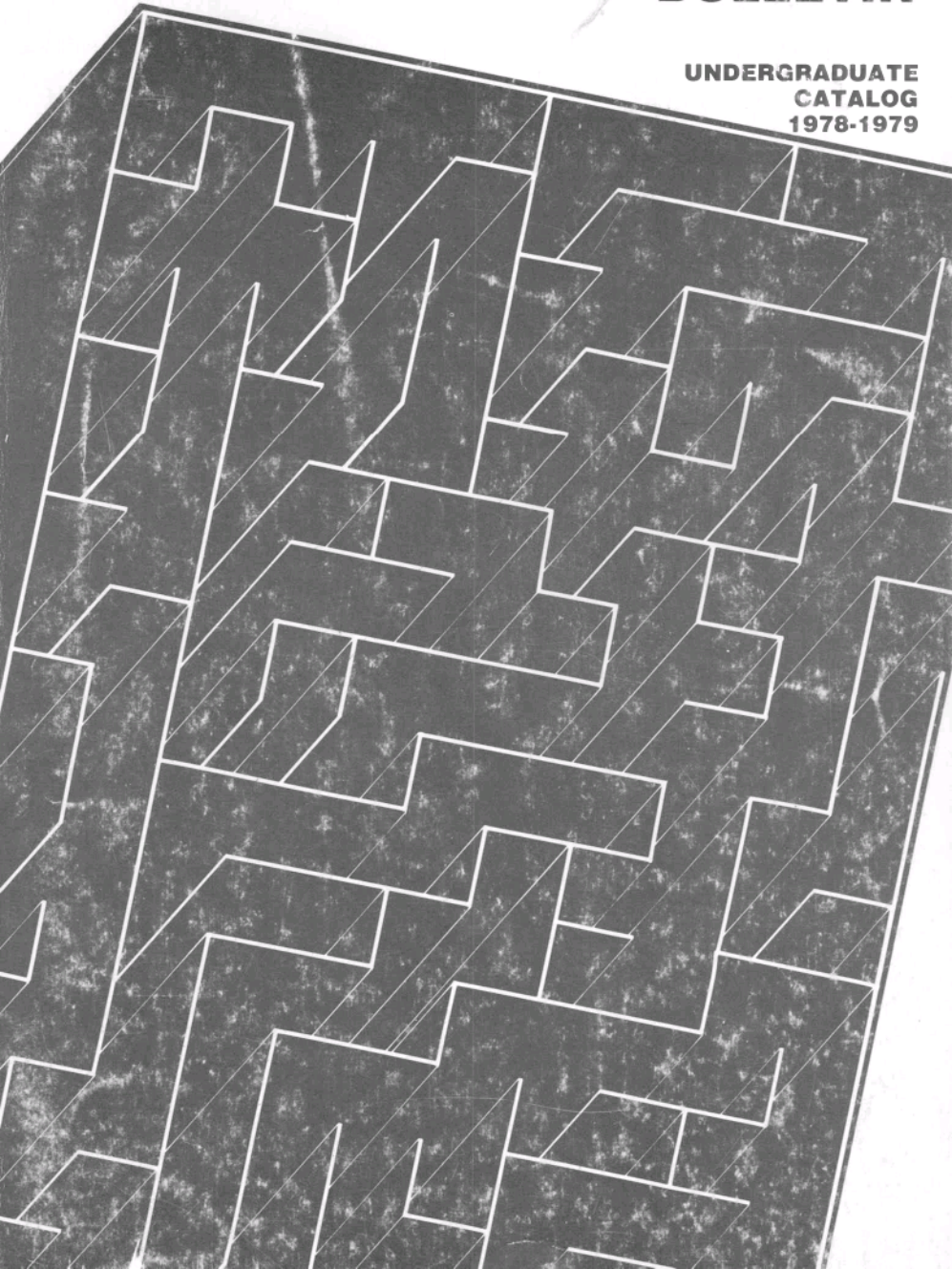


**UNIVERSITY
OF
NORTHERN
COLORADO
BULLETIN**

**UNDERGRADUATE
CATALOG
1978-1979**



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

Published five times a year in January, March, April, May and August by UNC Publications Office, Carter Hall 206A, Greeley, Colorado 80639. Second Class Postage paid at Greeley, Colorado.

Bulletin Series LXXVI, No. 3, April, 1978.

UNIVERSITY OF NORTHERN COLORADO BULLETIN

**UNDERGRADUATE
CATALOG
1978 - 79**

**EFFECTIVE DATES:
JUNE 1, 1978 to MAY 31, 1979**

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UNIVERSITY CALENDAR

1978 - 1979

SUMMER QUARTER, 1978

Pre-session

Monday, June 12 – Registration and classes begin for 1-week (June 12 - June 16) pre-session and 10-week session (June 12 - August 18)

Tuesday, June 13 – Classes begin for 10-week session

Friday, June 16 – Last day of classes for 1-week pre-session

Regular Session

Monday, June 19 – Registration for 8-week session (June 19 - August 11)

Tuesday, June 20 – Classes begin for 8-week session

Tuesday, July 4 – Vacation (no classes)

Friday, August 11 – Last day of classes for 8-week session

Saturday, August 12 – Commencement

Friday, August 18 – Last day for 10-week session

Interim Session

Monday, August 21 – Registrations for other sessions within the August 21 - September 15 period will be conducted during the first day of classes in the classroom assigned to the course. Consult the Summer, 1978, Schedule of Classes for specific beginning and ending dates of courses.

FALL QUARTER, 1978

Tuesday and Wednesday, September 19 and 20 – New Faculty and GA/TA Meetings

Thursday and Friday, September 21 and 22 – Fall Registration

Monday, September 25 – Classes begin

Wednesday, Thursday, Friday, November 22, 23, 24 – Thanksgiving Vacation (no classes)

Monday, November 27 – Classes begin

Friday, December 8 – Last day of classes

Saturday, December 9 – Commencement

WINTER QUARTER, 1979

Wednesday and Thursday, January 3 and 4 – Winter Registration

Friday, January 5 – Classes begin

Friday, March 16 – Last day of classes

Saturday, March 17 – Commencement

SPRING QUARTER, 1979

Monday and Tuesday, March 26 and 27 – Spring Registration

Wednesday, March 28 – Classes begin

Friday, May 11 – Fall Pre-Registration

Monday, May 28 – Memorial Day (no classes)

Friday, June 8 – Last day of classes

Saturday, June 9 – Commencement

Residence Hall Rates **Effective September 1, 1978**

	Quarterly Rates
Residence Hall with Room and Board	Per Student
East Campus (15 Meal Option, \$450/mo.)	\$485
McCowen	505
Harrison	510
Belford, Sabin, Tobey-Kendel and Snyder	490
Wiebking and Wilson	505
Residence Halls, Apartment Style, without Board (rates per person)	
Turner	
Single	\$230
4-person apartment	245
Lawrenson	
Efficiency	265
4-person apartment	280
Other Campus Apartments	
Student Family (furnished)	Monthly Rates Per Family \$155

Bulletin Supplement

To the University of Northern Colorado 1978-79 Undergraduate Catalog (page 46), and Graduate School Catalog (page 36). In accordance with legislative action and approval of the Board of Trustees, the following changes have been made effective June 1, 1978.

TUITION (Summer, Fall, Winter or Spring Quarters)

	Colorado Resident	Non- Resident
6 Credit Hours or Less		
Tuition per Credit Hour	\$ 23.00	\$ 91.00
7-18 Credit Hours (full-time)	\$160.00	\$638.00
Tuition per Credit Hour for each Credit Hour above 18	\$ 11.00	\$ 43.00

SERVICE FEES (Residence status does not apply.)

Summer Quarter, 1978

General Fee Distribution	
University Fees	\$18.67
Student Fees	9.34
Health Service Fees	9.49
Total Fees Required, More than Six Credit Hours	\$37.50
Six Credit Hours or Less	\$3.00 per Credit Hour
Health Insurance Optional (during first week of Summer Quarter)	\$22.50

Fall, Winter or Spring Quarters, 1978-79

General Fee Distribution, per quarter	
University Fees	\$24.64
Student Fees	12.33
Health Services Fees	12.53
Health Insurance	27.60
Total Fees Required, More than Six Credit Hours	\$77.10
Six Credit Hours or Less	\$4.50 per Credit Hour
COPIRG Fee (Optional, All Quarters)	\$1.50

(over)

A Guide to the 1978 - 79 UNC Catalog

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 . 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 principle emphasis has been upon preparing students

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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 (Colleges of Arts and Sciences, College of Education, College of Performing and Visual Arts, School of Business, School of Educational Change and Development, School of Health, Physical Education and Recreation, School of Industrial Technology and Home Economics, 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 the several institutions of higher education controlled by the Trustees of State Colleges in Colorado, is now governed by the Trustees of 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, National Association for Business Teacher Education, American Assembly of Collegiate Schools of Business, and other educational organizations.

Campus. The physical facilities of the university consists of 17 academic buildings, 23 residence halls and apartments for students, 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

The 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 or her high school record accompanying the application indicates he or she 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 individually 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

6 / ADMISSIONS

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 or she 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. Students planning to major in Nursing or Music will be required to submit additional application for admission to those schools. The second application and instructions will be sent by the Admissions Office upon receipt of inquiry or application for admission to the University. 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 Aids 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 or she has a "C" average academic record and is in good standing at the college or university from which he or she is transferring. His or her 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. A maximum of 135 quarter hours of academic credit is accepted from accredited 4-year institutions. Students must have a minimum residence of 45 quarter hours on the UNC campus -- this does not include UNC off-campus courses. 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 earned an Associate of Arts or Associate of Science Degree or 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, and (b) Two official transcripts of all credits earned at other colleges and universities.

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 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 page 144 and 291 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 or she 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 Student Services Center, located in the University Center, to be assigned to 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 2.75 or higher cumulative grade point average may enroll for additional hours with approval from the office of the Dean of Students or the Student Services Center. Students who carry an overload (in excess of 18 academic credit hours) will be required to pay a non-refundable tuition surcharge on a per credit hour basis. 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.

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.

Course 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.

All academic departments will maintain files of course descriptions for courses ending "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 add deadline posted in the schedule 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, the 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 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 or the Student Services Center. 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 may 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. A student may make a complete withdrawal from the University through the close of the quarter. Students who wish to completely withdraw from school during the quarter must initiate and complete 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. Students who make a complete withdrawal from the University will be charged a withdrawal fee through the end of the 4th week of the quarter. After such time, a student will be assessed full tuition and fees without refund. Please refer to the Fees and Expenses section, page 46.

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 or she considers unwarranted or capricious. Before initiating these procedures, and between any of the appeals steps outlined below, the student may and is encouraged to seek advice from his or her academic adviser or from any of the Deans in the Dean of Students Office, the Student Services Center, or the University Ombudsman.

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 the 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 the Step 2 conference with the instructor's Academic Dean.) In matters concerning departmental policy, the student should take his or her 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 the 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", "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 or her 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 objective of the 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 student is a freshman until he or she 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.

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.

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, not including summer 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 a 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" or "TF" indicates failure. Other marks used are "I" incomplete; "W" approved withdrawal; "TF" unapproved withdrawal. The work to remove an "I" is to be completed and the official grade change card received in the Records Office by the last day of the succeeding quarter of attendance, which must occur within one year of assignment of the grade. If the process has not been completed within the time limitation, the "I" remains on the record and is computed as an "F" in the student's grade average. "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. The grade of "TF" is computed as an "F".

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" or a "TF". If all the student's marks were "Cs", he or she would have a grade point average of 2.00. If one-half of his or her marks were "Cs", and the other half "Ds", the numerical value of his or her 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 (Fall, Winter, and Spring Quarters) 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 (Fall, Winter, and Spring Quarters) will be included on the Dean's Honor Roll.

Graduation with Honors. A student may be graduated with honors on the basis of his or her cumulative grade point average. To be considered for honors based on a cumulative grade point average, a student must have completed 75 quarter hours of credit at the University of Northern Colorado prior to the quarter of graduation. 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 seventeen departments leading to the Bachelor of Arts degree. The offerings are designed to give broad, diversified educational opportunities in the liberal arts disciplines and at the same time to provide the groundwork 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 requirements as specified in this catalog. He must also select a major disciplinary or inter-disciplinary subject for concentration. Those wishing to be recommended for certification to teach in secondary

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schools must also complete the Professional Teacher Education courses as prescribed by the College of Education.

Academic Departments

Anthropology Department

James A. Wanner, Chairperson

Professors: Fay, B. Mickey

Associate Professors: Higgins, Kettel,
Lutz, J. Mickey

Assistant Professors: Ayer, Denning,
Haug, Wanner

Biological Sciences Department

Ronald K. Plakke, Chairperson

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

Associate Professors: Harmon,
Peoples

Assistant Professors: Fitzgerald,
Heimbrook, Hiebert

Black Studies Department

Robert L. Dillingham, Jr., Chairperson

Assistant Professor: Dillingham

Chemistry Department

James O. Schreck, Chairperson

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

Associate Professor: Kovar

Communication Department

Richard J. Crawford, Chairperson

Professors: Crawford, DeBoer, Holley

Associate Professors: Ross,
Warnemunde

Assistant Professors: Bethel, Camp,
Hess, Karre, Schuetz, Smith

Instructors: Rood, Trapp

Earth Sciences Department

Richard A. Slater, Chairperson

Professors: Cobb, R. Dietz

Associate Professors: Hackett,
Hopkins, Shropshire, Slater

Assistant Professor: Nesse

Economics Department

Orvel L. Trainer, Chairperson

Professor: Trainer

Associate Professors: Anderson,
Mahanty

Assistant Professors: Agthe,
Garrison, St. Aubyn

English Department

Forrest Frease, Chairperson

Professors: Boyle, Brand, Brewer,
Carriar, C. Frease, F. Frease,

Harrison, Huff, Jones, Myers, Starr

Associate Professors: Agan,
Applegate, Doyle, Finnegan, E.
Kearns, Loftis, Luere, C. Meyer,
Peercy, Princic, Rea, Santos, N.
Wilson, Witwer

Assistant Professors: F. Bowles,
Kiefer, Lackie, Manley, Varner, S.
Wilson

Foreign Language Department

Glenda J. Brown, Chairperson

Professors: Brown, Graham

Associate Professors: Keppeler,
Owechko, Sandstedt

Assistant Professors: Ensz, Cordova,
Freyre, Lange, Zeller

Instructor: 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

Professors: K. Kearns, Lehrer

Associate Professors: J. Dietz, Scott

Assistant Professors: Cole, Collins,
Lyles, Ormrod

History Department

Stephen T. Powers, Chairperson

Professors: Arnold, Boeck, Byerly,
Cornebise, Larson, Rothaus, Rowe

Associate Professors: Knott,
Lonsdale, Powers

Assistant Professors: Broussard,
Clough, Edgerton, Worrall

Mathematics Department

Donald D. Elliott, Chairperson

Professors: Cavanagh, Elliott, Fisch,
Fuelberth, Heiny, Johnson,
McNerney, Popejoy, D. Schmidt

Associate Professors: Bosch,
Johnston, Richardson, Schweers,
Tolar

Assistant Professors: Anders,
Rumford

**Mexican American Studies
Department**

Carlos Leal, Chairperson
Assistant Professors: Hoffman, Leal,
Lopez

Philosophy Department

Thomas K. Trelogan, Chairperson
Associate Professor: Morelli
Assistant Professors: Dhar, Hodapp,
Kolitch, Trelogan

Physics Department

Wallace Aas, Chairperson
Professors: Aas, Fry, Hamerly
Associate Professor: Fadner
Assistant Professor: Lightsey
Instructor: Iverson

Political Science Department

Richard Perchlik, Chairperson
Professors: Christensen, Perchlik
Associate Professors: Bookman,
Knapp, Mazurana, Watson

Science Education Department

Leslie W. Trowbridge, Chairperson
Professors: Crockett, Olson, Sund,
Trowbridge

Sociology Department

Robert B. Stein, Chairperson
Professor: Schulze
Associate Professors: Cleere,
Jennison, Kamal, Quammen, Stein,
Vonk
Assistant Professors: Fox, Jones,
Kitzerow, Marshall, O'Connor,
Trahan, Willoughby

COLLEGE OF EDUCATION

Bruce W. Broderius, Dean
Richard L. Bear, Associate Dean
Robert Johnson, Associate Dean

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 educational 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.

**College Student Personnel
Administration**

Norman Oppelt, Chairperson
Professors: Bowen, Kinnick, Nelson,
Oppelt
Associate Professors: Best, Giebler,
McCary, Smart
Assistant Professors: Foote, Kuncl,
Miller, Selden

Curriculum and Instruction

James Stoffler, Chairperson
Professors: Broderius, Krosky,
Morrison, Nichols, Stoffler
Associate Professors: Rosales

Educational Administration

Arthur R. Partridge, Chairperson
Professors: Luketich, Partridge,
Ritter, Schroeder, Wilsey
Associate Professor: D. Montgomery

Educational Field Experiences

Robert C. Richardson, Director
Professors: Fielder, Richardson
Associate Professors: D. Adams, G.
Burns, Erickson, Febinger, J. M.
Johnson, Warner, Weltner
Assistant Professors: Cox, Hytrek,
Ousley, Rose

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Educational Media Department **D. Harold Bowman, Chairperson**

Professors: Bowman, Cyphers,
Seager

Associate Professor: Green
Assistant Professor: Gibbons

Elementary Education and Reading Department

Alvin O. Mosbo, Chairperson

Douglas S. Burron, Assistant Chairperson

Professors: W. Arnold, D. Brown, A. Burron, Claybaugh, Glaser, Kelly, Lewis, Lowry, Mosbo, Nebel, Wolfe

Associate Professors: D. Burron, Henry

Assistant Professors: P. Brazee, J. Cordova, P. Garcia, Good, Lynn, M. Oreskovich, Pavlik

Instructor: M. Brand

Foundations of Education Department

Michael Jacobs, Chairperson

Professors: Cordell, Roat, Turner, Usher

Associate Professors: Glassman, Jacobs

Assistant Professor: Clute

Higher Education Department

Kenneth Hogan, Chairperson
Professor: Hogan

Psychology, Counseling and Guidance Department

Michael J. Gimmestad, Chairperson

Professors: Bear, Blake, Gimmestad, Koplitz, Lutey, Montgomery, Praul, Schenkman, Shaw.

Associate Professors: Morris, B. Norton, Osorno, Poston, Rave, Stutler, Tate, Ward, Welch, Zellner

Assistant Professors: Bakewell, Barnard, Bolocofsky, Carter, Case, Copeland, Medeiros, Obrzut, Ormrod, Ramirez, Soltz

Instructors: Beaudoin, C. Norton

Research and Statistical Methodology Department

Samuel Houston, Chairperson

Professors: B. Heimerl, Houston, Schmid

Associate Professors: Lynch, D. Shaw

Adjunct Professors: Duff, Heiny

Affiliate Professor: Yoder

SCHOOL OF SPECIAL EDUCATION AND REHABILITATION

Robert S. Sloat, Director

Willard G. Jones, Associate Director

Professors: Bitter, Eldredge, B. Gearheart, Gonzales, O. Kolstoe, Lundeen, Napier, K. Owens, Reinert, Sloat, Weishahn, Wolfe

Associate Professors: Bowen, Carvajal, Cronin, Gay, Hull, B. Kolstoe, Lane, Millslagle, Tuttle, Underwood, Wright

Assistant Professors: Baker, Bottenberg, DeRuiter, Ferraro, Fowler, C. Gearheart, Gilbert, Kappan, Kaley, Olson, Resnick, Swank, Swanson, Traynor, Uhrig, Underwood

Instructors: Blackhurst, Cleeland, Fielder, Lucero, Reed

COLLEGE OF PERFORMING AND VISUAL ARTS

James E. Miller, Dean

The College of Performing and Visual Arts consists of a Fine Arts Department, a School of Music and a Theatre Arts Department each of which offers its own

comprehensive curriculum in its area. The three branches of the college work cooperatively in inter-disciplinary areas involving more than one art form such as opera, musical theatre and multi-media productions.

Fine Arts Department

Robert B. Turner, Chairperson

Professors: D. Johnson, Moody,
Schumacher

Associate Professors: Barucchieri,

Blubaugh, Cordiner, Turner

Assistant Professors: Haas, B.
Johnson, Luster, Macfarlane,
Munson, Meyer, Shin, Welsh

Instructor: Coronel, Hoover

SCHOOL OF MUSIC

James E. Miller, Director

Robert C. Ehle, Assistant Director

The School of Music is a professional school offering preparation for the teacher of music at all levels for 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/her 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: Edwin Baker,
Chairperson

History and Literature: James Upton,
Chairperson

Music Education: Dwight Nofziger,
Chairperson

Piano and Organ: Walter Schenkman,
Chairperson

Strings: Howard Skinner, Chairperson
Theory and Composition: Dale

Dykens, Chairperson

Voice: Claude Schmitz, Chairperson

Woodwind: Loren Bartlett,
Chairperson

Professors: Baker, Bartlett, Copley,
Dykens, Evans, Himmel, Miller,

Nofziger, Schenkman, Schmitz,
Skinner, Upton, Walker

Associate Professors: Aitken, Ehle,
Goes, Graham, James, Jamieson,
Linscome, Mickens, Pfund,
Rhoads, Robinson

Assistant Professors: Anderson,
Bourassa, Coppom, Daugherty,
D'Aurelio, Haun, Herrick, Lehnert,
R. Smith, W. Smith

Theatre Arts Department

John W. Willcoxon, Chairperson

Professors: Girault, Norton, Willcoxon

Associate Professors: Van Loo

Assistant Professors: Gloekler, X.
Johnson

SCHOOL OF BUSINESS

Ramon P. Helmerl, Dean

R. Bruce Garrison, Assistant 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

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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: H. Anderson, Clithero,
Damgaard, Duff, Heimerl, Kennedy,
McConnell, Palmer, W. Stewart,

Teglovic, Waterman

Associate Professors: Allen, Bohrer,
Douglas, Folger, Halldorson,
Harris, Levenson, Renshaw,
Robins, Saam, Shade

Assistant Professors: D. Anderson,
Brown, DeBoer, Dierks, Donnel,
Garrison, Gottko, Hansen,
Hoffman, Holmboe, Jacques,
Melanson, Phillips, Seymour,
Smith, J. Stewart

Instructors: Crouch, Elton, Freese,
Jascott, Peek, Suroviak

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, Cooke,
Everett, Lindahl, Malumphy,
McKain, Phillips, Rossi, Sage,
Shirley, Steffy, Van Anne

Associate Professors: Blasi, Cody,
Heiss, Parkos, Van Dinter, Wright

Assistant Professors: Benich,
Carlisle, Fri, Hedberg, Hurley,
Kolbe, Kotowski, LaBonde,
Magafas, McMillen, Minton,
Mosser, Petroff, Rodriguez, Rollins,
Upton

Instructors: Bauer, Conn, Harrison,
Howard, James, Larkin, Libera,
Tresvan

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

SCHOOL OF INDUSTRIAL TECHNOLOGY AND HOME ECONOMICS

William R. Erwin, Jr., Dean

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

Academic Departments

Home Economics Department

Marilyn Burns, Chairperson

Associate Professors: Burns,

Egeness, Sorensen, Taylor,
Walters, Wirick

Associate Professors: Frye, Krosky

Instructors: Grable, Peiffer

Industrial Arts and Technology Department

Robert G. Hammond, Chairperson

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

Associate Professor: Kruger

Assistant Professors: Lloyd,
Morimoto

SCHOOL OF NURSING

Phyllis Drennan, Dean

The School of Nursing offers a twelve 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.

Professors: Drennan

Associate Professors: Babich, Bossart,

Hurlock, Payton, Sawatzky,
Thompson, L.

Assistant Professors: Baird, Biegel,

Hallan, Heckman, Richter, Swingle,

Tanner, Thompson, C., Zaweckis

Instructors: Comer, Freeburn,
Malkiewicz, Martin, Nate, Tracy

DIVISION OF AEROSPACE STUDIES

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. Bobby

D. Anderson, Capt. David Winters

DIVISION OF STUDENT SERVICES

The Vice President for Student Services coordinates all of the activities of the departments in the area of Student Services. 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 and staff members assigned to Student Services work in the following areas: The Dean of Students Office, Student Services Center, Admissions, Registrar and Records, Housing, Food Services, Counseling, Financial Aids, Placement, Health Services, The Center for Human Enrichment, The University Center, Student Activities, The Office of Resources for Disabled Students, Veterans' Affairs, and the Department of Public Safety. The Division of Student Services assists students in testing the formal classroom experience against the real world. The mission of the division, then, is to assist the student in the acquisition of an education and help the student remove barriers which would interfere with his or her educational progress within the university environment.

DEAN OF STUDENTS OFFICE

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; 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 multi-purpose agency designed to provide many of the functions of Student Services Divisions in one central facility. It is an information center; a place to go when you don't know where to go. It is a problem-solving center, serving faculty as well as students. It is an academic-advising center for all undeclared students. It is a materials-distribution center, handling most of the forms and materials of other campus offices. In addition, it is a processing center for forms such as drop and add, change of major and change of address.

THE CENTER FOR NON-TRADITIONAL AND OUTREACH EDUCATION AND THE CENTER FOR SPECIAL AND ADVANCED PROGRAMS

Robert O. Singer, Dean

**Richard J. Wood, Associate
Director, and Executive
Director of UNC/CSAP
Foundation, Inc.**

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

**Bobbe L. Davey, Assistant
Director of Off-Campus**

Instruction

**John A. Ketchum, Director of
Outreach Administrative
Services**

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

**Ladd L. Cochrane, Coordinator of
External Degree Programs,**

**Conferences and Institutes,
and Summer Inservice for
Teachers**

**of Continuing Education for
Health Care Personnel and
Adult Education**

Andrew P. Chitwood, Coordinator

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

a. off-campus classes:

Off-campus classes designed to provide educators with opportunities to improve their professional skills are provided upon request to school districts and individuals having identified needs for educational services.

b. individual studies

Regarding individual studies, if enrolled on-campus a student may not take an IS 422/622 through off-campus. If the student is not enrolled on-campus, he or she may take an IS 422/622 through off-campus when (1) the study is needed to complete a degree program and graduate; OR (2) the study is one that can only be done at an off-campus location; OR (3) enrolled in an external degree program. In all cases, the student enrolling for an individual study needs to obtain the instructor's, adviser's, departmental, and appropriate academic dean's signatures of approval on the IS form obtainable at the Center. These guidelines also include EDFE 501.

c. independent study courses

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. Although it is not possible to earn a degree from the University through independent study, UNC policy states that a student may earn and apply a maximum of 45 quarter hours of credit through correspondence, learning package, or extension courses toward a bachelor's degree. This includes UNC Outreach independent study and correspondence and extension work transferred from other colleges and universities. Independent study courses must be completed, graded, and recorded the quarter prior to that in which the student expects to graduate.

d. external degree programs

The University, through the Center for Non-Traditional and Outreach Education, endeavors to meet the educational needs of its mature, career oriented, off-campus audience through many modes. One of these modes is the External Degree Program, which has for its major purpose the designing and delivery of high quality, on-site degree programs. The degrees earned in this format are designed to enable students to obtain a high quality education without undue interference with their full-time employment. Degrees earned in this fashion are awarded by the University and bear no distinction from resident degrees.

e. studies abroad

The UNC Program in Comparative Arts is administered by the Center. This study-abroad program provides for the learner fully accredited residence instruction at its La Poggerina facilities, located outside Florence, Italy. Instructional components include fine arts, history and studio experiences, humanities, and Italian language. Instruction is organized into cross-disciplinary and cross-cultural experiences.

f. conferences and institutes

The Center, through its division of Conferences and Institutes, offers professional services in all aspects of coordination and intensive program planning for conferences and other short programs. Great care for individualized conference needs marks all services provided by the division, which maintains close liaison with the University faculty and allied services. Conferences provide an opportunity for busy people to meet and study together and to avail

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themselves of the resources of the University. In many cases, conferences, because of their special format, provide the most advantageous means of using these resources.

g. *adult education courses*

Adult education courses allow professional people to earn non-academic credit in courses designed to improve job performance or foster cultural enrichment.

h. *UNC/CSAP Foundation, Inc.*

The University, in association with UNC/CSAP Foundation, Inc., has developed and offers educational programs to meet the needs of the employed adult. These 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 entire field of non-traditional education.

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

For detailed information, address inquiries to the Dean, Center for Non-Traditional and Outreach Education, University of Northern Colorado, Greeley, Colorado 80639, or call (303) 351-2891. For information about the Center for Special and Advanced Programs, address inquiries to the Executive Director, UNC/CSAP Foundation, Inc., University of Northern Colorado, Greeley, Colorado 80639 or call (303) 356-2442.

BACHELOR'S DEGREE 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 and (2) all courses required by the school or department in which a student elects a major or minor. (See specific major and minor program requirements.) In addition, students may select other courses to meet the minimum requirements 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.

GENERAL EDUCATION REQUIREMENTS

General Education at the University of Northern Colorado is a program of 60 quarter hours which are selected by the student from nine components or categories (a-b-c-d-e-f-g-h-i). The 60 hours required in general education allow the student an opportunity to choose a variety of courses outside his/her major field to strengthen and enhance the bachelor's degree.

All courses which are acceptable for general education credit are identified by a letter preceding the prefix, course number and title "Fundamental Mathematical Skills" indicates that this course may be taken to satisfy the basic computational skills requirement; d-FA 108 "Drawing for Non-Majors" may be taken to partially satisfy Category d of the General education requirements.

To fulfill the 60 quarter hours required in general education, all students will complete the following requirements:

I. Foundations of General Education: complete the requirements as follows:

- a. One 3 quarter hour approved course in Computational Skills or demonstrated competency. Courses to be selected from the following:

a-MATH 101 Recommended for students with little or no high school mathematics.

a-MATH 123 Recommended for students with one year of high school algebra.

a-MATH 192* For elementary education majors and special education majors.

a-PHIL 101 Recommended background: one year of high school algebra.

a-RSM 203 Recommended background: one year of high school algebra.

Successful completion of any other MATH course, carrying a general education designation, of at least three hours credit (with the exception of MATH 117 and MATH 191*) will indicate demonstrated competency and will exempt the student from the Computational Skills requirement. Those students who have an adequate algebraic background are encouraged to take a mathematics course numbered 115 or higher.

b. One 3 quarter hours course in Basic Composition or demonstrated competency. Only one course may be taken to satisfy this requirement:

b-ENGL 101.

c. One 3 quarter hour approved course in Intermediate Composition. A list of courses which can be used to satisfy this requirement will be published in the Schedule of Classes and/or will be available with pre-registration materials. Courses will be identified with a lower case "c" before the prefix and course number.

A student may be exempted from taking all or part of the Foundations of General Education component by complying with one or more of the following conditions: (1) possess an Associate of Arts or an Associate of Science degree from an accredited junior college; (2) pass a challenge examination in one or two of the Foundations of General Education areas. Exemption, but not necessarily credit, will be made for the Foundations areas successfully challenged (credit may be granted where a credit examination is the basis for the challenge); (3) present an ACT score of 26.00 and higher in mathematics and/or English. A student exempted from taking courses in the Foundations of General Education component for this reason would take a comparable amount of elective credit. See III.

II. Categories: complete the required two courses from each of the following categories:

d. **Arts and Applied Language Studies.** Two courses, carrying different prefixes** (e.g., d-MUS, d-FA), are required.

e. **Professional and Applied Studies.** Two courses, carrying different prefixes** (e.g., f-BUS, e-IA), are required.

f. **Social and Behavioral Sciences.** Two courses, carrying different prefixes** (e.g., f-GEOG, f-ECON), are required.

g. **Humanities and Integrative Studies.** Two courses, carrying different prefixes** (e.g., g-MAS, g-PHIL), are required.

h. **Sciences.** Two courses, carrying different prefixes** (e.g., h-CHEM, h-PHYS), are required.

i. **Human Interaction.** Two courses, carrying different prefixes** (e.g., i-COMM, i-PSY), are required.

* For elementary education or special education majors, successful completion of both MATH 191 and MATH 192 will satisfy the basic computational skills requirement. These courses are required for the elementary education major.

**When two or more departments share a common prefix (BUS, MUS, HPER) courses selected from two different departments will satisfy the requirement. Thus, e-HPER 299 "Community Health" (from the Health Education Department) and e-HPER 108 "Gymnastics" (from the Physical Education Department) would satisfy the Category e requirements. Students should check with departments to determine the departmental origin of specific courses.

- III. Complete the general education program to a total of 60 quarter hours.** A maximum of up to six quarter hours taken in the field of specialty (major) may potentially count for general education credit, providing such courses bear a category designation. Any elective hours remaining to reach the required total of 60 must be satisfied with courses carrying a category designation from anywhere in the general education program except the major field of specialty.

Courses not preceded by a category designation (e.g., BUS 223 "Business Law" III) in the catalog may not be taken to satisfy general education requirements. Methods courses, field experience courses, independent studies, and graduate level courses (i.e., 500 level and up) will not count for general education credit. No course can satisfy more than one general education category simultaneously.

The general education program at the University of Northern Colorado is intended to be distributed over a four-year period.

Junior-College Transfers. Students transferring to the university from junior or community colleges who have earned an Associate of Arts or Associate of Science Degree or 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. Students without Associate of Arts or Associate of Science degrees will be held to the general education requirements.

HONORS PROGRAM

Forrest W. Freese, 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 and/or current issues in his or her 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 or her project or thesis from a professor of his or her own choosing or from a professor assigned by the department. The professor advises the student concerning different aspects of the 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 graduated 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 or her honors thesis or project to the office of the director of the honors program 12 weeks before the 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 College 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 COMPARATIVE ARTS

Beginning in the summer of 1974, the University officially inaugurated its study abroad program housed in "La Poggerina," located 41 kilometers from Florence, Italy. The Program is operated three quarters per year: spring, summer and fall. The major study opportunities of the undergraduate program include studio and museum experiences in the fine arts, historic and comparative analysis of Renaissance and contemporary periods through the Humanities and Fine Arts Departments, as well as Italian language offered through the Foreign Language Department. On occasion, other departmental courses will become available as the Program is developed. The "La Poggerina" is a converted and modernized resident center with facilities including classrooms, art studios, gallery, dormitory accommodations, dining room, student lounge and recreation area.

For further information on programs and courses, see the appropriate department section and course listings. Potential participants requesting complete information and application forms should contact UNC Program in Comparative Arts, The Center for Non-Traditional and Outreach Education, Faculty Apt. Unit 1, 351-2891.

AMERICAN HUMANICS

An emphasis on Youth Agency Administration is offered in the Department of Recreation in conjunction with American Humanics, a thirty-year-old organization that works with colleges and universities to provide quality education to meet the needs of today's youth agencies. The Humanics program at UNC is made possible by a grant from the W. K. Kellogg Foundation of Battle Creek, Michigan.

The academic phase of the program offers specialized courses dealing in the nature of volunteer agencies. Internships and practicums are also a part of the academic offerings that feature practical experience. The Humanics program leads to a Bachelor's degree in Recreation with an area of concentration in Youth Agency Administration.

A loan fund has been established and is available to students in the Humanics program, and American Humanics offers a placement program which works closely with a national network of youth agencies.

American Humanics provides a Resident Administrator at the University of Northern Colorado who coordinates workshops, retreats, and field trips. For more information, contact the American Humanics Resident Administrator, Gunter Hall, Room 109C, telephone 351-2720.

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 PROGRAMS

The following information is provided for those students whose goal will require studies in professional schools such as law, engineering, dentistry, medicine, optometry, pharmacy and veterinary medicine. Pre-professional course work in each of these areas is available at UNC. Admission to these professional schools is very competitive and requires careful planning. To optimize one's chances for admission, pre-professional students should work very closely with one of the special advisers for their program. These advisers are knowledgeable about the requirements for admissions, application procedures and selection factors and will direct the student's program toward meeting the specific requirements of the professional school as well as his/her degree program at UNC. General information about each of these programs is listed below. For further information about each of these programs is listed below. For further information and for the assignment of an academic adviser, students should see the following persons:

Pre-law: A Pre-Law Guide and Recommended Course list are available upon request. Richard Seymour, School of Business, Kepner 106 (351-2652).

Pre-engineering: Two-year program for engineers after which the student will transfer to an engineering school to complete his/her degree. Information available from Wallace Aas, Department of Physics, Ross 43 (351-2961).

Pre-health professions: Information regarding dentistry, medicine, optometry, pharmacy, veterinary medicine, dental hygiene, physical therapy, and physician assistant is available from Gordon Tomasi, Chairman, Pre-health Professions Committee, Department of Chemistry, Ross 138 (351-2559).

GENERAL INFORMATION

Pre-law: Law schools do not recommend a specifically designed major for pre-law students. A good pre-law curriculum could be structured around any non-teaching major offered within the College of Arts and Sciences or Business Administration.

Pre-engineering: Course of study for pre-engineers is as follows:

1. One year general chemistry (CHEM 104 or 106, 105 or 107,111)
2. Mathematics through calculus (MATH 131, 132, 133)
3. One year calculus-level general physics (PHYS 265, 266, 267)
4. Electives in general education which will transfer to the engineering school of the student's choice.

This program can be modified depending upon the engineering school and type of engineering selected by the student. Information regarding appropriate electives is obtained from the student's adviser in the Department of Physics.

Pre-health professions: Each professional school sets its own specific requirements but certain generalizations are possible:

1. Two to four years of undergraduate study is generally expected prior to admission to most professional schools. No specific undergraduate major is required although most students major in one of the biological sciences or chemistry.

2. Minimum course requirements for most health professions are as follows: One year in each of the following areas: (BIO 101, 102, 103), English (composition and speech classes), general chemistry (CHEM 104 or 106, 105 or 107, and 111), mathematics (MATH 124, 125, 130), organic chemistry (CHEM 332, 333, 334), and

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physics (PHYS 260, 261, 262, or 265, 266, 267). These courses represent minimum preparation and additional courses especially in biology (a second year including some cellular biology and genetics) and mathematics (additional calculus and statistics) are encouraged and in some cases required. Schools of veterinary medicine require a minimum of two years of biology and often at least a semester of biochemistry.

PROFESSIONAL TEACHER EDUCATION

Admission to Professional Teacher Education (PTE)

The following are the minimal requirements for admission to PTE:

1. 45 quarter hours of college study
2. 2.30 cumulative grade point average
3. Documented evidence of 40 contact hours of educational field experience (Use EDFE 270, 2 hours, or equivalent)
4. Recommendation of the major department
5. Speech/hearing test, health check, personality inventory, and attendance at an information seminar

NOTE: Graduation from a program of PTE also requires a minimum 2.30 cumulative grade point average.

Application to the PTE program should be made at the beginning of the quarter and all forms must be returned to McKee 518 before the second Friday of that quarter. (It takes the remainder of the quarter to process applications.) The forms require a declaration of major because recommendation for entrance to the PTE program and later for certification can be made in a major area only. If a student has a double major, application must be made for each. If a student changes major or adds a second major, application must be made again for each new area.

The professional education courses which are listed below are open only to students who have been fully or probationally (or in the case of transfer students with more than 60 hours, tentatively) admitted to PTE. Transfer students may receive some exemptions based on evaluation of transcripts from colleges previously attended.

