorado.
- JEANE L. LUERE**, Assistant Professor of English - B.A., B.S., M.A., Ohio State University.
- ARNO H. LUKER**, Professor of Psychology, Counseling and Guidance - B.S., J.D., University of South Dakota; M.A., Michigan State College; Ed.D., University of Northern Colorado.
- DONALD M. LUKETICH**, Professor of Education - B.S.E., Arkansas State College; M.S., Illinois University; Ed.D., University of Northern Colorado.
- DALE J. LUNDEEN**, Professor of Special Education - B.S., Western Michigan University; M.A., Indiana University; Ph.D., University of Minnesota.
- RICHARD C. LUSTER**, Assistant Professor of Fine Arts - B.S., Kansas State University; M.F.A., Kansas University.
- CAROL L. LUTEY**, Professor of Psychology, Counseling and Guidance - B.S., M.A., University of Minnesota; Ph.D., Michigan State University.
- BRUCE J. LUTZ**, Assistant Professor of Anthropology - A.B., Rutgers University; M.A., Ph.D., University of Pennsylvania.
- ROBERT LYNCH**, Assistant Professor of Research and Statistical Methodology - A.B., State University of New York; Ph.D., University of Northern Colorado.
- DONALD A. MACFARLANE**, Assistant Professor of Fine Arts - A.B., M.A., Brigham Young University.
- DANIEL C. McALEES**, Professor of Special Education - B.A., Albright College; M.A., Ph.D., Michigan State University.
- PATRICK W. McCARY**, Associate Professor of Student Personnel-Counseling - B.A., M.A., Ph.D., Michigan State University.
- ALLEN W. McCONNELL**, Associate Professor of Business; Chairperson, Department of Accounting - B.S., M.A., University of Northern Dakota; C.P.A.

- HAROLD L. MCKAIN, JR.**, Associate Professor of Physical Education - B.S., Central Missouri State College; M.E., University of Oklahoma; Ph.D., State University of Iowa.
- ROZEMA E. MCKAIN**, Instructor in Laboratory School - A.B., M.A., University of Northern Colorado.
- WARREN J. McMILLEN**, Assistant Professor of Physical Education - B.A., M.A., University of Northern Colorado.
- CHARLES R. McNERNEY**, Associate Professor of Mathematics - B.A., M.A., University of Northern Colorado; Ph.D., Ohio State University.
- KAREN SUE MADORE**, Instructor and Advanced Medical/Surgical Nursing - B.S., Union College; M.S., University of Northern Colorado.
- ANITA H. MAGAFAS**, Instructor of Recreation - B.S., Oklahoma Baptist University; M.S., Indiana University.
- AROOP K. MAHANTY**, Assistant Professor of Economics - B.S., University of Wyoming; M.A., University of Northern Colorado; Ph.D., Colorado State University.
- JUDITH A. MALKIEWICZ**, Instructor in Nursing of Children - B.S., University of Northern Colorado; M.S., University of Colorado.
- CHRISTIE MALNATI**, Instructor in Italian and French - B.S., University of Colorado.
- THERESA M. MALUMPHY**, Professor of Health and Physical Education - B.S., State College, Massachusetts; M.S., University of Wisconsin; Ph.D., Ohio State University.
- ROBERT P. MARKHAM**, Assistant Professor of University Library; Academic Biblio Librarian - A.B., M.L.S., University of Denver; Ph.D., Drew University.
- SUE MARKS**, Temporary Assistant Professor of Psychology, Counseling and Guidance - A.B., University of Michigan; M.A., Michigan State University; Ed.D., Indiana University.
- JAMES MARSHALL**, Instructor in Sociology - B.S., Southern Colorado State College; M.A., University of Northern Colorado.
- S. SCOTT MASSIN**, Assistant Professor of Business - B.J., University of Missouri; J.D., University of Nebraska.
- VINCENT MATTHEWS III**, Associate Professor of Geology - B.S., M.S., University of Georgia; Ph.D., University of California at Santa Cruz.
- STEVE J. MAZURANA**, Associate Professor of Political Science - B.A., University of Miami; M.A., Indiana University.
- MARCUS K. MEILAHN**, Associate Professor of Chemistry - B.S., Lakeland College; Ph.D., Arizona State University.
- WAYNE W. MELANSON**, Assistant Professor of Journalism - A.B., Adams State College; Ed.S., University of Northern Colorado.
- DANIEL MELLADO**, Assistant Professor of Music; Chairperson, Department of Strings - B.M., University of Texas at El Paso; M.M., University of Colorado.
- CHARLES A MEYER**, Assistant Professor of English - B.A., Wagner College; M.A., University of Arizona.
- HOWARD M. MICKENS**, Associate Professor of Music - B.S., Bowling Green State University; M.M., Northwestern University.
- NELDA M. MICKENS**, Instructor in Laboratory School - B.M.E., Northwestern University; M.A., University of Northern Colorado.
- BARBARA H. MICKEY**, Professor of Anthropology - B.A., M.A., Ph.D., Indiana University.
- JOHN R. MICKEY**, Associate Professor of Anthropology - B.S., Kansas State Teachers College, Emporia.
- GARY E. MILLER**, Assistant Professor of Education - B.A., M.A., University of Northern Colorado.
- JAMES E. MILLER**, Professor of Music - B.M., Michigan State College; M.A., University of Northern Colorado; M.F.A., Ph.D., State University of Iowa.
- KURT R. MILLER**, Associate Professor of Music - A.B., M.A., Northern Arizona State University; D.M.A., University of Southern California.
- MARGARET MILLER**, Assistant Professor of Special Education - A.B., John Herron Art School; M.S., Butler University; Ph.D., Purdue University.
- WILBUR G. MILLSLADGLE**, Associate Professor of Special Education - B.S., Black Hills State College; M.A., Ed.D., University of Northern Colorado.
- SANDRA L. MINTON**, Instructor in Women's Physical Education - A.B., M.A., University of California at Los Angeles.

- MARIE A. MOINAT**, Assistant Professor of University Library - B.S., Colorado State University; M.A., University of Northern Colorado.
- DONALD B. MONTGOMERY**, Associate Professor of Education - B.S., Pepperdine College; M.Ed., Ohio University; Ed.D., University of Northern Colorado.
- LOLA J. MONTGOMERY**, Professor of Psychology, Counseling and Guidance - B.A., University of Kansas; M.A., University of Northern Colorado; Ed.D., Teachers College, Columbia University.
- ROBERT A. MONTGOMERY**, Professor of Physical Education - B.A., Pepperdine College; M.S., University of Southern California; Ed.D., University of Northern Colorado.
- C. JOSEPH MOODY**, B.F.A., University of Illinois; M.F.A., University of Iowa; Ed.D., Ball State University.
- FRANK A. MORELLI**, Associate Professor of Philosophy - A.B., Manhattan College; M.A., Ph.D., Boston University.
- DENNIS MORIMOTO**, Assistant Professor of Industrial Arts - B.A., M.A., University of Northern Colorado.
- GRANT L. MORRIS**, Assistant Professor of Psychology, Counseling and Guidance - B.A., University of South Florida; M.S., Ph.D., Washington State University.
- GAYLORD D. MORRISON**, Professor of Education - B.S., Northwest Missouri State College; M.A., University of Nebraska; Ed.D., University of Missouri.
- AVIN O. MOSBO**, Professor of Elementary Education; Chairperson, Department of Elementary Education and Reading - B.A., Luther College; M.A., State University of Iowa; Ed.D., University of Northern Colorado.
- L. CAROL MOSSER**, Assistant Professor of Physical Education - B.S., East Stroudsburg State College; M.A., University of Northern Colorado.
- RICHARD S. MUNSON**, Assistant Professor of Fine Arts - A.B., University of Minnesota; M.S., Ph.D., Pennsylvania State University.
- PATRICIA L. MURPHY**, Assistant Professor of Sociology - B.S., University of San Francisco; M.A., University of Alberta.
- ROBERT MURRAY**, Assistant Professor of Music - B.M., M.M., American Conservatory; D.M.A., Indiana University.
- DONALD L. MYERS**, Associate Professor of Education - B.A., Washburn University; M.A., Kansas State University.
- DORIS E. MEYERS**, Associate Professor of English - B.S.E., Arkansas State Teachers College; M.A., Ohio University; Ph.D., University of Nebraska.
- FREDRIC L. MYERS**, Assistant Professor of Fine Arts - B.V.A., Auburn University; M.F.A., University of Oklahoma.
- GRACE D. NAPIER**, Professor of Special Education - B.A., Douglass College; M.Ed., New York University; Ed.D., Temple University.
- DALE A. NEBEL**, Professor of Elementary Education - B.A., M.A., State University of Iowa; Ed.D., University of Northern Colorado.
- MARSHAL C. NELSON**, Assistant Professor of Child Development; Coordinator, Children's Village - B.S., Emory University; M.S., Florida State University.
- THEODORE M. NELSON**, Professor of Psychology - B.S., M.A., Ph.D., University of Minnesota.
- JOE NICHOLS**, Professor of Education; Chairperson, Department of Curriculum and Instruction - B.S., M.S., Pittsburg State College; Ed.D., University of Colorado.
- LEROY F. NICK**, Assistant Professor of Vocational Teacher Education - A.B., Northern Idaho College of Education; M.A., University of Northern Colorado.
- MARLYS NOBLE**, Instructor in Laboratory School - B.S., Bemidji State College.
- DWIGHT E. NOFZIGER**, Professor of Music; Chairperson, Department of Music Education - B.S., Bowling Green State University; M.A., Columbia University; Ed.D., University of Northern Colorado.
- BYRON E. NORTON**, Assistant Professor of Psychology, Counseling and Guidance - B.A., Central Washington State College; M.S., Ed.D., Northern Illinois University.
- LLOYD A. NORTON**, Associate Professor of Theatre Arts - B.A., M.A., University of Northern Colorado; M.A., University of Denver.
- JOHNE. OBRZUT**, Assistant Professor of Psychology, Counseling and Guidance - A.B., M.A., Northern Arizona University; Ph.D., University of Minnesota.