Required Courses	Hours	Credit
PSY 347	Developmental Psychology for Teachers	3
PSY 348	Learning Processes in Education	3
EDF 366	Foundations of Education	3
EDF 367	Philosophy of Education	3
EDF 368	Seminar in Foundations of Education	1
EDSE 405	Handicapped Students in the Regular Classroom	3
EDSE 406	Working with Handicapped Students in the Elementary School	2
	or	
EDSE 407	Working with Handicapped Students in the Secondary School	2
EDRD 420	Reading in the Secondary School (not required of Elementary Education majors)	3
EDLS 360,	361, 362, or 363 Clinical Experience (Certain majors may use EDFE 378, 379)	2
.....	Methods of Teaching (Check major for requirement)	3
EDFE 444	Supervised Teaching	18
	Total hours	44

NOTE: For students in appropriate program areas, the following are acceptable substitutes for either EDSE 406 or EDSE 407:

EDEC 463	Diagnostic Teaching in Early Childhood
EDSE 306	Identification of Learning Disabilities in Early Childhood
FA 229	Art for the Exceptional Child

HECV 465	Home Economics Program for Special Needs
HPER 432	Adapted Physical Education
HPER 438	Physical Education/Recreation for the Mentally Impaired
HPER 439	Physical Education/Recreation for the Physically Handicapped
MUS 414	Music for Children with Learning Disabilities
VTE 430	Vocational Education for Learners with Special Needs

PTE Enrollment Options

In order to help insure continuity in the program of PTE, students enroll in the PTE courses in one of the following ways.

The "Block" Option:

1st Quarter		2nd Quarter		3rd Quarter	
PSY 347	3	PSY 348	3	EDFE 444	18
EDF 366	3	EDF 367	3		
EDSE 405	3	EDF 368	1		
EDRD 420	3	EDSE 406/7	2		
		EDLS 360-3	2		
		....(Methods)	3		
Total	12	Total	14		

The "Professional Year" Option:

Students enroll in the same courses as shown in the list of requirements. Such enrollment occurs for a sequence of three consecutive quarters for a minimum total of 44 quarter hours of credit. At registration, students pick up a complete packet of class cards for **special sections** of the PTE courses. Since the registration may be limited, students must apply for this option no later than the end of the 2nd quarter preceding enrollment in it.

Specified Departmental Majors Option:

Certain major departments have arranged for the option listed below. Check with the major department to gain full information.

1st Quarter		2nd Quarter		3rd Quarter	
PSY 347	3	PSY 348	3	....(Methods)	3
EDF 366	3	EDF 367	3	EDLS 360-3	2
				EDSE 405	3
4th Quarter		5th Quarter			
EDSE 406/7	2	EDFE 444	18		
EDF 368	1				
EDRD 420	3				

Substitutions and Electives

1. The Professional Teacher Education Committee may determine that certain requirements listed above may be met by other means. Check with your major department for special accommodations that may be available.

2. The following courses in education are among the recommended electives.

Check with your advisor for further information.

EDEM 410. Introduction to Educational Media. (3)

EDF 475. History of Education in the United States. (3)

EDEL 471. History and Philosophy of Bilingual Education. (3)

*EDAD 520. School Law I. (3)

*EDCI 551. Problems in Teaching Minority Groups. (3)

PSY 346. Human Effectiveness in Education. (3)

* Open to qualified juniors and seniors.

Certification. Upon satisfactory completion of a program of teacher education and any additional requirements that may be imposed by state law, a student is eligible for institutional recommendation to the State Commission on Teacher Education and Certification for certification in the state of Colorado. Near the end of the quarter in which the program is to be completed, the student should complete application forms in the College of Education office in McKee Hall. Applications are processed as soon as official transcripts, ordered by the applicant, are received from the Registrar showing completion of the program and the degree conferred.

VOCATIONAL TEACHER EDUCATION

Robert F. Barnes, Director

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 following section of this catalog for detailed information related to specific Vocational Teacher Education Program Areas.

Business and Office Education, page 61.

Distributive Education, page 62.

Home Economics Education, page 89.

Health Occupations Education, page 84.

Several generic Vocational Teacher Education Courses are taught at the undergraduate level; refer to Vocational Teacher Education, page 141.

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.

Professor: Keller

Associate Professors: Barnes, Bennett, Burns, Renshaw, Robins, Sorensen, Walters, Wirick

Assistant Professors: Dierks, Donnel,

Johnson, Hartley, Welch
Instructors: Gibson, Peiffer
Vocational Credentialing Officer:
Hollingsworth

GRADUATION REQUIREMENTS

1. A student must meet the General Education 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 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 the quarter before graduation. Graduation from a teacher education program requires a University of Northern Colorado cumulative grade point average of at least 2.30.

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 their 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, Student Services Center, 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; Student Handbook; Statement of Academic Freedom, Rights and Responsibilities of students; Residence Hall Contract and Handbook; and Statement of Vehicle Regulations. Information concerning student 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 or herself 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 may 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 test data
6. Study skills problems

The Center's 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.

The Counseling Center is the institutional testing center for CLEP, ACT, SAT, GRE, GED, Miller Analogies, and the UNC department challenge program. *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. The deadline date for receipt of the processed FFS from ACT in Iowa City is March 31. Applications received after March 31 will be considered late applications and will be processed pending availability of funds. Due to processing time for 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 31 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.

Additional information available upon request from the Financial Aids Office.

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. The 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 to 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. This 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. 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

Student Health Services. A program of health services is available for the purpose of meeting health needs and promoting optimum health which in turn, facilitates the students' progress toward educational and career goals. This is accomplished by providing medical and mental health services, preventive medicine, health education and counseling, and access to and coordination with local medical facilities within the limits of available resources. All full-time students currently enrolled in the University (7 hours or more) have paid full health services fees and are entitled to receive all of the health services during the term in which they are enrolled. Part-time students have paid a partial health fee and are eligible to receive a portion of the available health services. A brief description of the program is as follows: The Student Health Center (On-Campus Outpatient 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, mental health professionals, registered nurses, first aid, immunizations, administration of allergy medications. A supplemental off-campus program of medical services is available through a contract with the Weld County Medical Society; included are office calls and diagnostic laboratory and x-rays within the terms of the contract.

Student Health Insurance Plan. A health insurance plan is provided for all students registered for seven (7) hours or more. Enrollment is automatic (Fall, Winter & Spring only) and the premium is included in Student Fees. The main provisions of this basic plan are primary coverage for accidents and sicknesses including benefits for hospital room and board, outpatient laboratory and x-ray, surgical procedures, doctor's visits in-hospital, etc. within the terms of the policy. Enrolled students may also purchase this insurance for eligible dependents upon request during the week of registration. Students have an option to waive the Student Insurance if proof of current enrollment in a comparable accident / sickness insurance plan can be shown. Proof consists of a letter from the insurance company, or insurance agent, or employer. This letter must show name of insurance company and address, policy number, student's name, and current coverage. A letter from the policyholder showing the above information will also be accepted if accompanied by an enrollment card or policy at the time waiver is requested. To complete the waiver process, the student must present the above information along with the Certificate of Registration and Library Identification Card (included in the registration packet) to Health Center personnel during registration or in the Student Health Center the 1st week of the quarter and sign the "Waiver of Student Health Insurance" form. **This must be completed before the deadline date of 12 Noon on the last day to add classes. After this date, no additional waivers will be made.**

A complete description of the services available at the Student Health Center and a summary of the insurance plan including the waiver process are listed in the Student Health Service and Insurance brochure. Copies are made available at registration. Additionally, they can be obtained by contacting the Student Health Center.

Speech/Language Pathology and Audiology Clinics

As good speech/language and hearing are considered necessary for the preparation of future professionals in all fields, the Speech/Language Pathology and Audiology Clinics provide assessment and treatment services for the students and faculty of this University.

The Speech/Language Pathology and Audiology Clinics are fully accredited for the provision of professional services by the American Boards of Examiners in Speech Pathology and Audiology of the American Speech and Hearing Association. The Speech/Language Pathology Clinic located in Bishop-Lehr Hall, Room 147, provides complete assessment and treatment services for the wide range of speech/language problems which are found within the general categories of articulation, voice, stuttering and language. Services available do not include teaching English as a second language. For further information, please call 351-2012.

The Audiology Clinic, located in McKee Hall, Room 58, provides a full range of services for the assessment of hearing disorders and (re)habilitative treatment for those who possess hearing loss. Services include standard hearing assessment, all special hearing tests for site of lesion, hearing aid evaluations, hearing aid analysis, speechreading/auditory training, counseling regarding hearing impairment, noise measurement and evaluation, ear protection from noise, and other such services. For further information, please call 351-2734.

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. Ninety-eight University-owned furnished apartments are provided for married students on an annual basis. Summer Quarter usage of residence hall facilities provides an additional 280 units for families.

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

All freshman students must live in University residence halls for their first academic year with the following exceptions:

1. Students commuting from parents or guardians' homes.
2. Married students.

If you have special needs in conflict with this University requirement, write to the Director of Housing. This letter from the parent or guardian should include the student's name, Social Security number, and detailed information regarding the reasons for the request to which the Director of Housing may respond.

The freshman residency requirement is consistent with the philosophy which views a student's living environment as an important part of personal and academic development. For students on campus, the residence hall program attempts to provide the support and guidance necessary to maximize successful adjustment to the University community. Together with the combined efforts of residence hall staff, faculty, other University staff, and the individual student, the University attempts to provide a climate conducive to the accomplishments of a student's educational objectives.

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.)

Residence Hall Regulations. Regulations applicable to residence hall living attempt to provide ample opportunity for personal growth and self-discipline. Group living requires certain guidelines that apply to all. These are published in the Housing Contract and residence hall handbook, 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 (11:00 p.m.), residence halls are accessible through night clerks.

Staff. A professionally-trained staff is provided in each residence hall to assist students. The Resident Advisor is a graduate student chosen through a detailed selection process, and is trained in the areas of administration, counseling, facilitation, advising, and referral. The Student Assistant is an upperclass student who has been carefully chosen to work with students based on leadership ability, a successful academic record, and a desire to assist fellow students.

Residence Hall Student Government. The residence hall student government structure is advised and encouraged by the housing staff at UNC. It emanates from the individual residence hall councils and deals primarily with housing issues and policies. An arm of the hall government structure at all levels is programming. The aim is to determine the needs of student residents and attempt to program accordingly – socially, educationally, developmentally, culturally, etc. Hall activities are financed by a small dues assessment on each resident.

Food Service. Meals prepared to 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 desserts 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. A fifteen-meal plan is optional on East Campus.

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 beginning of Fall Quarter. Separate contracts for Summer Quarter housing 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, the student 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 THE CONTRACT.

Application for Housing. Address the Housing Office, Gordon Hall, when applying for any type of on-campus housing. A deposit of \$50 must be advanced with the contract 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 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. There are 98 University-owned two-bedroom furnished apartments available for students who are married and have no more than two children. These units are located at 508 17th Street and 509 18th Street.

Off-Campus Housing. The Off-Campus Renters Information Service provides bulletin board assistance in obtaining available facilities in the Greeley area. Current listings of private rooms, apartments, houses, mobile homes, and rentals to share are posted daily at their office in the University Center. Students are also encouraged to contact local newspapers for assistance. The university does not inspect nor approve off-campus housing. It is expected that landlords who list with the Renters Information Service will abide by the Colorado Fair Housing Act of 1959.

The Off-Campus Renters Information Service also provides assistance and referral in student landlord/tenant disputes. General renter information and publications are also available. Students will derive the most benefit by using these services before they rent and before signing any lease or contract. Prospective UNC students are welcome to write, or call (303) 351-2172, for information. A visit to the Greeley area prior to enrollment is strongly encouraged to complete a housing search in time for the beginning of the academic year.

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 1,200,000 units or 471,228 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.

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 Service, an automated retrieval service rendered via computer search, works through the Reference Services. Interlibrary Loan Services borrows library materials for our students which are not readily available in our library. This service is also part of the Reference Department.

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, 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 26,100 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 in the location, acquisition, production, duplication, and utilization of educational media materials and equipment is available from the Educational Materials Services (EMS) office, located in the Michener Library, L171 South.

In addition to film rental services, EMS maintains a permanent library of films, videotapes, filmstrips and other media materials, and is the central coordinating agency for all audio-visual equipment on the UNC campus.

A professional staff and facilities are available for the original production and/or duplication of audio-visual teaching materials including television programs, tape/slide programs, audio tape materials, and graphic art materials including overhead transparencies.

An engineering staff is available for maintenance of audio-visual equipment and consultation on design and installation of audio-visual equipment and systems. EMS is also responsible for the management of KUNC-FM, the full-service Public Radio station operated by UNC.

In cooperation with the Department of Educational Media, EMS offers consultant services for all faculty on the design, development, and utilization of Educational technology systems and devices.

EMS must approve all departmental requests for audio-visual type equipment and materials prior to purchase.

Bureau of Business and Public Research

The bureau's primary mission is to provide research and consultative services to business and government organizations. It has been officially designated by the U.S. Department of Commerce as a Census Summary Tape Processing Center and has assumed responsibility for establishing and coordinating the development of a regional planning data depository for the northern Colorado area.

Insurance Institute

The function of the Insurance Institute is to formulate insurance courses and

other insurance programs in cooperation with the School of Business and insurance industry and to act as coordinator of these courses and programs. Special emphasis is placed on undergraduate work in insurance and on in-service training for insurance industry personnel in academic work leading to advanced professional designations and general seminars for professional improvement.

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 an independent and impartial party who receives complaints from the University members and who acts on those complaints in the form 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.

Placement Services

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.

Resources for Disabled Students

The Office of Resources for Disabled Students provides assistance to the physically disabled in their pursuit of higher education. The various resources available through this office include counseling, tutors, attendants, readers, a Learning Laboratory, an adapted van, and job readiness skills training.

Counseling is provided on a one-to-one basis and in small groups for pre-admission assistance, academic concerns, and personal needs. The Learning Laboratory has equipment available such as a Visual-Tek to magnify printed matter, tape recorders, loaner wheelchairs, a battery charger, and study areas. A van equipped with a wheelchair lift is available to provide transportation to and from the University and between classes. The office assists disabled students in arranging for attendant care, tutors, readers, and/or interpreters. The Department of Recreation coordinates an adapted recreation program which includes such sports as swimming, wheelchair basketball, archery, bowling, track events, and skiing.

University Center

The University Center, located on 20th Street between 10th and 11th Avenues,

serves as the hub of most student activities and services. Besides study areas and lounges throughout the building, the University Center includes a recreation area, Food Service areas, bookstore, activities area, music room, art gallery, information desk, and meeting rooms.

Most University Center facilities are open to all faculty, staff, students, and visitors on a regular weekly schedule. The use of facilities for non-academic purposes is scheduled through the Center's Scheduling Office.

Student Activities

All campus organizations must apply each year through the Associated Students to the Dean of Students Office for charter approval. When organizations are recognized through the chartering process, facilities of the campus designated for such purposes may be used by the groups.

Student Activities Office. The Student Activities Office acts as the primary coordinator of "activities outside the classroom." The office and Student Activities Area are administered by the University Program Coordinator.

The Student Activities Area includes offices of Associated Students government, University Program Council, Black Student Union, United Mexican-American Students, Book Exchange, Mirror, Legal Counsel, CoPIRG, student magazines, and the Student Services Center. Services include mailboxes and storage space for student organizations; free manual typewriter and ditto machine usage; and display case space scheduling. A Student Activities Area Sign Shop provides poster and publicity service to University individuals/groups for modest fees.

University Program Council. The University Program Council is the primary student programming group on campus. Operating through a committee system, students present a schedule of activities of an educational, social, recreational, or entertaining nature. Program committee areas include films, leisure activities, lectures, concerts, residence hall programs, art exhibits, cultural arts, minority programs, and publicity. The organization also works with the approximately forty student clubs/organizations in presenting special interest activities. Membership is open to all students through an application process.

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 at a reduced 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, golf, 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 individual events. 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 two student publications; the *Mirror* (a tri-weekly newspaper) and the *Colorado North Review* (a general interest and literary magazine).

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;
- Pi 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 Betta Sigma, national band fraternity;
- Theta Pi Theta, home economics honorary.

Social Organizations. At the University of Northern Colorado there are nine social sororities and eight 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

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including awards for high scholastic achievement. All of the fraternities on campus have representation in the Interfraternity Council which acts as an organizational body for fraternity activities. 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.

Release of Student Information

The University has designated the following information as "directory information" under 348 (a) (5) (B) of the Family Educational Rights and Privacy Act of 1974. Directory information concerning students at the University will be released **without the prior consent of the student** as permitted by law unless within ten (10) days after registration a student has notified the Registrar's Office, located in Frasier Hall, Room 123, that such information should not be released without his or her consent. Once a student has withdrawn from school for one quarter (except Summer Quarter), it will be necessary to reinstate the request. "Directory information" at the University of Northern Colorado as follows: (a) name, address, and phone listing; (b) date and place of birth; (c) major field of study; (d) participation in officially recognized activities and sports; (e) dates of attendance; (f) degrees and awards received; (g) all recent previous educational agencies or institutions attended; and (h) weight and height of members of athletic teams.

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.

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 VA 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.

Registrar and Records

The Office of Registrar and Records is responsible for student registrations (including program changes), graduation checks (initiated by students when they have accumulated 135 quarter hours of credit), classification of students for tuition purposes, maintenance of student records (including transcript production), and class scheduling. The Office is located in Frasier 123.

The Center for Human Enrichment

The Center for Human Enrichment (CHE) is a supportive services program designed for incoming freshman and sophomore students. An outgrowth of the University's concern for the admission, retention, and graduation of all capable students, the program provides intensive and individualized services in the following areas: academic advising; personal counseling; career guidance; tutorial services; academic development classes (reading, writing, math, and study skills); University orientation; and special interest classes (personal growth and assertive training).

Students are eligible for CHE if they meet several of the following criteria:

1. Have academic need, as verified through high school transcripts, (GPA and class rank) and ACT scores.
2. Have financial need, as determined by HEW Office of Education income guidelines.
3. Have potential for success in post-secondary education.
4. Come from an environment characterized by severe rural isolation.

Program participants are referred by the Office of Admissions, although individual student requests for services are welcomed. The Center is located in Candelaria Hall, Room 225.

The Department of Public Safety

The Department of Public Safety is responsible for providing a safe and secure environment for the University community and provides a wide range of services to the students, faculty, and staff. Among the services offered by the Department are lost and found; engraving identification for personal items; transporting sick and injured students whenever feasible; limited escort service to female students; and security survey for off-campus housing.

The Department is open 24 hours a day and serves as an information center, in addition to operating the campus telephone switchboard during the night hours and on weekends. Emergencies should be promptly reported to the Department, 351-2245.

Performing Arts

The Little Theatre of the Rockies, the Opera Theatre 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 Fall Quarter auditions in theatre see the general tryout information under the degree program in the Department of Theatre Arts. For further information call the Performing Arts box office: 351-2200.

Qualified students are eligible to participate in the university choirs, bands, orchestra, small ensembles 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. **NOTE:** The State of Colorado is considering a uniform hourly tuition assessment policy which, if put into practice in the Summer of 1978, might result in a per credit hour tuition charge which would differ from the estimated schedule shown below.

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.

Summer, Fall, Winter or Spring Quarters	1977-78 Colo. Resident	Actual Non- Resident	1978-79 Colo. Resident	Estimate Non- Resident
Tuition				
6 Credit Hours or Less				
Tuition per Credit Hour	\$ 21.00	\$ 82.00	\$ 22.00	\$ 88.00
7-18 Credit Hours (full-time)	144.00	573.00	153.00	612.00
Tuition per Credit Hour for each Credit Hour above 18	10.00	38.00	10.00	40.00
Fees (a)				
6 Credit Hours or less				
Tuition per Credit Hour	3.00	3.00	3.00	3.00
7 or more credit hours				
University Fees	23.30	23.30	24.00	24.00
Student Fees	11.30	11.30	12.00	12.00
Health Services Fees	11.90	11.90	13.00	13.00
Health Insurance (b)	19.50	19.50	22.50	22.50
Total	\$ 66.00	\$ 66.00	\$ 71.50	\$ 71.50
CoPIRG Fee (Optional, All Quarters)	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50

(a) University, Student, and Health 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. Students will receive a Student Certificate of Registration and Library Identification Card which is validated at the time of registration. Students will also receive a permanent photo identification card. Both the validated Certification of Registration and Library Card and the photo ID will be required for University events. 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. Students who are currently enrolled in a comparable health and accident program may request a waiver of the UNC student health insurance plan. For information regarding this waiver procedure see the student health program description on page 36 of this catalog.

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 Title 23, Article 7, Colorado Revised Statutes 1973, as amended. 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
Deferral Fee	5.00
Late Registration Fee: Assessed for registration after	
scheduled registration time	5.00
Assessed for each added day of late registration	2.00
Late Fee Payment (based on past due balance)	
\$ 10.00 to 99.00	5.00
100.00 to 299.99	10.00
300.00 to 499.99	20.00
500.00 to 699.99	30.00
700.00 to 899.99	40.00
900.00 and over	50.00
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* ...	22.25
(If a student was not enrolled full-time -- for more than six credit hours -- Spring Quarter 1978, he does not have health insurance coverage for the Summer Quarter of 1978.)	
Special Program Fees such as bowling, skiing, field trips, golf	At Cost
Special Tests by the Counseling Service	At Cost
Student Certificate of Registration and Library Identification Card Replacement	1.00
Student Photo 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	\$15.00
Re-enrollment	10.00

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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 HALL WITH ROOM AND BOARD	QUARTERLY RATES PER STUDENT	
	1977-78 Actual	1978-79 Estimate
(Occupancy: two persons per room)		
Harrison	\$485.00	\$510.00
McCowen, Wilson, Wiebking	480.00	505.00
Belford, Tobey-Kendel, Sabin, Snyder	465.00	490.00
Cross, Hadden, Hays, Troxel	460.00	485.00

RESIDENCE HALLS, APARTMENT STYLE, WITHOUT BOARD

(Occupancy: four persons per apartment)		
Turner Hall	\$230.00	\$245.00
Lawrenson Hall	245.00	280.00

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	
	1977-78 Actual	1978-79 Estimate
Student Family Apartments, East Campus leased on 12-month contract (includes furnishings & utilities)	\$145.00	\$155.00

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

Policy on Reassessment, Refunds, and Withdrawals

Adjustments in tuition or fees are permitted after registration only under specified conditions. A change in a course of study which results in a change of registered hours during the period ending with the last day for adding classes will result in a reassessment of tuition and fees. Tuition and fees will not be adjusted after the last day for adding classes.

For information regarding the procedure for withdrawal from the University, refer to page 10 of this catalog. To be eligible for a refund of any kind upon withdrawal from school the student must present a formal, approved Notice of Withdrawal and Program Change Form(s) (Drop Slip) at the Cashier's Office. Refunds are not prorated; rather, they are made in terms of the policy statements below and the resident 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, \$30 if

withdrawal occurs during the second week, \$45 if withdrawal occurs during the third week, and \$60 if withdrawal occurs during the fourth week. If the total tuition and fees is less than the withdrawal fee, the lesser amount will be charged. 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.

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 Tuition and Fee Card, showing the University tuition, fees, and housing rates for the academic year and the date these charges are due and payable. If full payment of these charges is not made when due, the student is subject to a charge for late payment, as shown on the tuition and fee card, and withdrawal of enrollment. The University will send a notice of pending withdrawal of enrollment to any such student. 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	500.00 to 699.99	30
100.00 to 299.99	10	700.00 to 899.99	40
300.00 to 499.99	20	900.00 and over	50

The University will not register a student, release a diploma, provide a transcript, nor provide placement services or other university services 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 reasons for which the student is responsible, is charged a fee of \$8. 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 nonpayment and may result in withdrawal of a student's enrollment.

DEGREE PROGRAMS

UNDERGRADUATE MAJOR, MINOR, AND NON-DEGREE PROGRAMS

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*TE-Teacher Education LA -Liberal Arts

- | | |
|--|---|
| <p>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 Administration Minor-LA
 Business Administration-LA
 <i>(emphasis on Accounting)</i>
 Business Administration major-LA
 <i>(emphasis in Finance)</i>
 Business Administration major-LA
 <i>(emphasis in General)</i>
 Business Administration major-LA
 <i>(emphasis in Insurance)</i>
 Business Administration major-LA
 <i>(emphasis in Small Business Management)</i>
 Business Administration major-LA
 <i>(emphasis in Management Adm.)</i>
 Business Administration major-LA
 <i>(emphasis in Management Info. Science)</i>
 Business Administration major-LA
 <i>(emphasis in Marketing)</i>
 Business Administration major-LA
 <i>(emphasis in Office Admin.)</i>
 Business: Secretarial, two year non-degree program
 Business Teacher Ed. major-TE
 <i>(emphasis in Distributive Ed.)</i>
 Business Teacher Ed. major-TE
 <i>(emphasis in Office Education)</i></p> | <p>Chemistry major-LA and TE
 Chemistry minor-LA and TE
 Chemistry minor for Med. Tech.-LA
 Communication major-TE
 <i>(Emphasis in PTE)</i>
 Communication major-LA
 <i>(emphasis in Human Relationship)</i>
 Communication major-LA
 <i>(emphasis in Mass Media)</i>
 Communication major-LA
 <i>(emphasis in Law and Public Policy)</i>
 Communication major-LA
 <i>(emphasis in Organization)</i>
 Communication minor-LA and TE
 Communication minor for El. Ed.-TE
 Dance Education minor-TE
 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., Bilingual-Bicultural major-TE
 Elementary Ed., Early Childhood major-TE
 Elementary Science minor-TE
 English major-LA and TE
 English minor-LA and TE
 Environmental Studies minor-LA
 Fine Arts major-LA and TE
 Fine Arts minor-LA
 Florence Program-non-degree program
 French major-LA and TE</p> |
|--|---|

* Students who major in teacher education programs may select a minor in either a teacher education or non-teaching area. Students who major in a non-teaching program, may pursue a minor only in non-teaching areas.

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 Education major-TE
 (emphasis School Health)
 Health Education major-LA
 (emphasis Community Health)
 Health Education minor-TE
 (emphasis School Health)
 Health Education minor-LA
 (emphasis Community Health)
 Health Occupations-TE
 History major-LA and TE
 History minor-LA and TE
 Home Economics, Dietetics major-LA
 Home Economics Education major-TE
 Home Economics, Family Life and
 Consumer Education major-LA
 Home Economics, Food and Nutrition
 major-LA
 Home Economics, Vocational Home
 Economics major-TE
 Home Economics minor-TE
 Home Economics minor in Business-LA
 Home Economics minor in Science-LA
 Humanities minor-LA
 Individualized Education
 Program-non-degree program
 Industrial Arts major-LA and TE
 Industrial Arts minor-LA and TE
 Interdisciplinary Studies major-LA and TE
 Journalism major-LA
 (emphasis in News-editorial)
 Journalism major-TE
 (emphasis in Teacher Ed.)
 Journalism major-LA
 (emphasis in Management Relations)
 Journalism minor-TE
 Junior High/Secondary School Science
 Major-TE
 Mathematics major-LA and TE
 Mathematics minor-LA and TE
 Medical Technology major-LA
 Mexican American Studies major-LA
 Mex. Amer. Studies minor-LA and TE
 Middle School Ed. major-TE
 Music minor-LA
 Music major-LA
 (emphasis in Instrumental)
 Music major-LA
 (emphasis in Piano)
 Music major-LA
 (emphasis in theory/Composition)

Music major-LA
 (emphasis in Vocal)
 Music Education major-TE
 (emphasis in Instrumental)
 Music Education major-TE
 (emphasis in Vocal, Piano and General)
 Musical Theatre major-LA
 Nursing major-LA
 Outdoor Education, Environ. Education
 Minor-TE
 Philosophy major-LA
 Philosophy minor-TE
 Physical Education major-TE
 Physical Education minor-TE
 (emphasis in Coaching)
 Physical Education minor-TE
 (emphasis in Secondary)
 Physical Education minor-TE
 (emphasis in Elementary)
 Physical Education minor-TE
 Physical Science major-TE
 Physics major-LA and TE
 Physics minor-LA and TE
 Political Science major-LA
 Political Science minor-LA
 Pre-School minor-TE
 Pre-School Ed. major-TE
 Psychology major-LA
 Psychology minor-LA and TE
 Recreation major-LA
 Rehabilitation & Related Services major-LA
 Russian minor-LA and TE
 Russian-Soviet Studies minor-LA
 School of Educational Change &
 Development major-LA and TE
 Social Science major-LA and TE
 Sociology major-LA
 Sociology minor-LA
 Spanish major-LA and TE
 Spanish minor-LA and TE
 Special Education major-TE
 (emphasis in Acous. Handicapped)
 Special Education major-LA and TE
 (emphasis in Audiology)
 Special Education major-TE
 (emphasis in Mental Retardation)
 Special Education major-LA
 (emphasis in Speech Pathology)
 Theatre Arts major-LA and TE
 Theatre Arts minor-LA and TE
 Voc Teacher Education non-degree
 program
 Women's studies minor-LA
 Zoology major-LA

Aerospace Studies

Administered by the Department of Aerospace Studies

Aerospace Studies Minor. Requirements for a minor are completion of 12 hours of the General Military Course and 18 hours of the Professional Officer Course, 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 6 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 participation in six academic undergraduate and/or graduate quarters concurrently with the POC. **Students will compete for selection during the academic year preceding 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.

Freshman enroll in the following courses:

Course No.	Course Title	Hours	Credit
AS 110	U.S. Military Forces in the Contemporary World I	.....	2
AS 111	U.S. Military Forces in the Contemporary World II	.....	2
AS 112	U.S. Military Forces in the Contemporary World III	.....	2

Sophomores enroll in the following courses:

AS 210	The Development Growth of Air Power I	.....	2
AS 211	The Development Growth of Air Power II	.....	2
AS 212	The Development 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 310	Security Forces in America I	.....	3
AS 311	Security Forces in America II	.....	3
AS 312	Security Forces in America III	.....	3
AS 410	Concepts of Air Force Leadership	.....	3
AS 411	Concepts of Air Force Leadership and Management I	.....	3
AS 412	Concepts of Air Force Leadership and Management II	.....	3
*AS 403	Flight Instruction	.....	3

**AS 403 (Flight Instruction) is required of 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.

	Number of Required Courses
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 110, 120, 121, 122, 220, 221, 222, 228, 280, 281, 300, 320, 321, 322, 323, 324, 325, 326, 327, 329, 331, 335, 337, 338, 350, 381, 382, 383, 420, 421, 431, 490.	
III. Archaeology	2
Selected from 140, 143, 240, 241, 242, 243, 244, 245, 340, 341, 342, 344, 345, 346, 347, 348, 349, 385, 386, 440, 449, 450.	
IV. Physical	2
Selected from ANT 170, 370, 371, 372, 373, 470, 471.	
V. Theory	2
Selected from ANT 384, 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.

	Number of Required Courses
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	1
Selected from 110, 120, 121, 122, 220, 221, 222, 228, 280, 281, 300, 320, 321, 322, 323, 324, 325, 326, 327, 329, 331, 335, 337, 338, 350, 381, 382, 383, 420, 421, 431, 490.	

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III. Archaeology	1
Selected from 140, 143, 240, 241, 242, 243, 244, 245, 340, 341, 342, 344, 345, 346, 347, 348, 349, 385, 386, 440, 448, 450.	
IV. Physical	1
Selected from ANT 170, 370, 371, 372, 373, 470, 471.	
V. Theory	1
Selected from ANT 384, 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:

Course No.	Course Title	Hours	Credit
BIO 101	Principles of Biology	5	5
BIO 102	Principles of Botany	5	5
BIO 103	Principles of Zoology	5	5
BIO 291	Seminar in Scientific Writing	2	2

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	3	3
BIO 232	Genetics Laboratory	2	2
BIO 336	Evolution	3	3
BIO 234	Population Genetics	3	3

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

BIO 241	Modifications of the Human Environment	4	4
BOT 340	Plant Ecology	5	5
ZOO 340	Animal Ecology	5	5
ZOO 302	Principles of Animal Behavior	4	4
BIO 346	Aquatic Ecology	5	5

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

BOT 323	Morphogenesis of Non-Vascular Plants	5	5
BOT 421	Plant Anatomy	5	5
ZOO 121	Human Anatomy	4	4
ZOO 427	Vertebrate Embryology	5	5
ZOO 428	Comparative Vertebrate Anatomy	5	5

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

BIO 361	Microbiology	5	5
BOT 310	Plant Taxonomy	5	5
BOT 424	Mycology	5	5
ZOO 304	Ornithology	4	4
ZOO 316	Entomology	5	5
ZOO 320	Invertebrate Zoology	5	5
ZOO 412	General Parasitology	5	5
ZOO 441	Mammal and Herpetile Survey	5	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
		<u>60</u>

Students interested in special areas of biology such as graduate work, teacher certification 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 44 hours of Professional Teacher Education (Including EDLS 363 and SCED 441) and one hour credit of BIO 371. The student 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 programs.

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:

Course No.	Course Title	Hours	Credit
BLS 101	Crisis of Identity	3	.3
BLS 220	Black Community Development	3	.3
BLS 240	Dynamics of Racism	3	.3
BLS 260	Themes in Afro-American Literature	3	.3
HIST 277	History of the Black Man in America I	4	.4
HIST 278	History of the Black Man in America II	4	.4
HIST 279	History of the Black Man in America III	4	.4
BLS 380	Education in the Black Community	3	.3
BLS 392	Linguistic Styles of Black America	3	.3
BLS 399	Community Study Project	1-4	

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BLS 495	Interpersonal Communication	3
	Black Study Electives to be selected from courses below with the approval of the Coordinator of Black Studies	11-14
		<u>48</u>

Black Studies Electives

ID 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

Black Studies Minor

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	3-6
		<u>28</u>

Black Studies Minor Electives

ID 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	5
BIO 102	Principles of Botany	5	5
BIO 103	Principles of Zoology	5	5
BIO 231	Genetics	3	3

BIO 232	Genetics Laboratory	2
BIO 291	Seminar in Scientific Writing	2
BIO 361	Microbiology	5
BOT 310	Plant Taxonomy	5
BOT 323	Morphogenesis of the Nonvascular Plants	5
BOT 340	Plant Ecology	5
BOT 350	General Plant Physiology	5
BOT 421	Plant Anatomy	5
	Electives to be selected with approval of major adviser .....	.8
		<hr/> 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 three courses 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 pursuing the B.S. degree 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 of one of the areas of emphasis.

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

4. A minor is not required.

HONORS. The School of Business participates in the Honors Program. See Honors Program section of catalog.

Business Administration Core

Course No.	Course Title	Hours	Credit
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	
			<hr/> 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.

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

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	4
		<u>45</u>

Emphasis in Finance

BUS 240	Introduction to Insurance	3
BUS 292	Business Statistics II	3
BUS 320	Intermediate Accounting I	4
BUS 456	Business Policies and Management	3
BUS 470	Financial Management	3
BUS 471	Investments	3
BUS 473	Commercial Bank Policies and Management	3
BUS 474	Case Problems in Financial Management	3
ECON 202	Money and Banking	5
	Nine additional hours of Finance courses or other Business courses with approval of adviser	9
		<u>39</u>

Emphasis in Insurance

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

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

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 I	4
BUS 352	Procurement	3
BUS 383	Electronic Data Processing--COBOL	3
BUS 457	Small Business Management	3
		<u>39</u>

Emphasis in Management Information Science

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 Small Business Management

BUS 240	Introduction to Insurance	3
BUS 328	Accounting for Business Decisions	4
BUS 352	Procurement	3
BUS 354	Human and Organizational Behavior	4
BUS 357	Managing New Business Ventures	3
BUS 475	Financial Management of Small Business Firms	3
BUS 453	Personnel Management	4
BUS 457	Small Business Management	3
BUS 458	Seminar in Entrepreneurship	3
ECON 200	The Price System	4
	Five additional hours of Business courses with approval of adviser	<u>5</u>
		39

Emphasis in Marketing

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

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Student will elect two of the following courses:

BUS 363	Sales Management	3
BUS 364	Marketing Channels	3
BUS 461	Advertising Campaigns	3
BUS 464	International Marketing	3
BUS 465	Seminar in Retailing	3
		38

Emphasis in Office Administration

BUS 112	Typewriting III	3
BUS 109	Calculators and Business Applications	2
*BUS 115	Landmark ABC Shorthand II	4
	<i>or</i>	
*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	3
	<i>or</i>	
BUS 383	Electronics Data Processing – COBOL	3
BUS 452	Administrative Office Management	3
BUS 453	Personnel Management	4
COMM 420	General Semantics	4
	Business Electives (at 300 and 400 level)	4
		38

*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	Calculators and Business Applications	2
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 102	Business English	3
BUS 150	Principles of Management	4
BUS 180	Introduction to Business Data Processing	3
BUS 205	Business Communications	3
BUS 211	Office Practicum I	5
BUS 212	Office Practicum II	5
BUS 214	Records Management	2
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
PSY 120	General Psychology	3
	Business electives to complete a minimum of 90 quarter hours	15-19
		90

Business Administration Minor

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
*MATH 115	Essentials of Mathematics I	3
		<u>45</u>

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

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, vocational 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, 44 hours, as listed earlier in this catalog. Business Teacher Education majors should use VTE 430 in place of EDSE 407, BEVE 430, and 3 hours of methods as planned by the adviser.
5. Electives to complete the 180 quarter hours or 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	
BUS 101	Consumer Business Problems	3	
*BUS 110	Typewriting I	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	
**MATH 115	Essentials of Mathematics I	3	
VTE 310	Vocational Education Foundation -- Seminars	3	
		<u>54</u>	

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

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

Emphasis in Office Education

BUS 111	Typewriting II	3
BUS 112	Typewriting III	3

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BUS 211	Office Practicum I	
BUS 212	Office Practicum II	5-10
BUS 232	Business Law II	3
BUS 240	Introduction to Insurance	3
BUS 452	Administrative Office Management	3
BEVE 341	Methods and Materials of Teaching Typewriting	1
BEVE 344	Methods and Materials of Teaching Basic Business Subjects	1
*BEVE 348	Methods and Materials of Teaching Office Practice	1
BEVE 371	Evaluation in Business Subjects	3
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 <i>and</i>	3
BUS 320	Intermediate Accounting I	4
BUS 321	Intermediate Accounting II	4
BUS 428	Income Tax Accounting I	4
BEVE 343	Methods and Materials of Teaching Bookkeeping	1
	<i>or</i>	
**BUS 116	Beginning Gregg Shorthand	4
BUS 117	Intermediate Gregg Shorthand	4
BUS 118	Advanced Shorthand	4
BEVE 342	Methods and Materials of Teaching Shorthand	1

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* If your emphasis is in accounting, this may be omitted.

**The ABC Shorthand series may be substituted for Gregg.

The above reflects the new certification requirements of the Colorado State Department of Education.

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 or her 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	Personal Selling	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 371	Evaluation in Business Subjects	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 344	Methods and Materials of Teaching Basic Business Subjects	1
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

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	.5
	<i>or</i>		
CHEM 106	Principles of Chemistry IA	5	.5
CHEM 105	Principles of Chemistry II	5	.5
	<i>or</i>		
CHEM 107	Principles of Chemistry IIA	5	.5
CHEM 111	Qualitative Analysis	5	.5
CHEM 302	Inorganic Chemistry I	3	.3
CHEM 311	Quantitative Analysis I	5	.5
CHEM 332	Organic Chemistry I	5	.5
CHEM 333	Organic Chemistry II	5	.5
CHEM 334	Organic Chemistry III	5	.5
CHEM 335	Advanced Laboratory in Organic Chemistry	1	.1
CHEM 390	Chemical Literature	1	.1
CHEM 402	Inorganic Chemistry II	3	.3
CHEM 403	Laboratory in Inorganic Chemistry	1	.1
CHEM 414	Instrumental Methods of Analysis	5	.5
CHEM 431	Organic Qualitative Analysis	3	.3
CHEM 451	Physical Chemistry I	4	.4
CHEM 452	Physical Chemistry II	4	.4
CHEM 453	Physical Chemistry III	4	.4
CHEM 454	Physical Chemistry I Laboratory	1	.1
CHEM 455	Physical Chemistry II Laboratory	1	.1
CHEM 456	Physical Chemistry III Laboratory	1	.1

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3. Mathematics including 130, 131, 132, and 133.