DANIEL F. O'CONNOR, Assistant Professor of Sociology - B.S., Northern State College; M.A., Creighton University; Ph.D., Oklahoma State University.

DAVID O. OLSON, Professor of Industrial Arts - B.S., Northern Illinois Teachers College; M.A., University of Northern Colorado; Ed.D., Texas A&M University.

JUDITH LYNN OLSON, Instructor in Laboratory School - B.S., M.A., Mankato State College.

KENNETH V. OLSON, Professor of Science Education - B.A., Augsburg College; M.A., Ph.D., University of Minnesota.

LeANN OLSON, Assistant Professor of Special Education - A.B., Augustana College; M.A., University of Oklahoma.

STEPHEN J. OLSON, Temporary Instructor in Psychology, Counseling and Guidance - B.S., Bimidji, State College; M.A., Ed.S., Kent State University.

NORMANT. OPPELT, Professor of Psychology; Chairperson, Department of College Student Personnel Administration - B.S., Colorado State University; M.A., University of Northern Colorado; Ph.D., Michigan State University.

JOSEPH ORESKOVICH, Instructor in Sociology - B.S., University of Southern Colorado; M.A., University of Northern Colorado.

WENDELL A. OSORNO, Associate Professor of Psychology, Counseling and Guidance - A.B., Wayne State College; M.A., University of Northern Colorado; Ph.D., Iowa State University.

JAMES C. OUSLEY, Assistant Professor of Education - A.B., Whittier College; M.A., California State College at Los Angeles; Ed.D., University of Northern Colorado.

IWAN OWECHKO, Assistant Professor of Russian - Diploma, Pedagogic University of Voroschilovgrad; Ph.D., Ukrainian Free University, Munich.

KAYE D. OWENS, Professor of Special Education - B.A., Idaho State University; M.A., Ed.D., University of Northern Colorado.

G. DEAN PALMER, Associate Professor of Business; Chairperson, Department of Business Teaching and Vocational Teacher Education - A.B., M.A., University of Northern Colorado; Ed.D., Montana State University.

WILLIAM G. PARKOS, Associate Professor of Health and Safety - B.S., Mankato State College; M.S., Ph.D., University of Minnesota.

ARTHUR R. PARTRIDGE, Professor of Education; Chairperson, Department of Educational Administration; Director of Educational Planning Service - B.A., M.S., University of Kansas; Ed.D., Stanford University.

ROBERT A. PAVLIK, Assistant Professor of Education - B.E., University of Wisconsin, M.A., Ed.D., University of Northern Colorado.

RITA J. PAYTON, Associate Professor of Nursing of Children - B.S., St. Mary's College, Indiana; M.S., Indiana University.

E. EDWARD PEEPLES, Assistant Professor of Biology - B.S., University of Florida; M.S., Stetson University; Ph.D., University of Texas.

NORMAN L. PEERCY, Assistant Professor of English - B.A., M.A., University of Northern Colorado; Ph.D., University of Kansas.

ELEANOR M. PEIFFER, Assistant Professor of Home Economics/Vocational Teacher Education - B.S., Douglass College, Rutgers University; Ed. M., Rutgers University.

THOMAS M. PEISCHL, Instructor in University Library - A.B., Susquehanna University; M.Ed., Temple University; M.A., University of Denver.

RICHARD A. PERCHLIK, Professor of Social Science; Chairperson, Department of Political Science - B.S. in Bus., B.S. in Ed., M.A., Ohio State University; Ph.D., University of Colorado.

PATRICIA D. PERRY, Instructor in Medical-Surgical Nursing - B.S., M.S., Boston University.

RICHARD A. PETERSON, Associate Professor of Physical Education - A.B., M.A., San Diego State College; Ph.D., University of Wisconsin.

THOMAS A. PETROFF, Assistant Professor of Physical Education - B.S., M.A., Michigan State University.

WILLIAM A. PFUND, Associate Professor of Music - B.M., Youngstown University; M.M., New England Conservatory.

D. ALLEN PHILLIPS, Associate Professor of Physical Education - B.S., M.Ed., University of Idaho; Ed.D., University of Oregon.

RONALD K. PLAKKE, Professor of Zoology; Chairperson, Department of Biological Sciences - B.A., University of Northern Colorado; Ph.D., University of Montana.

- WILLIAM D. POPEJOY**, Professor of Mathematics - B.S., M.A., Illinois State University; Ed.D., University of Northern Colorado.
- CHARLES S. L. POSTON**, Associate Professor of Psychology, Counseling and Guidance - B.A., Lynchburg College; M.A., Auburn University; Ph.D., Washington University.
- STEPHEN T. POWERS**, Associate Professor of History; Chairperson, Department of History B.S., U.S. Naval Academy; M.A., Rice University; Ph.D., University of Notre Dame.
- JUDITH A. PRAUL**, Professor of Psychology, Counseling and Guidance - B.S., Western Illinois University; M.S., Ed.D., Indiana University.
- WALTER F. PRINCIC**, Associate Professor of English - B.A., Baldwin-Wallace College; M.A., Ph.D., University of Illinois.
- DAVID L. PRINGLE**, Associate Professor of Chemistry - B.S., Wayne State University; M.S., Ph.D., Iowa State University.
- FRANCIS R. QUAMMEN**, Associate Professor of Sociology - B.A., M.A., University of Northern Colorado.
- JOHN RAMIREZ**, Assistant Professor of Psychology, Counseling and Guidance - A.B., M.A., Texas Technical University.
- OREL J. RANUM**, Assistant Professor of Home Economics - B.S., North Dakota State University; M.S., University of Oklahoma.
- ELIZABETH J. RAVE**, Associate Professor of Psychology, Counseling and Guidance - B.S., Illinois State University; M.A., University of Colorado; Ph.D., University of Southern California.
- PAUL W. REA**, Associate Professor of English - A.B., Eastern Michigan University; M.A., Wayne State University; Ph.D., Ohio State University.
- VICKI REED**, Instructor in Special Education - B.S., Northwestern University; M.A., University of Denver.
- HENRY R. REINERT**, Associate Professor of Special Education; Chairperson, Department of Special Learning Problems - B.S., Fort Hays Kansas State College; M.A., Ed.D., University of Northern Colorado.
- PAUL RENSHAW**, Associate Professor of Business and Vocational Teacher Education - B.A., M.A., University of Michigan.
- NORMAN H. RESNICK**, Assistant Professor of Special Education - B.A., American International College; M.A., Ph.D., University of Connecticut.
- ALICE G. REYNOLDS**, Instructor in History - A.B., University of Colorado.
- ARTHUR R. REYNOLDS**, Professor of History - B.A., Nebraska State Teachers College; M.A., Ph.D., University of Minnesota.
- CHARLES D. RHINE**, Instructor in Library Science; Assistant Reference Librarian - B.S., Fort Hays Kansas State College; M.S., M.L., Kansas State Teachers College.
- MARY RHOADS**, Associate Professor of Music - B.M., M.M., University of Michigan; Ph.D., Michigan State University.
- ROYAL A. RICH**, Professor of Zoology - B.S., University of Nebraska; M.S., Ph.D., Utah State University.
- PAUL W. RICHARD**, Associate Professor of Biology - B.A., M.A., University of Northern Colorado.
- EDMUND A. RICHARDS**, Professor of Zoology - B.S., Purdue University; M.S., Ph.D., University of Illinois; M.D., University of Stockholm.
- JOAN RICHARDSON**, Associate Professor of Mathematics - B.S., University of Minnesota; M.A., Ph.D., Arizona State University.
- ROBERT C. RICHARDSON**, Professor of Education; Director, Educational Field Experiences - B.A., M.A., University of Michigan; Ph.D., University of Colorado.
- CAROLYN E. RITTER**, Part-time Instructor in Education and Research; Academic Consultant - B.S., M.S., University of Oregon; Ph.D., University of Northern Colorado.
- EMMETT A. RITTER**, Professor of Education - B.S., M.Ed., Ed.D., University of Oregon.
- ROSARIO RIVERA**, Instructor in Economics - A.B., University of Northern Colorado.
- DAVID H. ROAT**, Associate Professor of Education - B.A., Albion College; M.A., Ph.D., Michigan State College.
- GRACE A. ROBINS**, Associate Professor of Business Teacher Education - B.S., Central Teachers College; M.E., University of Oklahoma.
- JACK C. ROBINSON**, Assistant Professor of Music - B.M., Stetson University; M.M., Indiana University.

GLORIA J. RODRIGUEZ, Assistant Professor of Physical Education - B.S., University of New Mexico; M.S., University of North Carolina.

BOBBY H. ROLLINS, Assistant Professor of Physical Education - B.S., Colorado State University; M.A., Arizona State University.

DIANNE ROOD, Instructor in Communication - B.A., St. Olaf College; M.A., University of Nebraska.

JOHN A. ROSALES, Associate Professor of Education - A.B., University of Northern Colorado; M.A., Colorado College; Ed.D., University of Northern Colorado.

JESS C. ROSE, Temporary Instructor in Education - B.M., M.M.E., Kansas University.

CLARENCE E. ROSS, Instructor in Laboratory School - A.B., M.A., University of Northern Colorado.

ROBERT F. ROSS, Assistant Professor of Communication - B.S., University of Nebraska; M.A., University of Northern Colorado; Ph.D., University of Denver.

ANTHONY M. ROSSI, Professor of Physical Education - B.S., New York University; M.A., University of Northern Colorado.

BARRY ROTHBAUS, Professor of History - B.A., Hunter College; M.S., Ph.D., University of Wisconsin.

GAIL S. ROWE, Associate Professor of History - B.A., Fresno State College; M.A., Ph.D., Stanford University.

LESLIE A. ROWE, Instructor in Laboratory School - A.B., Nebraska Wesleyan University; M.Ed., Colorado State University.

WENDELL ROY, Professor of Industrial Arts - B.S., M.Ed., North Texas State University; Ed.D., Texas A&M University.

FRED K. RUMFORD, Assistant Professor of Mathematics - B.S., M.S., Kansas State University.

GRETCHEN SAAM, Assistant Professor of Business - B.A., M.A., University of Iowa; M.B.A., Michigan State University.

THOMAS F. SAFFELL, Professor of Education - B.S. in Ed., M.Ed., Ph.D., University of Kansas.

GEORGE H. SAGE, Professor of Physical Education; Chairperson, Department of Physical Education for Men - B.A., M.A., University of Northern Colorado; Ed.D., University of California, Los Angeles.

GLENN H. St.AUBYN, Instructor in Economics - B.S., Colorado University; M.A., University of Northern Colorado.

ARSENIO SANDOVAL, Assistant Professor of Mexican American Studies - B.A., University of Northern Colorado; M.A., University of New Mexico.

LYNN A. SANDSTEDT, Assistant Professor of Spanish - A.B., University of Northern Colorado; M.A., Ph.D., University of Colorado.

TOMAS N. SANTOS, Assistant Professor of English - A.B., M.A., Ph.D., University of Iowa.

NORMAN I. SAVIG, Associate Professor of Library Science; Music Librarian - B.A., M.A., University of Denver.

GORDON H. SAWATZKY, Associate Professor of Psychiatric Nursing - B.A., Bethel College; M.N., Yale University; M.S. University of Colorado.

F. KEITH SCHADEL, Instructor in Laboratory School - A.B., University of Northern Colorado.

ANNE W. SCHENKMAN, Professor of Psychology, Counseling and Guidance - A.B., M.A., Ed.D., Indiana University.

WALTER A. SCHENKMAN, Professor of Music; Chairperson, Department of Piano and Organ - B.A., Harvard University; M.M., Yale Music School; Diploma de' Studes, Paris Conservatory; D. Mus, Indiana University.

JOHN SCHMID, Professor of Research and Statistical Methodology - B.S., M.S., Ph.D., University of Wisconsin.

DONALD L. SCHMIDT, Professor of Mathematics - B.A., Bethel College; M.S., Ph.D., Iowa State University.

GERALD D. SCHMIDT, Professor of Zoology - B.A., University of Northern Colorado; M.S., Ph.D., Colorado State University.

CLAUDE M. SCHMITZ, Professor of Music; Chairperson, Department of Voice - B.A., M.A., University of Northern Colorado.

JAMES O. SCHRECK, Professor of Chemistry; Chairperson, Department of Chemistry - B.A., University of St. Thomas; M.S., Ph.D., Texas A&M University.

GLENN B. SCHROEDER, Professor of Education - B.S., Oregon College of Education; M.Ed., University of Oregon; Ph.D., University of New Mexico.

JANICE E. SCHUETZ, Assistant Professor of Communication - A.B., Idaho State University; M.S., Kansas State College; Ph.D., University of Colorado.

ROBERT O. SCHULZE, Professor of Sociology - A.B. University of Michigan; M.A., Columbia University; Ph.D., University of Michigan.

SUZANNE S. SCHULZE, Instructor in Library Science; Head, Documents Service - A.B., University of Michigan; M.P.A., Wayne University; M.L.S., University of Rhode Island.

HERBERT C. SCHUMACHER, Professor of Fine Arts - B.F.A., M.F.A., Ed.D., University of Kansas.

REX R. SCHWEERS, JR. Associate Professor of Mathematics - B.A., M.A., University of Northern Colorado.

STEVEN L. SCOTT, Assistant Professor of Geography; Chairperson, Department of Geography - B.A., Kearney State College; M.A., Western Illinois University; D.A., University of Northern Colorado.

DANIEL A. SEAGER, Associate Professor of Library Science; Chief Bibliographer/Editor - B.A., Oklahoma Baptist University; A.B., M.A., University of Oklahoma.

DONALD E. SEAGER, Associate Professor of Educational Media - B.E., Geneseo State Teachers College; M.A. in Ed., Syracuse University; Ed.D., Brigham Young University.

CHARLES SELDEN, Assistant Professor of Education - A.B., Kansas Wesleyan University; M.S., Fort Hays Kansas State College.

COLLEEN A. SETTJE, Instructor in Laboratory School - A.B., M.A., University of Northern Colorado.

HERBERT H. SEVERSON, Assistant Professor of Psychology, Counseling and Guidance - B.S., Wisconsin State University; M.S., Ph.D., University of Wisconsin.

RICHARD G. SEYMOUR, Assistant Professor of Business - A.B., Duke University; M.B.A., J.D., University of Denver.

DALE SHAW, Assistant Professor of Research and Statistical Methodology - A.B., Colorado College; M.S., Kansas State University; Ph.D., University of Northern Colorado.

SARAH F. SHAW, Professor of Psychology, Counseling and Guidance - B.S., West Virginia University; M.A., Marshall University; Ed.D., Indiana University.

HYUNK K. SHIN, Assistant Professor of Fine Arts - B.A., Sung Kyun Kwan University, Korea; M.A., San Diego State College.

J. MAX SHIRLEY, Professor of Recreation Education; Chairperson, Department of Recreation - B.S., M.A., University of New Mexico; Ed.D., University of Northern Colorado.

BARBARA S. SHIVLEY, Temporary Instructor in Child Development - A.B., Grinnell College; M.Ed., Tufts University.

JOSEPH L. SHOEMAKER, Professor of Science - B.A., M.A., University of Northern Colorado; Ed.D., University of Colorado.

KENNETH L. SHROPSHIRE, Associate Professor of Geology - B.A., Miami University; Ph.D., University of Colorado.

ROBERT O. SINGER, Associate Professor of Education; Director, Center for Non-Traditional and Outreach Education - A.B., M.A., Ed.D., University of Northern Colorado.

HOWARD M. SKINNER, Professor of Music - B.A., Sterling College, Kansas; B.Mus., M.Mus., McPhail College of Music; D.Mus., Northwestern University.

RICHARD A. SLATER, Assistant Professor of Oceanography; Chairperson, Department of Earth Sciences - B.S., University of Oklahoma; M.A., University of Southern California; Ph.D., University of Sydney.

JOSEPH J. SLOBOJAN, Assistant Professor of Mathematics in the Laboratory School - A.B., M.Ed., University of Delaware; Ed.D., University of Northern Colorado.

DAVID W. SMART, Associate Professor of Student Personnel-Counseling - A.B., Brigham Young University; M.A., Ph.D., University of Utah.

JAMES G. SMITH, Instructor in Laboratory School - B.S., Kansas State University; M.A., University of Northern Colorado.