4. Physics 265, 266, 267. *or*

5. ENG 101, 102, COMM 110 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, 39 hours, plus EDLS 363, 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	.5
	<i>or</i>		
CHEM 106	Principles of Chemistry IA	5	.5
CHEM 105	Principles of Chemistry II	5	.5
	<i>or</i>		
CHEM 107	Principles of Chemistry IIA	5	.5

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CHEM 111	Qualitative Analysis	5
CHEM 302	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
	<i>or</i>	
CHEM 482	General Biochemistry I – The Chemistry of Biological Compounds	4
CHEM 495	Seminar in Teaching Chemistry	2
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	3-7
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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 Minor

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
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
	<i>or</i>	
CHEM 482	General Biochemistry I – The Chemistry of Biological Compounds	4
	Electives must be selected from the following courses: CHEM 111, 261, 302, 311, 314, 360, 483, to total 27 or more quarter hours. Alternative courses must be approved by the Chemistry Department before the student enrolls in the course.	

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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 minor	7

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Electives must be selected from the following courses: CHEM 281, 302, 311, 314, 333, 334, 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 24.

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 must 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, and shall complete the PTE program of 44 hours.

I. Communication: Professional Teacher Education Emphasis*

Course No.	Course Title	Hours	Credit
COMM 130	Voice and Speech Improvement	3	
COMM 170	Oral Interpretation	3	
COMM 212	Argumentation Theory	3	
COMM 250	Public Speaking	3	
COMM 270	Readers Theatre	3	
COMM 302	Small Group Communication	4	
COMM 312	Practical Debate	3	
COMM 323	Interpersonal Communication: Theory	4	
COMM 420	General Semantics	4	
COMM 486	Directing Communication Activities	3	
THEA 240	Stage 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

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COMM 323	Interpersonal Communication: Theory	4
COMM 323	Interpersonal Communication: Application	4
COMM 420	General Semantics	4
*COMM 490	Workshop in Communication	3
		<u>22</u>
	Electives in Communication	<u>28</u>
		50

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

III. Communication: Mass Media Emphasis

COMM 140	Principles of Mass Communication	3
COMM 340	Radio Production	3
COMM 342	Television Production	4
COMM 345	Broadcast Advertising	3
COMM 346	Radio Drama	3
COMM 348	Broadcast Management	3
COMM 356	Communication Strategies: Media	3
		<u>22</u>
	Electives will be chosen in Communication or related disciplines	<u>28</u>
		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	Argumentation Theory	3
COMM 250	Public Speaking	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	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: Organizational Emphasis

COMM 220	Nonverbal Communication	3
COMM 302	Small Group Communication	4
COMM 323	Interpersonal Communication: Theory	4
COMM 330	Organizational Communication	3
COMM 331	Interviewing in Organizations	3
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 who declare a communication minor must complete 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	Argumentation Theory	3
COMM 312	Practical Debate	3
COMM 302	Small Group Communication	4
COMM 323	Interpersonal Communication: Theory	4
COMM 270	Readers Theatre	3
COMM 420	General Semantics	4
COMM 486	Directing Communication Activities	3
		<u>30</u>
	Electives in Communication	6
		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 in the Community	3
		<u>20</u>
	Electives in Communication	9
		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	3
HPER 255	Modern Dance Techniques	3
HPER 456	Workshop in Modern Dance	3

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
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Earth Sciences Major

Administered by the Department of Earth Sciences

Earth Sciences Major (Non-teaching)

This program is for students interested in careers in astronomy, geology, meteorology, or oceanography, as well as for those desiring a broad background in

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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 or she meet with an adviser in the department to discuss his or her goals and to outline a program of study which will enable him or her 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 – 39 hours, plus EDLS 363 – 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.

Course No.	Course Title	Hours	Credit
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	Physical Geology	.....	5
GEOL 202	Historical Geology	.....	5
MATH 330	Mathematics for the Sciences I	.....	3
MET 200	General Meteorology	.....	4
MET 301	Elements of 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:

Course No.	Course Title	Hours Credit
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.

Economics 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
BUS 101	Consumer Business Problems	3
BUS 371	Personal Finance	3
BEVE 430	Economic Education Seminar	3
ECON 100	Introductory Economics	5
ECON 102	Contemporary Economic Problems	3
	Electives in Business or Economics	<u>17</u>
		36

The electives must be planned in cooperation with the minor adviser. Elective courses may be chosen from the economic courses listed on pages 172, 173, 174 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
EDLS 360	Clinical Experience: Primary	2
EDLS 361	Clinical Experience: Intermediate	2
EDLS 362	Clinical Experience: Middle School	2
EDLS 363	Clinical Experience: Secondary	2
EDFE 378	Introduction to Teaching: Field Center	2
EDFE 379	Introduction to Teaching: Inner City	2
EDFE 401	Practicum	1-4
EDFE 422	Individual Studies	1-4

II. Supervised Teaching for Certification

EDFE 444	Supervised Teaching	18
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Important Note: All EDFE courses except 422 are marked S-U with no grade point average computed. All EDLS courses are letter graded.

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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 library, instructional materials center, or educational media center.

Students pursuing the B.A. Degree who want to meet accreditation standards of North Central and Colorado* must:

1. Complete the General Education requirements as specified in this catalog.
2. Complete all requirements for a teaching major.
3. Complete the required and elective courses below for a minimum of 27 hours.

Required Courses:

Course No.	Course Title	Hours Credit
EDEM 410	Introduction to Educational Media	.3
EDEM 420	Design and Construction of Graphic Materials	.3
EDEM 434	Reference Materials: Basic School Reference Service	.3
EDEM 475	Administering Educational Media I	.3
EDEM 530	Cataloging and Classification I	.3
EDEM 536	Evaluation and Selection of Educational Materials	.3

Electives:

EDEM 330	Instructional Materials: Problems of Organization, Storage, and Retrieval	.3
EDEM 460	Television in Education	.3
EDEM 500	Still Photography for Teachers	.2
EDEM 516	Utilization of Educational Resources	.3
EDEM 534	Reference Materials: Service in Specialized Subject Areas and Government Publications	.3
EDRD 314	Improvement of Instructional Literature in the Elementary School	.3
EED 406	Literature for Adolescents	.4

NOTE: It is recommended that the student try to take 6-9 hours of his or her supervised teaching (EDFE 450 or EDFE 460) in a suitable media situation.

* This is not an endorsement on the Teacher's Certificate.

Elementary Education

Administered by the Department of Elementary Education and Reading

Students who wish to change majors to elementary education and who have previously taken course work at the University of Northern Colorado must have a minimum grade point average of 2.5 in course work taken at the University of Northern Colorado to be admitted to the department.

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, with the exception of FA 224, are applicable to general education.

Course No.	Course Title	Hours Credit
FA 224	Elementary Art	.3
GEOG 100	World Geography	
	or	
GEOG 148	Anglo-America	.5
HIST 175	Themes in American 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

Select a minimum of one non-pedagogical course from health or physical education.

3. Complete the Professional Teacher Education courses PSY 347, PSY 348, EDF 366, EDF 367, EDF 368, EDSE 405, EDSE 406 (or equivalent), and EDFE 444, a total of 36 hours. Eighteen hours student teaching must be in elementary education; that is, in 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
EDLS 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 303	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

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* 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 EDLS 360-361, and 362 in the elementary education major.

7. 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.

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

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

10. Students are informed that revised Colorado Certification Standards have precipitated the need to change the program described above. These changes have not been made final as this copy goes to press.

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 202	Oral, Reading, and Written Spanish Communication I	3
MAS 203	Oral, Reading, and Written Spanish Communication II	3

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MAS 204	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 472	Evaluation and Selection of Bilingual and Bicultural Materials	2
EDEL 474	Teaching in a Second Language in the Elementary Bilingual and Bicultural School	3
EDEL 471	History and Philosophy of Bilingual Education	3
		27

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

2. Completion of the following courses:

Instructional Techniques

*EDEC 480	Nursery-Kindergarten Education	3
*EDEC 462	Classroom Management in Early Childhood	3

Child Growth and Development

CD 136	Introduction to Preschool	2
CD 331	Development of the Infant and Toddler	3
CD 333	Development and Guidance of the Young Child	4
*EDEC 464	Introduction to Early Childhood Education	3

Compensatory Programs

*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

* Must be taken at the University of Northern Colorado

3. 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

Course No.	Course Title	Hours	Credit
BIO 402	Conservation of Natural Resources	4	4
SCI 303	Elementary Biological Science	3	3
SCI 309	Science for Elementary Teachers	3	3
SCED 151	Introductory Science Field Experiences	2	2
	Electives to be selected with approval of student's minor adviser		15
			27

Recommended Electives:

AST 100	General Astronomy	4	4
BIO 101	Principles of Biology	5	5
BIO 102	Principles of Botany	5	5
BIO 103	Principles of Zoology	5	5
BIO 336	Evolution	3	3
GEOL 100	General Geology	4	4
MET 200	General Meteorology	4	4

SCI 210	Values Act (I) on Environment	3
SCI 508	Science Workshop	3
ZOO 304	Ornithology	4

English Major

Administered by the Department of English

Students pursuing the B.A. degree with a 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 at least 27 quarter hours.
3. A minimum of 64 hours of English courses, including all courses to meet the specific requirement.

A. Core Requirements

Course No.	Course Title	Hours	Credit
*ENG 111	Introduction to Poetry	4	
Eng 114	Introduction to Language	4	
*ENG 115	Introduction to Fiction and Drama	4	
ENG 202	Writing about Language	4	
ENG 240	or 241 Creative Writing	4	
ENG 250	The English Language	4	
ENG 319	Advanced Expository Techniques	4	

B. Literature Options

Group I – English Literature. One course required.

ENG 211	Medieval Literature	4	
ENG 212	Renaissance Literature	4	
ENG 213	The Restoration and Eighteenth Century	4	
ENG 214	The Romantic Movement	4	
ENG 215	Victorian Prose and Poetry	4	
ENG 220	English Literature: 1900 - 1939	4	
ENG 221	English Literature: 1900 - Present	4	

Group II – American Literature. One course required.

ENG 216	American Literature to the Civil War	4	
ENG 217	American Literature: The Civil War to 1914	4	
ENG 225	American Literature: 1914 - 1939	4	
ENG 226	American Literature: 1940 - Present	4	

* Qualified students may be exempted by examination.

Group III – Genre, theme, and figure. One course required.

ENG 260	Women's Biography	4	
ENG 310	Shakespeare: Early Plays	4	
ENG 311	Shakespeare: Later Plays	4	
ENG 360	Chaucer	4	
ENG 402	The Short Story	4	
ENG 403	Techniques of the Novel	4	
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 411	Biography and Autobiography	4	

Group IV – World Literature. One course required.

ENG 232	Great Writers of the World	4	
ENG 430	Studies in World Literature	4	
ENG 450	Studies in Russian Literature	4	

C. Electives in English 20

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NOTE: Courses in Groups I, II, III, and IV that were not taken to fulfill the literature requirement may be elected as well as any of the courses listed below. (ENG 101, ENG 102, ENG 103, and ENG 105 do not count toward the English major.)

ENG 231	Great Writers in England and America	4
ENG 325	Studies in Science Fiction	4
ENG 326	Advanced Studies in Science Fiction	4
ENG 340	Creative Writing: Advanced Poetry	4
ENG 341	Creative Writing: Advanced Fiction	4
ENG 410	History of Ideas in Literature	4
ENG 414	Greek and Comparative Mythology	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 441	Colloquium in Literature	4

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

Students working for certification in English must complete the above program except for the Electives in English, Section C. Students working for certification will complete the following additional requirements:

5. Professional Teacher Education Core of 39 quarter hours plus EDLS 363, two quarter hours, and EED 341, four quarter hours. EDLS 363 and EED 341 must be taken concurrently. At least one quarter must elapse between the time when the student takes EDLS 363 and EED 341 and the time when the student takes EDFE 444 (Supervised Teaching). An additional requirement is that each student take EDFE 270 in the sophomore year. Prerequisites for admission into PTE as English majors are stipulated in section 7 below.

6. The following courses must also be taken:

ENG 321	Generative-Transformational Grammar	4
EED 402	Literature and Materials in the Secondary School	5
	Electives in English (as specified above in section C)	8

7. Students who intend to enter the teaching profession are required to complete at least two English courses with a minimum grade point average of 2.30 before being admitted to the PTE program.

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

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

EDEM 410	Introduction to Educational Media	3
EDEM 460	Television in Education	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 in order to allow for an independent study on problems in teaching after the student-teaching experience.

English Minor

Course No.	Course Title	Credit Hours
*ENG 111	Introduction to Poetry	4
ENG 114	Introduction to Language	4
*ENG 115	Introduction to Fiction and Drama	4
ENG 202	Writing about Language	4
	Electives in English	15

Students with a minor in English who plan to teach in the secondary school are required to take only 11 hours of elective credit in English, but they must take the following courses:

EED 402 Literature and Materials in the Secondary School 5

One of the following two courses:

ENG 250 The English Language 4

or

ENG 321 Generative-Transformational Grammar 4

Minors may choose elective hours from Groups I, II, and IV, and from the electives for English majors. In addition, teaching minors may elect ENG 250 or ENG 321 as an elective if that course has not been chosen as a requirement.

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

NOTE: Teaching minors who wish to do student teaching in English must take EED 341, Methods and Materials for Teaching Language and Composition in the Secondary School, and may have to take EDLS 363 as well.

* *Qualified students may be exempted by examination.*

Elementary Education majors minoring in English are not to take the program designed for secondary-school teachers.

HONORS: The Department of English participates in the Honors Program. See page 24.

Environmental Studies Program

The following credit hours of intensive environmental studies represent an interdisciplinary approach to the many complex environmental problems. They may be applied to the student's academic program in a variety of ways:

1. The courses may be used as electives to the general education curriculum requirements, in specific code categories which differ from course to course. Consult the course description section of this catalog for exact information as to which code category applies to each of the courses listed below.

2. The courses may be used as components of an environmental studies emphasis in an Interdisciplinary Studies Program (see description of latter program on pages 94).

3. Thirty-one credit hours from the courses listed below must be fulfilled for any student electing to fulfill a minor program in Environmental Studies. The specific courses selected from among those listed below to fulfill the minor requirements must be individually arranged between the student and the minor adviser.

Course No.	Course Title	Hours Credit
ENST 110	Introduction to Environmental Studies	3
ENST 120	Humans' Attitudes Toward Their Physical and Social Environments	3
ENST 130	The History of the Environmental Movement	3
ENST 209	Energy and the Environment	3
ENST 211	Chemistry and 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 255	Geological Hazards	3
ENST 260	Ecological Interpretations	3
ENST 270	Social Implications of Ecology	3
ENST 280	Natural Resources and Technology	3
ENST 300	The General Systems Approach	4
ENST 310	Future Environments and Ecosystem Modification	3
ENST 340	Internship in Environmental Studies	5-18
ENST 350	Environmental Health	3
ENST 361	Art and the Environment	3
ENST 422	Individual Studies	1-4
GEOG 315	Resource Management	3

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Due to the continually emerging nature of the Environmental Studies Program, the interested student is urged to check with the Environmental Studies Coordinator for the most up-to-date information on course offerings and program requirements.

Fine Arts Major

Administered by the Department of Fine Arts

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

Course No.	Course Title	Hours	Credit
FA 121	Foundation Lecture I	2	2
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	Arts, Man and Culture I	4	4
FA 111	Arts, Man and Culture II	4	4
FA 112	Arts, Man and Culture III	4	4
			12

Studio Program

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

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

Fine Arts Teaching Major

General Requirements

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, 44 quarter hours.

The following required courses in the major:

Foundations Program

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	3
		<u>15</u>

Art History Program

FA 110	Arts, Man and Culture I	4
FA 111	Arts, Man and Culture II	4
FA 112	Arts, Man and Culture III	4
		<u>12</u>

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	3
		<u>21</u>

Art Education Program

EDFE 270	Teacher Aide, Fine Arts (Elem)	1
EDFE 270	Teacher Aide, Fine Arts (Sec)	1
*FA 229	Art for the Exceptional Child	3
*FA 244	Elementary Art for Art Majors and Minors	3
*FA 245	Methods of Teaching and Coordinating Art in Elementary School	2
FA 339	Leading Ideas in Art for Teachers	2
**FA 341	Methods of Teaching in the Secondary School (Fine Arts)	3
EDFE 378	Introduction to Teaching	2
FA 430	Seminar in Art Education	2
FA 432	The Curriculum in Art Education	3
		<u>22</u>

* Not required for secondary certification

** Not required for elementary certification

NOTE: Students wishing a K-12 certification must satisfactorily complete all ten courses listed above.

Additional Art Education Requirements:

1. 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 student's educational career to assure proper course planning.
2. Complete one area of emphasis in Fine Arts for a minimum of 12 quarter hours beyond any other required courses listed in the four programs above.

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 Arts, Man and Culture I, 4.
FA 111 Arts, Man and Culture II, 4.
3. Elect twenty-three (23) quarter hours in Fine Arts to complete 36 quarter hours.

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UNC Program in Florence: Studies in Comparative Arts Supervised by the Department of Fine Arts Paolo Barucchieri, Director

The Department of Fine Arts supervises and participates in a program in Comparative Arts at a residence center, "La Poggerina" near Florence, Italy.

Courses offered through this program may be used to partially satisfy major and minor requirements in the Department of Fine Arts, Anthropology, Home Economics, Humanities or General Education requirements. A description of this program may be found in this catalog on page 26.

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:

Course No.	Course Title	Hours	Credit
FR 201	Intermediate French I	4	4
FR 202	Intermediate French II	4	4
FR 203	Intermediate French III	4	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	3
FR 311	Intermediate French Composition	3	3
FR 312	Intermediate Review Grammar	3	3
FR 340	French Civilization I	3	3
FR 341	French Civilization II	3	3
FR 342	Contemporary France	3	3
FR 400	Problems in Oral French	3	3
	Four French literature courses chosen from the departmental offerings	12	
	*Electives in French to be chosen with the consent of the adviser	6	

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Students who desire teaching certification will take the PTE program of 44 hours, including EDLS 363, Clinical Experience, (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:

FR 340	French Civilization I	3	3
FR 341	French Civilization II	3	3
FR 342	Contemporary France	3	3
	Four French literature courses chosen from the departmental offerings	12	
	*Electives in French to be chosen with the consent of the adviser	15	

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*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. A minor of at least 27 quarter hours approved by the department.

5. In addition, students must demonstrate competency in certain areas of

language activity. See department for competency list.

6. 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 Review Grammar	3

Three courses of the following to be chosen with the consent of the adviser:

FR 340	French Civilization I	3
FR 341	French Civilization II	3
FR 342	Contemporary France	3
FR 400	Problems in Oral French	3
		<u>30</u>

B. For students wishing a Liberal Arts minor:

FR 340	French Civilization I	3
FR 341	French Civilization II	3
FR 342	Contemporary France	3
	Electives in French to be chosen with the consent of the adviser	<u>9</u>
		30

In addition, students must demonstrate competency in certain areas of language activity. See department for competency list.

Geography Major

Administered by the Department of Geography

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

Student 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	
GEOG 121	Physical Geography II	3	
GEOG 122	Cultural Geography I	3	
GEOG 123	Cultural Geography II	3	
GEOG 148	Anglo-America	5	
GEOG 364	Maps and Their Uses	2	
	Electives in Advanced Regional Courses		14
	Electives in Advanced Systematic Courses		<u>15</u>
			48

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.

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Geography Minor

GEOG 100	World Geography	5
GEOG 148	Anglo-America	5
GEOG 384	Maps and Their Uses	2
	Electives in Advanced Regional Geography	5
	Electives in Advanced Systematic Geography	5
	Electives in Advanced Regional or Systematic Geography	5

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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:

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 or her assigned adviser.

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

Course No.	Course Title	Hours	Credit
GER 201	Intermediate German I	4	4
GER 202	Intermediate German II	4	4
GER 203	Intermediate German III	4	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

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Students who desire teaching certification will also take the PTE program of 44 hours, including EDLS 363, Clinical Experience, (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

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* 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. A minor of at least 27 quarter hours approved by the department.

5. In addition, students must demonstrate competency in certain areas of language activity. See department for competency list.

6. 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
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GER 202	Intermediate German II	4
GER 203	Intermediate German III	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
		<u>30</u>

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>

In addition, students must demonstrate competency in certain areas of language activity. See department for competency list.

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:

Course No.	Course Title	Hours	Credit
GERO 205	Introduction to Gerontology	4	
HPER 236	Introduction to Health Aspects of Gerontology	4	
HPER 369	Therapeutic Recreation	3	
GERO 370	Reality Orientation and Remotivation for Older Adults	3	
HPER 495	Senior Seminar	4	
EDSE 290	Orientation to Rehabilitation and Related Services	3	
HEC 351	Geriatric Nutrition	3	
PSY 230	Human Growth and Development	5	
PSY 433	Maturity and Aging	3	
MAS 304	Bicultural Systems	3	
SOC 341	Sociology of Aging	3	
ZOO 156	Elements of Human Physiology-Anatomy	5	
GERO 453	Internship in Gerontology	18	
GERO 490	Administration of Programs for Older Adults	3	
			<u>64</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 (School Health Emphasis)

Administered by the Department of Health and Safety Education

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

1. Complete the Liberal Education of requirements of 60 quarter hours.

2. Professional Teacher Education, 39 hours.

3. The following courses in the major:

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Course No.	Course Title	Hours	Credit
CHEM 108	General Chemistry	5	
	or		
CHEM 109	General Chemistry - Organic	5	
ZOO 156	Elements of Anatomy & Physiology	5	
	or		
ZOO 250	Human Physiology	5	
HPER 200	Introduction to Health Education	3	
HPER 238	Contemporary Issues in Drug Abuse	3	
HEC 250	Principles of Human Nutrition	3	
	or		
HEC 251	Nutrition I	3	
PSY 250	Humanistic Psychology	3	
	or		
PSY 255	Psychology of Emotional Adjustment	3	
BIO 261	Medical & Public Health Microbiology	4	
	or		
BIO 361	Microbiology	5	
HPER 262	Standard First Aid & Personal Safety	2	
HPER 299	Community Health	3	
HPER 303	Health Education in the Elementary School	2	
HPER 336	Human Sexuality	3	
HPER 342	Modern Concepts of Health & Disease	3	
HPER 343	Methods and Observations of Health Education in the Secondary School	5	
HPER 350	Introduction to: Environmental Health	3	
HPER 405	Issues in Health	3	
PSY 432	Preadolescence and Adolescence	3	
HPER 471	Safety Education	3	
			56-57

Health Education Minor (School Health Emphasis)

Students must complete the following core courses:

HPER 200	Introduction to Health Education	3
HPER 405	Issues in Health	3
HPER 299	Community Health	3
HPER 303	Health Education in the Elementary School	2
HPER 343	Methods & Observations of Health Education in the Secondary School	5
		16

In addition take 16 hours from the following courses:

HPER 238	Contemporary Issues in Drug Abuse	3
PSY 255	Psychology of Emotional Adjustment	3
HPER 262	Standard First Aid and Personal Safety	2
HPER 336	Human Sexuality	3
HPER 342	Modern Concepts of Health & Disease	3
HPER 350	Environmental Health	3
HPER 471	Safety Education	3
		32

Health Education Major (Community Health 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 Liberal Education requirements of 60 quarter hours.
2. HPER 454 Internship in Community Health 9 - 18 hours.
3. The following core courses:

CHEM 108	General Chemistry	5
	or	
CHEM 109	General Chemistry - Organic	5
ZOO 156	Elements of Anatomy & Physiology	5
	or	
ZOO 250	Human Physiology	5
HPER 200	Introduction to Health Education	3
HPER 238	Contemporary Issues in Drug Abuse	3

HEC 250	Principles of Human Nutrition	3
	or	
HEC 251	Nutrition I	3
PSY 250	Humanistic Psychology	3
	or	
PSY 255	Psychology of Emotional Adjustment	3
BIO 261	Medical and Public Health Microbiology	4
	or	
BIO 361	Microbiology	5
HPER 262	Standard First Aid & Personal Safety	2
HPER 299	Community Health	3
HPER 336	Human Sexuality	3
HPER 342	Modern Concepts of Health & Disease	3
HPER 350	Introduction to Environmental Health	3
HPER 405	Issues in Health	3
HPER 471	Safety Education	3

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In addition take 16 hours from the following courses:

NURS 100	Orientation to the Concept of "Health" and the Health Care Delivery System	2
CHEM 109	General Chemistry - Organic	5
CHEM 130	Introductory Organic Chemistry	5
COMM 140	Principles of Mass Communication	3
PSY 202	Principles and Philosophies of Guidance	3
RSM 203	Introductory Statistical Methods	3
ICU 210	Death and Dying	3
HEC 221	Human Relationships	3
BIO 231	Genetics	5
BIO 234	Population Genetics	3
HPER 236	Health Aspects of Gerontology	3
BIO 262	Common Infections of Man	3
PSY 265	Social Psychology	3
SOC 272	The Community	3
CHEM 281	Human Biochemistry	5
RSM 303	Basic Statistical Inference	3
SOC 310	Social Psychology	3
SOC 312	Mass Communication and Propaganda Analysis	3
HEC 315	Consumer Education	3
HEC 316	Consumer Protection	3
SOC 325	Sociology of Medicine	3
BUS 341	Life and Health Insurance	3
BUS 354	Human and Organizational Behavior	4
BIO 361	Microbiology	5
BUS 366	Consumer Behavior	4
BIO 380	The Venereal Diseases	3
BIO 381	Topics in Birth Control and Contraception	1
BIO 382	Counseling in Birth Control and Contraception	1-4
ZOO 412	General Parasitology	5
BIO 430	Behavioral Genetics	3
SOC 435	Socio-Cultural Change	3
PSY 465	Psychology of Human Sexuality	3
ANT 470	The Nature of Man	3
ANT 472	Medical Anthropology	4

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Health Education Minor (Community Health Emphasis)

Students pursuing the B.S. degree with a Minor in Health Education (Community Health Emphasis) must complete the following core courses:

HPER 200	Introduction to Health Education	3
HPER 405	Issues in Health	3
HPER 299	Community Health	3
HPER 342	Modern Concepts of Health & Disease	3
HPER 350	Introduction to Environmental Health	3

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In addition take 18 hours from the following courses:

HPER 238	Contemporary Issues in Drug Abuse	3
RSM 203	Introductory Statistical Methods	3
	or	
RSM 303	Basic Statistical Inference	3
HPER 282	Standard First Aid & Personal Safety	2
PSY 265	Social Psychology	3
	or	
SOC 310	Social Psychology	3
SOC 272	The Community	3
SOC 325	Sociology of Medicine	3

Health Occupations

Administered by Vocational Teacher Education

The Health Occupations-Vocational Teacher Education program provides for the undergraduate preparation of persons who hold current registration, certification, or licensure in their health field to teach in a health occupations program at the secondary, post-secondary, or adult level. The general format for the B.A. in Health Occupations is as follows:

General Education	60
Health Practitioner Preparation (includes work experience)	54
*Professional Health Occupations Teacher Education	54
Health Occupations Career Options/Alternatives	12

The Health Occupations Vocational Teacher Education program has established criteria for each of the health occupations programs based on the practitioner preparation required by the program accrediting agencies. The evaluation of the health practitioner preparation will be accomplished in conjunction with the admissions office at UNC, the health occupations teacher education program and the Colorado community colleges as needed.

Associated with the health practitioner preparation needed for the degree program are required work hours identified in the State Plan for Vocational Education in order to qualify for a vocational credential. These occupational hours will also be achieved before students complete the B.A. in Health Occupations-Vocational Teacher Education.

*Professional Health Occupations Teacher Education -- The vocational teacher education program had identified competency modules (one hour blocks) in the following areas necessary to be completed for the B.A. in Health Occupations.

1) Foundations	8
VTE 310 -- Vocational Education Foundations Seminars	
VTE 400 -- Organization and Administration of Health Occupations	
VTE 419 -- Advisory Committees Seminar in Vocational Education	
Other courses depending on Career Goal	
2) Teacher Preparation	11
Health Occupations Instructional Design	
VTE 401 -- Occupational Analysis	
VTE 402 -- Performance Objectives	
VTE 403 -- Classroom Evaluation	
VTE 404 -- Instructional Methods	
VTE 405 -- Media Utilization	
VTE 406 -- Student Evaluation in the Clinical Setting	
VTE 430 -- Vocational Education for Learners with Special Needs	
Other courses depending on background and Career Goal.	
3) Teaching Experience	23
VTE 453 -- Preparation for Teaching Vocational Health Occupations	
EDFE 444 -- Student Teaching	
VTE 483 -- Teaching Improvement Seminar in Vocational Health Occupations	

- 4) **Planned Experiences** Based on Career GoalsCredit varies
 5) Additional Professional Teacher Education requirements PSY 347, PSY 348, EDF 366, EDF 367, EDF 368, EDRD 420, and EDSE 405 (19 hours).

History Major (Liberal Arts)

Administered by the Department of History

Students pursuing a baccalaureate degree in History must complete:

1. The General Education requirements as specified in this catalog.
2. The following courses in History:

Course No.	Course Title	Hours Credit
HIST 100	The American Past, 1492-1800	4
HIST 101	The American Past, 1800-1900	4
HIST 102	The American Past, 1900-Present	4
HIST 130	Western Civilization I	4
HIST 131	Western Civilization II	4
HIST 132	Western Civilization III	4
HIST 299	Introduction to Historical Research	3
HIST 400	Interdisciplinary Readings in History	3
		<u>30</u>
	Advanced electives in History	34
	Two courses must be in Third World History (Asian, African, Latin American).	
	One course must be in American History.	
	One course must be in European History.	<u>64</u>

3. One minor of 27 hours preferably within the College of Arts and Sciences.

4. Electives sufficient to complete the 180 hours required for the baccalaureate degree.

The Department of History recommends that history majors take a foreign language.

History Major (Teacher Preparation)

Administered by the Department of History

Students pursuing a baccalaureate degree in History who expect to receive departmental endorsement in the social studies certification area must complete:

1. The General Education requirements as specified in this catalog.
2. The following courses in History:

Course No.	Course Title	Hours Credit
HIST 100	The American Past, 1492-1800	4
HIST 101	The American Past, 1800-1900	4
HIST 102	The American Past, 1900-Present	4
HIST 130	Western Civilization I	4
HIST 131	Western Civilization II	4
HIST 132	Western Civilization III	4
HIST 299	Introduction to Historical Research	3
HIST 400	Interdisciplinary Readings in History	3
		<u>30</u>
	Advanced electives in History	22
	Two courses must be in Third World History (Asian, African, Latin America).	
	One course must be in American History.	
	One course must be in European History.	<u>52</u>

3. The following social science courses:

Course No.	Course Title	Hours Credit
ANT 100	General Anthropology	5
ECON 100	Introductory Economics	5
GEOG 100	World Geography	5
PSCI 100	National Government of the United States	5
SOC 100	Principles of Sociology	5
	Advanced electives in one of the above social science fields	12
		<u>37</u>

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4. The Professional Teacher Education program.

Departmental requirements concerning the PTE program:

a. Prior to application students must have completed 20 hours of history, 8 of which must have been taken at UNC, with a GPA of 2.3 (computed from UNC courses only).

b. SSED 341 (Methods of Teaching) and EDLS 363 (Clinical Experience) may be taken only after the completion of EDF 366 and PSY 347, the Western Civilization and The American Past surveys, and 10 hours of introductory social science courses.

c. Students must complete 40 hours in the major before registering for EDFE 444 (Supervised Teaching).

History Minor

The following courses are required for a History minor:

Course No.	Course Title	Hours	Credit
HIST 100	The American Past, 1492-1800	4	4
HIST 101	The American Past, 1800-1900	4	4
HIST 102	The American Past, 1900-Present	4	4
HIST 130	Western Civilization I	4	4
HIST 131	Western Civilization II	4	4
HIST 132	Western Civilization III	4	4
	Advanced electives in History	12	12
			36

Students minoring in History who intend to teach Social Studies should take three of the following introductory social or behavioral science courses to fulfill their general education requirements in Category 3: ANT 100, ECON 100, GEOG 100, PSCI 100, SOC 100, PSY 120. These courses may not be counted toward fulfilling the thirty-six hour minor requirement.

HONORS: The Department of History participates in the Honors Program. See page 24.

Home Economics

Administered by the Department of Home Economics

Students pursuing a B.A. in Home Economics may select one of four majors: Dietetics; Family Life and Consumer Education; Food and Nutrition; Vocational Home Economics Teacher Education. Students must satisfy the following requirements:

1. Complete the General (Liberal) Education requirements of 60 quarter hours.
2. Electives to complete 180 quarter hours of academic credit required for graduation.
3. No minor required.

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, medical centers, health care facilities, commercial or college food services, school lunch programs, governmental agencies, public health nutrition, extended care facilities, public or voluntary care agencies, Voc-Tech schools and colleges, and consultation services.

The following required courses are listed according to recommended sequence.

Course No.	Course Title	Hours	Credit
HEC 101	Self Identification	2	2
HEC 108	Investigating the Home Economics Profession	2	2

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BUS 180	Introduction to Business Data Processing	3
CHEM 104	Principles of Chemistry I	5
CHEM 105	Principles of Chemistry II	5
CHEM 130	Introductory Organic Chemistry	5
ENG 103	Basic Technical Writing	3
ZOO 105	Human Biology (sub. for SCI 104 in Gen. Ed.)	4
ZOO 121	Human Anatomy	4
HEC 141	Techniques of Food Preparation	4
HEC 207	Think Metric	1
HEC 242	Principles of Food Preparation	4
HEC 243	Nutrition Module: Medical Terminology	1
HEC 251	Nutrition I	3
BIO 261	Medical and Public Health Microbiology	4
BUS 205	Business Communications	3
BUS 220	Principles of Accounting I	4
CHEM 281	Human Biochemistry	5
ZOO 250	Human Physiology	5
HEC 343	Nutrition Module: Interpreting Lab Data	1
HEC 351	Nutrition for the Older Adult	3
HEC 353	Applied Nutrition	4
HEC 362	Demonstration Techniques	2
BUS 281	Electronic Data Processing - FORTRAN	3
	or	
BUS 383	Electronic Data Processing - COBOL	3
SOC 325	Sociology of Medicine	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 451	Nutrition II	3
HEC 456	Infant and Child Nutrition	3
PSY 466	Industrial Psychology	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. Students electing this major may select an area of emphasis in Textiles and Clothing.

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

Course No.	Course Title	Hours Credit
HEC 101	Self Identification	2
HEC 108	Investigating the Home Economics Profession	2
HEC 111	Management for Effective Living	3
HEC 141	Techniques of Food Preparation	4
HEC 171	Design in Living	3
HEC 181	Basic Textiles	5
**HEC 190	Fundamentals of Clothing Construction or Challenge Exam	3
HEC 207	Think Metric	1
HEC 212	Management Dynamics	3
HEC 221	Human Relationships	3
HEC 242	Principles of Food Preparation	4
*HEC 249	Food Module	1
HEC 250	Principles of Human Nutrition	3
CD 331	Development of the Infant and Toddler	3
CD 333	Development and Guidance of the Young Child	4
HEC 315	Consumer Education	3
HEC 316	Consumer Protection	3
HEC 349	Food Module	1
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 419	Management for Contemporary Living	3

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HEC 445	Experimental Food Studies	4
*HEC 449	Food Module	1
	†Science	15

* A total of five hours is required from food modules courses numbered HEC 249, 349, and 449 and may be taken after the freshman year.

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

† Science courses are to be selected with guidance of 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.

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.

The following courses are required and listed in recommended sequence.

Course No.	Course Title	Hours	Credit
HEC 101	Self Identification	2	
HEC 108	Investigating the Home Economics Profession	2	
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	
ENG 103	Basic Technical Writing	3	
HEC 111	Management for Effective Living	3	
HEC 141	Techniques of Food Preparation	4	
HEC 207	Think Metric	1	
HEC 221	Human Relationships	3	
HEC 242	Principles of Food Preparation	4	
*HEC 249	Food Module	1	
HEC 251	Nutrition I	3	
BUS 205	Business Communications	3	
CHEM 281	Human Biochemistry	5	
CD 331	Development of the Infant and Toddler	3	
*HEC 349	Food Module	1	
HEC 351	Nutrition for the Older Adult	3	
BIO 363	Food Microbiology	5	
HEC 362	Demonstration Techniques	2	
IA 342	Basic Photography	3	
IA 345	Publication Production	5	
HEC 353	Applied Nutrition	4	
HEC 374	Consumer Aspects of Household Equipment	4	
HEC 419	Management for Contemporary Living	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 Module	1	
HEC 451	Nutrition II	3	
HEC 456	Infant and Child Nutrition	3	

* A total of five hours is required from food modules courses numbered HEC 249, 349, and 449 and may be taken after the freshman year.

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.

Vocational Home Economics Teacher Education Administered by the Department of Home Economics

With the fulfillment of the specified Home Economics subject matter requirements, vocational and educational courses, the student will be certified and credentialed to teach in vocational home economics programs. Cumulative GPA of 2.3 is required for admission into PTE.

Two alternative programs prepare students for secondary school teaching in Consumer Homemaking or Occupational Home Economics.

Course No.	Course Title	Hours	Credit
HEC 111	Management for Effective Living	3	3
HEC 141	Techniques of Food Preparation	4	4
HEC 171	Design in Living	3	3
HEC 181	Basic Textiles	5	5
HEC 190	Fundamentals of Clothing Construction or Challenge Exam	3	3
HEC 193	Creative Clothing Construction	4	4
HEC 212	Management Dynamics	3	3
HEC 221	Human Relationships	3	3
*HEC 242	Principles of Food Preparation	4	4
*HEC 249	Food Module	1	1
HEC 250	Principles of Human Nutrition	3	3
EDFE 270	School and Community Aide	1-4	1-4
VTE 310	Vocational Education Foundations Seminar	3	3
CD 331	Development of Infant and Toddler	3	3
CD 333	Development and Guidance of the Young Child	4	4
HEC 349	Food Module	1	1
	or		
HEC 449	Food Module	1	1
HEC 362	Demonstration Techniques	2	2
HECV 363	Introduction to Curriculum in Vocational Home Economics Education	3	3
HECV 367	Principles/Practices of Evaluation in Vocational Home Economics Education	3	3
HEC 369	Laboratory Management and Maintenance	1	1
HEC 371	Design for Shelter	3	3
HEC 372	Design for Interiors	3	3
HEC 374	Consumer Aspects of Household Equipment	4	4
HEC 395	Fashion Design -- Flat Pattern Drafting	4	4
	or		
HEC 494	Tailoring	4	4
HEC 315	Consumer Education	3	3
HPER 191	Personal and Family Health	3	3
	or		
HPER 262	Standard First Aid and Personal Safety	2	2
	or		
	Red Cross Certificate	0	0
EDSE 405	Handicapped Students in Regular Classroom	3	3
VTE 430	Voc Ed for Learners with Special Needs	3	3
VTE 411	Vocational Student Organizations	1	1
VTE 414	FHA/HERO Seminar	2	2
VTE 410	Cooperative Education and Coordinating Techniques	3	3
HECV 460	Home Economics Wage Earning	3	3
**HECV 462	Preparation for Teaching Vocational Home Economics	3	3
**EDLS 363	Clinical Experience	2	2
EDFE 444	Supervised Teaching	18	18
HECV 464	Reading in Home Economics	3	3
HECV 482	Teaching Improvement Seminar in Vocational Home Economics	2	2
Recommended courses:			
VTE 290	Directed Occupational Experience	3-8	3-8
EDEM 410	Introduction to Educational Resources	3	3
EDEM 420	Design and Construction of Audio-Visual Materials	3	3
HECV 432	Teaching Child Development and Family Living in Secondary School	3	3

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State credentialing requirements for Vocational Home Economics Education also include wage-earning hours on the basis of type of credential. They are:

Consumer-Homemaking, 2000 hours of home related work (1 year or 2000 hours of home experience are acceptable)

Multi-Occupational, 2000 hours of occupational experience distributed among the subject-matter areas of home economics.

Specific Skill Occupational, 2000 hours of occupational experience directly related to the area to be taught.

After September 1, 1980, all Occupational Home Economics teachers must have 4,000 hours of work experience; all Consumer Homemaking teachers must have 2,000 hours work experience and their 2,000 hours of home experience.

The following courses are also required for professional teacher education certification: PSY 347, PSY 348, EDF 366, EDF 367, EDF 368 and EDRD 420.

* A minimum of nine hours in the foods areas are to be selected from the following courses: HEC 241, 242, 249, 349, 449.

** These courses are to be taken concurrently.

Home Economics Minors

Administered by the Department of Home Economics

A student who wishes to minor in Home Economics may register with the department for Adviser assignment.

General Home Economics Minor (Non-teaching)

A minimum of 27 credit hours must be selected from the following courses:

HEC 111	Management for Effective Living	3
HEC 171	Design in Living	3
HEC 181	Basic Textiles	5
HEC 190	Fundamentals of Clothing Construction	3
HEC 193	Creative Clothing Construction	4
HEC 221	Human Relationships	3
IA 259	Industrial Arts Activities for the Exceptional Child	3
	or	
IA 359	Construction Activities in the Elementary Classroom	3
HEC 250	Principles of Human Nutrition	3
CD 331	Development of the Infant and Toddler	3
CD 333	Development and Guidance of the Young Child	4
HEC 340	Contemporary Food Preparation	4
HEC 371	Design for Shelter	3
HEC 372	Design for Interiors	3
HEC 315	Consumer Education	3
HEC 456	Infant and Child Nutrition	3

Home Economics Minor in Business

Administered by the School of 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

Recommended course.

BUS 465	Seminar in Retailing	3
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Emphasis in Textiles and Clothing Administered by the Department of Home Economics

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 fashion merchandising 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. The student interested in Fashion Design may elect to follow a Minor in Fine Arts.

It is recommended that the student take the required courses as listed under Family Life and Consumer Education with the exception of:

HEC 212	Management Dynamics	3
HEC 242	Principles of Food Preparation	4
HEC 249	Food Module	1
CD 333	Development and Guidance of the Young Child	4
HEC 349	Food Module	1
HEC 445	Experimental Food Studies	4
HEC 449	Food Module	1

The following courses may be substituted for the above:

HEC 193	Creative Clothing Construction	4
HEC 382	Consumer Textiles	3
HEC 384	Seminar in Textiles and Clothing	3
HEC 392	Survival Sewing	3
HEC 395	Fashion Design - Flat Patterns Drafting	4
HEC 481	Advanced Textiles	3
HEC 494	Tailoring	4
HEC 497	Evolution of Fashion	3
HEC 499	Consumer and Fashion Market	3

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 the approval of the minor adviser to complete 27 hours.

Florence Program: Home Economics

The Department of Home Economics participates in a program in Comparative Arts at a residence center, "La Poggerina" near Florence, Italy.

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 or her 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

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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, 228, 240, 242, 280, 281, 300, 320, 321, 322, 323, 324, 325, 326, 327, 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, 215, 216, 217, 220, 221, 225, 226, 310, 311, 325, 360, 402, 403, 405, 406, 407, 408, 410, 411, 414, 415, 416, 430, 441, 450.

FINE ARTS 110, 111, 112, 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 211, 212, 213, 214, 215, 210, 222, 226, 251, 290, 301, 377, 378, 411.

MUSIC 140, 141, 142, 143, 240*, 241*, 242*, 285, 340, 341, 345, 346, 347, 449, 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, 210, 220, 230, 270, 305*, 312*, 315*, 325, 330, 355, 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*, 350*, 351*.

**Prerequisite SOC 100.*

THEATRE 130, 430, 431, 432.

Humanities: UNC Program in Florence

For Humanities courses taught in Florence, see page 223.

A student may develop an individualized humanities minor in Italian Medieval, Renaissance, or modern studies using selected courses listed for the Humanities minor and studies taken at the Comparative Arts Center near Florence, Italy. See the Director of Humanities, English Department.

Individualized Education Program

This highly individualized experimental program, initiated winter quarter 1975, is open to freshmen, sophomores, and first quarter juniors. A small number of faculty members have been designated as tutors, each of whom will be assigned from ten to fifteen students. Each participating student will select a tutor upon entry into the program, and, thereafter, the student's entire educational experience will be determined by agreement between the tutor and the 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 or her 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 evaluation record of the student's work and attainments.

Students interested in the program should consult one of the tutors: Professors John Brand (English), Richard Dietz (Earth Sciences), or James Wanner (Anthropology).

Industrial Arts Major (Non-Teaching)

Administered by the Department of Industrial Arts and Technology

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 elsewhere 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 62 academic quarter hours as follows:

Course No.	Course Title	Hours	Credit
IA 100	Introduction to Industrial Arts	1	1
IA 118	General Plastics (Synthetic Materials)	3	3
IA 141	Graphic Arts Fundamentals	3	3
IA 150	Wood Processing	3	3
IA 161	Principles of Drafting	3	3
IA 170	General Metals	3	3
IA 180	General Electricity	3	3
IA 190	Introduction to Power	3	3
IA 219	Plastics	3	3
IA 223	Industrial Mathematics	2	2
IA 241	Graphic Arts	3	3
IA 250	Machine Woodworking	3	3
IA 261	Pictorial and Working Drawings	3	3
IA 272	Gas and Electric Welding	3	3
IA 274	Machine Tool Operation	2	2
IA 281	Electro-Mechanical Equipment and Measuring Instruments	3	3
IA 291	Internal Combustion and Reciprocating Engines	3	3
IA 357	Construction Technology	3	3
IA 433	Industrial Materials	3	3
	Business or Economic Electives	9	9
		<u>62</u>	<u>62</u>

6. Eighteen academic quarter hours electives in industrial arts.

Industrial Arts Major (Teacher Preparation)

Administered by the Department of Industrial Arts and Technology

Students majoring in Industrial Arts who plan to teach in the public schools should meet the following requirements:

1. Complete the General Education requirements as specified elsewhere in this catalog. It is recommended that the following courses be completed as part of the General Education requirements: Math 123 and 124; Chemistry 104 and 105; Physics 260 and 261.

2. Complete the Professional Teacher Education core as specified elsewhere in this catalog.

3. Complete the required courses in the major:

IA 100	Introduction to Industrial Arts	1	1
IA 118	General Plastics (Synthetic Materials)	3	3
IA 141	Graphic Arts Fundamentals	3	3
IA 150	Wood Processing	3	3
IA 161	Principles of Drafting	3	3

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IA 170	General Metals3
IA 180	General Electricity3
IA 190	Introduction to Power3
IA 219	Plastics .....	.3
IA 223	Industrial Mathematics .....	.2
IA 241	Graphic Arts .....	.3
IA 250	Machine Woodworking .....	.3
IA 261	Pictorial and Working Drawings .....	.3
IA 272	Gas and Electric Welding .....	.3
IA 274	Machine Tool Operation .....	.2
IA 281	Electro-Mechanical Equipment and Measuring Instruments .....	.3
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 Education .....	.3
IA 336	Principles of General Shop Organization3
IA 357	Construction Technology3

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4. Elect 9 additional hours from the following areas of industrial arts: wood, metal, crafts, drafting, power, graphic arts and electricity-electronics (Total IA Major is 71 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 (Teacher Preparation)

Required courses in the minor:

IA 161	Principles of Drafting .....	.3
IA 261	Pictorial and Working Drawings .....	.3
IA 320	Course Organization in Industrial Arts .....	.3
IA 336	Principles of General Shop Organization .....	.3

Elect 18 quarter hours in industrial arts to meet the minor requirements of 30 hours.

Industrial Arts Minor (Non-Teaching)

This minor requires the election, with the approval of the minor adviser, of 30 quarter hours in industrial arts.

Interdisciplinary Studies Program

Under this recently inaugurated program any undergraduate in the University 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 the 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 requirements of the general education program -- that is, completing nine hours of Foundations of General Education and completing two courses in Arts and Applied Language Studies, two courses in Professional and Applied Studies, two courses in Social and Behavioral Sciences, two courses in Humanities and Integrative Studies, two courses in Sciences, and two courses in Human Interaction -- 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 for 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, the interdisciplinary program must include a culminating research project or senior thesis (IS 422, 3 - 4 hours); 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 and must have a recommendation for certification from a department offering a teacher education program.) Students desiring to enter the program should do so not later than the second quarter in 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 writing courses, demonstrate competence in grammar, spelling, and word usage by successful performance on the Journalism Department's proficiency test.
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 or her last quarter on campus, must pass a typing proficiency test and a grammar-copy editing proficiency test.
6. It is recommended that after finishing the junior year, each major take the one-quarter internship (JOUR 401) for 15 hours credit.
7. Majors must take these core courses:

Journalism Core

Course No.	Course Title	Hours Credit
JOUR 100	Introduction to Journalism	2
JOUR 110	Newswriting	4
JOUR 115	Advanced Newswriting	4
JOUR 301	Journalism Internship	6
	(or 2 hours JOUR 301 plus JOUR 401)	
JOUR 399	Press and Current Affairs	3
JOUR 492	Ethics and Libel	3

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8. In addition to the core courses, majors are to take courses in one of these areas of specialization:

News-Editorial Specialization

JOUR 210	Feature Writing for News Media	3
JOUR 250	News Editing	3
JOUR 255	Publications Layout	3
JOUR 310	Analytical Reporting	4
JOUR 397	Master Journalists and Their Times	3
JOUR 496	Opinion Formation	3
	Electives in journalism or related courses approved by adviser	9
		28

Teacher Education Specialization

JOUR 250	News Editing	3
JOUR 284	Techniques of Advertising	3
JOUR 330	Teaching Secondary School Journalism	3
JOUR 397	Master Journalists and Their Times	3
JOUR 430	Scholastic Publications	3
JOUR 435	Teaching by Newspaper and Broadcast	2
IA 345	Publication Production	5
	Electives in journalism or related courses approved by adviser	9
		31

*Course taught by Journalism Department, but credit applied in Professional Teacher Education

Check with department regarding current state certification regulations.

Management Relations Specialization

JOUR 255	Publications Layout	3
JOUR 284	Techniques of Advertising	3
JOUR 360	Community Newspaper	3
JOUR 380	Fundamentals of Public Relations	3
JOUR 384	Direct Mail Advertising	1
JOUR 385	Media Planning	1
JOUR 386	Advertising Regulation	1
JOUR 460	Newspaper Management	3
IA 345	Publication Production	5
	Electives in journalism or related courses approved by adviser	5
		28

9. Select one minor from among business, business education, English, communication, history, economics, political science, sociology, psychology, or environmental studies; or select one cognate below; to total 27 quarter hours; or select 27 quarter hours from an academic area with the approval of the journalism adviser before the beginning of the junior year.

Emphasis areas, which can be taken in place of a minor are:

Broadcast News Cognate

JOUR 340	Broadcast Newswriting	3
COMM 110	Communication: Public Forum	3
COMM 340	Radio Production	4
COMM 342	Television Production	4
JOUR 301	Journalism Internship-Radio	2
	Electives in journalism and/or communication, with JOUR 401 Intern, recommended if it is not taken for the journalism major	11
		27

Social Science Cognate

HIST 172	United States History	4
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 industrial history, contemporary history, economic history and problems, government or foreign policy	10
		27

Business Cognate

BUS 100	The American Business System	3
BUS 101	Consumer Business Problems	3
BUS 150	Principles of Management	4
BUS 260	Marketing	4
BUS 261	Personal Selling	3
BUS 362	Advertising	3
	Electives in marketing and/or management	7
		<u>27</u>

The Arts Cognate

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	11
		<u>27</u>

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 44 quarter hours in professional teacher education.
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 110	Newswriting	4
JOUR 115	Advanced Newswriting	4
JOUR 284	Techniques of Advertising	3
*JOUR 330	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	6
		<u>27</u>

* Taken only if going into teacher education.

HONORS. The Department of Journalism participates in the Honors Program. See Honors Program section of catalog.

Junior High/Secondary School Science Major Administered by the Department of Science Education

Students majoring in Junior High/Secondary School Science who plan to teach in the public schools are required to include the following courses in the programs:

1. All General Education requirements as specified earlier in this catalog.
2. Professional Teacher Education, 39 hours, and SCED 441 or SCED 442, three hours credit concurrently with EDLS 363, Clinical Experience, 2 hours credit.
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	

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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
		<u>56</u>

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	3
BIO 336	Evolution	3
BIO 360	Biology of Microorganisms	3
BIO 402	Conservation of Natural Resources	4
CHEM 130	Introductory Organic Chemistry	5
GEOL 201	Principles of Geology I	5
MET 200	General Meteorology	4
MET 320	Climatology	3
MET 330	Physical Meteorology	3
OCN 200	General Oceanography	3
OCN 301	Principles of Oceanography I	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.

Hours Credit

2. Courses in the major core (below) 42
3. Courses in the liberal arts specialization (below) 18

60

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

Mathematics Major (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 program (no minor is required in this program):

1. All General Education requirements as specified earlier in this catalog.
2. Professional Teacher Education, 44 hours, including EDLS 363, two hours credit, and MED 341, three hours credit, to be taken simultaneously.
3. Courses in the major core (below) 42
4. Courses in the teaching specialization (below) 35

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A. Major Core:

Course No.	Course Title	Hours	Credit
MATH 130	Analytic Geometry	4	4
MATH 131	Calculus I	5	5
MATH 132	Calculus II	5	5
MATH 133	Calculus III	4	4
MATH 250	Elementary Probability Theory	4	4
MATH 251	Elementary Statistics Theory	4	4
MATH 321	Elementary Linear Algebra	4	4
MATH 322	Introduction to Abstract Algebra	4	4
MATH 335	Differential Equations I	4	4
MATH 380	Computer Programming	4	4
			<u>42</u>

B. Liberal Arts Specialization:

MATH 409	Foundations of Mathematics	3	3
MATH 432	Basic Analysis I	4	4
MATH 433	Basic Analysis II	4	4
MATH 434	Basic Analysis III	4	4
	Electives to be selected from MATH 250 or higher, excluding MATH 280, 330, 331, 332, 395, and 402	3	3
			<u>18</u>

C. Teaching Specialization:

MATH 327	Elementary Functions from an Advanced Viewpoint	4	4
MATH 341	Introduction to Modern Geometry I	3	3
MATH 342	Introduction to Modern Geometry II	3	3
MATH 381	Problem Solving with Calculating Devices	2	2
MATH 464	Introduction to the History of Mathematics	3	3
MATH 491	Theory of Equations	4	4
	Courses in a mathematics education component to be selected with the approval of the faculty adviser	16	16
			<u>35</u>

Students majoring in Mathematics who plan to teach in the elementary school should meet the following requirements:

1. Complete all General Education requirements as specified earlier in this catalog.
2. Professional Teacher Education as stated in this catalog.
3. Meet requirements of the Elementary Education major as specified in this catalog.
4. Courses in the major:

*MATH 124	College Algebra	5	5
*MATH 125	Plane Trigonometry	5	5
MATH 130	Analytic Geometry	4	4
MATH 131	Calculus I	5	5
MATH 151	Introduction to Statistical Analysis	4	4
MATH 280	Beginning Computer Programming in BASIC	3	3
MATH 321	Elementary Linear Algebra	4	4
MATH 341	Introduction to Modern Geometry I	3	3
MATH 401	Foundations of Arithmetic	3	3
MATH 464	Introduction to the History of Mathematics	3	3
	Electives to be selected from mathematics or mathematics education courses numbered 200 or higher, excluding MATH 330, 331 and 332	9	9
			<u>48</u>

* Qualified students may be exempted.

5. Complete the additional requirements as stated on page 68 in this catalog for certification as an elementary school teacher.

Mathematics Minors

Following are the requirements for the Liberal Arts minor:

MATH 130	Analytic Geometry	4	4
MATH 131	Calculus I	5	5
MATH 132	Calculus II	5	5
MATH 133	Calculus III	4	4

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Electives: One of MATH 124, 125, 127, if taken before MATH 130 and additional electives in mathematics courses numbered 250 or higher. MATH 280, 330, 331, 332, 395 and 402 may not be counted

	Following are the requirements for the minor for persons planning to teach:	
MATH 130	Analytic Geometry	4
MATH 131	Calculus I	5
MATH 132	Calculus II	5
MATH 321	Elementary Linear Algebra	4
MATH 322	Introduction to Abstract Algebra	4
MATH 341	Introduction to Modern Geometry I	3
MED 341	Methods of Teaching Mathematics	3
EDLS 363	Clinical Experience	2
	* Electives in mathematics or mathematics education courses numbered 124 or higher, excluding MATH 330, 331 and 332	5
		35

** It is recommended that a course be selected from among MATH 250, 305, 323, 342, 380*

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
		27

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 135 quarter hours will be earned on the campus of the University of Northern Colorado during the first three years and 45 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 (45 hours -- Foundations of General Education and all category requirements) as specified earlier in this catalog. Two required science courses will be accepted as meeting the category requirements in science.

2. Courses in the major:

Course No.	Course Title	Hours	Credit
MTEC 410	Clinical Chemistry	5	
MTEC 411	Chemistry Laboratory I	3	
MTEC 412	Chemistry Laboratory II	2	
MTEC 413	Special Chemistry Laboratory	2	
MTEC 430	Immunohematology	2	
MTEC 431	Immunohematology Laboratory	4	
MTEC 440	Medical Microbiology	4	
MTEC 441	Medical Microbiology Laboratory I	3	
MTEC 442	Medical Microbiology Laboratory II	3	
MTEC 460	Urinalysis and Clinical Microscopy	2	
MTEC 461	Urinalysis and Coagulation Laboratory	2	
MTEC 470	Medical Parasitology	1	
MTEC 480	Serology	2	
MTEC 481	Serology Laboratory	1	
MTEC 490	Hematology	3	

MTEC 491	Hematology Laboratory I	3
MTEC 492	Hematology Laboratory II	3

3. The Medical Technology Chemistry minor of 27 or more hours.

4. Forty-seven quarter hours are required by the American Society of Clinical Pathologists and/or the staff of Weld County General Hospital in the following: Biology -- BIO 101, ZOO 105, ZOO 121, ZOO 250, BIO 261, BIO 361; Chemistry -- CHEM 314, 482, 483; Physics -- PHYS 261, 262.

5. Five hours of college mathematics.

6. 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. (Students majoring in Mexican American Studies should take ANT 100, SOC 100, HIST 175, PSCI 100, and GEOG 100).

2. The following required courses in the major:

Course No.	Course Title	Hours	Credit
MAS 101	Introduction to Mexican American Studies	4	
RSM 203	Introductory Statistical Methodology	3	
	or		
MATH 251	Elementary Statistics Theory	4	

At least one course selected from each of the following areas:

I. Behavioral/Cultural -- Selected from MAS 302, 304, 307

II. Historical/Descriptive -- Selected from MAS 270, 280, 306

III. Literary/Humanities -- Selected from MAS 260, 412, 414

IV. Designated Electives -- ANT 384, HIST 299, PHIL 340, PSY 271, PSCI 340, PSY 375, SOC 460

V. Senior Project or Thesis

VI. Electives in MAS (consult your adviser) to total

3. Students who major in Mexican American Studies will meet the language major requirements in the following manner:

a. Students who have a prior understanding of Spanish (2 years of College Spanish or the equivalent) are required to take the following courses MAS 290, 300, and select one of the following MAS 308, 310, 414 or

b. Complete a minor in Spanish and meet the course requirements listed in (a) above.

4. Students interested in being certified for teaching Mexican American Studies must take a Social Science major rather than one in Mexican American Studies.

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

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	11

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.

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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 405	Handicapped Students in Regular Classrooms	3	
EDSE 407	Working with Handicapped Students in the Secondary School	2	
EDRD 310	Improvement of Instruction in Reading in the Elementary School	3	
	or		
EDRD 420	Reading in Secondary Schools	3	
PSY 347	Developmental Psychology for Teachers	3	
PSY 348	Learning Processes in Education	3	
EDF 366	Foundations of Education	3	
EDF 367	Philosophy of Education	3	
EDF 368	Seminar in Foundations of Education	1	
EDRD 520	Reading in the Content Field	3	
EDFE 270	School Aide	2(or more)	
EDLS 362	Clinical Experience	2	
EDFE 444	Supervised Teaching (Middle School)	18	
	Method course to be taken in content field	3	
	Psychology elective with approval of adviser	3	

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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 requirements of the university. Formal application for admission to the School of Music must be made through the office of the Director 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 Degree (non-certified)

- Music Major
- Music Minor

Bachelor of Music Degree (non-certified)

Emphasis in instrumental voice or piano performance, or theory and composition.

A program combining the Bachelor of Music Education Degree and the Bachelor of Music Degree in the performance or theory and composition areas is available.

Bachelor of Music Education Degree (leading to a state teaching certificate)

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:

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
MUS 201,	202, 203 Advanced Sight Singing & Theory I, II, III .....		.9
MUS 243,	244, 245 History of Music I, II, III .....		.9
MUS 301	Counterpoint .....		.3
MUS 302	Homophonic Forms .....		.3
	Electives in Music .....		.9
			<u>51</u>

* May be used as part of the 60 hours of required General Education

3. One academic minor 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, III	12
*MUS 141,	142, 143 Music Literature & Styles I, II, III .....	.6
	Electives	<u>15</u>
		33

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).

Students who wish to use Voice as credit toward their Minor requirements must audition and have permission of the Voice Department to do so.

* 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 45 hours (Foundations of General Education and all category requirements) as specified earlier in this catalog for non-teaching degree programs.

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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 27 - 30 hours study in a Foreign Language. Specifics to be determined by consultation with the student's major adviser.

Instrumental Emphasis (Performance)

MUS 101,	102, 103 Sight Singing & Theory I, II, III	12
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
	and/or	
*MUS 260,	261, 262 Intermediate Class Piano I, II, III	3
	or	
*MUS 271,	471 Individual Performance in Piano	6-12
MUS 201,	202, 203 Advanced Sight Singing & Theory I, II, III	9
MUS 243,	244, 245 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 427	Orchestral Excerpts Class (Strings)	3
**MUS 428	Orchestral Excerpts Class (Brass)	3
**MUS 429	Orchestral Excerpts Class (WW)	3
MUS 423	Practicum in Band Conducting and Performance	
	or	
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 string or brass or woodwind 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
	and/or	
*MUS 260,	261, 262 Intermediate Class Piano I, II, III	3
	or	
*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 243,	244, 245 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
	or	
MUS 424	Practicum in Choral Conducting and Performance	3
MUS 402	Polyphonic Forms	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 271,	471 Individual Performance in Piano	48
MUS 201,	202, 203 Advanced Sight Singing & Theory I, II, III	9
MUS 243,	244, 245 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, 418, 419, 420 Piano Literature I, II, III, IV, V, VI	12
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
	or	
*MUS 260,	261, 262 Intermediate Class Piano I, II, III	3
	or	
*MUS 271,	471 Individual Performance in Piano	18
MUS 163,	164, 165 Beginning String Instruction I, II, III	3
MUS 201,	202, 203 Advanced Sight Singing & Theory I, II, III	9
MUS 243,	244, 245 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	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 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.

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*** 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. Meet requirements for Admission to the Professional Teacher Education Program.

3. Professional Teacher Education, 44 hours as specified in the Professional Teacher Education section of this catalog or the music equivalents.

4. All PTE required courses, choral or instrumental conducting courses and required techniques classes must be completed prior to student teaching.

5. The required courses listed for the Instrumental Emphasis or the Vocal, Piano and General Emphasis.

6. 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).

7. Meet all music performance, recital attendance and music education requirements as stated in the respective departmental Applied Music and Performance and Music Education Handbooks.

8. Electives to meet requirements for graduation.

9. Marching Band is required during Fall Quarter of all wind and percussion students on campus in the instrumental music education program.

10. MUS 414 (3 hours credit) plus 3 hours in special education courses to satisfy the special education requirements for teaching certification are required.

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 and 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 243,	244, 245 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 312	Teaching Elementary Instrumental Music (PTE)	.2
MUS 313	Teaching Secondary Instrumental Music (PTE)	.2
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 Horn Class	1
MUS 365	Low Brass Class	1
MUS 366	Percussion Class	1
MUS 412	Instrument Repair and Care	1
MUS 414	Music for Children with Learning Disabilities	3
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 314	Guitar in the Classroom	1
MUS 316	Teaching Music Listening	3
MUS 317	Children's Song Literature	3
MUS 318	Music in Early Childhood	3
MUS 325	Choral Conducting and Literature for the High School	1
MUS 340	Survey of History and Literature of Jazz	3
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 444	Marching Band Techniques	2
MUS 449	History of Musical Instruments	1
MUS 450	Dalcroze-Eurhythmic in the General Music Classroom	1
MUS 451	Kodaly -- His Impact on American Music Education	1
MUS 452	Orff Schulwerk in American Schools	1
MUS 453	Creativity in Music Education	1
MUS 454	Non-Performance Music Courses in the Senior High School	1
MUS 456	Tests and Measurement in Music	1
MUS 457	Public Relations in School Music	1
MUS 458	Public School Music Management	1

* May be used as part of the 60 hours of required General Education.

** Six quarters of piano study are required. The level of study will be determined by audition and the availability of staff.

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
	and/or	
MUS 260,	261, 262 Intermediate Class Piano I, II, III	3
	or	
MUS 271,	471 Individual Performance in Piano (For Voice Majors)	12
	or	
**MUS 269,	469 Individual Performance in Voice (For Piano Majors)	12
MUS 201,	202, 203 Advanced Sight Singing & Theory I, II, III	9
MUS 210	Introduction to Music Education	2
MUS 243,	244, 245 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 312	Teaching Elementary Instrumental Music (PTE)	2
MUS 323,	324 Choral Techniques and Conducting I, II	2
MUS 325	Choral Conducting and Literature for the High School	1
†MUS 367	Brass and Percussion Class	1
†MUS 368	String Class	1
†MUS 359	Woodwind Class	1
MUS 414	Music for Children with Learning Disabilities	3
	Applied Music	22
	Major Musical Organization	11
	Music Electives (to be selected from courses below)	16

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Music Electives

††MUS 285,	485 Opera Workshop	1-3
MUS 206	Music Methods and Materials for Elementary Teachers	2
MUS 313	Teaching Secondary Instrumental Music (PTE)	2
MUS 314	Guitar in the Classroom	2
MUS 316	Teaching Music Listening	3
MUS 317	Children's Song Literature	3
MUS 318	Music in Early Childhood	3
MUS 340	Survey of History and Literature of Jazz	3
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 410	Introduction to Vocal Pedagogy	2
†MUS 415,	416, 417, 418, 419, 420 Piano Literature I, II, III, IV, V, VI	12
‡MUS 445	Vocal Repertoire: German Art Song	2
‡MUS 446	Vocal Repertoire: French Art Song	2
‡MUS 447	Vocal Repertoire: Italian Song	2
MUS 450	Dalcroze-Eurhythmics in the General Music Classroom	1
MUS 451	Kodaly – His Impact on American Music Education	1
MUS 452	Orff Schulwerk in American Schools	1
MUS 453	Creativity in Music Education	1
MUS 454	Non-Performance Music Courses in the Senior High School	1
MUS 456	Tests and Measurement in Music	1
MUS 457	Public Relations in School Music	1
MUS 458	Public School Music Management	1
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.

** Upon completion take a proficiency examination with the Voice Department.

† Individual Performance may be substituted.

†† Maximum of ten hours applicable toward the sixteen required hours of electives.

‡ At least three courses of Piano Literature are required. Open to all students at the Sophomore level or above.

‡‡ Requires upper level proficiency in voice as a pre-requisite.

Admission to the Professional Teacher Education Program

In addition to meeting the general requirements for formal admission to the Professional Teacher Education Program, 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 or she will demonstrate his or her ability to play, at sight, piano accompaniments suitable for community and classroom singing.
3. Demonstrate to a jury of the music faculty his or her ability to read music vocally at sight.
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 music education 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. See page 31 specifying qualification for second baccalaureate degree.

Requirements:

1. Complete the requirements for the B.M. E. degrees 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	
	or	
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, Productions	0
MUS 285,	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 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	3
MUS 361	Flute & Saxophone Class	1
MUS 362	Clarinet Class	1
MUS 363	Double Reed Class	1
MUS 364	Trumpet & 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

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MUS 402	Polyphonic Forms3
MUS 403	Acoustics of Music3
MUS 405	16th Century Counterpoint3
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, textbooks 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 or her ability to perform on his or her major instrument. Each student will be expected to appear frequently as a soloist in the weekly student recital series. During the senior year he or she 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 tutorship 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. 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 needs. **FOR FRESHMEN 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 or her instrument normally belongs -- band, orchestra, or choir.

Piano and organ majors may select either 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 -- Freshmen and Sophomores

400 series -- Juniors and Seniors

*224, 424. VOCAL JAZZ ENSEMBLE. **One hour credit.**

*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.**

*236, 436. DIXIELAND JAZZ BAND. **One hour credit.**

*237, 437. JAZZ OCTET. **One hour credit.**

*238, 438. OLD TIMES JAZZ BAND. **One hour credit.**

*239, 439. JAZZ NONETTE. **One hour credit.**

*240, 440. JAZZ SEPTET. **One hour credit.**

*241, 441. JAZZ QUARTET. **One hour credit.**

*242, 442. JAZZ QUINTET. **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 24.

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 Coordinator of the Music Theatre Degree Program.

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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
THEA 170,	171, 172 Stage Movement I, II, III	.....	3
THEA 261	Stage Make-up	.....	2
MUS 269,	469 Individual Performance in Voice for Those with Non-Voice Emphasis	.....	24
THEA 270,	271, 272 Rhythmic & Dramatic Movement I, II, III	.....	3
†MUS 271	Individual Performance in Piano	.....	12
MUS 285,	485 Opera Workshop	.....	12
THEA 360	Acting III (Acting in Musical Theatre)	.....	3
THEA 465,	466, 467 Musical Theatre Repertory, I, II, III	.....	6
††MUS 465,	466, 467 Individual Coaching in Musical Theatre Repertory I, II, III	.....	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
			110

* Total of twelve quarters and/or each quarter in residence.

** 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.

†† Prerequisite a minimum of six hours of MUS 269 and/or 469.

4. Electives sufficient to complete the requirements for the Bachelor of Arts degree.

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 requirements to enter graduate school. At the present, there is little graduate opportunity in musical theatre. See your adviser.

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 45 hours (Foundations of General Education and all category requirements) of General Education. ICU courses may be taken as electives.
2. Required Support Courses:

Course No.	Course Title	Hours	Credit
CHEM 106	General Chemistry	.....	5
CHEM 109	General Chemistry – Organic	.....	5
CHEM 281	Biochemistry	.....	5
ZOO 105	Vertebrate Zoology	.....	4
ZOO 121	Mammalian Anatomy	.....	4
ZOO 250	Physiology	.....	5
ZOO 351	Medical Pharmacology	.....	4
BIO 261	Microbiology	.....	4
HEC 251	Nutrition I	.....	3
HEC 357	Therapeutic Nutrition	.....	3

3. Nursing Courses:

Sophomore Year -- Clinical Level I

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	10

Junior Year -- Clinical Level II

NURS 300,	301, 302 Clinical Practicum in Nursing Process I, II, III	15
NURS 306	Interactional and Ethical/Legal Aspects of Nursing Practice	3
NURS 311	General Systems Theory Applied to Health Care	3
NURS 350	Psychopathological Concepts in Nursing	2
NURS 360	Pathophysiological Concepts of Nursing	4
NURS 330	Normal Developmental Stressors	3
NURS 335	Chronic Stressors	3
NURS 340	Acute Stressors	3

Senior Year -- Clinical Level III

NURS 400	Clinical Practicum in the Distributive Health Care Setting	5
NURS 401	Clinical Practicum in Team Management in the Episodic Setting	5
NURS 406	The Inquiry Process in Nursing	3
NURS 411	Leadership in Nursing	3
NURS 422	Individual Studies in Nursing	1-4
NURS 430	Nursing in the Distributive Health Care Setting	3
NURS 435	Team Management in the Episodic Health Care Setting	3
NURS 450	Special Emphasis in Selected Professional Nursing Role	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 School of Nursing are obtained from and made to the University of Northern Colorado Office of Admissions. Admissions to the 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.

Students enrolled in the pre-clinical program will receive academic advising from members of the School of Nursing faculty.

Level I (Clinical Program): The designation of nursing major does not necessarily assure an appointment in the School of Nursing at the sophomore year (Clinical Level I).

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 are obtained at the School of Nursing. The following factors may be considered by the Student Affairs Committee in the selection of students:

1. Cumulative grade point average

A. at the University of Northern Colorado

B. or at a previous institution in the case of a transfer student

2. Results of the health examination required for admission to the clinical nursing program (See Health Policies for nursing majors on page 114 of this catalog).

3. Scores on selected tests measuring such factors as: aptitude; cognitive; affective; and psychomotor skills; and achievement.

The number of students admitted to the clinical nursing program is determined by the available resources. Available resources may also limit possibilities for readmission to the program for those students who withdraw for any reason.

Registered Nurses Pursuing the Degree. Graduates of state approved diploma or associate degree programs in nursing are eligible to apply for admission

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to the baccalaureate program in nursing. The program to be pursued by R.N. students has been designed to be as flexible and responsive to individual student needs as possible within the constraints and resources of the School of Nursing.

The length of the program for the registered nurse student is dependent upon the amount of transfer credit and successful completion of advanced standing credit examination (CLEP, Departmental, NLN, and Level). The first nursing courses required for registered nurse students are not offered every quarter (NURS 325 and 303).

Admission procedure for R.N.'s: Individuals seeking admission must be admitted to the University of Northern Colorado following the procedure outlined in the University Bulletin.

Students should concurrently contact the School of Nursing for information regarding admission to the Nursing major.

Progression. Nursing majors must earn a minimum grade of "C" in all required nursing courses for progression in the nursing major. 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. Students receiving a grade less than "C" in a nursing course will be readmitted to that course on a space available basis only. Courses may not be offered each quarter.

Students who do not pre-register are not guaranteed a space in clinical courses.

Students in the clinical levels (I, II, III) who withdraw for any reason from the Nursing major should do so in writing to the Dean to formalize the withdrawal.

Students who have not enrolled for either required support courses or nursing courses over three successive quarters and have not made prior arrangements with the Dean will not be considered a nursing major. Readmission to the School of Nursing will require re-application (see admission).

Graduation. The degree of Bachelor of Science in nursing will be granted by the Board of Trustees 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.

Health Policies. 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.

Additional Expenses. In addition to the regular tuition and fees, nursing majors have the following expenses:

Year	Quarter	Item	Amount*
Sophomore	Fall	Uniforms and caps**	\$65.00 - 75.00
		Chest x-ray	\$20.00
		White shoes	\$20.00 - 30.00
		Name pin	\$ 1.50
		Watch with second hand	\$ 8.00 - 20.00
		Stethoscope	\$10.00 - 35.00
Senior	Spring	School pin	\$35.00
		Chest x-ray	\$20.00

* Costs listed above are approximate and are subject to change.

** Uniforms (required) are ordered the quarter before the clinical assignment.

Clinical Practice. Nursing students have a variety of clinical experiences -- hospitals, nursing homes, industry, schools, public health and in northeastern Colorado communities. Clinical practice is concurrent with nursing theory (classes) and is guided by nursing faculty as well as by the opportunity to interact with professionals in the agencies.

Student practicums in the agencies are assigned according to available resources. All assignments require transportation and may necessitate moving from the Greeley area. Students are responsible for their own transportation to all off-campus activities (classes or practicums).

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, Outdoor Leisure Education, and Outdoor Adventure 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, and in public school outdoor programs. Course offerings, which have significance for this broad area, are offered in many departments of the University. Students interested in Outdoor Education should pursue the following program under the advisement of the Coordinator of Outdoor Education.

Course No.	Course Title	Hours Credit
OED 250	Outdoor Education and Environmental Awareness	3
OED 350	Outdoor Leisure Education	4
OED 450	Programs in Outdoor Education	3
OED 308	Workshop in Outdoor Education	3
ENST 260	Ecological Interpretations	3
	or	
BIO 401	Conservation of Natural Resources	4
ENST 361	Art and the Environment	3
	or	
FA 335	Aesthetic Education	3
GEOG 350	Geography of Colorado	3
	or	
GEOG 353	Geography of the Great Plains	2
	or	
GEOG 490	Historical Geography of Colorado	3
JOUR 496	Opinion Formation	3
	or	
COMM 356	Communication Strategies	3
MUS 315	Music and Recreation	2

New courses are continually emerging in the academic departments that may be taken as substitute courses for some courses listed above. Students minoring in Outdoor Education should consult with the Coordinator of Outdoor Education for the most current course offerings.

Philosophy Major Administered by the Department of Philosophy

1. Meet all General Education requirements as specified earlier in this catalog.
2. Courses selected from the following areas:

	Number of Required Hours
I. General	0
Selected from PHIL 100, 270, 315 (PHIL 100 is not required of majors, but will count as 4 of the hours of electives. However, majors are strongly urged to take two of PHIL 150, 210, and 220 early in their academic programs.)	

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II.	Value Theory	4
	Selected from PHIL 150, 330, 350, 355	
III.	Logic	4
	Selected from PHIL 340, 345	
IV.	History of Philosophy	8
	Selected from PHIL 210, 220, 230, 305, 312, 405	
V.	Area Studies	4
	Selected from PHIL 360, 265, 370, 375, 380	
VI.	Systematics	4
	Selected from PHIL 430, 440, 480	
VII.	Electives (to be chosen in consultation with adviser)	28
		52

3. Majors intending to enter graduate programs in Philosophy are urged to take PHIL 499 in addition to the 52 hour program.

4. In addition, a minor of at least 27 hours, chosen in consultation with the adviser is required. If taken as a second major, no minor is required.

5. Students intent upon law school or wishing to enter graduate programs in Philosophy of Science should consult with their adviser for preferred minors or second majors.

6. Electives sufficient to complete the requirements for graduation.

Philosophy Minor

Administered by the Department of Philosophy

The Department of Philosophy wishes to allow maximum student participation in the selection of his or 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	4
	COMM 120, PHIL 340	
II.	History of Philosophy	8
	PHIL 210, 220, 230, 305, 312	
III.	Value Theory	4
	PHIL 150, 330, 355	
IV.	Systematics	4
	PHIL 315, 360, 370, 415, 430, 440	
V.	Electives	4
		28

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. Competency must be demonstrated while the student is enrolled at the University of Northern Colorado. A student may receive credit for the courses listed below, if he or she has taken comparable courses at other colleges, but the transfer of courses **does not**

include the transfer of competency. A transfer student who wishes to take a competency examination for a particular activity for which he or she received transfer credit must contact one of the instructors who teach in this area and arrange to take the competency examination the next time it is being given.

A. Team Sports:

HPER 268	Analysis and Movements of Flag Football	1
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	2
HPER 278	Analysis and Movements of Softball	2
HPER 292	Analysis and Movements of Baseball	2

NOTE: Competency can be obtained in: (1) Flag Football or Football. (2) Softball or Baseball.

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 192	Advanced Life Saving and Aquatic Instruction	4
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

NOTE: Competency is available **only** in HPER 192, 290, and 294.