RICHARD J. SMITH, Assistant Professor of Communication - B.A., M.A., Eastern Michigan University.

RONALD SMITH, Assistant Professor of Music - A.B., Northern Michigan University; M.M., University of South Florida.

WALTER G. SMITH, JR., Assistant Professor of Music - B.A., M.A., University of Northern Colorado; M.F.A., University of Iowa.

VALERIE L. SORENSEN, Associate Professor of Home Economics - B.S., M.Ed., Colorado State University.

OREN SPRAGUE, Assistant Professor of Library Science; Library Research and Development Officer - A.B., Graceland College; M.L.S., University of California at Los Angeles; B.D., Drake University.

ROBERT T. STACH, Instructor in Laboratory School - B.A., M.A., University of Northern Colorado.

KATHLEEN M. STALLINGS, Assistant Professor of English - B.A., Reed College; M.A., University of New Mexico.

WENDELL R. STARR, Professor of English - B.A., Ottawa University; M.A., University of Colorado; Ph.D., University of Minnesota.

DORIS C. STEFFY, Professor of Physical Education - B.A., Iowa State Teachers College; M.A., State University of Iowa.

ROBERT B. STEIN, Assistant Professor of Sociology; Chairperson, Department of Sociology - A.B., Beloit College; M.A., Ph.D., Vanderbilt University.

CONNIE K. STELLJES, Assistant Professor of Spanish - B.S., University of Kansas; M.A., University of Colorado.

JOHN R. STEWART, Instructor in Business - B.S., Kansas State Teachers College; M.A., University of Northern Colorado.

WALTER H. STEWART, Associate Professor of Journalism; Acting Chairperson, Department of Journalism - B.J., B.A., B.S., M.A., University of Missouri; Ph.D., Southern Illinois University.

JAMES A. STOFFLER, Professor of Education - B.S., Southern Illinois University; M.Ed., Marquette University; Ph.D., Southern Illinois University.

DOUGLAS L. STUTLER, Associate Professor of Education - B.A., M.A., University of Northern Colorado; Ph.D., Oregon State University.

ROBERT B. SUND, Professor of Science Education - B.A., Reed College; M.S., Oregon State College; M.A., Ed.D., Stanford University.

JOHN H. SWAIM, Assistant Professor of Social Studies - B.S.E., M.S., Kansas State Teachers College.

MARIAN A. SWINGLE, B.S., University of Vermont; M.S., Boston University.

DAVID H. TAGGERT, Assistant Professor of Education - A.B., University of Wyoming; M.A., Brigham Young University; Ph.D., University of Wyoming.

CHRISTINE TANNER, Instructor in Medical-Surgical Nursing - B.S., University of Northern Colorado; M.S., University of California.

GERALD E. TANNER, Assistant Professor of Psychology, Counseling and Guidance - B.A., M.A., Ph.D., University of Northern Colorado.

GEORGE TATE, Assistant Professor of Psychology, Counseling and Guidance - A.B., Clark College; M.A., Northwestern University; Th.D., Iliff School of Theology.

JO ANN TAYLOR, Associate Professor of Home Economics - B.S. in Ed., Northwest Missouri State College; M.A., University of Northern Colorado.

STEVE TEGLOVIC, JR., Professor of Business; Chairperson, Department of Management - B.S.B.A., M.B.A., University of Denver; Ph.D., University of Northern Colorado; C.D.E.

BERT O. THOMAS, Professor of Zoology - B.S., M.S., Colorado State University; Ph.D., University of Minnesota.

LIDA F. THOMPSON, Associate Professor of Medical-Surgical Nursing - B.S., University of New Mexico; M.S., University of Colorado.

HARVEY L. THORNBURG, Assistant Professor of Psychology, Counseling and Guidance - B.A., Western Washington State College; M.A., Ph.D., University of Illinois.

SYLVIA D. THORNBURG, Associate Professor of Psychology, Counseling and Guidance - B.A., M.A., Ph.D., University of Illinois.

BERT D. THORPE, Professor of Zoology - B.S., Ph.D., University of Utah.

ROBERT A. TOLAR, Associate Professor of Mathematics - B.S., Lamar College; M.A., University of Texas; Ph.D., Texas A&M University.

GORDON E. TOMASI, Professor of Chemistry - B.A., M.A., University of Northern Colorado; Ph.D., University of Louisville.

JANET TRACY, Instructor in Medical-Surgical Nursing - B.S., University of Iowa; M.S., University of Colorado.

RICHARD G. TRAHAN, Assistant Professor of Sociology - A.B., M.A., San Jose State University.

ORVEL L. TRAINER, Professor of Economics; Chairperson, Department of Economics - B.A., M.A., Ph.D., University of Colorado.

ROBERT A. TRAPP, Instructor in Communication - A.B., M.A., Texas Technological University.

ROBERT M. TRAYNOR, Assistant Professor of Special Education - A.B., M.A., University of Northern Colorado.

FERN N. TRESVAN, Instructor in Women's Physical Education - B.A., University of Utah.

LESLIE W. TROWBRIDGE, Professor of Science; Chairperson, Department of Science Education - B.S., Central State Teachers College, Wisconsin; M.S., University of Chicago; M.S., University of Wisconsin; Ph.D., University of Michigan.

JUAN TRUJILLO, Assistant Professor of Education - A.B., Colorado College; M.A. University of Colorado.

HAROLD G. TURNAGE, Instructor in Laboratory School and University Foreign Languages A.B., Millsaps College.

DEANE E. TURNER, Professor of Education - B.A., Centro De Estudios Universitarios; M.Ed., Adams State College; Ph.D., University of Texas.

ROBERT B. TURNER, Associate Professor of Fine Arts; Chairperson, Department of Fine Arts - B.S., State University of New York; M.S., Ed.D., University of Oregon.

DEAN W. TUTTLE, Associate Professor of Special Education - B.S., Wheaton College; M.A., Teachers College, Columbia University; M.A., San Francisco State College; Ph.D., University of California and San Francisco State College.

R. ELAINE UHRIG, Assistant Professor of Special Education - A.B., M.A., Ed.D., University of Northern Colorado.

JUDY K. UNDERWOOD, Assistant Professor of Special Education - A.B., Douglass College; M.A., Newark State College; Ph.D., University of Denver.

JAMES S. UPTON, JR., Associate Professor of Music; Coordinator, Department of History of Literature - B.A., B.M., Hendrix College; M.M., Southern Methodist University; Ph.D., University of Texas.

RICHARD H. USHER, Professor of Education - B.S., Murray State College; M.Ed., Ed.D., University of Florida.

STEVEN VALENZUELA, Instructor in Education - A.B., University of Northern Colorado.

NANCY M. VAN ANNE, Professor of Physical Education - B.A., Iowa State Teachers College; M.A., State University of Iowa; Ph.D., University of Oregon.

NORBERT R. VAN DINTER, Associate Professor of Recreation - B.S., Sul Ross State College; M.S., Florida State University; Ed.D., University of Northern Colorado.

BARRY L. VAN HOOK, Assistant Professor of Business; Chairperson, Department of General Business/Vocational Teacher Education - B.S., Illinois State University; M.S., Ed.D., Northern Illinois University.

BARRETT W. VAN LOO, Assistant Professor of Theatre Arts - A.B., M.A., California State University.

LEO B. VARNER, Assistant Professor of English - B.A., University of California; M.A., San Francisco State College; Ph.D., University of Illinois.

JOHN VONK, Assistant Professor of Sociology - A.B., M.A., Ph.D., Western Michigan University.

GEORGIA J. WADE, Instructor in Laboratory School - B.S., M.A., Illinois State University.

WAYMAN E. WALKER, Professor of Music - B.M.E., University of Colorado; M.M., University of Southern California.

DORIS O. WALTERS, Associate Professor of Home Economics and Vocational Teacher Education - B.S., Northern Illinois State University; M.Ed., Colorado State University.

JAMES A. WANNER, Assistant Professor of Anthropology - B.S., M.S., University of Wisconsin.