* *Competency to include: (1) Demonstrable Skill, (2) Analysis of skill, and (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 Movements 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 competed 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.)

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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	Volleyball
Tennis	Gymnastics
Basketball	Wrestling
Track and Field	Swimming
Football	

4. The following courses are also required in the major:

HPER 202	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
	Methods Block (Recommended to take as 10-hour block.)	
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, 39 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 student 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 courses elected from the following courses. A student must obtain competency in at least 3 of these activities. (See page 117 for description of

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competency examinations.) Competency must be demonstrated while the student is enrolled at the University of Northern Colorado. A student may receive credit for the courses listed below, if he or she have taken comparable courses at other colleges, but the transfer of courses **does not** include the transfer of competency. A transfer student who wishes to take a competency examination for a particular activity for which he or she received transfer credit must contact one of the instructors who teaches in this area and arrange to take the competency examination the next time it is being given.

HPER 268	Analysis and Movements of Flag Football	1
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	2
HPER 277	Analysis and Movements of Track	2
HPER 278	Analysis and Movements of 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
HPER 292	Analysis and Movements of Baseball	2

NOTE: Competency can be obtained in: 1) Flag Football or Football, 2) Softball or Baseball.

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
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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. Competency must be demonstrated while the student is enrolled at the University of Northern Colorado.

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A student may receive credit from the courses listed below, if he or she has taken comparable courses at other colleges, but the transfer of courses **does not** include the transfer of competency. A transfer student who wishes to take a competency examination for a particular activity for which he or she received transfer credit must contact one of the instructors who teaches in this area and arrange to take the competency examination the next time it is being given.

A. Team Sports:

HPER 268	Analysis and Movements of Flag Football	1
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	2
HPER 278	Analysis and Movements of Softball	2
HPER 292	Analysis and Movements of Baseball	2

NOTE: Competency can be obtained in: 1) Flag Football or Football, 2) Softball or Baseball.

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 192	Advanced Life Saving and Aquatic Instruction	4
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

NOTE: Competency is available **only** in HPER 192, 290, and 294.

* Competency to include: (1) Demonstrable skill, (2) Analysis of skill, and (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	Sociological 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)

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. Competency must be demonstrated while the student is enrolled at the University of Northern Colorado. A student may receive credit from the courses listed below, if he or she has taken comparable courses at other colleges, but the transfer of courses **does not** include the transfer of competency. A transfer student who wishes to take a competency examination for a particular activity for which he or she received transfer credit must contact one of the instructors who teaches in this area and arrange to take the competency examination the next time it is being given.

A. Team Sports:

HPER 268	Analysis and Movements of Flag Football	1
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	2
HPER 278	Analysis and Movements of Softball	2
HPER 292	Analysis and Movements of Baseball	2

NOTE: Competency can be obtained in: 1) Flag Football or Football, 2) Softball or Baseball.

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 192	Advanced Life Saving and Aquatic Instruction	4
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

NOTE: Competency is available **only** in HPER 192, 290, and 294.

* *Competency to include: (1) Demonstrable skill, (2) Analysis of skill, and (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.

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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, 39 hours, plus EDLS 363, 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 or her adviser and each such program.

Physics Major Administered by the Department of Physics

Students pursuing the B.A. with 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:

Course No.	Course Title	Hours Credit
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, 39 hours, plus EDLS 363, 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
	or	
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	
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
		30

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, SOC 100.)

2. The following required courses in the major:

Course No.	Course Title	Hours	Credit
PSCI 100	National Government of the United States	5	
PSCI 105	Introduction to Political Science	3	

Electives in political science to include at least one course from each of the following groups: A, B, C, D, & E to equal 40 hours credit.

Group A -- United States Government

PSCI 104	Contemporary Political Issues	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 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 400	Political Parties	3
PSCI 401	Minority Politics	3
PSCI 402	Urban Politics	4
PSCI 403	Problems in United States Government	3
*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

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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 435	Problems in Political Philosophy	3
	American Politics: History and Theory	3
	(See ID 438, Page 271)	

Group D -- Comparative Government

PSCI 210	European Political Systems	4
PSCI 310	East European Government and Politics	4
PSCI 350	Comparative Public Policy	3
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 -- Research Methodology

†PSCI 150	Introduction to Research in Political Science	3
†PSCI 550	Research and Inquiry in Political Science	3
		48

* 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.

† Appropriate courses in other departments may be substituted with the approval of one's adviser, to fill the Group E requirement but would not count toward the 48 hours required in the major.

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 and only 6 credit hours can apply toward the Political Science 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 100	National Government of the United States	5
PSCI 105	Introduction to Political Science	3
	Electives in Political Science selected with the approval of the Department of Political Science	19
		27

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 Teacher Education Program.

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
COMM 130	Voice and Speech Improvement	3
EDSE 160	Introduction to Speech/Language Disorders	3
PSY 255	Psychology of Emotional Adjustment	3
		<u>11</u>

Sophomore Year

HEC 221	Human Relationships	3
HEC 250	Principles of Human Nutrition	3
HEC 340	Contemporary Food Preparation	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 Young 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	Rhythmic Education in the Elementary School	2
	or	
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 Young 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 250	Principles of Human Nutrition	3
	Electives	3
		<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

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EDEC 460	Nursery-Kindergarten Education	3
HEC 221	Human Relationships	3

Psychology Majors

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. The following required courses in the major (60 hours):

Course No.	Course Title	Hours Credit
PSY 101	Introductory Seminar in Psychology	1
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 5-15

One course from the following:

PSY 161, 265, 365, 369, 458, 466	3
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One course from the following:

PSY 240, 241, 442, 443, 445	3
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One course from the following:

PSY 343, 480, 481, 482	3-5
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One course from the following:

PSY 230, 431, 432, 433	3-5
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One course from the following:

PSY 250, 251, 341, 345	3
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One course from the following:

BLS 101, 240, 340, 350, 380, 495, MAS 101, 304, 306	3
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Approved electives as needed (Maximum 6 hours of Non-PSY courses)

Minimum 60

NOTE: The Psychology major does not lead to teacher certification.

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, 241, 265, 343, 443, 480, 481	3
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One course from the following:

PSY 250, 251, 341, 345	3
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Approved Electives Maximum 3 hours of Non-PSY courses

Minimum 27

Psychology Minor (PTE)

Required courses for the undergraduate minor in psychology are:

PSY 120	General Psychology	3
PSY 240	Human Learning and Cognition	3
PSY 230	Human Growth and Development	
	or	
PSY 431	Infancy and Childhood	
	or	
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:

Course No.	Course Title	Hours	Credit
HPER 203	Introduction to Recreation	3	
HPER 252	Social Recreation	2	
HPER 253	Camp Counseling	3	
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 444	Recreation and the Voluntary Agencies	3	
HPER 451	Administration of Community Parks and Recreation	5	
HPER 472	Recreation Leadership	4	
HPER 495	Senior Seminar	2	
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>

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. Before graduation, students must possess and present a current Standard First Aid Card to their advisers.

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

Emphasis in American Humanics

Recreation (Students with this major may select an Emphasis in American Humanics upon approval from their Recreation adviser.)

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	
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	3	
RUS 306	Survey of Russian Literature II	3	
RUS 307	Survey of Russian Literature III	3	
RUS 335	Russian Conversation	3	
RUS 336	Advanced Russian Composition	3	
			<u>30</u>

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In addition, students must demonstrate competency in certain areas of language activity. See department for competency list.

Russian-Soviet Studies

Dean A. Arnold, Coordinator

A major in Russian-Soviet Studies is available under the Interdisciplinary Studies Program.

Minor:

1. Twenty-seven hours of study selected from the following:

ECON 320	Russia's Soviet Economy	3
ENG 450	Studies in Russian Literature	4
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 476	History of the 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 336	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. Russian Language is not required but is strongly recommended and a maximum of 15 hours may be applied toward the minor.

3. Planning of the program by the student with the coordinator.

4. Hours in the minor will not apply toward the student's 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. SECD is not an external degree program. Admission will be by invitation and based upon the program that an applicant submits and has been approved by the SECD Advisory Board and the student's 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 Cole, 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:

	Hours Credit
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 350 or 310	32
(Six hours of Minority Studies may be included in the 32 hours advanced Social Science requirements.)	
*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 below:

	Hours Credit
A. Introductory courses in five social science fields (ANT 100, ECON 100, GEOG 100, PSCI 100, SOC 100)	25
B. ID 470, Theory and Research in the Social Sciences	4

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C. HIST 100, 101, 102 (U.S. History)	12
D. European and/or Third World History	12
E. Advanced courses in two or three social science fields (Anthropology, Black Studies, Economics, Geography, History, Mexican American Studies, Political Science, Sociology).	
For the areas listed below, the following courses must be taken	28
Anthropology	ANT 381 or 382 and 335 or 337
Economics	ECON 145 or 200
Geography	GEOG 120 or 121 and 122 or 123
Mexican American Studies	MAS 302 and 304
Political Science	PSCI 220 or 421
Sociology	SOC 310

3. Professional Teacher Education as specified below:

A. Professional Teacher Education (PTE)	39
B. EDLS 363, Clinical Experience	2
C. SSED 341, Methods of Teaching Social Science in the Secondary School ..	3
D. No Social Science major may apply for admission to Professional Teacher Education (PTE) until he or she 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.	
E. To be admitted to PTE, the student must have at least a 2.30 grade point average in those courses counting toward his or her major which were taken at the University of Northern Colorado and must have taken all the courses in 2A.	
F. Before taking EDLS 363 and SSED 341, the student must have completed EDF 366 and PSY 347.	
G. Before being permitted to apply for student teaching, a Social Science major must have completed successfully at least 40 hours in the major.	

4. No minor required.

HONORS. Social Science majors may participate in the Honors Program. See page 24.

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 or her assigned adviser.

2. Courses selected from each of the following areas:

I. Principles of Sociology	5
SOC 100	
II. Social Theory	12
SOC 350*, 351*, 352*, 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, 430, 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 Electives56

*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 or her assigned adviser.

2. Courses selected from each of the following areas:

	Hours Credit
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, 430, 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

** Courses numbered 500 and above -- seniors with 3.00 GPA and permission of instructor.

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 or her 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
SPAN 202	Intermediate Spanish II	4
SPAN 203	Intermediate Spanish III	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
SPAN 325	Advanced Spanish Composition	3
SPAN 335	Spanish Conversation	4
SPAN 345	Spanish Pronunciation	4
SPAN 400	Problems in Oral Spanish	3
	Six Spanish literature courses, 3 in Peninsular literature and 3 in Latin American literature, to be chosen from the departmental offerings	18

Students who desire teaching certification will also take 44 credit hours, including EDFE 378, Introduction to Teaching, (2 hours credit) and FL 341,

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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
	Six Spanish literature courses, 3 in Peninsular literature and 3 in Latin American literature, to be chosen from the departmental offerings	18
	*Electives in Spanish to be chosen with the consent of the adviser	14
		<hr/> 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. A minor of at least 27 quarter hours approved by the department.

5. In addition, students must demonstrate competency in certain areas of language activity. See department for competency list.

6. 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
SPAN 202	Intermediate Spanish II	4
SPAN 203	Intermediate Spanish III	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
SPAN 325	Advanced Spanish Composition	3
SPAN 335	Spanish Conversation	4
SPAN 345	Spanish Pronunciation	4
	Electives in Spanish to be chosen with the consent of the adviser	3
		<hr/> 30

B. For students wishing a Liberal Arts minor:

SPAN 310	Advanced Spanish Grammar	4
	Three Spanish literature courses chosen from the departmental offerings ..	9
	Electives in Spanish to be chosen with consent of the adviser	5
		<hr/> 30

In addition, students must demonstrate competency in certain areas of language activity. See department for competency list.

Special Education Majors

Administered by the School of Special Education and Rehabilitation

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/language 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/language pathology. 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 practice. 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/Language 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	5
EDF 485	Philosophy of Education	3	3
PSY 349	Educational Psychology	5	5
EDSE 309	Introduction to Special Education Student Teaching	2	2
EDFE 420	Special Education Student Teaching:Elementary	18	18
	or		
EDFE 430	Special Education Student Teaching: Secondary	18	18
			33

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: Educable Mentally Retarded 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 of 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: Educable Mentally Retarded, and Special Education: Trainable Mentally Retarded.

All students in either major are required to take:

EDSE 100	Education of Exceptional Children	3	3
EDSE 160	Introduction to Speech/Language Disorders	3	3

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EDSE 304	Introduction to Measurement of the Handicapped	3
EDSE 306	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	Introduction to Classroom Management	2
EDRD 310	Improvement of Instruction in Reading	3
FA 229	Art for the Exceptional Child	
	or	
IA 259	Industrial Arts Activities for the Exceptional Child	3
PSY 230	Human Growth and Development	5
EDFE 270	School and Community Aide	2
		<u>36</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 Foundations – Seminars	3
VTE 410	Cooperative Education and Coordination Techniques	3
VTE 430	Recommended electives in Vocational Teacher Education: 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

* Highly recommended.

Acoustically Handicapped Emphasis

The Bachelor of Arts is pre-professional and does not lead to certification in acoustically handicapped. The Master of Arts degree is the professional degree and enables the student to meet the academic and practicum requirements for the certification by the National Conference of Executives for the Deaf and the Colorado State Department of Education (Refer to graduate catalog for completion of certification program).

Due to the large number of students desiring admission into the Acoustically Handicapped Program, the Department of Communication Disorders is finding it necessary to restrict enrollment so the faculty can provide to the student the individual attention so necessary in this field.

Freshmen or transfer students should apply for admission to the Acoustically Handicapped by April 15. If accepted by the faculty entrance screening committee, students will be notified by May 15. Students should contact the Area Director of Acoustically Handicapped in Michener Library L-139 for specific information.

Students must complete the coursework necessary for certification in Pre-School, Elementary, or a specific area of Secondary Education, in addition to the courses for Acoustically Handicapped.

Core Requirements:

EDSE 100	Education of Exceptional Children .....	.3
EDSE 250	The Structure of Language .....	.3
EDSE 270	The Structure and Pathology of Auditory and Vestibular/Visual Systems ..	.3
EDSE 304	Introduction to Measurement of the Handicapped .....	.3
EDSE 309	Introduction to Special Education Student Teaching .....	.2
EDSE 350	Pathology and Introduction to the Hearing Impaired .....	.3
EDSE 356	Manual Communication Skills: S.E.E. ....	.3
EDSE 357	Introduction to Hearing Aids and Amplication Systems .....	.2
EDSE 358	Auditory Training and Speechreading .....	.4
EDSE 370	Introduction to Audiology .....	.3
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 Hearing Impaired .....	.4
EDSE 455	Methods of Teaching Reading to the Hearing Impaired .....	.3
EDSE 456	Manual Communication Skills: A.S.L.3
EDEM 410	Introduction to Educational Resources3

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All electives must be approved by student's adviser.

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	Listening Skills for Learning .....	.3
EDSE 442	Principles of Education of Partially Seeing .....	.3
EDSE 443	Teaching Daily Living for the Visually Handicapped .....	.2

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/Language 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) and endorsement standards for the speech/language specialist in the public schools.

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All students must apply for admission to the Speech/Language Pathology Program. Transfer students must apply prior to their arrival on campus. Typically, applications are submitted during Spring Quarter of the Sophomore year, by April 1. It is the student's responsibility to obtain the application and the Admission and Retention Policies from the Speech/Language Pathology Office, Bishop-Lehr 147.

Course requirements:

EDSE 100	Education of Exceptional Children	3
EDSE 160	Introduction to Speech/Language Disorders	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	Anatomy and Physiology of Speech and Hearing	5
EDSE 270	The Structure and Pathology of Auditory and Vestibular/Visual Systems	3
EDFE 270	School and Community Aide	Maximum 4
EDSE 274	Clinical Observation in Audiology	2
EDSE 356	Manual Communications Skills: SEE	3
EDSE 358	Auditory Training and Speech Reading	4
EDSE 360	Articulation Disorders I	3
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 366	Neurological Bases of Speech/Language Disorders	3
EDSE 369	Neurological Bases for Speech and Hearing	4
EDSE 370	Introduction to Audiology	3
EDSE 372	Advanced Audiology	5
EDSE 374	Advanced Observation in Audiology	2
EDSE 460	Public School Speech/Language Pathology	3
EDSE 464	Clinical Practicum in Speech/Language Pathology	Minimum 6
EDSE 467	Diagnosis in Speech/Language Pathology	3
EDSE 474	Practicum in Audiology	2

All eligible undergraduate speech/language pathology majors, whether full or part time, are required to register for EDSE 464 during each quarter.

Recommended electives are EDSE 250, 270, 304, 306, 310, 320, 326, 330, 331, 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, 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. No endorsement for employment as an audiologist is granted at the undergraduate level. 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 School Audiologist (for those who desire to complete those additional requirements for School Audiology). ALL STUDENTS MUST APPLY FOR ADMISSION TO THE AUDIOLOGY PROGRAM. TRANSFER STUDENTS MUST APPLY FOR ADMISSION PRIOR TO THEIR ARRIVAL ON CAMPUS. ALL APPLICATIONS MUST BE SUBMITTED BY APRIL 1 FOR SUMMER OF FALL ADMITTANCE. All EDSE 100 or 200 level courses required for Audiology majors must have been completed or in progress at the time of application.

For information regarding admission procedures, contact the Director of Audiology, Bishop-Lehr Hall 147. Students applying for admission to this Program will be selected according to: 1) Promise of academic achievement; 2)

Letters of reference; 3) Commitment in their Clinical Observation; 4) Self-direction; and 5) Intellectual curiosity.

The following is the required program:

EDSE 100	Education of Exceptional Children	3
EDSE 160	Introduction to Speech/Language Disorders	3
EDSE 260	Introduction to Phonetics	3
EDSE 265	Acoustics of Speech	3
EDSE 266	Speech and Language Development	3
EDSE 267	Anatomy and Physiology of Speech and Hearing	5
EDSE 270	The Structure and Pathology of Auditory and Vestibular/Visual Systems	3
EDSE 274	Clinical Observation in Audiology	Maximum 6
EDSE 350	Pathology and Introduction to Education of the Hearing Impaired	3
EDSE 357	Introduction to Hearing Aids and Amplification Systems	2
EDSE 358	Auditory Training and Speech Reading	4
EDSE 360	Articulation Disorders I	3
EDSE 364	Introduction to Clinical Practicum II	2
EDSE 365	Language Disorders in Children I	3
EDSE 369	Neurological Bases for Speech and Hearing	4
EDSE 370	Introduction to Audiology	3
EDSE 372	Advanced Audiometry	5
EDSE 374	Advanced Observation in Audiology	Maximum 12
EDSE 464	Clinical Practicum in Speech/Language Pathology	2
EDSE 471	School Audiology	3
EDSE 477	Pediatric Aural Rehabilitation	3
EDSE 479	Geriatric Audiology and Aural Rehabilitation	3
ZOO 105	Human Biology	4
ZOO 121	Human Anatomy	4
ZOO 250	Human Physiology	5

Clinical practicum by permission only for advanced senior students:

EDSE 474	Practicum in Audiology	2
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For students desiring to work toward certification in School Audiology, the following additional courses must be completed:

EDSE 302	Counseling Parents of Exceptional Children	3
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 Hearing Impaired	4
EDSE 455	Methods of Teaching Reading to the Hearing Impaired	3

Recommended electives are IA 180, 383, 384, PSY 202, 230, 240, 342, 343, 431, 432, 433, 444, ENG 321, 418, 419, EDSE 250, 302, 304, 306, 356, 361, 456, 451, 452, 459, CD 331, COMM 111, 323, SCI 110, MUS 403.

Rehabilitation and Related Services Major Administered by the School of Special Education and Rehabilitation

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 and adviser approved non-teaching minor consisting of 27 quarter hours.
4. 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

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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 and 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 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 102	Crisis of Identity II	3

Mexican American Studies: At least three (3) hours selected from the following courses:

MAS 101	Introduction to Mexican American Studies	4
MAS 302	Social Stratification in the Mexican American Community	3
MAS 304	Bicultural Systems	3

Sociology: At least seven (7) hours selected from the following courses:

SOC 145	Social Problems	3
SOC 210	Social Movements	3
SOC 240	Criminology	4
SOC 310	Social Psychology	3
SOC 340	Juvenile Delinquency	4
SOC 345	Sociology of Minorities	4

Psychology:

PSY 255	The Psychology of Emotional Adjustment	3
PSY 458	Abnormal Psychology	3

And at least six (6) hours of the following:

PSY 230	Human Growth and Development	5
PSY 240	Human Learning and Cognition	3
PSY 250	Humanistic Psychology	3
PSY 365	Psychology of Prejudice	3
PSY 432	Preadolescence and Adolescence	3
PSY 433	Maturity and Aging	3
PSY 460	Paraprofessional Helpline Training	3

Research and Statistical Methodology

RSM 203	Introductory Statistical Methods	3
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Theatre Arts Major

Administered by the Department of Theatre Arts

Students pursuing the A.B. 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 core of courses in the major:

Course No.	Course Title	Hours Credit
THEA 105,	106, 107 Individual Performance in Theatre	2
THEA 110	Introduction to Stagecraft	3
THEA 130	Introduction to the Theatre	3
THEA 160	Acting I (Internals)	3
THEA 205,	206, 207, 208 Individual Performance in Theatre	4
THEA 220	Beginning Stage Costuming	3
THEA 240	Beginning Stage Direction	3
THEA 261	Stage Make-Up	2
THEA 305,	306, 307, 308 Individual Performance in Theatre	6
THEA 330,	331, 332 History of the Theatre I, II, III	9
THEA 405,	406, 407, 408 Individual Performance in Theatre	6

In addition, **one of** the following fields of specialization.

Acting:

THEA 170,	171, 172 Stage Movement I, II, III	3
THEA 260	Acting II (Externals)	3
THEA 360	Acting III (Musical Theatre)	3
THEA 361	Advanced Stage Makeup	2
THEA 370,	371, 372 Rhythmic and Dramatic Movement I, II, III	3
THEA 460	Serious Styles of Acting	2
THEA 461	Comic Styles of Acting	2
THEA 462	Problems in Acting Conventions	2
	Electives in Theatre Arts	6
		<u>26</u>

Graduate School Preparatory:

THEA 210	Stagecraft	3
THEA 260	Acting II (Externals)	3
THEA 281	Creative Dramatics in Education	3
THEA 310	Beginning Scene Design	3
THEA 340	Directing Period Plays	3
THEA 341	Directing Experimental Plays	3
THEA 342	Directing Musical Theatre	3
THEA 411	Stage Lighting	3
	Electives in Theatre Arts	5
		<u>26</u>

Stage Direction:

THEA 170,	171, 172 Stage Movement I, II, III	3
THEA 210	Stagecraft	3
THEA 260	Acting II (Externals)	3
THEA 281	Creative Dramatics in Education	3
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 440	Directing the One-Act Play	2
		<u>26</u>

Technical Theatre:

THEA 210	Stagecraft	3
THEA 310	Beginning Scene Design	3
THEA 320,	321 Stage Costume Design I, II	8
THEA 361	Advanced Stage Make-Up	2
THEA 410	Advanced Staging Techniques	4
THEA 411	Stage Lighting	3
	Electives in Theatre Arts	3
		<u>26</u>

Theatre in the Community:

THEA 260	Acting II (Externals)	3
THEA 280	Creative Dramatics in the Community	3
FA 335	Aesthetic Education	3
COMM 375	Oral Interpretation of Children's Literature	3
THEA 380	Children's Theatre Production	3
THEA 390	Chamber Theatre	4
THEA 480	Advanced Creative Dramatics	3
	Electives in Theatre Arts	4
		<u>26</u>
	Total credit hours of the major	<u>70</u>

All majors in the Liberal Arts program must have departmental advisement from a member of the faculty in the Department of Theatre Arts. It is sometimes possible to substitute for certain required courses or to design an individualized field of specialization, but only with advisement and with the signed approval of the faculty of the Department of Theatre Arts. All Liberal Arts majors in Theatre

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Arts should consult their copies of "Goals for the Liberal Arts Program (A.B. Degree) in Theatre Arts" for a focus to their programs and for planning their programs. Many courses outside the Department of Theatre Arts can and should be used to support the skills, concepts and needs of the major field of specialization. Consult your adviser.

3. Attendance at or involvement with all productions of the Little Theatre of the Rockies during residency.

4. Electives sufficient to complete the requirements for the Bachelor of Arts (A.B.) degree.

Theatre Arts Major (Teaching)

Students pursuing the A.B. with a major in Theatre Arts, who plan to teach Drama in the public schools, must plan their programs to fulfill the following requirements:

1. All General Education requirements as specified earlier in this catalog.

2. Professional Teacher Education, 39 hours, plus EDCI 341 (three hours credit) and EDLS 363 (two hours credit).

3. The following courses in the major:

THEA 105,	106, 107 Individual Performance in Theatre	2
THEA 110	Introduction to Stagecraft	3
THEA 130	Introduction to the Theatre	3
THEA 160	Acting I (Internals)	3
THEA 170,	171, 172 Stage Movement I, II, III	3
THEA 205,	206, 207, 208 Individual Performance in Theatre	4
THEA 210	Stagecraft	3
THEA 220	Beginning Stage Costuming	3
THEA 240	Beginning Stage Direction	3
THEA 260	Acting II (Externals)	3
THEA 261	Stage Make-Up	2
THEA 281	Creative Dramatics in Education	3
THEA 305,	306, 307, 308 Individual Performance in Theatre	6
THEA 310	Beginning Scene Design	3
THEA 330,	331, 332 History of the Theatre I, II, III	9
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 405,	406, 407, 408 Individual Performance in Theatre	3
THEA 411	Stage Lighting	3
THEA 440	Directing the One-Act Play	2
	Electives in Dramatic Literature	6

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The Department of Theatre Arts requires student majors to consult with and be advised by a faculty member teaching in the department. The focus of the Teacher Education program is governed by the "Goals and Objectives for Teacher Education (A.B. Degree) in Theatre Arts," a document which should be in the hands of all Teacher Education majors in Theatre Arts.

4. A teaching minor of 27 or more quarter hours is highly recommended. Students must remember that in the public schools of the State of Colorado more than half the teaching load must be done in the area of certification. The student desiring this degree of certification should be prepared for many additional requirements both in content and in methods and observation in the minor field.

5. This program meets the current certification requirements for teaching drama in the secondary schools of the State of Colorado.

6. This program meets the current minimum requirements of the North Central Association for teachers of Drama. See your adviser about N.C.A. updates.

7. Attendance at or involvement with all productions of The Little Theatre of the Rockies during residency.

8. Electives sufficient to complete the requirements for the Bachelor of Arts degree.

Theatre Arts Minor

Following are the requirements for the minor:

THEA 105,	106, 107 Individual Performance in Theatre	1
THEA 110	Introduction to Stagecraft	3
THEA 130	Introduction to the Theatre	3
THEA 160	Acting I (Internals)	3
THEA 205,	206, 207, 208 Individual Performance in Theatre	2
THEA 240	Beginning Stage Direction	3
THEA 305,	306, 307, 308 Individual Performance in Theatre	3
	Electives in Theatre Arts	12
		30

Theatre Arts Minor (Teaching)

For the students desiring to teach Drama, the Department of Theatre Arts requires the following program in the minor:

1. An adviser from the Theatre Arts faculty.
2. The following courses in the minor:

THEA 105,	106, 107 Individual Performance in Theatre	1
THEA 110	Introduction to Stagecraft	3
THEA 130	Introduction to the Theatre	3
THEA 160	Acting I (Internals)	3
THEA 205,	206, 207, 208 Individual Performance in Theatre	2
THEA 210	Stagecraft	3
THEA 240	Beginning Stage Direction	3
THEA 260	Acting II (Externals)	3
THEA 261	Stage Make-Up	2
THEA 305,	306, 307, 308 Individual Performance in Theatre	3
THEA 310	Beginning Scene Design	3
	Electives in Theatre Arts	9
		38

3. EDCI 341 (three hours credit) and EDFE 374 (two hours credit) taken in Theatre Arts.

4. This program does not meet the current certification requirements for teaching drama in the secondary schools in the State of Colorado if more than half of the teaching load is in Drama.

5. This program meets the current minimum requirements of the North Central Association for teachers of Drama. See your adviser about N.C.A. updates.

General Tryouts. The Department of Theatre Arts conducts general tryouts the first week of Fall Quarter each year. The Fall productions are cast from these tryouts, and the entire faculty assess the progress of students in acting at this time. Each tryout will consist of two short contrasting speeches (two minutes each), which are memorized and performed. If musical material is used, the sheet music and accompanist must be provided. For an assessment of your acting abilities, make individual appointments with the member of the faculty from whom you wish to receive an evaluation.

Vocational Teacher Education

Vocational Teacher Education is a multi-disciplinary program. It is directed toward preparing persons to teach in Vocational Programs approved by the State in Business and Office Education, Distributive Education, Health Occupations Education and Home Economics for Consumer and Homemaking or Occupational Homemaking Education. At the beginning of their Junior year, students enrolled in any Vocational Teacher Education program should check with the occupational area teacher educator to identify any deficiencies that must be met to qualify for a Vocational Credential.

Students interested in Vocational Teacher Education should go to:

1. School of Business, Department of Business Teaching Education for Busi-

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ness and Office Education and Distributive Education requirements. Kepner 213.

2. School of Industrial Technology and Home Economics, Department of Home Economics for Consumer and Homemaking and Occupational Homemaking requirements. Crabbe 306.

3. Vocational Teacher Education, Health Occupations, Gunter 103.

4. Vocational Credentialing Officer, McKee 531, for Vocational Credential requirements.

Vocational Teacher Education Courses

Course No.	Course Title	Hours	Credit
VTE 210	Career Opportunities and Explorations	.....	3
VTE 290	Directed Field Experiences	.....	Maximum 12
VTE 306	Workshops in Vocational Teacher Education	.....	Maximum 9
VTE 310	Vocational Education Foundations – Seminar	.....	3
VTE 400	Organization and Administration of Health Occupations	.....	3
VTE 401	Health Occupations Instructional Design – Occupational Analysis	.....	1
VTE 402	Health Occupations Instructional Design – Performance Objectives	.....	1
VTE 403	Health Occupations Instructional Design – Classroom Evaluation	.....	1
VTE 404	Health Occupations Instructional Design – Instructional Methods	.....	1
VTE 405	Health Occupations Instructional Design – Media Utilization	.....	1
VTE 406	Student Evaluation in the Clinical Setting	.....	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 419	Advisory Committees Seminar in Vocational Education	.....	2
VTE 422	Individual Studies in Vocational Teacher Education	.....	Maximum 4
VTE 430	Vocational Education for Learners with Special Needs	.....	3
VTE 453	Preparation for Teaching Vocational Health Occupations – Seminar	.....	3
VTE 483	Teaching Improvement Seminar in Vocational Health Occupations	.....	2
VTE 488	Seminars in Vocational Teacher Education	.....	Maximum 6

Health Occupations -- Vocational Teacher Education

The vocational teacher education program has identified competency modules (one hour blocks) in the areas necessary to be completed for the B.A. in Health Occupations (see page 84).

Other modules may be advised depending upon the career goal of the individual student. For specific information, ask for the bulletin pertaining to the professional Health Occupations Teacher Education competency curricula. Individuals may challenge these program modules and will be exempted from those in which they have successfully met the defined competency criteria.

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.

A major in Women's Studies is available through the Interdisciplinary Studies Program.

In all cases, the minor program will be developed individually with each student by the coordinator and Women's Studies faculty. Each minor in Women's

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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 major 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	3
ID 448	Women's Studies: Senior Seminar	3	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)	4	4
BLS 102	Crisis in Identity II: The Black Women	3	3
EDF 380	Women in Education	3	3
ENG 260	Women's Biography	4	4
ENG 327	Women and Sex in Science Fiction	4	4
ENG 430	Studies in World Literature (Literature by and About Women)	4	4
HEC 321	Role Behavior in the Intimate Environment	4	4
ICU 205	Human Sexuality (Malumphy-Plakke)	3	3
ICU 208	Liberation: Myth to Ms.	5	5
ICU 231	Women in Sports	2	2
ICU 314	Images of Women in Literature	4	4
ICU 319	Sexism in Management	3	3
ICU 344	Women in Music	2	2
MAS 307	La Chicana	4	4
PHIL 380	Problems and Methods of Philosophy (Philosophy of Feminism)	4	4
PSCI 207	Politics of Feminism	3	3
PSY 468	Psychology of Women	3	3
SOC 221	Sociology of Sex Roles	3	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	5
BIO 102	Principles of Botany	5	5
BIO 103	Principles of Zoology	5	5
BIO 231	Genetics	3	3
BIO 232	Genetics Laboratory	2	2
BIO 291	Seminar in Scientific Writing	2	2
BIO 361	Microbiology	5	5
BIO 350	Cell Physiology	5	5
ZOO 316	Entomology	5	5
	or		
ZOO 412	General Parasitology	5	5
ZOO 427	Vertebrate Embryology	5	5

ZOO 428	Comparative Vertebrate Anatomy	5
ZOO 340	Animal Ecology	5
	Electives to be selected with approval of major adviser	8
		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 three courses in each of the above fields (chemistry, physics, or mathematics) not be 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

f-ANT 100. General Anthropology. (5) The nature and scope of anthropology, organic man, and the nature of culture.

f-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.

f-ANT 120. World Ethnology. (3) Ethnologies are selected from various culture areas throughout the world. Emphasis is upon strategies for analysis of ethnographic data.

f-ANT 121. North American Indians. (3) Ethnographic study of North American Indian cultures between the time of contact and prior to massive acculturational influences.

f-ANT 122. South American Indians. (3) Study of aboriginal peoples of South America.

f-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.

f-ANT 143. Classical Archaeology. (3) An introductory survey of the archaeological cultures of the ancient Classical World.

h-ANT 170. Introduction to Biological Anthropology. (4) A general survey of the subfields of biological 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.

f-ANT 220. Seminar in Modern Ethnology. (3 - 9) A study of the analysis of selected modern ethnographies to present up-to-date materials and problems in various culture areas.

f-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.

f-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.

f-ANT 228. Eastern Asia. (4) A survey of the anthropology of China and Japan. Emphasis is on understanding modern trends in the region.

- f-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.
- f-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.
- f-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.
- f-ANT 243. Plains and Mountain Archaeology. (4).** Prerequisite, ANT 140. This course will acquaint the student with prehistoric adaptations in the plains and mountains of Colorado and adjacent states. Particularly stressed will be those groups which used both of these major zones.
- f-ANT 244. Archaeological Theory. (3).** An introductory course to acquaint the student with the theoretical concerns of archaeology. Course emphasis will be on integrating archaeology with other fields of anthropology.
- f-ANT 245. Public Archaeology. (4).** This course will acquaint the student with the body of federal and state legislation which applies to cultural resource management, with particular emphasis upon archaeology. It is recommended that the student have at least one other archaeology course.
- f-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.
- f-ANT 281. Principles of Social Organization. (4).** Basic principles of social structure, with emphasis on kinship.
- f-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.
- f-ANT 320. Ethnology of Middle America. (4).** Indian, mestizo and urban cultures of Middle America; interethnic relationships; acculturation trends.
- f-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.
- f-ANT 322. Oceania. (4).** Peoples of Polynesia, Melanesia and Micronesia.
- f-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.
- f-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.
- f-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.
- f-ANT 326. Indians of the Southwest. (4).** Ethnology of the Pueblo, Navajo, Apache, Yuman tribes and the Pima-Papago groups.
- f-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.
- f-ANT 329. Peoples and Cultures of the Caribbean. (4).** A description of the development of an underdeveloped area in relationship to its disappearing plantation systems, growing industry and tourist business.

f-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.

f-ANT 335. Economic Anthropology. (4). A general survey of the field of economic anthropology. Topics covered include typologies of economies, the applicability of formal Western economics to non-Western, non-industrial economies, principles of organization of hunting and gathering band economies, tribal economies, chiefdoms, traditional agrarian economies, pastoral economies, and modern peasant economies, and modernization of economic systems under capitalist and socialist systems. Emphasis is on the inter-relationships between economy and the other aspects of culture.

f-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.

f-ANT 338. Anthropology of War. (4). A cross-cultural survey of the interrelationships between warfare as an activity and aspects of culture. Cases covered include primitive, historical, and modern warfare.

f-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.

f-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.

f-ANT 342. Near Eastern Archeology. (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.

f-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.)

f-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.

f-ANT 346. Mayan Archaeology. (4). A thorough study of Maya civilization of Mesoamerica: its origins, developments, chronology, and archaeological manifestations. A review of other archaeological cultures in southern Mexico and Central America.

f-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.

f-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.

f-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.

f-ANT 350. European Ethnology. (4-8). Course designed to explore the ethnology

of European sub-cultures and will be occasionally subtitled as to area.

f-ANT 360. Anthropological Linguistics. (4). The study of speech and language with the context of anthropology. Cognitive categories formed through language, the nature of language, cultural focus in language, linguistic change.

d-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.

f-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.

h-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.

f-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.

h-ANT 373. The Human Skeleton. (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.

f-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.

f-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.

f-ANT 382. Acculturation. (4). A study of cultures in contact and the influences they have one upon the other.

f-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.

f-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.

f-ANT 385. Survey Methods in Archaeology. (4). Prerequisites: ANT 140, one 200 level archaeology course and ANT 384. This course is designed to acquaint the student with the variety and usefulness of survey techniques in archaeological research. Participation in an actual survey and in survey design is required.

f-ANT 386. Lithic Technology and Analysis. (4). Prerequisites: ANT 140 and one 200 level archaeology course. This course is designed to acquaint the student with the variety of techniques used to interpret and analyze lithic materials in archaeology. Some stone working activity will be part of the course.

f-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.

f-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.

ANT 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem.

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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 for General Education credit.

f-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.

f-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.

f-ANT 449. Egypt: New Kingdom Archaeology. (3). A thorough review of later Egyptian archaeology, beginning with the 18th dynasty.

f-ANT 450. Archaeology Field School. (Maximum 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.

f-ANT 470. The Nature of Man. (3). 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.

f-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.

f-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.

f-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.

f-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.

f-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.

AEORSPACE STUDIES

e-AS 110. 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, and introduction to Air Force doctrine and how it relates to national strategy. Corps Training is included as a laboratory portion of all aerospace courses.

e-AS 111. 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.

e-AS 112. 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.

e-AS 210. 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.

e-AS 211. 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.

e-AS 212. 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.

e-AS 310. 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 needs for discipline and the study of non-judicial punishment and the courts-martial system.

e-AS 311. 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. Discuss planning, organizing, coordination, directing and controlling.

e-AS 312. 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.

e-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.

e-AS 410. 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.

e-AS 411. 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.

e-AS 412. 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.

AS 422. Independent Study. (2 or 3). Course designed for students who have practicum or other course conflicts which prevent attendance in normal aerospace studies program flow.

ASTRONOMY

Courses in astronomy are administered by the Department of Earth Sciences.

h-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.

h-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.

h-AST 302. Principles of Astronomy II. (3). Prerequisite, AST 100 or 301. The Universe beyond the solar system: stars and stellar systems.

h-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.

h-AST 420. Lunar and Planetary Astronomy. (3). Prerequisite, AST 100 or 301.

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Techniques and results of space exploration. Students will select topics for intensive individual study.

AST 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.

h-AST 496. 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 organization.

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 of 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 concur-

rently). 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 422. Business Teacher Education 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. Not open to graduate students. Not for General Education credit.

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 Education -- "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 students 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, a 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 DE 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 de-

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signed 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.

h-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.

h-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.

h-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.

h-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 minor.

h-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.

h-BIO 231. Genetics. (3). 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.

h-BIO 232. Genetics Laboratory. (2). (4 laboratory.) Prerequisites, BIO 102, 103, 231 (or concurrent). Laboratory experiences illustrating the fundamental laws of heredity as applied to plants, animals and man.

h-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.

h-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 majors in Biological Sciences.

h-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.

h-BIO 261. Medical and Public Health Microbiology. (4). (3 lecture, 3 laboratory.) Recommended, CHEM 281, ZOO 121, 250. This course places emphasis on the microorganisms of public health significance, their detection, the diseases they cause and the treatment of these diseases. The course is primarily designed for students in dietetics, nursing, pre-medicine, pre-dentistry, and pre-veterinary medicine.

h-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.

h-BIO 291. Seminar in Scientific Writing. (2). Prerequisite, sophomore 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.

h-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.

h-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.**

h-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.

h-BIO 361. Microbiology. (5). (3 lecture, 4 laboratory.) Prerequisite, CHEM 130 or 332, recommended BIO 103 or ZOO 105. An examination of a 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.

h-BIO 363. Food Microbiology. (5). (3 lecture, 4 laboratory.) Prerequisite CHEM 130 or 332. Recommend BIO 103 or ZOO 105. Microbial agents of food technology, spoilage and disease are examined. Bacteria and molds are of chief importance but viruses and animal parasites transmitted in food and water will be included. Recommended for dietetics majors, food and nutrition majors, and as an elective course for biological sciences and health majors.

h-BIO 371. Techniques of Biological Preparation. (1). (3 laboratory.) Prerequisite, acceptance in PTE. This course is designed to acquaint the student with techniques of laboratory preparation and biological investigation. Emphasis is placed on techniques of lecture and laboratory preparation and presentation; construction and use of biological equipment; and approaches to teaching controversial subject matter.

h-BIO 380. Sexually Transmitted Diseases. (3). An introduction to the sexually transmitted diseases with emphasis on the venereal diseases, including their history, etiology, epidemiology, clinical course, treatment and prevention.

h-BIO 381. Topics in Birth Control and Contraception. (1). Prerequisites, permission of director of Birth Control Center and instructor; must be taken concurrently

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with BIO 382. An interdisciplinary study of basic biological, medical and guidance principles used in birth control and abortion counseling.

h-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.

h-BIO 388. 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 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.

h-BIO 401. Practicum in College Biological Science Instruction. (1, maximum 3). (3 laboratory.) A chance for students to gain experience in teaching introductory biological science laboratory. Opportunities will be available for students to aid in laboratory preparation, individual tutoring of students, and instruction in the laboratory. Consent of instructor and the departmental PTE committee required.

h-BIO 402. 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 502.

h-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 psychopathy.

h-BIO 460. Microbiology of Special Environments. (5). (3 lecture, 4 laboratory.) Prerequisite, BIO 261 or BIO 361 or equivalent. An examination of microbial populations and microbial interactions in soil, water, and food. Emphasizes the natural roles of microorganisms in their specific environments and microbial control, especially in food preservation and water quality.

h-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.

h-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.

h-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.

h-BIO 491. Undergraduate Seminar. (1). A study of the current research and literature on selected biological topics.

BLACK STUDIES

g-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.

g-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.

g-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.

g-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.

g-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.

g-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.

g-BLS 322. Black Nationalism. (3). An analysis of the development of Black social movements: nationalism, integration, and separation, including Vesey, Garbey, Malcolm X, and Pan-Africanist movements.

f-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.

f-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.

g-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.

g-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.

g-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.

d-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.

g-BLS 399. Community Study Project. (1-4). A field work course which will require a community-based project in housing, education, or social services.

f-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.

BLS 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. Not for General Education credit.

g-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.

g-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.

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g-BLS 460. Black Religion. (3). An explorative analysis of historical and social forces in the formation of Black religious institutions in the United States.

g-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.

g-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.

g-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.

d-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.

g-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.

I-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.

g-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.

h-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.

h-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.

h-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.

h-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.

h-BOT 421. Plant Anatomy. (5). (3 lecture, 4 laboratory.) Prerequisites, BIO 101, 102. A study of the anatomy of plants with emphasis on the seed plants. Careful consideration is given to the various tissues as to their origin, development, and structure as related to their function. Some consideration is given to the evolution of tissues in plants.

h-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.

h-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 designated in the categories below belong to that business area of study:

- 1 - 19 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

e-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.

e-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 be the use of credit, insurance needs, banking, buying guides, consumer protection, and other problems of the individual.

d-BUS 102. Business English. (3). A course including a compact survey of the rules of grammar, usage, and the chief aspects of business writing style -- punctuation, capitalization, numbers, abbreviations, plurals and possessives, compound words, and word division. Also included are the rules of style for writing metric measurements and the matter of sexism in our language.

d-BUS 109. Calculators and Business Applications. (2). A course emphasizing the operation and use of calculators in the performance of mathematical concepts and computations common to the business office.

e-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.

e-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.

e-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.

e-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. Students who have had speedwriting (Landmark) may not take this course for credit.

e-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.

e-BUS 116. Beginning Gregg Shorthand. (4). Prerequisite, BUS 111. Course comprises complete theory of Gregg shorthand. Students who have one year of

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high school shorthand or the equivalent cannot take this course for credit, but should take BUS 117.

e-BUS 117. Intermediate Gregg Shorthand. (4). Prerequisite, BUS 116 with a grade of "C" or better, or take dictation of 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.

e-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.

e-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.

e-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.

e-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.

d-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.

d-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.

e-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.

e-BUS 212. Office Practicum II. (5). Prerequisite, BUS 211 and consent of instructor. This course offers the student the opportunity to refine his or her office skills. Emphasis is also placed upon the organizational structure and operations in today's office, supervisory responsibilities, decision-making, grooming and human relations.

e-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.

e-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.

e-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.

e-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.

e-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 period expenses.

e-BUS 231. Business Law I. (3). The first segment 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, and certain aspects of criminal and tort law. Also included, are discussions on the laws relating to consumer protection and leases. The second segment consists of the law of contracts.

e-BUS 232. Business Law II. (3). Prerequisite, BUS 231. This is one of two advanced undergraduate business law courses. It deals specifically with contracts for the sale of goods (the law of sales), how payment is made (the law of commercial paper), and how credit transactions are financed (the law of secured transactions). It also includes laws relating to insurance and bankruptcy.

e-BUS 233. Business Law III. (3). Prerequisite, BUS 231. This course continues the study of business law dealing especially with the topics of agency, employment, partnerships, corporations, real property, government regulations, administrative agencies and wills.

e-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.

e-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.

e-BUS 261. Personal Selling. (3). Prerequisite, BUS 260. 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.

e-BUS 271. Personal Finance. (3). The course is designed to help those students interested in the problems of allocating income and managing personal finances.

e-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.

e-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 correlation analysis and selected nonparametric statistical techniques.

e-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.

e-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.

e-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 evaluation problems in presenting current assets and liabilities on the statements.

e-BUS 321. Intermediate Accounting II. (4) Prerequisite, BUS 320 with a minimum grade of "C". A continuation of BUS 320. Emphasizes problems encountered in

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valuing investments, plant and equipment, and stockholder's equity for statement presentation.

e-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.

e-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.

e-BUS 324. Cost and Managerial Accounting II. (4). Prerequisite, BUS 323. This course gives emphasis to both costing for inventory evaluation and income determination and costing for planning and control.

e-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.

e-BUS 328. Accounting for Business Decisions. (4). Prerequisite, BUS 221 with a minimum grade of "C". (Credit will not count toward graduation for Accounting majors.) Emphasis will be placed on how a business can use accounting information for decision making. Included will be a study and analysis of basic financial statements, uses of cost accounting systems and the information they develop, introduction to tax problems of businesses, and study of various accounting systems.

e-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, escrow, and statutory requirements will be included.

e-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).

e-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).

e-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).

e-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.

e-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).

e-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.

e-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).

e-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 problems of the procurement function.

i-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.

e-BUS 357. Managing New Business Ventures. (3). Prerequisite, Business core or consent of instructor. This course is designed to emphasize the problems and opportunities of starting new businesses, including new enterprise creation, planning, management, control and growth.

e-BUS 361. Retail Management. (4). Prerequisite, BUS 260. A study of the basic principles and techniques of retail merchandising and store operation.

e-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.

e-BUS 363. Sales Management. (3). Prerequisite, 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.

e-BUS 364. Marketing Channels. (3). Prerequisite, BUS 260. A systems approach to the marketer's problems of distribution including inventories, transportation, warehousing, packaging, order processing and the inherent problems of distribution including inventories, transportation, warehousing, packaging, order processing and the inherent problems of managing conflicts within the channel. Also, to be studied, the marketing channels with emphasis on both industrial and consumer product distribution.

e-BUS 365. Marketing Strategy. (4). Prerequisite, BUS 260. This course is designed to familiarize the student with operations of marketing organizations. The strategies used by marketing managers in making marketing decisions will be studied.

e-BUS 366. Consumer Behavior. (3). Prerequisite, BUS 365 or consent of instructor. A course exploring the consumer and his or her 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.

e-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.

e-BUS 372. Principles of Real Estate. (3). This 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.

e-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.

e-BUS 385. Electronic Data Processing -- Data Management. (3). (Laboratory

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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.

e-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.

e-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.

e-BUS 396. Management Science -- Deterministic Models. (3). Prerequisite, BUS 291. Managerial decision making based upon optimality analysis, linear programming, microanalytic methods including inventory control, games and strategies, queuing theory and Markov Analysis.

e-BUS 397. Management Science -- Probabilistic Models. (3). Prerequisite, BUS 292. Decision making in uncertain environments. Application of modern statistical techniques, with particular emphasis in probability models, including Bayesian methods of analysis.

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.

e-BUS 420. Advanced Accounting I. (4). Prerequisites, BUS 321 with a minimum grade of "C" and BUS 322 or concurrently. This course includes a study of partnerships, installment sales, consignment sales, home and branch office relationships, business combinations, and an introduction to consolidations.

BUS 422. Business 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. Not open to graduate students. Not for General Education credit.

e-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.

e-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.

e-BUS 428. Income Tax Accounting I. (4). 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.

e-BUS 429. Income Tax Accounting II. (4). Prerequisite, BUS 428. A continuation of BUS 428, with emphasis on federal income tax rules applicable to partnerships and corporations.

e-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)

e-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).

e-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).

e-BUS 443. Analysis of Insurance Functions II. (3). A continuation of BUS 442. (Second part of C.P.C.U. Part II).

e-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).

e-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).

e-BUS 452. Administrative 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.

e-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.

e-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.

e-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.

e-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.

e-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.

e-BUS 458. Seminar in Entrepreneurship. (3). Prerequisites, BUS 357, 457, and senior status. This course is an integrative study of problems in Small Business Management through the use of case studies and the preparation of a proposal for the creation of a new business.

e-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

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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.

e-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.

e-BUS 462. Marketing Problems. (3). Prerequisites, BUS 365 and senior standing or consent of 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.

BUS 463. Advertising Campaigns Lab. (2). Prerequisite, BUS 362. May only be taken concurrently with BUS 461. A practical experience course involving the actual preparation and production of print and broadcast advertisements and audio-visual presentation materials.

e-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.

e-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.

e-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.

e-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.

e-BUS 472. Investment Analysis. (3). Prerequisite, BUS 471. An analysis of various types of securities and the management of investment portfolios.

e-BUS 473. Commercial Bank Policies and Management. (3). Prerequisites, BUS 170, 370, and ECON 202. The internal operations of commercial banks, including managerial problems.

e-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.

e-BUS 475. Financial Management of Small Business Firms. (3). Prerequisite, BUS 370. The financial problems of small business firms will be studied. The emphasis will be on credit management, financing alternatives of the small business, and the valuation of small businesses for sale purposes.

e-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.

e-BUS 489. Computer Simulation Models. (3). (Laboratory arranged.) Prerequisites, BUS 291 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 308. Child Development Workshop. (1-15). An opportunity to study problems in child development. 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 final mark.

f-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.

f-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.

f-CD 333. Development and Guidance of the Young Child. (4). (3 lecture, 2 laboratory.) The physical, intellectual, social, and emotional development of the young child are approached from the developmental point of view. Appropriate guidance procedures are discussed as they relate to these and other areas of child growth. Developmental theory and laboratory observation are stressed as primary approaches to child study; these methods are later compared to alternative approaches to child study.

CD 334. Preschool Curriculum and Methods. (PTE) (3). (Recommended to be taken prior to or 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.) Recommended to be 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. (1 - 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. Not for General Education credit.

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.

i-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

h-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.

h-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.

h-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.

h-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.

h-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.

h-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 for modern chemistry. Laboratory work will emphasize quantitative aspects of chemistry.

h-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.

h-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.

h-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. Students cannot receive credit for CHEM 109, CHEM 130, and CHEM 332.

h-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.

h-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.

h-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.

h-CHEM 302. Inorganic Chemistry I. (3). Prerequisite, CHEM 311. This course is an introduction to inorganic chemistry. Literature, atomic structure and chemical bonding will be presented.

h-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.

h-CHEM 314. Instrumental Analysis. (4). (3 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.

h-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.

h-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.

h-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.

h-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.

h-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 for nmr, gpc, ir, and uv.

h-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.

h-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.

h-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.

h-CHEM 390. Chemical Literature. (1). Prerequisite, CHEM 334. This course

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covers the use of the library and the function of chemical literature. Problems in the use of the library are assigned.

h-CHEM 402. Inorganic Chemistry II. (3). Prerequisites, CHEM 302, 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.

h-CHEM 403. Laboratory in Inorganic Chemistry. (1). (3 laboratory.) Prerequisite, CHEM 302. The student will perform experiments which will explore the structure, bonding and chemical properties of inorganic substances.

h-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.

h-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.

h-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 techniques of analysis.

h-CHEM 451. Physical Chemistry I. (4). Prerequisites, CHEM 333, MATH 132, 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.

h-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.

h-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.

h-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.

h-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.

h-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.

h-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.

h-CHEM 482. General Biochemistry I -- The Chemistry of Biological Compounds. (4). (3 lecture, 3 laboratory.) Prerequisite, CHEM 333. An introduction to the chemistry of biologically important compounds. The chemistry of the organic compounds in the living system will be stressed, but inorganic chemistry will be included.

h-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.

h-CHEM 484. General Biochemistry III -- Intermediary Metabolism and Physical Biochemistry. (4). (3 lecture, 3 laboratory.) Prerequisites, CHEM 483. Continuation of the study of intermediary metabolism. Enzyme kinetics, the physical chemistry of macromolecules, and the molecular organization of the cell will be emphasized.

h-CHEM 495. 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.

h-CHEM 499. Seminar, Research and Honors in Chemistry. (1-3). This course is designed to introduce the student to chemical research and current chemical literature. The student will initiate and pursue an investigation of a specific topic in chemistry or chemical education. Oral and written reports are required. Students in the Honors program will submit an Honors Thesis. Open to qualified juniors and seniors.

COMMUNICATION

d-COMM 110. Communication: Public Forum. (3). An introduction to the principles and practices of platform speaking. Particular attention will be given to basic theory, purposes, planning, modes of proof, delivery and audience analysis.

i-COMM 111. Communication: Interpersonal. (3). This course focuses on the processes of dyadic communication such as listening, self awareness, assertiveness, perception, language and their relationship to self improvement.

d-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.

d-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 logoi.

d-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.

e-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.

d-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.

e-COMM 210. Laboratory Forensics. (Maximum 3). To provide experience in intercollegiate forensics, students interested in individual events or readers theatre may register for one hour; those interested in debate may register for two hours; and those interested in debate and individual events may register for three hours. No student may earn more than eight total hours.

e-COMM 212. Argumentation Theory. (3). This lecture-discussion course focuses

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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.

I-COMM 220. Nonverbal Communication. (3). A study of nonverbal communication precepts associated with human communication. One focus is the relationship between non verbal 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.

d-COMM 250. Public Speaking. (3). (Maximum 6.) A course designed to provide practical experience in current modes of public communication in one-to-many relationships. The student will participate in three to five speeches and will evaluate others in terms of appropriate theory.

d-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.

I-COMM 302. Small Group Communication. (4). This course is an introductory study of the theories and techniques applicable to problem-solving and decision-making in small groups. Emphasis is placed on the relationship between communication and group variables such as leadership, roles and cohesiveness.

e-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.

I-COMM 323. Interpersonal Communication. (4). (Maximum 8.) Prerequisite, COMM 111 or equivalent. The interpersonal sequence is divided into two sections: Theory and practical applications. The section in theory explores philosophical and theoretical issues of self, perception, and relationships as they are affected by verbal and nonverbal communication. Practical applications stress the development of interpersonal skills of listening, trust, disclosure, helping, assertiveness and bargaining.

e-COMM 330. Organizational Communication. (3). This course is designed to acquaint students with communicative strategies and practices in organizations.

e-COMM 331. Interviewing in Organizations. (3). This course is designed to assist students in examining and participating in the interviewing process (entrance, performance appraisal, exit) operating in an organizational setting.

d-COMM 340. Radio Production. (3). (2 lecture, 2 laboratory.) 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. (4). 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.

d-COMM 342. Television Production. (4). (2 lecture, 4 laboratory.) Prerequisite, COMM 340. This course is designed to teach basic television vocabulary, procedure and production skills. In a laboratory setting, students apply their knowledge to the actual development and production of several short television programs.

e-COMM 345. Broadcast Advertising. (3). A course which emphasizes the development of the individual's skill in the preparation of broadcast advertising. Practical training for writing various types of commercials is offered in the course.

d-COMM 346. Radio Drama. (3). (1 lecture, 4 laboratory.) This course is designed to give media students an opportunity to write original scripts, adapt scripts from

literature and to produce broadcast quality drama for radio.

e-COMM 348. Broadcast Management. (3). A course of study designed to acquaint students with usual procedures, responsibilities, and problems encountered by management personnel of radio and television stations.

e-COMM 356. Communication Strategies. (3). (Maximum 6). 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 six credits.

d-COMM 375. Oral Interpretation of Children's Literature. (3). (2 lecture, 2 laboratory.) Prerequisite, COMM 170. A study of 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.

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.

i-COMM 402. Intercultural Communication. (2). (1 lecture, 2 laboratory.) A course and laboratory experience designed to investigate the nature of communication between and among different cultural groups. Obstacles to successful cross-cultural communication will be examined. Laboratory experiences increase student ability to counteract stereotyping they find in themselves and others, and expand student experiences in communicating effectively across cultures.

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 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. Not for General Education credit.

COMM 442. Advanced Television Production. (4). (2 lecture, 4 laboratory.) Prerequisite, COMM 342. This course is directed toward the refinement of skills learned in the introductory class, plus development of new skills in more sophisticated areas of television production.

COMM 450. Speech Composition. (3). A study of what is involved in the writing of speeches. Speech models are used for study and analysis, and each student will prepare and deliver short extempore speeches.

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.

COMM 460. Persuasion. (3). This course is a lecture-discussion seminar designed to investigate the major variables surrounding attitude change and human persuasion. Variables to be considered will include such items as source credibility, message organization and personality traits of auditors.

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.

COMM 490. Workshop in Communication. (3). This course studies the problems involved in communication in specific contexts such as the family and subcultures. The subject matter for the workshop will be announced prior to each quarter in the schedule of classes. Family Communication is frequently offered.

ECONOMICS

- f-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.
- f-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 in our society.
- f-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.
- f-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.
- f-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.
- f-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.
- f-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.
- f-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.
- f-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, facism and modified capitalism.
- f-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.
- f-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.
- f-ECON 306. Economics of Poverty and Discrimination. (3).** Prerequisite, ECON 102 or consent of the instructor. ECON 305 recommended. The objective of the course is to analyze the actual and alleged conditions which give rise to poverty and/or discrimination. Theoretical models will be supplemented with empirical data for a more realistic exploration of the poverty-discrimination phenomena.
- f-ECON 315. World Food Economics. (3).** Prerequisite, ECON 100. Major emphasis will be placed first on the functioning of the agricultural sector of the American economy, and then attention given to world food production, demand, and trade.
- f-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.
- f-ECON 330. Economics of Crime and Punishment. (3).** Prerequisite, ECON 100. This course will consider the economic causes and consequences of crime and punishment in this country during the 20th century by considering models dealing with the causes and effects of crime and punishment.
- f-ECON 332. Planning Economics. (3).** Prerequisite, ECON 100. The purpose will be to examine underlying economic factors that influence economic growth -- changes in spatial distribution of percapita income and locational shifts in Ameri-

can industry. Employing appropriate economic models, the student will study these factors as they apply to urban and regional economic growth problems.

f-ECON 334. Land Resource Economics. (3). Prerequisite, ECON 100. A study of the physical and biological factors determining supply and demand for land resources; economic principle affecting man's use of land resources; impact of institutional factors on land use and upon the manner in which people hold and enjoy rights in real property.

f-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.

f-ECON 359. International Economics. (5). Prerequisites, ECON 100, 200 or the consent of the instructor. The "open economy" is discussed and its environment is analyzed with various economics models. The impact and origin of trade flows is traced and evaluated in the context of economic welfare. International Finance, dealing with the monetary side of an open economy, forms the final part of the course.

f-ECON 360. Economics of Growth and Development. (3). Prerequisites, ECON 100, 200, or consent of 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.

f-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.

f-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.

f-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.

f-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.

f-ECON 403. 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.

f-ECON 451. Introduction to Quantitative Economics. (3). Prerequisites, ECON 100, 200, or 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.

f-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.

f-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.

f-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.

f-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

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played by particular "schools" of economic thinkers, the genesis of their ideas and their contributions.

EDUCATION 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 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. (1 - 4). Qualified undergraduate students outline and spend a minimum of 35 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.

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 308. Early Childhood Workshop. (1 - 15). An opportunity to study problems in early childhood education. 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 final mark.

EDEC 422. Individual Studies. (1 - 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. Not for General Education credit.

EDEC 460. Nursery -- Kindergarten Education. (PTE) (3). This course is designed

ot 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 308. Elementary Education Workshop. (1 -15). An opportunity to study problems in elementary education. 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 final mark.

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 320. 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) (2). 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. (1 - 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. Not for General Education credit.

EDEL 471. History and Philosophy of Bilingual Education. (3). Designed to provide an understanding of how a language other than English may be used as

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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.

EDEL 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 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 in 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.

e-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 Media. (3). Introduces students to most of the materials, both print and non-print, 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.

EDEM 420. Design and Construction of Graphic 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 for slides and other reproduction.

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. Not for General Education credit.

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. (3). 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.

EDEM 475. Administering Educational Media I. (3). A basic course in organization and administration of a single school media program. It will provide the essentials for a person who is working toward an endorsement in School Media. It is a prerequisite to EDEM 675.

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 366. Foundations of Education. (3). Designed to examine the historical and current social, psychological and pedagogical awarenesses pertinent to the teaching/learning processes for education in a democratic society. Teaching for multi-cultural/multi-ethnic needs is stressed and emphasis is placed on the nature and growth of an effective teaching self.

EDF 367. Philosophy of Education. (3). The course is predicated on the notion that a teacher's methodology is based on the basic assumptions held by that person about knowledge, truth, and values. Emphasis is on "doing" philosophy as it engages the educator and student with a consideration given to schools of thought and philosophic positions. Application is made to specific problems of education.

EDF 368. Seminar in Foundations of Education. (1). An on-going seminar designed to assist PTE students with the integration of their classroom learnings and their field-based experiences and to assist them in exploring the kind of educator they hope to be.

I-EDF 375. Understanding People: Concepts and Skills. (3). This course is designed to help students become more effective in understanding why people behave the way they do. Human behavior in two-person, group, and structured organizational relationships will be explored through the examination of various models and concepts. Students will be extensively involved in applying those models to identifying, analyzing, and resolving communication problems.

I-EDF 376. Creative Relating and Coping. (3). This course will initiate and facilitate inquiry into the problem of relating to and with others, and the corollary problem of coping effectively with human interaction conflicts. Reviewing and integrating together many of the contemporary approaches to communications, human relations, and personal growth, the course will offer a unique synthesis for promoting productive interpersonal relating, personal growth, creative coping, and positive conflict resolution.

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.

g-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.

g-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

g-EDFE 270. School and Community Aide. (PTE) (1 - 4). (May be repeated). Offers students valuable practical experience. Not limited to Greeley area. Open to students at any level who are considering a career in education or related fields. 20 clock hours of aiding required per quarter, per credit. Must be registered for 270 (when aiding) to receive credit. Early registration suggested all quarters – but required if aiding in Early Spetember for Fall credit; or December break for Winter credit; or Spring break for Spring credit. Summer quarter credit available by registering at Summer registration and aiding Summer or early September. Orientation seminar required. S-U final mark.

EDLS 360. Clinical Experience: Primary. (PTE) (2). Designed for Early Childhood/Elementary Education majors who need work with K - 3 students. Continuous interaction with children provided. Four hours per week in the classroom plus weekly seminars on Thursday at 3:35 p.m. All students will be video taped.

EDLS 361. Clinical Experience: Intermediate. (PTE) (2). Designed for the Elementary Education major. Student is assigned to a fourth, fifth, or sixth grade class. Continuous student and curricular interaction provided. Four hours per week in the classroom plus weekly seminars on Thursday at 3:35 p.m. All students will be video taped.

EDLS 362. Clinical Experience: Middle School. (PTE) (2). Student is assigned to a specific subject matter, class, and supervisor. Designed for Middle School, Secondary, and/or Elementary majors who desire to work with sixth to eighth grade students. Five classes per week plus a weekly arranged seminar with the supervisory teacher. All students will be video taped.

EDLS 363. Clinical Experience: Secondary. (PTE) (2). Taken concurrently with special methods. Students are assigned to a class in their subject matter area. Students are continuously involved in planned classroom activities that call for application of basic skills/practices of teaching. Five classroom days per week, one-two hours of seminar plus preparation time. All students will be video taped.

EDFE 378. Introduction to Teaching: Field Center. (PTE) (2). Student engages in directed participation in a teaching situation four hours a week under the supervision of a master teacher. One additional hour of conference each week is arranged with the instructor. S-U final mark.

EDFE 379. Introduction to Teaching: Innter 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 401. Practicum. (1 - 4). Open only by invitation to resident undergraduate students. Supervised professional activity in the student's major field. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairperson of the department. S-U final mark.

EDFE 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 chairperson of the department.

EDFE 444. Supervised Teaching. (PTE) (18). Meets the student teaching requirement for teacher certification. Supervision provided by a college consultant and a certified teacher whose endorsement is consistent with that of the student teacher. The experience includes the significant and continuous involvement of the cooperating teacher in the evaluation of the student teacher. S-U final mark.

READING COURSES

g-EDRD 130. College Reading Study Skills. (2). A course designed to enable college students to develop proficiency in the reading 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.

g-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 308. Reading Workshop. (1 - 15). The subtitle will indicate whether the workshop is for elementary or secondary teachers. Topics related to remedial reading (diagnosis, causation, and remediation), word perception, study skills, reading in the content fields, and trends and issues will be treated in various workshops. No subtitle may be repeated for credit. S - U final mark.

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). Required of undergraduates preparing to be secondary 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. (1 - 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. Not for General Education credit.

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

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.

e-EDSE 160. Introduction to Speech/Language Disorders. (3). A survey of identifying characteristics, causes, diagnosis and treatment pertaining to the common speech disorders.

EDSE 201. Undergraduate Practicum. (1 - 4). Open only to Sophomore majors in the School of Special Education and Rehabilitation. Supervised professional activity in the student's major field, approximately one hour of credit granted for

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every twenty hours of practicum. Two copies of a well-written paper must be filed with the instructor before credit is given.

d-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.

d-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/Language Pathology Clinic in terms of principles, procedures and forms. Clinical observations and participation will be arranged.

h-EDSE 265. Acoustics of Speech. (3). Prerequisite, MATH 117. 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 and speech development and their relationship to other aspects of child development.

e-EDSE 267. Anatomy and Physiology of Speech and Hearing. (5). The speech and hearing mechanism in terms of structure and physiology.

h-EDSE 270. The Structure and Pathology of Auditory and Vestibular/Visual Systems. (3). Concentrated study of abnormalities and diseases of the auditory mechanism including the outer ear, middle ear and central auditory system.

EDSE 274. Clinical Observation in Audiology. (1- 6). Observation of supervised diagnosis and therapy in the audiology clinic.

g-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. Undergraduate Practicum. (1 - 4). Open only to Junior majors in the school of Special Education and Rehabilitation. Supervised professional activity in the student's major field, approximately one hour of credit granted for every twenty hours of practicum. Two copies of a well-written paper must be filed with the instructor before credit is given.

g-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 303. 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 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/language impaired, and interpretation of test results in light of the various handicaps.

EDSE 305. Education 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 306. Workshop in Special Education. (1 - 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 of the TMR before his or her actual student teaching experience and to relate these field experiences with in-class presentations of materials through a weekly one hour seminar.

EDSE 313. College for Living Lab. (0). A laboratory course for students in selected Special Education courses. In this laboratory, they will be working with retarded young adults, teaching social interaction skills and the development of a sense of independence. Also, the lab participants will be creating curriculum materials in the area of reading, writing and arithmetic based upon the needs of the individual students.

g-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.

g-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 (diabetes, epileptic, etc.) will be discussed.

EDSE 331. Problems of Teaching the Physically Handicapped. (3). Methods, techniques and teaching procedures with the various types of physically handicapped children; study of programs and materials; curriculum planning with adaptations and aids used in the education of the physically handicapped child.

e-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, and oral methods, the combined method, the Rochester method and the acoustic method.

EDSE 351. Supervised Practicum with Hearing Impaired. (1 - 6). Supervised practical experience with acoustically handicapped children. Open to students in the area of teacher training education of the hearing impaired. One hour credit will be given, for every twenty hours of classroom work.

EDSE 356. Manual Communication Skills: S.E.E. (3). Course includes introduction and training for use of Seeing Essential English and the manual alphabet.

EDSE 357. Introduction to Hearing Aids and Amplification Systems. (2). Prerequisite, EDSE 370. A study of the effective use of amplification systems for acoustically handicapped individuals, including component parts, orientation and counseling in their use.

EDSE 358. Auditory Training and Speechreading. (4). Prerequisite, EDSE 357, EDSE 370. The development of reception of language through the auditory and visual channels. Emphasis is placed on methods of developing auditory discrimination and speechreading skills in hearing impaired children.

EDSE 360. Articulation Disorders I. (3). Prerequisite, admission to the undergraduate speech/language pathology program or consent of instructor. Causation, diagnosis and treatment of individuals with problems of articulation.

EDSE 361. Voice Disorders I. (3). Prerequisite, admission to undergraduate speech/language pathology program or consent of instructor. Causation, diagnosis and treatment of voice disorders.

EDSE 362. Stuttering I. (3). Prerequisite, admission to undergraduate speech/language pathology program or consent of instructor. Causation, diagnosis and treatment of stuttering.

EDSE 363. Introduction to Organic Disorders. (3). Prerequisite, admission to undergraduate speech/language pathology program, or consent of instructor. Causation, diagnosis and treatment for the speech/language disorders associated with cleft palate, cerebral palsy and aphasia.

EDSE 364. Introduction to Clinical Practicum II. (1 - 4). (Customarily 2 hours earned for each of 2 consecutive quarters.) Prerequisite, admission to undergraduate speech/language pathology program or consent of instructor. A more extensive view of the Speech/Language Pathology Clinic in terms of professional involvement related to clinical principles, procedures and forms. Clinical observation and participation will be arranged.

EDSE 365. Language Disorders in Children I. (3). Prerequisite, admission to the undergraduate speech/language pathology program or consent of instructor. An introduction to language sampling as an evaluative method of language disorders in children as a basis for remediation. The linguistic view point is emphasized.

EDSE 366. Neurological Bases of Speech/Language Disorders. (3). Prerequisites, EDSE 369 or consent of instructor. To provide students knowledge about common causes of brain damage associated problems, categories based on symptomatology, sites of lesion related to symptoms, signs of damage and the role of specialists concerned with brain damaged individuals having speech or language disorders.

EDSE 369. Neurological Bases for Speech and Hearing. (4). Prerequisite, admission to the undergraduate program or consent of instructor. Functional neurology and neuroanatomy of the central nervous system for the speech/language specialist.

EDSE 370. Introduction to Audiology. (3). Prerequisites, EDSE 265, EDSE 270 or equivalent, or consent of instructor. Introduction to area of audiology, including pure-tone testing procedures, methods of speech audiometry, interpretation of results in terms of physical, social, and educational handicap. No student will be allowed to take this course unless prerequisites have been met.

EDSE 372. Advanced Audiology. (5). 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 374. Advanced Observation in Audiology. (2 - 12). Minimum 6, at 2 hours each quarter. Prerequisite, EDSE 274. Concentrated guided observation of diagnosis and aural habilitation/rehabilitation in the Audiology Clinic. May be taken concurrently with EDSE 370 and EDSE 372.

g-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. (1 - 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. Undergraduate Practicum. (1 - 4). Open only to Senior majors in the School of Special Education and Rehabilitation. Supervised professional activity in the student's major field, approximately one hour of credit granted for every twenty hours of practicum. Two copies of a well-written paper must be filed with the instructor before credit is given.

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 405. 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 406 or 407 and is limited to non-special education majors.

EDSE 406. Working with Handicapped Students in the Elementary School. (2). Prerequisite, EDSE 405. This course will overview specific methods and techniques to be used in working with handicapped students in regular elementary schools.

EDSE 407. Working with Handicapped Students in the Secondary School. (2). Prerequisite, EDSE 405. This course will overview specific methods and techniques to be used in working with handicapped students in regular secondary schools.

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 experiences 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, EDRD 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. Introduction to Classroom Management. (2). To introduce undergraduate and graduate students to terminology and learning principles in the field of behavior modification applied to the classroom setting.

EDSE 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

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instructor and one with the chairman of the department. Not for General Education credit.

e-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.

e-EDSE 441. Listening Skills for Learning. (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.

e-EDSE 442. Principles of Education of Partially Seeing. (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 443. Teaching Daily Living for the Visually Handicapped. (2). Study and use of adapted materials and techniques for teaching to the visually handicapped such skills as grooming, eating, cleaning, cooking, sewing and simple home repairs. Additional one hour lab required.

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 Hearing Impaired. (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. (3). 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.

EDSE 460. Public School Speech/Language Pathology. (3). Prerequisites, admission to the undergraduate program 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/Language Pathology. (2 - 10, with 2 hours customarily earned per quarter.) Prerequisites, admission to undergraduate program and EDSE 364. Student performs supervised diagnosis and therapy with clients with speech/language problems. Each student clinician is

responsible for all information in the latest revision of the Clinic Handbook.

EDSE 467. Diagnosis in Speech/Language Pathology. (3). Prerequisite, admission to the undergraduate program, EDSE 360, and EDSE 365, or consent of instructor. Clinical diagnosis and evaluation of persons with speech and language disorders.

EDSE 470. Introduction to Communication Disorders of the Aging. (3). Course designed for non-majors. An introduction to disorders of communication which effect aging persons, their psycho/social and communicative impact, how the disorders are assessed, how they are treated, suggestions for recognizing those disorders and procedures for dealing efficiently with persons who possess them within the health care facility and in the community.

EDSE 471. School Audiology. (3). Course designed to provide an understanding of the implications of the incidence and classification of the hearing impaired in the schools, the educational and speech/language symptomology, alternative assessment procedures and their administration, inservice techniques, the total management of the hearing impaired in the schools, due process for hearing impaired children, their parents, and the schools.

EDSE 474. Clinical Practices in Audiology. (2 - 16, Minimum 8, 2 hours each quarter). Prerequisite EDSE 372 or consent of instructor. Performance of supervised assessment with infants, children, adults and the elderly.

EDSE 475. Practicum in Rehabilitation Audiology: Pediatric. (2 - 12, minimum 4, 2 hours each quarter). Prerequisite, EDSE 477 or consent of instructor. Observation and performance of supervised therapy in the rehabilitation of acoustically handicapped children.

EDSE 476. Practicum in Aural Rehabilitation: Adult and Geriatric. (2 - 12, Minimum 4, 2 hours each quarter). Prerequisite, EDSE 479. Observation and performance of supervised therapy in the rehabilitation of acoustically handicapped adults and aging clients.

EDSE 477. Pediatric Aural Rehabilitation. (3). Prerequisite, EDSE 372 or consent of instructor. A study of the habilitation and/or rehabilitation of infants and children with hearing handicap. Emphasis is placed on determination of appropriate remediation, language and speech therapy, auditory training and counseling parents for home programming.

EDSE 479. Geriatric Audiology and Aural Rehabilitation. (3). Prerequisite, EDSE 372 or consent of instructor. An in-depth study of the aging process as it affects the auditory mechanism. Emphasis is placed on rehabilitation of the hearing impaired aged person, along with the psychological impact of presbycusis.

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. (8 - 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 knowledge into a practical setting where the students 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 experiences. S-U final mark.

ENGLISH EDUCATION

EED 205. Oral English for the Teacher. (4). This course is designed to help prospective teachers interpret poetry, fiction, and drama orally and promote group discussion and interpersonal communication in order to increase their students' comprehension; it also seeks to improve the prospective teachers' command of spoken English.

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 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 403. Workshop in the Teaching of English. (PTE) (Maximum 9). A series of workshops in special problems in the teaching of English, conducted by authorities of the field.

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.

g-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

ENG 100. Writing Clinic. (No credit) A laboratory designed to help students improve their writing.

b-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.

ENG 102. The College Research Paper. (3). Prerequisite, ENG 101. 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.

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.

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.

g-ENG 111. Introduction to Poetry. (4). Critical approaches to poetry. Qualified students may be exempted by examination.

g-ENG 112. Introduction to Fiction. (4). Critical approaches to short stories and novels. Qualified students may be exempted by examination.

g-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.

d-ENG 114. Introduction to Language. (4). A basic course in language. Includes

traditional grammar; use and evaluation of dictionary information; levels and styles of usage; cultural and dialectal variants; the distinctive sounds, phonotactics, and prosodic features of English; the spelling system.

g-ENG 115. Introduction to Fiction and Drama. (4). Critical approaches to selected pieces of fiction and drama to develop students' skills in reading these genres. Similarities and differences between the two genres will be emphasized. Credit will not be given for ENG 115 if a student had had either ENG 112 or ENG 113.

d-ENG 202. Writing about Language. (4). Prerequisite, ENG 101, 114. Introduces expository writing skills beyond those of Freshman English, including reports, abstracts, summaries, and a brief research paper. Reviews language concepts presented in English 114; special emphasis on language in the context of society.

g-ENG 211. Medieval Literature. (4). A study of selected works from the Old English and Middle English periods.

g-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.

g-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.

g-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.

g-ENG 215. Victorian Prose and Poetry. (4). A survey course covering a number of Victorian writers and the themes running through their writings. Special emphasis upon intellectual currents of the age, such as Utilitarianism, the problems raised by industrialism, attitudes toward science, and the new aestheticism.

g-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.

g-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.

g-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.

g-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.

g-ENG 225. American Literature: 1914 - 1939. (4). An intensive study of selected American writers and/or themes of the years 1914 - 1939.

g-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.

g-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.

g-ENG 231. Great Writers in England or America. (Maximum 12). The in-depth study of one English or American writer not otherwise examined at length in another course. Subject of the course to be determined by subtitle. No subtitle may be taken more than once for credit.

g-ENG 232. Great Writers of the World. (Maximum 12). An in-depth study of one writer of the world, excluding those of England and America, not otherwise examined at length in another English Department course. Subject of the course to be determined by subtitle. A subtitle may be taken only once for credit.

d-ENG 240. Creative Writing: Introduction to Poetry. (4). An introduction to the techniques involved in writing poetry.

d-ENG 241. Creative Writing: Introduction to Fiction. (4). An introduction to the techniques involved in writing fiction.

d-ENG 250. 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.