- MAURICE B. WARD**, Assistant Professor of Psychology, Counseling and Guidance - B.S., M.A., Kansas State University; Ed.D., University of Northern Colorado.
- DENNIS E. WARNEUNDE**, Assistant Professor of Communication - B.A., Wayne State College; M.A., University of Nebraska.
- LINDA A. WARNER**, Instructor in Laboratory School - A.B., University of Northern Colorado.
- THOMAS E. WARNER**, Associate Professor of Education - B.S., Ashland College; M.Ed., Ph.D., Ohio University.
- JOYCE B. WASHINGTON**, Assistant Professor of College Student Personnel Administration - B.S., Lincoln University of Missouri; M.A., University of Michigan; Ed.D., University of Northern Colorado.
- ROLAND C. WATERMAN**, Professor of Business - B.S., New York State College for Teachers; M.A., Ed.D., Columbia University.
- GERALD G. WATSON**, Assistant Professor of Political Science - A.B., Willamette University; M.A., Ph.D., University of Florida.
- MEL W. WEISHAHN**, Associate Professor of Special Education - B.A., M.A., University of Northern Colorado; Ed.D., University of Oregon.
- I. DAVID WELCH**, Associate Professor of Psychology, Counseling and Guidance - A.B., M.A., University of Northern Colorado; Ed.D., University of Florida.
- ROBERT D. WELCH**, Instructor in Vocational Teacher Education - A.B., M.A., University of Northern Colorado.
- MAREN J. WELSH**, Assistant Professor of Fine Arts - B.A., M.A., University of Wyoming.
- WILLIAM H. WELTNER**, Associate Professor of Education - B.S., University of Colorado; M.A., Ed.D., Ball State University.
- KENNETH H. WIDEL**, Instructor in Laboratory School - B.S., Central Missouri State University; M.A., University of Northern Colorado.
- JOHN W. WILLCOXON III**, Professor of Theatre Arts; Chairperson, Department of Theatre Arts - B.A., Washington and Lee University; M.A., Ph.D., University of Minnesota.
- MARCIA I. WILLCOXON**, Assistant Professor of Interdisciplinary Studies - B.A., M.A., University of Minnesota.
- KENNETH WILLIAMS**, Temporary Instructor in Psychology, Counseling and Guidance - B.S., M.A., Ed.S., Eastern New Mexico University.
- GARY G. WILLOUGHBY**, Assistant Professor of Sociology - B.A., M.A., University of Colorado.
- CARL E. WILSEY**, Professor of Education - A.B., M.A., University of the Pacific; Ed.D., Stanford University.
- NELL E. WILSON**, Associate Professor of English - B.A., Texas Technological College; M.A., Ph.D., University of Colorado.
- SHARON R. WILSON**, Assistant Professor of English - A.B., Colorado State College; M.A., Purdue University.
- DAVID W. WINTERS**, Assistant Professor of Aerospace Studies - Capt. U.S. Air Force; A.B., University of Oklahoma; M.A., Air Force Institute of Technology, Wright-Patterson Air Force Base.
- ELISABETH P. WIRICK**, Associate Professor of Home Economics - B.S., College of Home Economics, Rotterdam, Netherlands; M.S., College of Home Economics, Amersfoort, Netherlands; M.A., Brigham Young University.
- MARIAN G. WITWER**, Assistant Professor of English - B.A., University of Michigan; M.A., University of Colorado.
- DALE E. WOERNER**, Professor of Chemistry - B.S., Kansas State University; M.S., Ph.D., University of Illinois.
- ELAINE V. WOLFE**, Associate Professor of Elementary Education - B.S., California State College; M.Ed., Pennsylvania State University; Ph.D., University of Pittsburgh.
- RICHARD R. WOLFE**, Professor of Special Education; Chairperson, Department of Social Rehabilitation Services - B.S., Thiel College; M.S., Westminster College; Ph.D., University of Pittsburgh.
- RICHARD J. WOOD**, Instructor in Curriculum and Instruction - B.S., State University College of Education--Oswego; M.S., State University College of Education--Buffalo.
- ERNEST J. WOODS**, Professor of Mathematics Education - B.A., Ottawa University; A.M., University of Northern Colorado.

- JANET E. WORRALL**, Assistant Professor of History - A.B., Hamline University; M.A., Ph.D., Indiana University.
- THURMAN N. WRIGHT**, Associate Professor of Physical Education - B.A., University of Northern Colorado; M.A., Dir. of P.E., Indiana University.
- WILLIAM S. WRIGHT**, Associate Professor of Special Education - A.B., Kansas Wesleyan University; M.A., University of Northern Colorado; Ed.D., University of Oregon.
- CAROLYN D. YELTON**, Assistant Professor of Nursing of Children - B.S., University of Northern Colorado; M.S., University of Colorado.
- ALICE M. YETKA**, Professor of Business - B.S., University of Minnesota; M.A., Ed.D., University of Northern Colorado.
- CAROLINE D. ZAWECKIS**, Assistant Professor of Community Health Nursing - B.S., Loretto Heights College; M.S., Catholic University of America.
- RONALD D. ZELLNER**, Assistant Professor of Psychology, Counseling and Guidance - B.S., M.A., Ph.D., Arizona State University.

Laboratory School Assignments Ernest Horn Elementary School -- University High School

- KENNETH G. FRISBIE**, Ed.D., Director of the Laboratory School.
- DONALD K. ADAMS**, Ed.D., Supervisor and Instructor in Elementary Science and Earth Science.
- MARGARET A. ANDERSON**, B.A., Supervisor and Instructor in the Primary Continuum.
- MARK W. ANDERSON**, M.A., Supervisor and Instructor in Middle School Mathematics.
- EDWARD BRAZEE**, Ed.D., Supervisor and Instructor in the Middle School Language Arts.
- CAROLYN K. BRINK**, M.A., Supervisor and Instructor in Home Economics.
- GREGORY R. BUTTON**, M.A., Supervisor and Instructor in Fine Arts.
- SHIRLEY M. CARRIAR**, Ed.D., Supervisor and Instructor in Secondary School English.
- RICHARD N. EMERSON**, M.A., Supervisor and Instructor in Middle School Mathematics and Science.
- BARBARA A. EMMERT**, M.A., Supervisor and Director of Guidance and Counseling, K-12.
- JAMES P. HAWKINS**, Ed.D., Supervisor and Instructor in Secondary English and Humanities.
- MICHAEL W. FLANNIGAN**, Ed.D., Guidance Counselor, K-12.
- BRENDA M. FOOTH**, M.A., Supervisor and Instructor in the Middle School Health, Physical Education and Recreation.
- GARY W. GRONBERG**, M.A., Assistant Director and Coordinator of Special Education for Elementary Education.
- THOMAS L. GROOM**, M.A., Supervisor and Instructor in Secondary School.
- LELLOINE GUNNING**, M.A., Supervisor and Instructor in the Intermediate Continuum.
- RUSSELL D. HEATH**, A.B., Supervisor and Instructor in Secondary School Social Studies.
- JENEAN L. HUCKABY**, B.S., Supervisor and Instructor in the Primary Continuum.
- H. AUDRIE JOHNSTON**, M.A., Supervisor and Instructor in Secondary School Mathematics.
- GERALD E. KARRE**, M.A., Supervisor and Instructor in Instrumental Music, K-12.
- IDAHLYNN KARRE**, Ph.D., Supervisor and Instructor in English, Middle School.
- EDWARD KRAFFT**, M.A., Supervisor and Instructor in the Intermediate Continuum.
- JEANNE E. LIPMAN**, A.B., Supervisor and Instructor in Vocational Business.
- ROBERT L. LONGWELL**, Ph.D., Supervisor and Instructor in Secondary School Speech and English.
- ROSEMA McKAIN**, M.A., Supervisor and Instructor in Secondary School Business.
- CHRISTY L. MALNATI**, A.B., Supervisor and Instructor in French.
- NELDA MICKENS**, M.A., Supervisor and Instructor in Vocal Music, K-12.
- MARIE W. MOINAT**, M.A., Librarian, K-12.
- MARLYS S. NOBLE**, B.S., Supervisor and Instructor in the Intermediate Continuum.

- JUDITH L. OLSON, B.S.**, Supervisor and Instructor in the Primary Continuum.
- PAUL W. RICHARD, M.A.** Supervisor and Instructor in Secondary School Science.
- CLARENCE E. ROSS, A.B.**, Supervisor and Instructor in Physical Education.
- LESLIE A ROWE, M.Ed.**, Supervisor and Instructor in Health, Physical Education and Recreation.
- F. KEITH SCHADEL, A.B.**, Supervisor and Instructor in Middle School English and Social Studies, and K-12 Counselor.
- COLLEEN A. SETTJE, M.A.**, Supervisor and Instructor in Secondary School Social Studies.
- JOSEPH L. SHOEMAKER, Ed.D.**, Supervisor and Instructor in Secondary School Science.
- JOSEPH J. SLOBOJAN, Ed.D.**, Supervisor and Instructor in Secondary School Mathematics; Assistant Director, Secondary School.
- JAMES G. SMITH, A.B.**, Supervisor and Instructor in Health, Physical Education and Recreation, K-12.
- ROBERT T. STACH, M.A.**, Supervisor and Instructor in Drama and Speech.
- CONNIE K. STELLJES, M.A.**, Supervisor and Instructor in Spanish, 6-12.
- JOHN H. SWAIM, M.A.**, Supervisor and Instructor in Social Studies, Middle School; Assistant Director, Middle School.
- HAROLD G. TURNAGE, A.B.**, Supervisor and Instructor in German.
- GEORGIA J. WADE, M.A.**, Supervisor and Instructor in Art, K-12.
- LINDA A. WARNER, A.B.**, Supervisor and Instructor in Middle School Science.
- KENNETH H. WIDEL, M.A.**, Supervisor and Instructor in Industrial Arts, K-12.
- ERNEST J. WOODS, A.M.**, Supervisor and Instructor in Secondary School Mathematics.