- g-ENG 260. Women's Biography. (4).** A course which briefly evaluates biography as a genre and primarily stresses the content of selected life stories about and by women who have struggled to succeed in a male-dominated world.
- g-ENG 310. Shakespeare: Early Plays. (4).** The reading and understanding of the early plays of Shakespeare.
- g-ENG 311. Shakespeare: Later Plays. (4).** The reading and understanding of the later plays of Shakespeare.
- d-ENG 319. Advanced Expository Techniques. (4).** Prerequisite, ENG 101, 202. A course devoted to the reading, writing and formal analysis of various prose pieces, the definition of tropes, the description of an identification of the logical fallacies -- particularly in modern political speeches -- through the examination of the classical rhetoricians, ancient and modern.
- d-ENG 321. Generative-Transformational Grammar. (4).** Prerequisite, ENG 250. 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.
- g-ENG 325. Studies in Science Fiction. (4). (Maximum 12).** Reading and discussion of works of science fiction and a view of science fiction's history and relevance.
- g-ENG 326. Advanced Studies in Science Fiction. (Maximum 12).** In-depth study of the works of one or more science fiction writers. Authors to be studied will be designated by subtitle, for example: Asimov, Heinlein, and Clarke. No subtitle may be taken more than once for credit. Only 4 credit hours of ENG 326 may be applied toward the English major or minor.
- g-ENG 327. Women and Sex in Science Fiction. (4).** A study of the treatment of women and sex in science fiction from the 1930's to the present.
- d-ENG 340. Creative Writing: Advanced Poetry. (4).** Prerequisite, ENG 240 or permission of instructor. A course for students to improve their writing of poetry.
- d-ENG 341. Creative Writing: Advanced Fiction. (4).** Prerequisite, ENG 241 or permission of instructor. A course for students to improve their writing of fiction.
- g-ENG 360. Chaucer. (4).** An introduction of the language and literature of Geoffrey Chaucer.
- g-ENG 402. The Short Story. (4).** The study of typical modern short stories to observe the methods of modern writers and interpretation of our present-day life embodied in this form of literature.
- g-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.
- g-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.
- g-ENG 405. Contemporary American Drama. (4).** A comprehensive view of the best dramatic literature of the modern American theater.
- g-ENG 406. Modern Drama Since Ibsen. (4).** A study of the developments in modern European and American drama since the time of Ibsen.
- g-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.
- g-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.
- g-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.
- g-ENG 410. History of Ideas in Literature. (4).** An intensive chronological study of various of the significant themes in literature.
- g-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.

g-ENG 414. 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.

g-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.

g-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.

d-ENG 418. Grammatical Analysis. (4). A study of comparison of grammatical systems that have been devised for the description of the English language. Approximately 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.

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.

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.

ENG 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Not for General Education credit.

g-ENG 430. Studies in World Literature. (Maximum 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.

g-ENG 441. Colloquium in Literature. (Maximum 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.

g-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

g-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.

f-ENST 120. Humans' Attitudes Toward Their Physical and Social Environments. (3). Prerequisite, ENST 110 recommended. This course will study the nature of human perceptions and attitude formation toward the environment, as well as the various behavioral change strategy alternatives that are involved in attempts to understand and solve current environmental problems.

f-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.

h-ENST 209. Energy and the Environment. (3). A study of past, present and future methods of energy production and limitations imposed by the laws of physics. Applications to transportation, home and industry are discussed.

h-ENST 211. Chemistry and the Environment. (3). This course will cover the

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natural chemical cycles, the impact of man's activities on those cycles, and the limits and restrictions to their restoration. Topics to be covered will include nuclear wastes, food additives, water and air pollution, pesticides and more.

h-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 humanity.

f-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.

f-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.

h-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.

h-ENST 255. Geological Hazards. (3). The role of geology in human interaction with the 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.

h-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 human survival is the main aim of this course.

f-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: consumership, materialism, alienation. Galbraith's social balance and the tactics of community organization and change agents.

h-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 impacts on natural resources and the environment.

h-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 humans and the natural environment.

h-ENST 310. Future Environments and Ecosystem Modification. (1). Prerequisites, all 100 and 200 ENST courses. This course will be concerned with humanity'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.

ENST 340. Internship in Environmental Studies. (5 - 18). This course is intended to provide the student with practical, on-the-job learning experience and training in a variety of professional areas related to the environment. The exact amount and applicability of credit hours and the exact nature of the experience to be engaged in by the student is individually arranged. Consult the Environmental Studies Coordinator for further information.

h-ENST 350. Environmental 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 humans.

g-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.

ENST 422. Individual Studies. (Maximum 4). Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on an environmental investigation of particular interest. Documentation in the form of a final paper must be filed before credit is given. See Environmental Studies Coordinator for further details.

EARTH SCIENCE

h-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. Credit may not be applied toward Earth Science major or minor.

h-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-courses will be three weeks long.

h-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.

h-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

d-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.

d-FA 110. Arts, Man and Culture I. (4). A general survey of western art from antiquity through the early Christian (5th century). Emphasis is placed on major movements, methods of analysis, historical criteria, changes, and development of styles.

d-FA 111. Arts, Man and Culture II. (4). A general survey of western art including the arts of the early migratory arts of 6th century through Renaissance (1600). Emphasis is placed on major movements, methods of analysis, historical criteria, changes, and development of styles.

d-FA 112. Arts, Man and Culture III. (4). A study of art which occurred after mannerism, baroque, rococo through present day.

d-FA 113. Lettering. (2). A study of basic lettering forms and their variants, layout and design, manuscript writing, showcards and posters.

d-FA 114. Elementary Crafts Design. (2). Various approaches and uses of simple paper construction suitable for use in the elementary art program.

d-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.

d-FA 121. Foundations Lecture I. (2). Theory and discussion of perceptual skills. Must be taken concurrently with FA 122.

d-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.

d-FA 123. Foundations Lecture II. (2). Theory and discussion of conceptual skills. Must be taken concurrently with FA 123.

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d-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.

d-FA 125. Foundations Lecture III. (2). Theory and discussion of Communicative and expressive skills. Must be taken concurrently with FA 126.

d-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.

d-FA 202. Figure Drawing. (3). The principles of drawing applied to the human figure. Study from life emphasizing essential anatomy and aesthetic relationship.

d-FA 203. Introduction to Water Color Painting. (3). Purpose and experience in painting with watercolor.

d-FA 207. Problems in Design. (3). Problems associated with form and function in design with emphasis on physical space.

d-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.

d-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.

d-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.

d-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.

d-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.

d-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.)

d-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 sculpture 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 for 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.

d-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.

d-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.

d-FA 270. Introduction to Jewelry and Silversmithing. (3). Permission of instructor. Basic forming forging, soldering, casting techniques and finishing incorporated in creative jewelry techniques.

d-FA 302. Life Drawing. (3). Prerequisite, FA 202. Study from life emphasizing individual interpretation, pictorial composition, inventive media.

d-FA 303. Watercolor Painting. (3). Prerequisite, FA 203. Watercolor painting with special emphasis on composition and design.

d-FA 305. Problems In Advanced Design. (3). Prerequisite, FA 207. Practical application of design theories with emphasis on individual student experiences.

d-FA 307. Sculpture: Methods and Materials. (3). Prerequisite, FA 258. Theoretical and practical experience in traditional and experimental approaches to making sculpture.

d-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.

d-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.

d-FA 310. Advanced Intaglio and Relief Printmaking. (3). Prerequisite, FA 259. Individual development in creative color printmaking. Color etching, mixed media mono and drypoint.

d-FA 311. Lithography. (3). Prerequisite, FA 259. Problems in Lithography including advanced technical processes and photo-plate combined and color lithography printing processes. Emphasis on developing individual competency, both technically and conceptually, through assigned projects. Drawing as related to graphics will be stressed.

d-FA 315. Crafts: Design on Fabrics. (3). Prerequisite, FA 215. Exploring old and new techniques of fabric decoration.

d-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.

d-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.

d-FA 318. Hand Loom Weaving Techniques. (3). Prerequisite, 218. Investigation and exploration of the various techniques suitable for present-day weaving.

d-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.

d-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.

d-FA 321. Interpretive Drawing. (3). Prerequisite, FA 202. Study of nature, still-life, imagination. Emphasis on individual interpretation, pictorial composition, inventive media.

d-FA 327. Ceramic Design. (3). A study involving the application of various ceramic decorative processes to hand built and wheel thrown clay forms.

d-FA 331. Sculpture Studio. (3). Prerequisite, FA 258. Individual application of design and technical skills in making sculpture.

d-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.

d-FA 337. Glaze and Clay Body Formulation. (3). Prerequisite FA 217 or equivalent. An exploration of ceramic glazes and clay bodies with emphasis on developing original glazes and clay bodies to suit individual modes of ceramic expression.

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- FA 339. Leading Ideas in Art for Teachers. (Eem/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.
- d-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-headings 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.
- d-FA 359. Intaglio and Relief Printmaking. (3).** Prerequisite, FA 259. Problems in intaglio printmaking including technical process, etching and monoprints.
- d-FA 360. Art of the Ancient Near East. (4).** A survey of the arts and history of Egypt and Mesopotamia.
- d-FA 362. Far Eastern Art. (4).** A survey of the arts and culture of India, China, and Japan.
- d-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.
- d-FA 364. Medieval Art. (4).** A detailed study of the 12th, 13th, and 14th century art as it relates to Medieval philosophy.
- d-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.
- d-FA 366. Renaissance Art. (4).** A detailed study of Renaissance Art with emphasis on the humanistic aspects.
- d-FA 367. Baroque Art. (4).** An in-depth study of the Art of the Mannerist and Baroque periods.
- d-FA 368. Primitive Art. (4).** A study of the arts, concepts and cultures of tribal societies; with emphasis on African, Oceanic, and American Indian.
- d-FA 369. American Art. (4).** Introduction to the history and arts of America, from the colonial period to the twentieth century.
- d-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.
- d-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.
- d-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.
- d-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.
- d-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 Ashnati, Ife, Benin, Yoruba, Cameroon.
- d-FA 390. Contemporary Imagery and Ideas. (3).** A study of current imagery and ideas prevalent in the main stream of contemporary aesthetic practice.
- d-FA 402. Life Drawing. (3).** Prerequisite, FA 302. Study from life emphasizing individual interpretation, pictorial composition, inventive media.
- d-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.

d-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.

d-FA 407. Sculpture: Methods and Materials. (3). Prerequisites, FA 258, 307. Theoretical and practical experience in traditional and experimental approaches to making sculpture.

d-FA 409. Intermediate Printmaking. (3). Prerequisite, FA 309. Advanced creative intaglio methods; etching, drypoint, sugarlift ground, mixed media with monoprint, photo engraving.

d-FA 410. Advanced Intaglio and Relief Printmaking. (3). Prerequisite, FA 310. Advanced color intaglio and relief printmaking. Woodcut, etching and monoprint mixed media.

d-FA 411. Lithography. (3). Prerequisite: FA 259. Problems in Lithography including advanced technical processes and photo-plate combined and color lithography printing processes. Emphasis on developing individual competency, both technically and conceptually, through assigned projects. Drawing as related to graphics will be stressed.

d-FA 415. Crafts: Design on Fabrics. (3). Prerequisite, FA 215. Exploring old and new techniques of fabric decoration.

d-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.

d-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.

d-FA 418. Hand Loom Weaving Techniques. (3). Prerequisite, FA 218. Investigation and exploration of the various techniques suitable for present-day weaving.

d-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.

d-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.

d-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.

d-FA 425. Figure Painting Studio. (3). Prerequisites, FA 220, 202. Painting from the human figure.

d-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.

d-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 or her educational emphasis.

d-FA 433. Mixed Media Painting Studio. (3). Prerequisite, FA 220. Experimental approaches to problems in painting emphasizing a variety of media and techniques.

d-FA 459. Intaglio and Relief Printmaking. (3). Prerequisite, FA 359. Advanced creative intaglio printmaking including advanced technical process and monoprint mixed media, photo engraving.

d-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 306. 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 308. Workshop in Crafts - In Florence. (3). Designed for advanced students only with techniques of various crafts of the area being introduced.

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 384. 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 385. 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 386. 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 367. Contemporary Art - In Florence. (3). A look at modern works connecting the past and the present.

FA 388. History of Architecture - In Florence. (4). Study of Italian architecture from Classical and Etruscan to modern architecture.

FA 389. 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 391. 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 392. 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 393. Comparative Urbanistics - In Florence. (3). A study of the science of urbanistics as it relates to the different culture patterns; the class is conducted so that urbanistics can be read as an artistic language.

FA 394. 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 398. Modern Man's Relationship - In Florence. (3). An investigation of artistic expression and the various forms and changes that these expressions have undergone in relation to our position as modern people.

FA 398. Old Master's Technique - In Florence. (3). Extensive study of techniques used in various periods of painting applied to study of the individual artist as selected by students.

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 428. Seminar in the Arts - In Florence. (3). Intercultural team-teaching seminar in which all artistic problems will be analyzed and discussed.

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 LANGUAGE

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. S-U grading.

FL 331. Teaching Foreign Language in the Middle School. (2). Prerequisite, intermediate standing or permission. Students will cooperate in planning, creating and presenting foreign language materials in a clinic capacity at the middle school 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.

d-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.

FRENCH

d-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.

d-FR 102. Elementary French II. (5). Summer Quarter: Must enroll for FR 101 and 103. Continuation of FR 101.

d-FR 103. Elementary French III. (5). Summer Quarter: Must enroll for FR 101 and 102. A continuation of FR 102.

d-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

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composition. Drill in use of the phonetic alphabet.

d-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 have had FR 201.)

d-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.)

d-FR 200. Seminar in French Drama. (3). (Maximum 6). Prerequisite, enrollment in or completion of at least a second year course. Course may be taken twice for credit. 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.

d-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.

d-FR 311. Intermediate French Composition. (3). Prerequisite, two years of college French. A course designed to perfect the student's ability to express himself or herself 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.

d-FR 312. Intermediate Review Grammar. (3). Prerequisite, two years of college French. Students will review principle elements of French grammar within the context of oral and written usage of the language. The classwork includes oral discussion and oral presentations along with some composition writing. This class is considered as preparatory to the conversation and composition courses and will be conducted in French.

g-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.

g-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.

g-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.

g-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.

g-FR 340. French Civilization I. (3). Prerequisite, two years college French. The study of French civilization and culture from prehistoric times through the 17th century. The course includes the historical, geographical, economic, political, artistic, and literary development of the country. The class will be conducted in French.

g-FR 341. French Civilization II. (3). Prerequisite, two years college French. The study of French civilization and culture from 1700 to the end of the Third Republic. The course includes the historical, geographical, economic, political, artistic, and literary development of the country. The class will be conducted in French.

f-FR 342. 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 include the artistic and literary development of 20th century France. The course will be conducted in French.

d-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 or her 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 of 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.

g-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.

d-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.

d-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. Not for General Education credit.

g-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.

g-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.

g-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.

GEOGRAPHY

f-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.

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1-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.

1-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.

1-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."

1-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.

1-GEOG 148. Anglo-America. (5). A study of regions and their interdependence. Land use, social and economic problems emphasized.

1-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.

1-GEOG 315. Resource Management. (3). An exploration of the theoretical nature of man-environment systems from the geographical viewpoint, accompanied by an examination of specific resource management and problem-solving practices in current use in our society. Emphasis is on the geographical component of these practices.

1-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.

1-GEOG 326. Africa. (5). Relationships between the physical and cultural patterns. Land use, resource development, social and political problems.

1-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.

1-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.

1-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.

1-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.

1-GEOG 343. Western Europe. (3). A study of the relationships between the physical and cultural environments, including land use, resources, economic and political problems.

1-GEOG 344. Asia (3). The countries of Asia in terms of their physiography, climates, regions, cultural landscapes, social organizations and economic activities.

1-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.

f-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.

f-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.

f-GEOG 355. Population Geography. (3). Investigates the distribution of world population through the related topics of migration, settlement, urbanization and utilization of natural resources.

f-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.

f-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.

f-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.

f-GEOG 364. Maps and Their Uses. (2). This 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.

f-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.

f-GEOG 370. Historical Geography of the City. (3). The origins of cities and the distribution, growth, and structure of pre-industrial and industrial cities.

f-GEOG 371. Urban Geography of the Contemporary City. (3). Analysis of land-use patterns, transportation, and functions of North American cities.

f-GEOG 372. Urban-Social Geography. (4). Analysis of the social, behavioral, political and demographic factors which influence the spatial arrangements and environmental patterns of the contemporary North American city.

f-GEOG 392. Field Course in Geography. (3 - 15). (Undergraduate and Graduate). Study and application of the techniques used in solving the geographic problems in the field, together with the effective presentation of the results of such studies.

f-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.

GEOG 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. Not for General Education credit.

f-GEOG 470. Urban and Regional Planning. (3). Principles and practices employed in urban and regional planning and how they are affected by public policy and private interests. Prerequisite, consent of the instructor or any two of the following: Historical Geography of the City; Urban Geography of the Contemporary City; Urban Social Geography; Urban Ethnology; Urban Economics; Urban Politics; Urban Sociology.

f-GEOG 490. Problems in Geography. (Maximum 9). A series (three) of advanced

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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.

h-GEOL 100. General Geology. (4). (3 lecture, 2 laboratory.) A general survey of geology designed primarily for non-science majors. Topics include origins and classifications of rocks and minerals, origins of landscapes, interior of the earth, earthquakes and volcanoes, mountain building, continental drift, fossils, and earth history. Field trips required. Students cannot receive credit for both GEOL 100 and GEOL 201.

h-GEOL 201. Physical Geology. (5). (4 lecture, 3 laboratory.) An in-depth introduction to geology designed primarily for science majors. Earth materials and the physical processes operative on and beneath the earth's surface. Laboratory activities include rock and mineral identification and a study of topographic and geologic maps. Field trips required. Students cannot receive credit for both GEOL 100 and GEOL 201.

h-GEOL 202. Historical Geology. (5). (4 lecture, 3 laboratory.) Prerequisite, GEOL 100 or 201. Geologic history of the earth and techniques and principles geologists use to interpret this history from rocks. Topics include geologic time, history of earth's physical features, origin of atmospheric and hydrosphere, origin and evolution of life on earth, fossils, and local geologic history. Field trips required.

h-GEOL 320. Mineralogy. (5). (3 lecture, 6 laboratory.) Prerequisites, GEOL 201, Trigonometry, CHEM 105, consent of instructor. This course includes introductory work in crystallography, descriptive and determinative mineralogy, and the study of mineral occurrences and associations. The laboratory stresses identification of minerals by means of physical and x-ray techniques. One Saturday field trip required.

h-GEOL 330. Earth Materials. (4). (2 lecture, 4 laboratory.) Prerequisites, GEOL 100 or 201. A study of crystals, minerals, and igneous, sedimentary and metamorphic rocks; their origins, descriptions and bases for classification.

h-GEOL 340. Paleontology. (5). (3 lecture, 6 laboratory.) Prerequisite, GEOL 202 or consent of instructor. A study of fossil animals and plants--their morphologies, classifications, life histories, trends of evolution, ecologies, and their uses as stratigraphic tools.

h-GEOL 370. Structural Geology. (5). (4 lecture, 3 laboratory.) Prerequisites, GEOL 201, PHYS 260, Trigonometry, consent of instructor. This course deals with the description and classification of the geologic structures of the Earth's crust, with the mechanics of rock deformation, and with the theories and ideas concerning the origins of geologic structures. Four Saturday field trips required.

h-GEOL 420. Optical Crystallography and Petrography. (5). (3 lecture, 6 laboratory.) Prerequisites, GEOL 320, consent of instructor. 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.

GEOL 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.

h-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.

h-GEOL 450. Sedimentology. (4). (3 lecture, 3 laboratory.) Prerequisites, GEOL 202 or consent of instructor. A study of processes of sedimentation, environments

of deposition, and genesis, classification, and analysis of sedimentary rocks.

h-GEOL 455. Stratigraphy. (4). (3 lecture, 3 laboratory.) Prerequisites, GEOL 202 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.

h-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.

h-GEOL 464. Glacial and Quaternary Geology. (3). Prerequisite, GEOL 100 or 201. A survey of geologic phenomena which characterized the Quaternary Period with emphasis on the behavior of glacier -- the dynamics, growth and recession, associated landforms and sediments, and climatic implications. Two Saturday field trips required.

h-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.

h-GEOL 480. Geologic Field Methods. (5). (3 lecture, 6 laboratory.) Prerequisites, GEOL 202, GEOL 370, and consent of instructor. An introduction to the techniques employed by the field geologist to obtain and record information from rocks in the field. Using standard geologic field equipment each student will conduct investigations and prepare a geologic map of an area of moderately complex structure.

h-GEOL 490. Rocky Mountain Geology Seminar. (3). Prerequisite, consent of instructor. Focus of course is three-day field trip to an area within the Rocky Mountains. In class, topics relevant to geology of area visited will be discussed in seminar format. Students will use geologic literature to research specific topics, and will prepare and deliver oral reports on these topics.

h-GEOL 495. Marine Geology. (3). Prerequisite, GEOL 202 or consent of instructor. A study of marine geologic processes and forms, including continental margin and oceanic basic structure and geomorphology, marine sedimentation, nearshore processes and coastal landforms.

GERMAN

d-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, dialogues, and free conversation. Supplementary work in the language laboratory is required. Language structure is covered inductively.

d-GER 102. Elementary German II. (5). A continuation of GER 101.

d-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.

d-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.

d-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

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intermediate text with conversational approach use with continued drill in the language laboratory.

d-GER 202. Intermediate German II. (4). Prerequisite, GER 201. A continuation of GER 201.

d-GER 203. Intermediate German III. (4). Prerequisite, GER 202. A continuation of GER 202.

g-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.

g-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.

g-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.

g-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.

d-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.

d-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.

d-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.

g-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.

d-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.

d-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.

g-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. Not for General Education Credit.

g-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.

g-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.

g-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.

g-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 on 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

I-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.

e-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.

I-HEC 111 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.

e-HEC 141. Techniques of Food Preparation. (4). (2 lecture, 4 laboratory.) Food selection, preparation, storage, and meal service.

e-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.

e-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.

e-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 fiber using methods appropriate to the pattern and fabric. Speed techniques of tailoring included.

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HEC 207. Think Metric. (1). (2 laboratory.) To understand and apply the metric system. Laboratory experience.

I-HEC 212. Management Dynamics. (3). Prerequisite, HEC 111. Designed to analyze concepts underlying the management process, and to establish guidelines basic to judicious use of family resources in goal attainment.

I-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.

I-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.

e-HEC 242. Principles of Food Preparation. (4). (2 lecture, 4 laboratory.) Prerequisite, HEC 141 or successful completion of competency exam; HEC 250 or 251. Physical and Chemical changes which occur during processing, storage and preparation of foods.

HEC 243. Nutrition Module: Medical Terminology. (1). The fundamental principles of recognizing, analyzing and building scientific words of Greek and Latin origin, contemporary scientific terminology and medical abbreviations.

HEC 246. Food Module. (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.

e-HEC 250. Principles of Human Nutrition. (3). A study of contemporary nutrition issues influencing man's well being.

HEC 251. Nutrition I. (3). Prerequisite, CHEM 130. Essential nutrients and their metabolic function in promoting total wellbeing of the individual during different stages of the life cycle.

e-HEC 306. 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.

e-HEC 315. Consumer Education. (3). Background of information relevant to analyzing and resolving consumer problems and relating social and psychological factors to consumer behavior.

I-HEC 316. Consumer Protection. (3). Information concerning local, state, and federal organizations and agencies and their functions, including existing laws and pending legislation written for the protection of the consumer.

I-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.

e-HEC 325. Home Nursing. (2). Principles of home nursing procedures demonstrated and opportunities provided for laboratory experience.

e-HEC 340. Contemporary Food Preparation. (4). (2 lecture, 4 laboratory.) Study of food selection and preparation principles in relationship to meal planning.

HEC 343. Nutrition Module: Interpreting Lab Data. (1). Analysis of the laboratory tests most widely used in the evaluation of nutritional status and the determination of their reliability for diagnosing deficiency states.

HEC 349. Food Module. (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.

I-HEC 351. Nutrition for the Older Adult. (3). Prerequisites, HEC 250, 251 or successful completion of self study program. Nutrition principles applied to changed needs of the mature adult focusing on bio-psycho-social factors.

HEC 353. Applied Nutrition. (4). Prerequisites, HEC 251, 243, 343, and ZOO 250. Study of the nutrition intervention for acute and chronic stressors.

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. Study of the adaption of normal nutrition to mental or physiological stressors of a chronic nature.

HEC 356. Diet Therapy. (1). Prerequisites, HEC 251, ZOO 250. Taught concurrently with NURS 302, 340. Fundamental principles associated with the nutritional interventions due to acute stressors.

HEC 357. Therapeutic Nutrition. (3). Prerequisites, HEC 251, ZOO 250. Study of adaptive nutrition patterns for acute and chronic stressors throughout the life cycle.

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 Vocational 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 Vocational Home Economics Education. (3). Prerequisites, 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.

e-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.

e-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.

e-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). (2 lecture, 2 laboratory.) Selection, care and use of household and clothing textiles.

e-HEC 384. Seminar in Textiles and Clothing. (3). Research, discussion of topics of current interest in the fields of textiles and clothing.

HEC 392. Survival Sewing. (3). (2 lecture, 2 laboratory.) Construction of 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.

f-HEC 393. Field Experiences in Cultural Awareness. (1 - 15). Opportunity to develop appreciation of cultural and historical backgrounds and contributions of various population groups in the USA or foreign countries.

e-HEC 395. Fashion Design - Flat Pattern 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.

HEC 396. Fashion Design in Draping. (4). (2 lecture, 4 laboratory.) Creative experiences in clothing through draping fabric on a form which has been made to the students' measurements.

HEC 409. Home Economics Internship Program. (3 - 18). Prerequisites, majors

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only, minimum junior standing, minimum GPA of 2.7, consent of faculty coordinator. Field experiences which integrate academic knowledge into a practical setting for career preparation.

HEC 419. Management for Contemporary Living. (3). Experiences in creative approaches to alternate lifestyles: low income, affluent, handicapped, employed, and "mother earth" approach.

e-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.

f-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.

e-HEC 445. Experimental Studies. (4). (2 lecture, 4 laboratory.) Research of the chemical and physical changes which result from various manipulations on food. Sensory, chemical and physical methods of food-quality assessment are employed.

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.

e-HEC 447. Quantity Food Purchasing and Preparation. (4). (1 lecture, 6 laboratory.) Prerequisite, HEC 446. Application of the principles of meal planning, food purchasing, food preparation, and food service through laboratory experiences at food service facilities on and off campus.

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 448. Food Module. (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.

f-HEC 451. Nutrition II. (3). (1 lecture, 4 laboratory.) Prerequisites, HEC 251, CHEM 281. In-depth study of human and animal nutrition.

f-HEC 456. Infant and Child Nutrition. (3). Prerequisites, HEC 250 or 251. A study of changing nutritional needs to promote maternal, infant, and child health.

HECV 460. Home Economics Wage Earning. (3). Prerequisites, HEC 363, EDFE 368, VTE 310, VTE 410. 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.

HECV 464. Reading in Vocational Home Economics. (3). Take concurrently with HECV 462 and EDFE 368. Course includes strategies for helping students read home economics materials. Implementing strategies will take place with students at Bishop-Lehr school.

HECV 461. Advanced Textiles. (3). (2 lecture, 2 laboratory.) New and modified fibers. New fabrication methods, textured yarn and modern finishes.

HECV 462. Teaching Improvement Seminar in Vocational Home Economics. (2). Discuss problems in student teaching. Taken concurrently with EDFE 470. Register separately thru EDFE.

e-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 fashion through the ages and

its influence on designs of present day clothing. Development of costumes in the courtier 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

g-HIST 100. The American Past, 1492 - 1800. (4). HIST 100 is a team taught chronological survey of American history featuring two lectures and two hours of seminar research weekly. The period covered will begin with the Columbian discovery and end with the inauguration of Thomas Jefferson.

g-HIST 101. The American Past, 1800 - 1900. (4). HIST 101 is a team taught chronological survey of American history featuring two lectures and two hours of seminar research weekly. The period covered will begin with the inauguration of Thomas Jefferson and end with the assassination of William McKinley.

g-HIST 102. The American Past, 1900 - Present. (4). HIST 102 is a team taught chronological survey of American history featuring two lectures and two hours of seminar research weekly. The period covered will begin with the assassination of William McKinley and end with the departure of Richard Nixon.

g-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.

g-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.

g-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.

g-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.

g-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.

g-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.

g-HIST 175. Themes in American History. (4). A topical approach to American history concentrating on specific themes which have shaped America's past and continue to influence its destiny. Not open to history majors or minors.

g-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.

g-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.

g-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.

g-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.

g-HIST 250. Geographic Influences in United States History. (2). Relationship of Geography to the discovery, exploration, settlement, and development of the United States.

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- g-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.
- g-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.
- g-HIST 258. The Hispano in the American Southwest. (4).** 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.
- g-HIST 260. History of Mexico. (4).** An introduction to Mexican history from pre-Columbian times to the present. Emphasis will be on the nineteenth and twentieth centuries stressing events leading to the 1910 Revolution and its aftermath. Social, cultural, and economic changes also will be covered.
- g-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.
- g-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.
- g-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.
- g-HIST 280. American Immigration. (4).** An examination of immigration to the United States emphasizing the nineteenth and twentieth centuries. While focus will be on immigration to the United States, there will be comparative reference to migrations to other countries. Among the major immigrant groups studied will be the Irish, English, Germans, Italians, Scandinavians, Jews, Chinese, and Japanese.
- g-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.
- g-HIST 286. 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.
- g-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.
- g-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.
- g-HIST 303. 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.

g-HIST 304. 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.

g-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.

g-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.

g-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.

g-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.

g-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.

g-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.

g-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.

g-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.

g-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.

g-HIST 350. Ancient History. (4). The life and institutions of the Ancient Near East and Greece, cultural development, living conditions, and recent archaeological discoveries.

g-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.

g-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.

g-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.

g-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 com-

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mon law, the system of courts, juries, and representative institutions. The course is especially recommended for pre-law students.

g-HIST 371. History of England, 1471 - 1550. (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.

g-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.

g-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.

g-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.

g-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.

g-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.

g-HIST 387. Modern Italy. (4). This course will emphasize the Resorgimento, Italy's role in the New Imperialism, World War I, the rise and development of Mussolini's Italy, Italy's checkered career in World War II, her inclusion in the Common Market, and future trends.

g-HIST 389. Adolf Hitler and the 3rd Reich. (4). Emphasizing the psycho-historical approach, this course will examine the mind and personality of Adolf Hitler, and the basic features of his Germany within the historical framework of the period, 1930 - 1945.

g-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.

g-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.

g-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.

g-HIST 400. Interdisciplinary Readings in History. (Maximum 12). A course for history majors and minors dealing with the contributions that the social and behavioral sciences make to the reconstruction of the past.

g-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.

g-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.

g-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.

g-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.

g-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.

g-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.

g-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.

g-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.

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.

g-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.

g-HIST 425. American Intellectual History since 1865. (4). This 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.

g-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.

g-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 *justalismo* of Peron, the *Estado Novo* of Vargas, and the flirtations with socialism in Chile. To be offered every other year.

g-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.

g-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.

g-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.

g-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.

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g-HIST 458. History of the Renaissance. (4). A study of political, social, economic, religious and cultural development of 1300 - 1500.

g-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.

g-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.

g-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.

g-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.

g-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.

g-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.

g-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.

g-HIST 486. Contemporary European History. (4). An advanced study of European 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, and the causes and consequences of two world wars.

g-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.

g-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.

g-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.

g-HIST 495. Modern Southeast Asia. (4). An historical analysis of those areas of southeast Asia which have been recently thrust into collusion with the modern world. Included will be a study of Thailand, Burma, Indonesia, Vietnam, and the Philippines.

g-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.

g-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 - 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.

- e-HPER 101. Field Sports. (1).
- e-HPER 102. Winter Sports. (1).
- e-HPER 103. Badminton. (1).
- e-HPER 104. Archery. (1).
- e-HPER 105. Movement Fundamentals. (1).
- e-HPER 106. Tumbling. (1).
- e-HPER 108. Gymnastics. (2).
- e-HPER 109. Physical Fitness and Conditioning. (1).
- e-HPER 110. Orienteering. (1).
- e-HPER 111. Softball. (1).
- e-HPER 112. Tennis. (2).
- e-HPER 113. Soccer. (1).
- e-HPER 114. Wrestling. (1).
- e-HPER 115. Volleyball. (1).
- e-HPER 116. Golf. (2).
- e-HPER 118. Basketball. (1).
- e-HPER 119. Rugby Football. (1).
- e-HPER 120. Bowling. (1).
- e-HPER 122. Fencing. (2).
- e-HPER 125. Swimming. (1).
- e-HPER 126. Skiing. (1).
- e-HPER 128. Roller Skating. (1).
- e-HPER 129. Basic Mountaineering. (1).
- e-HPER 130. Modern Dance. (1).
- e-HPER 131. Dance Performance. (1). Prerequisite, consent of adviser.
- e-HPER 132. Jazz Dance. (1).
- e-HPER 133. Social Dance. (1).
- e-HPER 134. Folk Dance. (1).
- e-HPER 135. American Square and Couple Dance. (1).
- e-HPER 136. Ballet. (1).
- e-HPER 137. Tap Dance. (1).
- e-HPER 140. Freshman Football. (1).
- e-HPER 141. Varsity Football. (1).
- e-HPER 142. Freshman Basketball. (1).
- e-HPER 143. Varsity Basketball. (1).
- e-HPER 144. Freshman Wrestling. (1).
- e-HPER 145. Varsity Wrestling. (1).
- e-HPER 147. Varsity Gymnastics. (1).
- e-HPER 149. Varsity Swimming. (1).
- e-HPER 150. Freshman Baseball. (1).
- e-HPER 151. Varsity Baseball. (1).
- e-HPER 153. Varsity Track. (1).
- e-HPER 155. Varsity Tennis. (1).
- e-HPER 157. Varsity Golf. (1).
- e-HPER 166. Intercollegiate Volleyball (Women). (1).
- e-HPER 167. Intercollegiate Field Hockey (Women). (1).
- e-HPER 168. Intercollegiate Softball (Women). (1).

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e-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.

e-HPER 192. Advanced Life Saving and Aquatic Instruction. (4). Prerequisite, Advanced Swimming skills and adequate physical fitness. Instruction in Advanced Life Saving techniques and methods of teaching swimming with emphasis on stroke mechanics and skills analysis. Upon successful completion the student will have earned American Red Cross certification in life saving and aquatics instruction.

SPECIAL CERTIFICATION COURSES

Advanced Life Saving and Water Safety Instruction: HPER 192.

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. (3). Designed to orient freshman majors with the breadth, scope, and nature of the professional program in health education.

HPER 202. Introduction to Physical Education. (2). Designed to orient freshman majors with the breadth, scope, and nature of the professional program in physical education.

HPER 203. Introduction to Recreation. (3). Designed to orient freshman majors with the breadth, scope, and nature of the professional program in 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 opportunity for professional educated workers in the field.

e-HPER 205. Issues in Health. (3). A variety of forces which currently affect the well-being of human population groups on a national and international level shall be analyzed.

h-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.

e-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.

h-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.

f-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.

e-HPER 224. Maturation 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 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.

e-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.

e-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. (3). Prerequisites, HPER 256, 293, 294. Basic Techniques, movement analysis and composition for the advanced dance student.

e-HPER 256. Improvisation and Composition Forms. (3). 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.

e-HPER 262. Standard First Aid and Personal Safety. (2).

e-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 268. Analysis and Movements of Flag Football. (1). Movements, skills, rules, and strategies.

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- HPER 266. Instructors 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).** Movements, 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. (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 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 included in a well-rounded program of physical education for the elementary school.
- HPER 289. Analysis and Movements of Skiing. (1).** Movements 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 292. Analysis and Movements of Baseball. (2).** Movements skills, rules and strategies.
- 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.

e-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 303. 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.

e-HPER 336. Human Sexuality. (3). This course shall be designed to survey the psychosocial and biophysical dimensions of man's and woman's growth and development toward optimal expression of sexual being.

f-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.

e-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.

h-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 355. Coaching of Gymnastics. (2). Prerequisite, HPER 285. Designed to prepare the student in the techniques and strategies of coaching competitive gymnastics.

HPER 356. Coaching of Field Sports. (2). Prerequisites, HPER 271, 272. Designed to prepare the student in the techniques and strategies of coaching competitive field sports.

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HPER 357. Coaching of Volleyball. (2). Prerequisite, HPER 274. Designed to prepare the student in the techniques and strategies of coaching competitive volleyball.

HPER 358. Coaching of Tennis. (2). Prerequisite, HPER 284. Designed to prepare the student in the techniques and strategies of coaching competitive tennis.

HPER 359. Coaching of Swimming. (2). Prerequisite, HPER 192 or current WSI. Designed to prepare the student in the techniques and strategies of coaching competitive swimming.

HPER 360. Coaching of Softball. (2). Prerequisite, HPER 278. Designed to prepare the student in the techniques and strategies of coaching competitive softball.

HPER 361. Coaching of Football. (2). Prerequisite, HPER 276. Designed to prepare the student in the techniques and strategies of coaching competitive football.

HPER 362. Coaching of Basketball. (2). Prerequisite, HPER 273. Designed to prepare the student in the techniques and strategies of coaching competitive basketball.

HPER 363. Coaching of Track and Field. (2). Prerequisite, HPER 277. Designed to prepare the student in the techniques and strategies of coaching competitive track and field events.

HPER 364. Coaching of Baseball. (2). Prerequisite, HPER 292. Designed to prepare the student in the techniques and strategies of coaching competitive baseball.

HPER 365. Coaching of Wrestling. (2). Prerequisite, HPER 275. Designed to prepare the student in the techniques and strategies of coaching competitive wrestling.

HPER 366. Sports Officiating. (1). Course number may be repeated, but sport designation may not. Designed to provide the background and understanding of the rules and techniques of officiating in various sports as indicated in the schedule of classes. Practical experience provided where possible.

HPER 368. Programs in Recreation. (4). Prerequisite, HPER 200, 252, 265, 266, 267. 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.

GERO 370. Reality Orientation and Remotivation Techniques. (3). A course designed to prepare the gerontology major in techniques of reality orientation to be used when dealing with moderate to severe degrees of confusion and memory loss in elderly persons. Techniques and methods using discussion groups to encourage moderately confused elderly patients in remotivation will be included.

GERO 375. Social Problems of Aging. (3). An overview of the most pressing problems from a sociological and psychological perspective confronting older persons in American society.

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 6 hours credit.) Prerequisite, HPER 380. Practical application and experience in the prevention, management, and rehabilitation of injuries occurring in the school athletic program.

HPER 432. 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 Measurements 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.

f-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 438. Physical Education for the Mentally Impaired. (3). This course is designed to provide students with the skills required to develop, implement, and evaluate physical education programs for the mentally retarded, emotionally disturbed, and learning disabled. Course content will emphasize program development according to federal regulations.

HPER 439. Physical Education for the Physically Handicapped. (3). This course is designed to provide students with the skills required to develop and implement a physical education program for the physically handicapped. Course content will address student placement in the least restrictive alternative.

HPER 440. Perceptual -- Motor Learning 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 444. Recreation and the Voluntary Agencies. (3). This course is designed to provide students with an orientation to the various voluntary agencies that operate unique programs of recreation in the community. Special attention will be given to organization, employment practices, staff, supervision, and financing.

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.

HPER 453. Advanced Internship in Recreation. (18). Prerequisite, HPER 452. Open only by permission of department chairperson. Opportunity provided for students to assume the normal responsibilities in the conduct of various kinds of recreation activities. One quarter of fulltime activity is required.