Affiliate Professors

- CLOYD L. ARFORD**, Affiliate Professor of Physical Education - B.S., University of Denver; M.D., University of Colorado.
- FLORENCE BERMAN**, Affiliate Professor of Special Education - A.B., Ohio University; M.A., Ph.D., University of Denver.
- F. KEITH BLUE**, Affiliate Professor of Educational Administration - A.B., University of Northern Colorado; Ph.D., Michigan State University.
- NATHAN J. CLIFFORD, M.D.**, Affiliate Professor of Physical Education - M.D., University of Colorado.
- DONALD E. COOK**, Affiliate Professor of Physical Education - A.B., Colorado College; M.D., University of Colorado School of Medicine.
- RICHARD CRIPE**, Affiliate Professor of Clinical Psychology - B.S., M.S., Ph.D., Purdue University.
- WILLIAM C. DEAN**, Affiliate Professor of Educational Administration - A.B., Alma College; M.A., Ph.D., Michigan State University.
- MARION P. DOWNS**, Affiliate Professor of Special Education and Rehabilitation - A.B., University of Minnesota; M.A., M.D., University of Denver.
- JAMES EMMETT**, Affiliate Professor of Biological Sciences - B.S., M.S., University of Wyoming; D.V.M., Colorado State University.
- BARBARA B. ERICSON**, Affiliate Instructor in Special Education and Rehabilitation - B.A.T., Western Illinois University.
- DONALD K. GOE**, Affiliate Professor of Educational Administration - A.B., M.A., University of Denver; Ed.D., University of Northern Colorado.
- JON M. HASBROUCK**, Affiliate Professor of Special Education and Rehabilitation - A.B., M.A., University of Montana; Ph.D., University of Minnesota.
- JOHN HOLLOWAY**, Affiliate Professor of College Law - B.A., J.D., University of Colorado.
- HELEN M. HUBER**, Affiliate Associate Professor of Nursing; Director of Nursing, Fort Logan Mental Health Center - B.S., College of Mt. St. Joseph; M.S.N., Catholic University of America.
- ROGER M. JOHNSON**, Affiliate Professor of Psychiatry; Psychiatrist; Medical Director, Weld Mental Health Center, Inc. - A.B., M.D., University of Nebraska.
- LEWIS KIDDER**, Affiliate Associate Professor of Medical Technology; Director, Department of Psychology, Weld County General Hospital - B.S., Kansas State University; M.D., University of Kansas.

CARL LOOVIS, Affiliate Professor of Special Education and Rehabilitation - B.S., Steton Hall University; M.S., University of Wisconsin, Ph.D., Louisiana State University.

PATRICIA A. LUCEY, Affiliate Professor of Special Education and Rehabilitation - Ph.B., Siena Heights College; M.Ed. National College of Education.

DE A. McMAHAN, Affiliate Professor of Special Education and Rehabilitation - B.A., University of Colorado; M.S., Washington University.

ALFRED E. McWILLIAMS, JR., Affiliate Professor of Education - A.B., M.A., Ph.D., University of Northern Colorado.

ROBERT MILLER, Affiliate Professor of Nursing; Director of Nursing, Weld County General Hospital - B.S., University of Denver; M.S., University of Colorado.

JOHN MILLS, Affiliate Assistant Professor of Medical Technology; Pathologist, Weld County General Hospital - B.S., M.D., University of Nebraska.

JERRY L. NORTHERN, Affiliate Professor of Special Education and Rehabilitation - A.B., Colorado College; M.S., Gallaudet College; Ph.D., University of Colorado.

MARY FRANCIS O'BRECHT, Affiliate Instructor in Speech Pathology - B.S., M.S., Southern Illinois University.

GILBERT D. ROMAN, Affiliate Associate Professor of Education - B.A., Wichita State University; M.Ed. Antioch College.

JOHN SERHANT, Affiliate Professor of Business - B.A., Baldwin-Wallace College.

THERON G. SILLS, Affiliate Professor of Psychiatry; Psychiatrist - B.A., M.D., University of Kansas.

SUSAN T. SLIBECK, Affiliate Professor of Special Education and Rehabilitation - B.S., Northern Illinois University; M.S. Colorado State University.

LARRY N. VIBBER, Affiliate Professor of Educational Administration - A.B., M.A., Ed.D., University of Northern Colorado.

JERRY WEIL, Affiliate Assistant Professor of Medical Technology; Pathologist, Weld County General Hospital - B.A., University of Colorado; M.D., University of Colorado, Medical School.

JAMES R. WHEELER, Affiliate Professor of Physical Education - M.D., Northwestern University.

Emeritus Faculty

VERNE AHLBERG, Professor Emeritus of Speech - A.B., M.A., Appointed, 1950; Emeritus since 1971.

RACHEL R. ANDERSON, Professor Emeritus of Business - A.B., M.A., Appointed, 1967; Emeritus since 1975.

WINFIELD DOCKERY ARMENTROUT, Vice President Emeritus - B.A., A.M., Ed.D., LL.D. Appointed, 1920; Emeritus since 1955.

GUNTHER F. A. BAER, Associate Professor Emeritus of German - B.A., M.A., Dr. utriusque iuris. Appointed, 1961; Emeritus since 1973.

HOWARD L. BLANCHARD, Professor Emeritus of Psychology, Counseling and Guidance - B.A., M.S., Ed.D. Appointed, 1960; Emeritus since 1974.

IRENE ENGLE BOGAN, Associate Professor Emeritus of Library Science - A.B., B.S. Appointed, 1946; Emeritus since 1964.

JOHN EDGAR BOTHELL, Professor Emeritus of Education - A.B., M.A., Ed.D. Appointed, 1949; Emeritus since 1970.

EDITH B. BRUMMER, Assistant Professor Emeritus of Library Science - B.S. Appointed, 1966; Emeritus since 1965.

JOHN WILLIAM BUNN, Professor Emeritus of Health Education - B.S., A.M. Appointed, 1966; Emeritus since 1963.

L.C. BUTLER, Professor Emeritus of Physical Education - A.B., M.A., Ed.D. Appointed, 1940; Emeritus since 1973.

MARTIN CANDELARIA, Professor Emeritus of Spanish - A.B., A.M., Ed.D. Appointed, 1948; Emeritus since 1963.

JOHN ELBERT CHADWICK, Professor Emeritus of Music - A.B., A.M., Ph.D. Appointed, 1924; Emeritus since 1962.

LUCY ROSENQUIST CHAMBERLAIN, Associate Professor Emeritus of Elementary Education - Ph.B., A.M. Appointed, 1923; Emeritus since 1949.

- ROY EDWARD COLBY**, Assistant Professor Emeritus of Spanish - A.B., M.A. Appointed, 1962; Emeritus since 1972.
- HARRY E. COLLINS**, Professor Emeritus of College Student Personnel Administration - A.B., M.A., Ed.S. Appointed 1956; Emeritus since 1975.
- AMBROS OWEN COLVIN**, Professor Emeritus of Business Education - B.C.S., A.M., Ph.D. Appointed, 1918; Emeritus since 1947.
- DONALD GILMORE DECKER**, Provost Emeritus, and Professor Emeritus of Science Education - B.S., M.A., Ph.D., Sc.D. Appointed 1937; Emeritus since 1975.
- RICHARD G. ELLINGER**, Professor Emeritus of Fine Arts - A.B., A.M. Appointed, 1927; Emeritus since 1962.
- ROSE WILMA FARRAR**, Professor Emeritus of Business Education - A.B., A.M. Appointed, 1938; Emeritus since 1962.
- JOHN B. FULBRIGHT**, Professor of Psychology, Counseling and Guidance - B.A., M.A., Ed.D. Appointed, 1949; Emeritus since 1972.
- CLARA E. FUNDERBURK**, Associate Professor Emeritus of Home Economics - B.S., M.A. Appointed, 1964; Emeritus since 1973.
- DON GARLICK**, Professor Emeritus of Music - B.F.A., M.M., D.M.A. Appointed, 1949; Emeritus since 1973.
- GEORGE G. GATES**, Professor Emeritus of English - B.A., M.A., Ed.D. Appointed, 1946; Emeritus since 1969.
- CATHERINE CRATES GIBERT**, Professor Emeritus of Foreign Languages - A.B., A.M. Appointed, 1922; Emeritus since 1959.
- BLANCHE GINSBURG**, Associate Professor Emeritus of Music - A.B., M.A. Appointed, 1946; Emeritus since 1974.
- HENRY TRUSTMAN GINSBURG**, Professor Emeritus of Music - B.Mus., A.B., A.M., D.Mus. Appointed 1931; Emeritus since 1958.
- HARLEY F. GLIDDEN**, Professor Emeritus of Science - B.S., M.A., Ph.D. Appointed, 1942; Emeritus since 1971.
- RUPERT M. GOODBROD**, Professor Emeritus of Music - B.F.A., M.S. in Ed. Appointed, 1945; Emeritus since 1971.
- LYMAN BECHER GRAYBEAL**, Professor Emeritus of Education - B.S., A.M., Ed.D. Appointed, 1950; Emeritus since 1960.
- WALTER O. GREEN**, Professor Emeritus of Fine Arts - B.A., M.A. Appointed, 1965; Emeritus since 1970.
- RHODA FOSS HALL**, Professor Emeritus of Home Economics - B.S., M.A. Appointed, 1945; Emeritus since 1967.
- JOHN WILLIAM HANCOCK**, Professor Emeritus of Physical Education - A.B., M.A. Appointed, 1932; Emeritus since 1966.
- EZRA CLARENCE HARRAH**, Professor Emeritus of Zoology - A.B., A.M., Ph.D. Appointed, 1926; Emeritus since 1954.
- WILLIAM F. HARTMAN**, Professor Emeritus of Journalism - B.A., M.A., Ed.D. Appointed, 1946; Emeritus since 1974.
- FRED LOUIS HERMAN**, Professor Emeritus of Physics - A.B., A.M. Appointed, 1922; Emeritus since 1960.
- TYRUS HILLWAY**, Professor Emeritus of Higher Education - A.B., M.A., Ph.D. Appointed, 1951; Emeritus since 1973.
- EDNA MARY HOYDAR**, Professor Emeritus of Public School Music - B.M., M.M. Appointed, 1937; Emeritus since 1962.
- BERNICE E. HUNN**, Professor Emeritus of Elementary Education - B.S., M.A., Ed.D. Appointed, 1957; Emeritus since 1975.
- HELEN BARBARA HUNT**, Associate Professor Emeritus of Home Economics - B.S., M.A. Appointed, 1949; Emeritus since 1959.
- RITA J. HUTCHERSON**, Professor Emeritus of Music - A.B., M.A., Ph.D. Appointed, 1946; Emeritus since 1973.
- ALEX JARDINE**, Professor Emeritus of Education - B.A., M.A., Ed.D. Appointed, 1966; Emeritus since 1970.
- LEROY KERNS**, Professor Emeritus of Education - A.B., M.A., Ed.D. Appointed, 1949; Emeritus since 1974.

WINFIELD LEROY KNIES, Associate Professor Emeritus of Business Education - A.B., M.B.A. Appointed, 1922; Emeritus since 1957.

PAUL CHARLES LaBORNE, Instructor Emeritus in Foreign Language - A.B., M.A. Appointed, 1960; Emeritus since 1970.

HELEN LANGWORTHY, Professor Emeritus of Speech and Drama - A.B., M.A., Ph.D. Appointed, 1933; Emeritus since 1965.

JESSIE EMILY LATHAM, Professor Emeritus of Health Education - A.B., M.A. Appointed, 1949; Emeritus since 1968.

ROSE EILEEN LEACOCK, Professor Emeritus of Fine Arts - B.S., M.A. Appointed, 1945; Emeritus since 1968.

ELIZABETH LEHR, Associate Professor Emeritus of Elementary Education - B.A., A.M. Appointed, 1926; Emeritus since 1959.

CHARLES WILLIAM McLAIN, Professor Emeritus of Educational Psychology and Guidance - B.S., M.S., Ed.D. Appointed, 1951; Emeritus since 1963.

FLORENCE MARGUERITE MEYER, Associate Professor Emeritus of English - A.B., A.M. Appointed, 1930; Emeritus since 1960.

ESTEL ELGAR MOHR, Professor Emeritus of Public School Music - B.S., M.A., Ed.D. Appointed, 1926; Emeritus since 1970.

ARTHUR D. MOINAT, Professor Emeritus of Botany - B.S., M.S., Ph.D. Appointed, 1950; Emeritus since 1967.

MARGARET LOIS MULRONEY, Professor Emeritus of Foreign Languages - B.A., M.A., Ph.D. Appointed, 1928; Emeritus since 1975.

LOUISE ADELAIDE NEAL, Professor Emeritus of Education - A.B., M.A., Ed.D. Appointed, 1946; Emeritus since 1972.

VERA LANORE NEWBURN, Professor Emeritus of Home Economics - B.S., M.S. Appointed, 1926; Emeritus since 1964.

HOWARD D. NINEMIRES, Professor Emeritus of Education - A.B., M.A. Appointed, 1952; Emeritus since 1968.

DALE O. PATTERSON, Professor Emeritus of Mathematics - A.B., M.A., Ph.D. Appointed, 1947; Emeritus since 1965.

ALBERT ELOISE REITZE, Associate Professor Emeritus of Education - A.B., M.A. Appointed, 1950; Emeritus since 1966.

WINNIFRED S. RICHARDSON, Associate Professor Emeritus of Library Science - A.B., M.A. Appointed, 1960; Emeritus since 1973.

WILLIAM ROBERT ROSS, President Emeritus - B.S., M.A., Ph.D., ScD., LL.D. Appointed, 1942; Emeritus since 1964.

GEORGE F. SANDERSON Professor Emeritus of Education - B.A., M.A. Appointed, 1948; Emeritus since 1975.

EDITH MARIE SELBERG, Professor Emeritus of Biology - A.B., A.M. Appointed, 1926; Emeritus since 1962.

JACK SHAW, Professor Emeritus of College Student Personnel Administration - A.B., M.Ed., Ph.D. Appointed, 1950; Emeritus since 1973.

MAYNARD L. STAMPER, Professor Emeritus of Biological Sciences - B.S., A.M., Ph.D. Appointed, 1954; Emeritus since 1974.

VIVIAN TILDEN, Associate Professor Emeritus of Library Science - A.B., M.A. Appointed, 1958; Emeritus since 1973.

OSCAR W. TOLLEFSON, Professor Emeritus of Geology - B.S., M.A., Ph.D. Appointed, 1956; Emeritus since 1969.

SYLVESTER ROY TOUSSAINT, Professor Emeritus of Speech - B.A., M.A., Ph.D. Appointed, 1938; Emeritus since 1967.

GLEN C. TURNER, Professor Emeritus of Business Administration - A.B., M.A., M.B.A., D.P.S. Appointed, 1940; Emeritus since 1968.

EVERETT H. VAN MAANEN, Professor Emeritus of Education - B.S., M.A., Ed.D. Appointed, 1959; Emeritus since 1975.

LAURA O. WILLIAMS, Assistant Professor Emeritus of Education - A.B., M.A. Appointed, 1968; Emeritus since 1971.

GRACE HANNAH WILSON, Professor Emeritus of Education - A.B., A.M., Ph.D. Appointed, 1915; Emeritus since 1953.

A. M. WINCHESTER, Professor Emeritus of Biology - A.B., M.A., Ph.D. Appointed, 1962; Emeritus since 1973.

WELBY B. WOLFE, Professor Emeritus of Drama - A.B., M.A., Ed.D. Appointed, 1946; Emeritus since 1973.

LESLIE DAY ZELENY, Professor Emeritus of Sociology - B.S., A.M., Ph.D. Appointed, 1946; Emeritus since 1963.

INDEX

A	
Academic Advising	8
Academic Appeals Board	10
Academic Credit	8
Academic Excellence	13
Academic Freedom, Rights and Responsibilities of Students	29
Academic Information	8-10
Academic Standards	10-13
Academic Standing	10
Academic Suspension	12
Accounting Program	51
Accreditation and Affiliation	4
Acoustically Handicapped, Program	129
Activities, Student	38
Administrative Officers	280
Admissions	5-8
Admission Policy	5
Admission Requirements	8
Aerospace Studies, Courses	140
Aerospace Studies, Faculty	20
Aerospace Studies, Program	45
Affiliate Professors	303
AFROTC	45
Alumni Relations	37
Application, Housing	35
Application, Student Field Experience	27
Anthropology, Courses	136
Anthropology, Faculty	14
Anthropology, Program	47
Arts, School of the	17
Arts and Sciences, College of	13
Astronomy, Courses	141
Athletics	38
Attendance	11
Audiology, Program	130
Awards and Scholarships	31
B	
Biological Sciences, Faculty	14
Biological Sciences, Program	48
Biology, Courses	143
Black Studies, Courses	146
Black Studies, Faculty	14
Black Studies, Program	49
Board of Trustees	280
Botany, Courses	147
Botany, Program	50
Business, Accounting Program	51
Business, Courses	148
Business, Distributive Education	56
Business, Faculty	18
Business, General Program	52
Business, Office Administration Program	53
Business, Office Education, Program	55
Business, School of	18
Business, Secretarial Program	54
Business Administration, Program	51
Business Teacher Education, Courses	141
Business Teacher Education, Program	55
Business-Finance, Program	52
Business-Management, Program	52
Business (Home Economics Major)	87
Business and Economics, Program	55
Business-Marketing, Program	53
C	
Calendar	2
Campus Facilities	5
Catalog, Effective Dates	1
Center for Non-Traditional and Outreach Education	21
Chemistry, Courses	157
Chemistry, Faculty	14
Chemistry, Program	57
Citizenship Standards	29
Class Status	11
Clubs and Honorary Fraternalities	38
College of Arts and Sciences, Faculty	13
College of Education, Faculty	16
College of Student Personnel Administration, Faculty	16
Colleges, Schools, and Departments of Instruction	13
Communication, Courses	160
Communication, Faculty	14
Communication, Program	60

Computing Grade Averages	12
Contracts	35
Correspondence and Learning	
Package Courses	21
Counseling Center	29
Course Descriptions	136-279
Course Load	8
Course Numbers	9
Course, General Military	46
Course, Professional Officer	46
Course Work for Next Degree	9
Credit by Examination	11
Credit for Military Service	
School Experience	7
Credentialing Requirements	28
Curriculum and Instruction,	
Courses	165
Curriculum and Instruction,	
Faculty	16
D	
Dance Education, Program	62
Dean's Honor Roll	13
Dean's List of Distinction	13
Dean of Student's Office	21
Degree Programs	44-135
Degree and Non-Degree Programs,	
Major and Minor	44
Descriptions of Courses	136-279
Dietetics, Program	62
Dining Rooms	34
Disabled Student, Special	
Resources for	37
Distributive Education	56
Division of Student	
Personnel	20
Driver and Traffic Safety	
Education	207
E	
Early Childhood Education,	
Courses	165
Early Childhood Education,	
Program	68
Earth Sciences, Courses	181
Earth Sciences, Faculty	14
Earth Sciences, Programs	63
Economics, Courses	163
Economics, Faculty	14
Economics, Program	64
Economic Education, Program	65
Education, College of	16
Educational Administration,	
Faculty	16
Educational Change and	
Development, School of	18, 123
Educational Curriculum and	
Instruction, Courses	165
Educational Curriculum and	
Instruction, Faculty	16
Educational Field Experiences,	
Courses	168
Educational Field Experiences,	
Faculty	16
Educational Field Experiences,	
Program	65

Educational Media, Courses	167
Educational Media, Faculty	16
Educational Media, Program	66
Elementary Education, Courses	166
Elementary Education, Faculty	17
Elementary Education,	
Program	66
Elementary Education, Bilingual	
Bicultural, Program	67
Elementary Science, Program	69
Emeritus Faculty	304
Employment, Student	30
English, Courses	177
English, Faculty	14
English, Program	69
English Education, Courses	177
Enrollment, Late	9
Entrance Requirements	8
Environmental Education--	
Outdoor Education, Program	111
Environmental Studies, Courses	180
Environmental Studies, Faculty	15
Environmental Studies, Program	73
Extra Fees	41
F	
Faculty, Listing	280
Family Life and Consumer	
Education, Program	73
Fees and Expenses	40
Finance, Program	52
Financial Aids	30
Financial Information	40
Fine Arts, Courses	182
Fine Arts, Faculty	18
Fine Arts, Program	74
Florence Program:	
Humanities	88,186
Florence, Studies in Comparative	
Arts Courses	186
Florence, Studies in Comparative	
Arts, Program	24, 76, 88, 186
Food and Nutrition Program	77
Food Service	34
Foreign Language, Courses	188
Foreign Language, Faculty	15
Forensics	38
Foundations of Education,	
Courses	167
Foundations of Education,	
Faculty	17
Fraternities	38
French, Courses	188
French, Program	78
Freshman Admissions Timetable	6
Freshman Students - Admissions	
Procedures	6
G	
General Education	
Requirements	22
General Information	3-5
Geography, Courses	191
Geography, Faculty	15
Geography, Program	79
Geology, Courses	193

Physics, Courses	255
Physics, Faculty	15
Physics, Program	117
Placement Center Charges	42
Placement Service	37
Political Science, Courses	257
Political Science, Faculty	15
Political Science, Program	118
Pre-Professional Courses	25
Preschool, Courses	156
Preschool Education, Program	119
Probation and Dismissal	11
Professional Courses for School of HPER	
Majors and Minors	208
Professional Officer Course	46
Professional Teacher Education	25
Proficiency Examinations	13
Program Enrichment	23
Program Requirements	44
Psychology, Courses	260
Psychology, Counseling and	
Guidance, Faculty	17
Psychology, Program	121
Publications, Student	38
R	
Reading, Courses	170
Readmission for Students Who	
have been dismissed for	
Academic Reasons	12
Recreation, Program	121
Refund Policy	42
Regulations Governing Academic	
Probation and Dismissal	11
Rehabilitation and Related	
Services, Program	131
Religious Program	39
Research and Statistical	
Methodology, Courses	264
Research and Statistical	
Methodology, Faculty	17
Residence Hall Charges	42
Residence Hall Regulations	35
Residence Hall Requirements	34
Residence Requirements	13, 34
ROTC, Air Force	45
Russian, Courses	265
Russian, Program	122
S	
Schedule of Classes	9
Schedule Changes	9
Scholarships and Awards	30
School of the Arts,	
Faculty	17
School of Business,	
Faculty	18
School of Educational Change	
and Development	18, 123
School of Educational Change and	
Development, Courses	268
School of Health, Physical	
Education, and Recreation,	
Faculty	19
School of Music, Faculty	19
School of Nursing, Faculty	20

School of Special Education	
and Rehabilitation, Faculty	17
Science, Courses	266
Science Education, Courses	265
Science Education, Faculty	15
Science, (Jr. High Level),	
Program	94
Sciences, College of Arts and	13
Second Baccalaureate Degree	29
Secretarial Program	54
Social Organizations	39
Social Science, Program	124
Social Studies Education,	
Courses	273
Sociology, Courses	268
Sociology, Faculty	16
Sociology, Program	124
Spanish, Courses	271
Spanish, Program	125
Special Certification, Courses	207
Special Education and	
Rehabilitation, Courses	171
Special Education, Program	125
Speech Pathology, Program	130
Student Activities	38
Student Employment	30
Student Freedom, Rights and	
Responsibilities	29
Student Government	38
Student Group Hospitalization	
and Accident Insurance	34
Student Health Program	33
Student Review	24
Student Services Center	21
Studies in Comparative Arts,	
Florence, Courses	186
Studies in Comparative Arts,	
Florence, Program	24, 76
Summer Session	9
Supervised Teaching for Certification	27
Suspension, Academic	12

T	
Teacher Education	25
Theatre Arts, Courses	273
Theatre Arts, Faculty	16
Theatre Arts, Program	132
Transfer Admissions	6
Transfer Credit	6
Transfer Procedures	7
Transfer Students	6
Transfer Students, Admissions	6
Timetable	7
Trustees, Board of	280
Tuition and Fees	40

U	
UNC Services	29
Undergraduate Course Load	8
Undergraduate Program	
Requirements	44
University Calendar	2
UNC Program in Florence,	
Italy: Studies in	
Comparative Arts	24, 76, 88, 186

V	
Veterans G.I. Benefits	40
Visually Handicapped, Program	129
Vocational Teacher Education	27
Vocational Teacher Education, Courses	276
Vocational Teacher Education, Program	134

W	
Withdrawal from Class	9
Withdrawal from University, Complete	10
Women's Studies, Program	134

Z	
Zoology, Courses	278
Zoology, Program	135

GUIDE TO CAMPUS OFFICES

Post Office Address:

University of Northern Colorado
Greeley, Colorado 80639

Telephone: (Area Code 303) 351-1890

Admissions

Admissions Office, Carter 209 (Ext 2881)

Affirmative Action

Affirmative Action Office, Frasier 201 (Ext 2957)

Bulletins and Catalogs

Publications Office, Frasier 206 (Ext. 2772)

Counseling Services

Counseling and Testing Center, 103 Gray Hall (Ext. 2497)

Fee Payments

Accounting Office, Frasier 11 (Ext. 2201)

Financial Assistance and Student Employment

Financial Aids Office, Carter 209 (Ext. 2502)

Graduate Program Information

Graduate Office, 1410-20th Street (Ext. 2831)

Housing

Housing Office, Gordon Hall (Ext. 2721)

Off-Campus and Correspondence Courses

Center for Non-Traditional and Outreach Education,
Faculty Apts. Unit 1, Garden Level (Ext. 2891)

Registration

Registrar and Records Office, Frasier 123 (Ext 2231)

Scholarships

Financial Aids Office, Carter 209 (Ext. 2502)

Summer Study

Admissions Office, Carter 209 (Ext. 2881)

University of Northern Colorado
Greeley, 80639

NON-PROFIT ORG.
U.S. POSTAGE
PAID
PERMIT NO. 19
GREELEY, COLO.