GERO 453. Internship in Gerontology. (18). Prerequisites, GERO 205, PSY 433, SOC 341, HPER 369, HPER 495. A course designed primarily to help a senior

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student majoring in Gerontology make the transition from the classroom to the practical situation. One quarter of full-time placement is required.

GERO 454. Advanced Internship in Gerontology. (18). Prerequisite, GERO 453. Open only by permission of department chairperson. Opportunity provided for students to assume the normal responsibilities in the conduct of various kinds of gerontological services. One quarter of fulltime activity 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. (3). Prerequisites, HPER 255, 256, 293, 294. Problems connected with the staging of dance performances.

g-HPER 457. Dance History and Philosophy. (4). History and development of dance as it is culturally determined and the philosophy influencing dance.

HPER 458. 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.

e-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 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 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.

GERO 490. Administration of Programs for Older Adults. (3). This course is designed to give the student a broad exposure into the various facets of administration of programs for older adults.

HPER 495. Senior Seminar. (2 - 4). Research, observation, participation, presentation and discussion of current events by students aimed at developing a personal and professional philosophy for their chosen professions.

HUMANITIES (ADMINISTERED BY ENGLISH DEPARTMENT)

g-HUM 120. Literature and Film. (4). A comparative study of literary and filmmaking techniques, the course focuses attention on significant works appearing

in both media and considers the problems of translating stories from one media to another, the effects of mutual influence, and the dimensions of perception which each affords.

g-HUM 210. Themes or Problems in the Humanities. (Maximum 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.

g-HUM 211. The Classical Ages: Greece and Rome. (4). Selected studies in Western culture from its beginnings to the decline of Rome.

g-HUM 212. The Middle Ages and the Renaissance. (4). Selected studies in western culture from its beginnings to the decline of Rome.

g-HUM 213. 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.

g-HUM 214. The Twentieth Century. (4). Selected studies of Western culture during the twentieth century.

g-HUM 215. The Literature and Arts of the Orient. (4). An introduction to the literature, arts, and thought of the Orient.

g-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.

g-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.

g-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, culture and historical phenomena.

g-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.

g-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.

g-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).

g-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.

g-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.

g-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.

g-HUM 411. Advanced Course in the Humanities. (Maximum 12). A study of one or more great literary or artistic works in relation to history, philosophy, and other arts.

HUMANITIES: UNC Program in Florence

g-HUM 310. Themes, Topics, or Problems in the Humanities: Florence. (Max-

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imum 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.

g-HUM 311. Studies in World Literature: Florence. (Maximum 12). A study of a particular theme, form, or problem as reflected in Italian and other world literature.

g-HUM 312. Comparative Studies in the Humanities: Florence. (Maximum 12). A comparative study in the art, music, philosophy and literature of Italy and those of other countries.

g-HUM 314. The Italian Humanists: Florence. (4). A study of the rise of humanism in Florence in the fifteenth century, the major contributors to this movement and their ideals.

g-HUM 318. Studies in Poetry: Florence. (4). Studies of the writing and traditional poetic forms and free verse related to the visual imagery of poetry.

INDUSTRIAL ARTS

IA 100. Introduction to Industrial Arts. (1). An orientation course describing trends and issues faced by industrial arts. Career opportunities and guidance suggestions will be offered to students as they prepare their future programs. In addition, a brief overview will be offered concerning the various professional programs within the curriculum. Or -- what you always wanted to know about industrial arts but were afraid to ask. S - U final mark.

e-IA 118. General Plastics (Synthetic Materials). (3). A general introduction to the field of plastics, emphasizing the study of materials and processes of industry. Content includes the basic processes of reinforcing (fiberglass), lamination, expandable materials, plastisol casting, assembling and finishing.

e-IA 141. Graphic Arts Fundamental. (3). Experience with the fundamental operations used in school graphic arts shops. Information about tools, machines, and materials.

e-IA 180. 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 electrical tools.

e-IA 160. General Drafting. (3). An exploratory drafting course emphasizing techniques, procedures, visualization and reading of drawings. Basic experiences in sketching and mechanical drawing of multiview, pictorial and working drawings for the novice.

e-IA 161. Principles of Drafting. (3). Prerequisite, IA 160 or equivalent recommended. Lettering, freehand sketching, geometric construction, techniques, orthographic projection, sectional, auxiliary views and dimensioning in drafting.

e-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.

e-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.

e-IA 190. Introduction to Power. (3). 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.

e-IA 214. 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.

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.

e-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. (3). Emphasis on techniques, skills and design in the use of industrial plastics materials. Includes the basic processes of molding, thermoforming, casting, mold making and machining.

IA 223. Industrial Mathematics. (2). This course provides an introduction to mathematics as applied to industrial arts and technology, specifically: manufacturing, construction, power and energy, graphics and communications. Related topics for study include: the metric system, mini-computer operation and systems analysis as applied to materials selection.

IA 241. Graphic Arts. (3). Prerequisite, IA 141. The relationship of the graphic reproduction processes used in school laboratories to industry. Emphasis upon duplicating, intaglio, stencil, planographic and photographic reproduction processes.

IA 250. Machine Woodworking. (3). Prerequisite, IA 150. The study of woods, materials, and equipment related to the woodworking area. Laboratory emphasis is on woodworking tools and machines.

e-IA 256. Upholstery. (3). Techniques and processes in the various types of upholstery for all grade levels.

e-IA 257. Woodturning. (2). Basic skills and related techniques in faceplate and spindle woodturning.

IA 259. Industrial Arts Activities for the Exceptional Child. (3). This course is designed to acquaint prospective teachers of pupils with exceptional learning difficulties with the background and methods for teaching constructional activities. They will become familiar with tools and materials that can supplement the ongo curriculum.

IA 261. Pictorial and Working Drawings. (3). Prerequisite, IA 161. Pictorial and advanced orthographic projection. Emphasis is on isometric, perspective and working drawings.

e-IA 272. Gas and Electric Welding. (3). A basic course in welding and welding technology with exposure to various welding techniques, positions and materials. A major emphasis is placed on skill development.

IA 274. Machine Tool Operation. (2). A basic course in the operation of machine tools, including lathes, drill presses, milling machines and surface grinders. Precision measurement and production techniques are emphasized throughout.

IA 281. Electro-Mechanical Equipment and Measuring Instruments. (3). 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 semiconductor theory.

IA 291. Internal Combustion and Reciprocating Engines. (3). Prerequisite, IA 190 or consent of instructor. Tuning the internal combustion reciprocating engine. Emphasis on calibration of carburetion and ignition systems. An intermediate level course requiring basic knowledge of the operational principles of the internal combustion reciprocating engine.

e-IA 299. Understanding the Automobile, a Course for Women. (3). An introductory study of the mechanical systems of the automobile. Emphasis is on exploration of operational problems and basic maintenance experiences. 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 prob-

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lems 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.

e-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 317 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 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 329. Industrial Internship. (Maximum 15). Prerequisite, adviser's recommendation and department permission. This course will provide industrial arts majors 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 adviser to meet the needs of the student. A complete report of experiences is required. Not open to graduate students. S - U final mark.

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 Education. (3). A study of the origin and development of the proposals and movements in industrial education together with consideration of the philosophical thought of selected leaders with emphasis on the United States.

IA 336. Principles of General Shop Organization. (3). Introduction to the concepts of organization and administration together with brief 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 and plastic crafts.

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.

e-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.

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 353. Furniture and Cabinet Making. (3). Prerequisite, IA 250. Design and construction of period and modern furniture, study of production methods of industry, upholstery, and woodfinishing.

e-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. Construction Technology. (3). The purpose of this course is to give students experience with tools and practices associated with various construction industry trades.

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.

e-IA 371. Art Metal and Metal Spinning. (3). Elementary course in art metal work including tool, etching, forming, piercing, enameling, and spinning.

IA 372. Advanced Welding. (3). Advanced skills in welding are developed by exercises in AC - DC arc welding and oxy-acetylene gas welding of various metals. Experiences in TIG and MIG welding of both ferrous and non-ferrous metals are provided. Consideration is given to principles of teaching, curriculum, supplies and equipment for teaching welding at the secondary and post-secondary levels.

e-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 Technology. (3). This course provides advanced experiences in the operation of machine tools with an emphasis on machine tool curriculum development and utilization at the secondary and post-secondary levels. Units for study include: tool and die making, precision jigs and fixtures, selection, testing and utilization of materials and heat treatment.

IA 377. Manufacturing Technology. (3). A course concerned with the concepts and techniques associated with manufacturing technology. The course covers such topics as research and design, manufacturing processes and distribution. Classroom activities will include both lecture/demonstration and laboratory experience.

IA 390. Solar Energy. (3). A survey of solar energy systems. Emphasis on construction of solar energy components as well as a thorough study of the principles underlying all solar energy collection and utilization.

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 393. Automotive Electrical Systems. (3). Prerequisites, IA 180 or consent of instructor. A study of automotive electrical systems from basic electricity to electronic ignition and voltage regulation. A class with equal emphasis on theory and practical laboratory exercises.

IA 396. Automotive Engine Overhaul and Repair. (3). Prerequisite, consent of instructor. The disassembly, analysis, and reassembly and calibration of the internal combustion, reciprocating engine. Emphasis is on careful and accurate standards in all phases of procedures common to engine overhaul and repair. The student must overhaul and recondition an engine as a basic class project.

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

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is given, one with the instructor and one with the chairman of the department. Not open to graduate students. Not for general education credit.

IA 433. Industrial Materials. (3). A study of the origin of 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.

e-IA 442. Black and White Photography. (3). 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 445. Color Photography -- Transparencies. (3). Prerequisite, IA 342. Study and application of color transparency photography as a tool of graphic communication. Emphasis upon the transformation of photographic ideas into effective graphic representations. Practical application in the use of reversal films and materials.

IA 446. Color Photography -- The Print. (3). Prerequisite, IA 342. Study and application of color print photography as a tool of graphic communication. Experimentation using contemporary methods of color printing.

IA 447. Photographic Illustration. (3). Prerequisite, IA 342. Study and application of still life photography as a tool of graphic communication. Emphasis upon both black and white and color photographic techniques used in studio photography for architectural, industrial-technical and commercial applications.

IA 448. Portrait Photography. (3). Prerequisite, IA 342. Study of the psychology of the personal likeness and its effect upon the public through graphic communication. Practical application in posing, lighting and portrait printing in black and white and color.

IA 452. Problems in Woodworking. (3). A study of the problems the specialized teacher in woodworking in secondary schools must meet.

IA 455. General Woods. (3). (Summers). A course to acquaint students with the use of tools, materials and processes associated with the woodworking field. Non-majors only.

IA 461. Architectural Drawing. (3). Deals with the planning and drawing of the 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 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 indi-

vidual 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

f-ICU 102. Seminar on Human Values. (3). Stinson. 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.

h-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 serves as a major part of the course.

d-ICU 108. Impact of Computers on Society. (3). Mc Nerney. 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.

h-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 are a function of our ability to understand the universe.

d-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.

e-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 needs.

e-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 brushes preparing the ink and paper. Holding the brush and brush practice with Chinese Lettering.

h-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.

h-ICU 115. Meteorology by Inquiry. (3). Trowbridge. This course is designed to illustrate how knowledge of weather is obtained by inquiry and investigation. The

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basic format is project oriented with opportunities for students to study local meteorology with simple equipment and apparatus. Field trips are made to relevant locations where meteorological information is collected.

d-ICU 116. Visual Images-Visual Thinking. (3). Moody. A laboratory-oriented course with emphasis on visual/concrete means of thinking, problem solving, and communications (followed by verbal analysis). Involvement is necessary; drawing skills are not. Students will select problems and content from academic disciplines, hobbies, etc. Small group and individual work, minimal lecture, maximal interaction.

f-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.

g-ICU 203. The Many Faces of Hell. (4). Lackle. 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.

g-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."

h-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.

h-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.

e-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.

e-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.

g-ICU 208. Liberation: Myth to Ms. (5). Willcoxon. 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."

f-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 attitudes toward death, including their own. Also the course will deal with grief and mourning and reactions to dying persons to imminent death.

g-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.

d-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 or her own inner resources, experience and dramatic instinct.

g-ICU 217. Music In American History and Culture. (3). Lutz. The purpose of this course is to examine select 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 of specifically American elements in classical music.

g-ICU 218. Asian Studies: The Great Traditions of China. (3). Santos. 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.

g-ICU 219. Asian Studies: The Great Traditions of South Asia. (3). Edgerton. 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.

g-ICU 220. Asian Studies: The Great Traditions of Southeast Asia. (3). Ayer. An interdisciplinary approach to the cultures of Southeast Asia, with special attention to the integration of history, socio-economic patterns, political traditions, religions, literary and artistic accomplishments of various countries in understanding the region today.

g-ICU 221. Japanese Literature and Art. (4). Brewer. An introduction to Japanese poetry, tales, and novels, and a corresponding study of their painting and other arts.

g-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.

g-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.

g-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.

e-ICU 226. General Kinesiology: A Study in Human Movement. (3). Barham, 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.

f-ICU 228. Witches and Virgins: Northern Mediterranean Women. (3). C. Higgins. An investigation of the social and symbolic position of women in Mediterranean society within the context of particular ethnographic settings. Discussions are viewed through historical and contemporary perspectives. Particular emphasis is given to Italian, Greek, and Spanish Ethnographic materials.

g-ICU 229. Castle and Cathedral: Aspects of Medieval Life. (4). Applegate. An introduction to secular and religious aspects of the medieval life style, with emphasis on their many contributions to modern culture.

e-ICU 231. Women in Sport. (2). Rodriguez. A course designed for students to study sexism in sport, to hopefully transcend sexism so that each individual may feel free to pursue his or her potential in sport and allow others to do the same.

f-ICU 232. Interpersonal Effectiveness Training. (3). Giebler. This course is designed to provide systematic training and skills proven useful for effective self help and interpersonal relating. Teaching methods will include general and specific instruction, video taped and live modeling, individual practice and coaching, immediate video tape, group and instructor feedback.

g-ICU 233. Asian Studies -- Modern China. (4). Santos. An interdisciplinary introduction to modern Chinese culture through the study of Chinese Literature in translation, 1917 - 1952. Utilizing literary texts as a base, special attention will be given to the historical development, socio-economic patterns, and religious, political, and philosophical traditions of the Chinese.

e-ICU 302. Contemporary Issues in Drug Abuse. (3). Harrison. This is a course designed to provide the student with current information concerning the physiological, psychological and sociological aspects of drug use, misuse and abuse. The availability and functionality of drug abuse programs and agencies dealing with prevention and rehabilitation will also be presented as will current research.

g-ICU 304. The American Nightmare: Protest Against the Dream. (4). Willcoxon. 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.

g-ICU 305. POP! Went the Dream. (4). Bowles. 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 or her own area of interest.

g-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.

g-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 on the computer will be used for instruction. No math or computer prerequisite. S - U final mark.

g-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.

I-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.

g-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.

g-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 Luis Borges, Julio Cortazar, Carlos Fuentes, Juan Rufo and Gabriel Garcia Marquez.

e-ICU 319. Sexism in Management: Changing Roles for Men and Women. (3). Helms, 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.

g-ICU 320. The Question of Love. (3). Mainali. 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.

g-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 judgment, logic and imagination in selecting from an infinite number of chess moves. S - U final mark.

d-ICU 323. Finding Creative Voices. (4). Myers. An experience of involvement in a creative community, with the works of C. S. Lewis, J. R. R. Tolkien, and Dorothy Sayers providing impetus for personal experimentation in written and oral communication. Emphasis on Christian philosophy of creativity and an appreciation of the living voice.

f-ICU 324. Politics, Technology, and Political Science. (3). 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.

g-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, Nikos Kazantzakis, and Denise Levertov.

g-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.

h-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.

h-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.

g-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.

f-ICU 332. Who Rules America? (4). Perchlik. 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.

g-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.

f-ICU 334. Seminar on Awakening Creativity. (3). Heckman. A course designed to awaken and activate the creative powers which are present in every individual. The focus will be on the creative potential which involves all common areas of living, such as study, leisure, relationships, work and personal growth. Participation in class and contributions of thoughts and ideas required for successful completion. S - U grading.

- h-ICU 335. Chemical Evolution: Protons to People. (3). Pringle.** The evolution of atoms and biochemically important compounds will be emphasized. Based on current theories of the prebiotic chemical and physical conditions, probable mechanisms for the genesis of biologically active molecules will be discussed. Evidence for molecular evolution will also be considered in some detail.
- h-ICU 336. Science, Religion, and Truth. (3). James.** A consideration of reality as perceived by science and religion. Emphasis will be placed upon how science and Judao-Christian religions attempt to arrive at truth. Issues where apparent conflict exists will be dealt with and strengths, weaknesses and areas of common belief for the two approaches will be examined. No prerequisites.
- e-ICU 337. Job Readiness Skills. (3). Scharf.** To provide the disabled and able-bodied an opportunity to interact concerning the world of employment, as they mutually discover the equalizing factors which determine job seeking success. It will be a learning experience for each group.
- f-ICU 338. The Geography of Blacks in the United States. (3). B. Francis.** Tracing geography of Blacks in the United States from the forced migration of slaves from Africa in pre-revolutionary times to the problems of spacial organization in today's ghettos. Attention will also be given to forces that have influenced the movement of Blacks from one area of the U.S. to another.
- f-ICU 339. Creators of the Italian Renaissance. (4). Brewer.** A study of major figures of the Italian Renaissance, their lives, works and the world they lived in.
- f-ICU 340. Watch Your Language. (3). Myers.** A course in which students examine facts and superstitions concerning errors in spelling and grammar. Instead of memorizing rules and taboos, students will conduct surveys of English usage in the community. Emphasis will be placed on collecting evidence and drawing valid conclusions from it.
- f-ICU 341. Student Power. (4). Trahan.** An historical and sociological examination of student awareness of their current and potential role in institutional and community discussion making. Students will be required to become familiar with literature on student activities and directly observe and analyze local and community discussion making processes.
- e-ICU 342. 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.
- e-ICU 343. Current Issues in American Law. (3). Seymour.** This course is intended to provide a foundation for understanding and coping with our legal procedure, tort and criminal law, taxes, consumer and protection, environmental protection, employment law, antitrust law, and family law (marriage, women's rights, children, and divorce.)
- d-ICU 344. Women in Music. (2). Rhoads.** The course will explore the lives, achievements and problems of past and present female musicians. Through the use of recordings, interviews, reports and extensive classroom discussion of articles, interdisciplinary approaches will be employed to study the problems and accomplishments of women in music and to relate them to those in other creative and artistic areas.
- e-ICU 345. Juries, Justice, and Jurisprudence. (3). Crawford.** This class is a lecture-discussion course designed to investigate American trial advocacy, criminal justice, and the role of the American courtroom lawyer.
- f-ICU 346. Dictators, Violence and Repression in Latin America. (3). Higgins, Hoffman.** Dictatorial regimes come and go in Latin America, and the coup d'etat and the military junta are common phenomena. Violence, repression and dictatorships are common themes in much of the contemporary literature and art. The course will deal with the social, economical and historical reasons for dictatorships and with the literary and artistic expressions of the dictator and violence theme.
- f-ICU 347. Contemporary Dissident Movements in U.S.S.R. (3). Owechko.** The course is designed to investigate the causes (reasons), goals and possible effects of different kinds of dissident movements in today's U.S.S.R. and to analyze some

literary, publicistic, artistic works and religious activities which became a target of the Soviet government's persecution of authors and their followers.

f-ICU 348. Social Problems of Modern Indian-Americans. (4). Jones. An identification, survey and analysis of selected social problems of modern Indian-Americans in urban areas and on reservations, with an emphasis on the differentiation and perspectives of social pathology, social disorganization, value conflicts, deviant behavior and labeling, as defined by the non-Indian society and by the Indians.

g-ICU 349. Herman Hesse. The Chaos and Restlessness of an Era and a Man in Turmoil. (3). Lange. An analysis and discussion of representative works of Hesse in English translation with respect to his treatment of searching youth for self-identity and meaning in life.

e-ICU 350. Beginning Sailing. (2). Arnold. Beginning sailing is designed to help students learn how to sail and relate sailing to personal fulfillment. The course deals with racing and cruising sailing vocabulary, safety, regulations, sailing opportunities and situations in sailing.

h-ICU 351. Human Sexuality. (3). Kolbe. The course shall be designed to provide an understanding of the bio-physical and psycho-social dimensions of human development toward optimal expression of sexual being. (This course is not open to students who have taken h-ICU 205.)

f-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.

h-ICU 402. Science and Christianity. (3). Peeples, Viens. A practical 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.

f-ICU 403. 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.

d-ICU 404. Classicism: Again and Again. (4). Haas. This course is comparative arts, a multi-disciplinary approach involving painting, sculpture, architecture, music and drama, will trace the development, extension, and interpretation of Classicism from the Greeks to the Twentieth Century.

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 an 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, ID100, and 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.

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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.

g-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.

g-ID 178. 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 use to trace the significance of our past experience to present concerns.

g-ID 337. History and Art of Africa. (4). A social and cultural history of Africa over the last three hundred years, with particular emphasis on artistic developments. The areas of concentration will include Nigeria, Angola, Ghana, Ivory Coast, Liberia, and Zaire. The course will include lectures, discussions, slide presentations and films. Team-taught with Fine Arts Department.

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. Race Relations. (4). This course is designed to contribute to the student's awareness of social and race relations. Emphasis is given to social positions, values, issues, and aspirations. An interdisciplinary approach will be used.

g-ID 404. Leadership Skill Development. (2). Permission of the instructor. The course is designed for students who are engaged in leadership positions on campus. The student participates in a seminar exploring concepts and dynamics of leadership. Includes readings and individual project activities pertaining to the student's leadership position. (S - U final mark.) 8 hours maximum.

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.

ID 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. Offered by the Department of Industrial Arts and Technology.

ID 425. 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 humanness and utilizing research. Offered by the Department of Industrial Arts and Technology.

ID 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 tradi-

tional 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. Offered by the Department of Industrial Arts and Technology.

g-ID 438. American Politics: History and Theory. (3). Analysis of significant texts in political philosophy by Americans and of the historical circumstances in which those texts were written; close attention will be given to the political philosophies of Madison, Jefferson, Hamilton, Calhoun, Thoreau, Bellamy, Dewey, and Lippmann.

g-ID 448. Women's Studies: Senior-Seminar. (3). Designed primarily for students minorinq 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.

ID 470. Theory and Research in the Social Sciences. (4). A course designed to provide social science teaching majors with an introduction to theory and research in the social sciences. Special emphasis will be on the logic of social scientific theory and research and its applicability for the secondary teacher.

INDIVIDUALIZED EDUCATION

IE 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.

IE 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.

INDIVIDUAL STUDIES

IS 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 chairperson of the department.

ITALIAN

d-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.

d-ITAL 102. Elementary Italian II. (5). A continuation of ITAL 101.

d-ITAL 103. Elementary Italian III. (5). A continuation of ITAL 102.

JOURNALISM

All journalism courses ending in the ten numbers as designated in the categories below belong to that journalism area of study:

- 1 - 9 General courses and Internships
- 10 - 19 Writing and Reporting
- 20 - 29 Individual Study and Research
- 30 - 39 Teaching

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40 - 49 Broadcast

50 - 59 Editing and Layout

60 - 69 Community Journalism and Management

70 - 79 Photography and Graphics

80 - 89 Advertising and Public Relations

90 - 99 Press Criticism, History, Law

d-JOUR 100. Introduction to Journalism. (2). Description and analysis of the news and information media in the United States from the point of view of the consumer and the prospective journalist. Recommended for freshmen and sophomores.

d-JOUR 110. Newsriting. (4). Prerequisite, functional skill in typewriting and successful performance on the departmental test of proficiency in English grammar, spelling, and word use. Designed to sharpen judgment and skill in selecting, reporting and writing news for print and broadcast with emphasis on newspaper newsriting.

d-JOUR 115. Advanced Newsriting. (4). Prerequisite, JOUR 110. Covering assignments outside the classroom, with emphasis on the reporting and writing of public affairs.

d-JOUR 210. Feature Writing for News Media. (3). Prerequisites, JOUR 110, 115. Analyzing, researching, and writing the longer feature with emphasis on current subjects usable in the local press.

JOUR 250. News Editing. (3). Prerequisite, JOUR 110. Principles and practice in editing copy and pictures, writing headlines; use of editorial judgment.

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.

JOUR 301. Journalism Internship. (2). Practical experience in at least two of the following areas (prerequisites noted in parentheses): advertising (JOUR 284); newspaper (JOUR 110, 115, 250); news service (JOUR 110, 115); sports writing (JOUR 110, 115); broadcast (JOUR 110, 340, COMM 340 or 342); publications (JOUR 250, 255); photography (JOUR 370); adviser aide (teaching) (JOUR 330, 435).

JOUR 310. Analytical Reprting. (4). Prerequisites, JOUR 110, 115. Preparing interpretive articles, investigative stories, editorials, columns, critical reviews (drama, films, books, music, recordings, art, radio and television).

JOUR 330. Teaching Secondary School Journalism. (PTE) (3). Methods of teaching, use of teaching materials, and use of communications theory applied to journalism teaching.

JOUR 340. Broadcast Newsriting. (3). Prerequisite, JOUR 110. To acquaint the student with the principles, techniques and forms for broadcast writing.

JOUR 360. Community Newspaper. (3). Prerequisites, JOUR 110, 115, 250. A realistic look at the problems and prospects of weeklies and small dailies, and the environments that shape them. Study will include cases, practical experience, and meetings with community journalists.

JOUR 370. Photojournalism. (3). (Laboratory arranged.) Prerequisites, JOUR 110 and IA 342. How to report news with a camera, design picture pages, write and illustrate photo features and essays, and write cutlines. Students must provide their own adjustable-lens camera.

JOUR 380. Public Relations. (3). A survey of the theories, concepts, and procedures fundamental to the understanding and practice of public relations. Application to business, government and other organizations is discussed.

JOUR 384. Direct Mail Advertising. (1). The technique and procedure of creating the mailing piece as well as securing of a productive mailing list.

JOUR 385. 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 386. Advertising Regulation. (1). Study of controls on advertising by use of

professional codes, postal laws, and federal and state regulatory agencies.

d-JOUR 397. Master Journalists and Their Times. (3). American journalism history concentrating on great American journalists, emphasizing their writings, standards of journalism, and their contributions to journalism and to society.

d-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. Journalism Intern. (15). Prerequisites, junior or senior status and permission of journalism adviser. Journalism majors only. One quarter of full-time work off-campus in news, public relations, advertising and other journalistically related organizations.

JOUR 408. Workshop. (1 - 4). Special workshops or short courses in various content areas of journalism and journalism education will be offered during the summers and other quarters as the need and opportunity arises. Course may be graded S or U.

JOUR 410. Writing for Magazines. (3). Prerequisites, JOUR 110, 115, 210. 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.

JOUR 422. Journalism 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. Not open to graduate students. Not for General Education credit.

JOUR 430. Scholastic Publications. (PTE) (3). Analysis of purpose and problems of school newspapers and yearbooks; techniques in advising newspapers, yearbooks, and magazines.

JOUR 435. Teaching by Newspaper and Broadcast. (PTE) (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 460. Newspaper Management. (3). Prerequisites, JOUR 110, 115, 250, 284. Production, circulation and advertising management; bookkeeping and supply ordering; buying; ownership regulation for the smaller daily and the weekly. Attention is given to production and trends in publishing technology.

d-JOUR 492. Ethics and Libel. (3). Prerequisite, junior or senior status. Study of current ethical and legal problems of the printed and broadcast media; designed for the prospective newsman, publisher-manager, school administrator, and journalism teacher.

d-JOUR 496. Opinion Formation. (3). Analysis of opinion and propaganda and the relationship of the media to opinion formation.

MEXICAN AMERICAN STUDIES

g-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.

d-MAS 202. 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.

d-MAS 203. Oral, Reading, and Written Spanish Communication: II. (3). Prerequisite, MAS 202. A continuation of MAS 202. Oral and written expression and vocabulary building are intensified. Some grammar analysis is introduced, but emphasis is on usage.

d-MAS 204. Oral Reading, and Written Spanish Communication: III. (3).

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Prerequisite, MAS 203. A continuation of MAS 203. 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.

e-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.

g-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 led to independence.

g-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.

d-MAS 300. Advanced Oral, Reading, and Written Spanish Communication. (3). This course stresses the use of fluent and functional Spanish-Mexican communication.

f-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.

f-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.

g-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.

g-MAS 307. La Chicana. (4). An in-depth study of the problems facing La Chicana with changing life-styles and situations (domestic survival, family structure, public roles, institutions, etc.) in Western society.

g-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.

d-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.

g-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.

g-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.

g-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 422. Individual Studies. (Maximum 4). MAS 422 is the equivalent of IS 422. Catalog regulations governing the purpose, method and reporting of IS 422 also apply for students enrolled for MAS 422. Students enroll for a minimum of 1 hour of independent studies under the supervision of a faculty adviser. It is recommended that a student not enroll for more than three hours of MAS 422 per quarter.

g-MAS 451. Senior Project or Thesis. (1 - 3 hours, maximum 5 hours). 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 assigned to him by the department. The professor advises the student concerning his subject or project for study. The student will hand in an acceptable written report at least three weeks before the student is to be graduated.

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

h-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.

a-MATH 101. Fundamental Mathematical Skills. (3). This course consists of topics from arithmetic and algebra: operations with real numbers, linear equations and inequalities, operations on polynomials, factoring, solution of two simultaneous equations (linear), word problems, proportions, graphing linear equations and inequities, and use of formulas to find perimeter, area and volume.

h-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.

h-MATH 115. Essentials of Mathematics I. (3). Prerequisite one year 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.

h-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.

h-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.

a-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.

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h-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.

h-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.

h-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.

h-MATH 130. Analytic Geometry. (4). Prerequisite, high school mathematics through trigonometry. This is a standard course in analytic geometry covering the following topics: Cartesian coordinates, distances, parallels, perpendiculars, locus of an equation, line forms including normal form, conic section including general quadratic forms in two variables, polar coordinates, and selected topics in solid analytic geometry.

h-MATH 131. Calculus I. (5). Prerequisite, MATH 130. The first course in a three-course sequence in beginning calculus. Elementary phases of both differential and integral calculus, along with various applications of these subjects are considered.

h-MATH 132. Calculus II. (5). Prerequisite, MATH 131. A continuation of MATH 131.

MATH 133. Calculus III. (4). Prerequisite, MATH 132. A continuation of MATH 132.

h-MATH 151. Introduction to Statistical Analysis. (4). 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.

h-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.

a-MATH 191. Basic Mathematics I. (3). The first of a three-course sequence which is particularly pertinent for the prospective teacher of arithmetic, 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.

a-MATH 192. Basic Mathematics II. (3). Prerequisite, MATH 191. A continuation of MATH 191.

h-MATH 193. Informal Geometry. (3). The emphasis is upon informal Euclidean geometry which is suitable for the K-8 curriculum. Laboratory techniques are employed when applicable.

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.

MATH 203. 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.

MATH 250. Elementary Probability Theory. (4). Prerequisite, MATH 133. Discrete and continuous probability, conditional probability, Bayes theorem; one dimen-

sional 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.

MATH 251. Elementary Statistics Theory. (4). Prerequisite, MATH 250. A continuation of MATH 250 in which statistical topics will be covered, assuming the probability background. Specific topics will be: jointly distributed random variables, Central Limit Theorem, sampling distributions, maximum likelihood estimation, properties of estimation, confidence intervals, and tests of hypothesis.

h-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.

h-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.

MATH 321. Elementary Linear Algebra. (4). Prerequisite, MATH 131. This course provides an introduction to the topics of linear algebra including vector spaces, basis, determinants, linear transformations, matrices, eigenvalues and eigenvectors. Applications will also be included.

MATH 322. Introduction to Abstract Algebra. (4). Prerequisite, MATH 321. This course provides an introduction to the topics and concepts of abstract algebra including rings, integral domains, integers, fields, groups and polynomial rings.

MATH 325. Elementary Matrix Algebra. (4). Prerequisite, MATH 321. This course presents an introduction to vector spaces and matrix theory including row operations, determinants, independence and linear transformations.

MATH 327. Elementary Functions from an Advanced Viewpoint. (4). Prerequisite, MATH 133. A course in analysis for prospective high school teachers. Topics will include the standard analysis concepts but organized in such a way as to give emphasis to a careful treatment of the elementary functions.

h-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.

h-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.

h-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 point of view.

MATH 335. Differential Equations I. (4). Prerequisite, MATH 133. A study of the theory and solution of differential equations. Ordinary differential equations are treated along with numerous applications.

MATH 336. Differential Equations II. (4). Prerequisite, MATH 335. A continuation of MATH 335. Topics to be covered include series solutions of differential equations, systems of equations, partial differential equations, Fourier series and boundary value problems.

MATH 341. Introduction to Modern Geometry I. (3). Prerequisite, high school geometry. The first of three courses designed to give the student a broad background in geometry. This course will build upon the student's high school background in the areas of Euclidean constructions, expanding to Mascheroni and

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inverse techniques, and proof of some classical as well as modern Euclidean theorems.

MATH 342. Introduction to Modern Geometry II. (3). Prerequisite, high school geometry and MATH 130. The main emphasis will be placed on the study of Euclidean geometry concepts of congruence and similarity through the use of transformation geometry. In this study, the analytic approach to the transformation geometry through the use of the Cartesian coordinate system will be covered.

MATH 343. Introduction to Modern Geometry III. (3). Prerequisite, MATH 341 or MATH 342. In this course, the main emphasis will be placed on the study of the structure of geometric ideas. Types of geometry to be studied will be finite geometries, projective geometry, affine geometry and non-Euclidean geometries.

h-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.

h-MATH 381. Problem Solving with Calculating Devices. (2). Prerequisite, MATH 124. The emphasis in this course is on problem solving with hand-held and desk calculators, both programmable and nonprogrammable. An overview of computing and algorithmic processes is also included.

h-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.

h-MATH 402. 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.

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.

MATH 409. Foundations of Mathematics. (3). Prerequisite, Senior status, mathematics major or minor. An introductory treatment of the foundations of mathematics and of the concepts that are basic to mathematical knowledge. Topics will include formal axiomatics, sets, logic and philosophy.

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.

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.

MATH 432. Basic Analysis I. (4). Prerequisite, MATH 133. 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.

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.

MATH 434. Basic Analysis III. (4). Prerequisite, MATH 433. The third course in a sequence of three courses. From the background built up on 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; applications to geometry; the gamma and beta functions; line, surface, and space integrals; vector notation; Bessel functions; elliptic integrals.

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.

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.

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.

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.

MATH 491. Theory of Equations. (4). A 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.)

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.

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.

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h-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.

h-MET 200. General Meteorology. (4). (3 lecture, 2 laboratory.) The basic course in meteorology, required for most subsequent courses. Considers the atmosphere, its composition and thermal structure; pressure, temperature, humidity, wind, precipitation and their measurement; clouds and weather associated with air masses and fronts; simple map analysis.

h-MET 301. Elements of Meteorology. (4). (3 lecture, 2 laboratory.) Prerequisite MET 200. An in-depth consideration of the weather elements of pressure, temperature, humidity, radiation and the earth's heat budget, precipitation processes, atmospheric stability concepts, adiabatic diagrams; development of clouds and their modification, severe storms; interpretation of weather charts.

h-MET 302. Dynamic Meteorology. (4). (3 lecture, 2 laboratory.) Prerequisite, MET 301. A continuation of principles developed in MET 301. Atmospheric motion, the general and secondary circulations, jet streams, Rossby waves, vorticity, air masses, cyclogenesis, frontogenesis, tropical weather systems.

h-MET 315. Meteorological Instruments, Observations and Codes. (3). (2 lecture, 2 laboratory.) Prerequisites, MET 200 or 301. Design of meteorological instruments and their operation, weather observations and codes, data transmission, and plotting of weather data on charts.

h-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.

h-MET 330. Physical Meteorology. (3). Prerequisites, MET 200 and 301 or MET 500. Radiation processes in the atmosphere, meteorological optics, elementary radar concepts. Growth of cloud and precipitation particles; weather modification. Atmospheric electricity.

MET 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.

h-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.

h-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 of Medical Technology.

MTEC 410. Clinical Chemistry. (5). This course covers the basic principles of clinical chemistry and of the methods utilized. Major topics include instrumentation, quality control, automation, blood gases and electrolyte interpretation, liver function, enzymology, renal function, endocrine function and tests utilizing isotopes. Interpretation of normal and abnormal test results is included.

MTEC 411. Chemistry Laboratory I. (3). This course is an introduction to a clinical chemistry laboratory, covering both the theoretical and technical aspects of semi-automated and manual chemistry procedures, quality control requirements, and test data flow. Topics include carbohydrate metabolism, kidney and liver function, electrolytes, and toxicology. Students, under supervision, utilize patient specimens.

MTEC 412. Chemistry Laboratory II. (2). This is a continuation of Chemistry Laboratory I where proficiency is gained in advanced studies of enzymology, liver function, iron and protein metabolism, and lipid dyscrasias.

MTEC 413. Special Chemistry Laboratory. (2). This is an introduction to sequential multiple analysis and to various electrophoretic and other specialized procedures.

MTEC 430. Immunohematology. (2). This lecture course discusses the basic principles of the methods utilized in the blood bank as well as the entire subject of the use of blood transfusions and component therapy in medicine. Some subjects included are the basic theory of blood factors, cross matching methods, isoantibodies, transfusion reactions, donor processing and transfusion therapy.

MTEC 431. Immunohematology Laboratory. (4). This course covers the principles and procedures of Blood Banking. Included are the selection and drawing of blood donor processing, pre-testing and crossmatching recipients' blood for transfusions, storage of blood and its components, and the preparation of blood and blood components for transfusions. Patient specimens are utilized under supervision.

MTEC 440. Medical Microbiology. (4). This lecture course discusses the laboratory aspects of identifying human pathogenic bacteria and fungi as well as the role viruses, rickettsia, bacteria and fungi play in causing diseases. Some of the subjects discussed include antibiotic therapy, antibiotic susceptibility testing and quality control in microbiology.

MTEC 441. Medical Microbiology Laboratory I. (3). This course involves the study of clinically significant bacteria. Included are collection of specimens, initial inoculation procedures, organism isolation and identification, staining methods, biochemical and serological testing methods, susceptibility testing and quality control. Patient specimens are utilized under supervision and test results are evaluated in relation to the disease process.

MTEC 442. Medical Microbiology Laboratory II. (3). This course involves laboratory study of the less frequently isolated clinically significant bacteria plus studies of parasites and fungi that cause disease in humans.

MTEC 460. Urinalysis and Clinical Microscopy. (2). This lecture course includes the basic principles of the various tests performed on urine specimens and the significance of these tests in clinical medicine. The principles and interpretation of tests done on gastric secretions are also discussed.

MTEC 461. Urinalysis and Coagulation Laboratory. (2). This course covers routine urinalysis, gastric analysis, pregnancy tests and basic coagulation procedures. Student, under supervision, perform tests on patient specimens. Emphasis is placed on proficiency and accuracy of test performance, understanding test principles and the clinical significance of tests results.

MTEC 470. Medical Parasitology. (1). This lecture course discusses the methods utilized in studying and identifying parasites of humans. The life cycle of parasites and the diseases caused by these parasites are also discussed.

MTEC 480. Serology. (2). This lecture course includes a basic introduction to immunology and to serologic techniques as well as specific discussions of many serologic tests such as those for syphilis, rheumatoid arthritis, infectious mononucleosis, streptococcal infections, immunoglobulin abnormalities and hypersensitivity diseases.

MTEC 481. Serology Laboratory. (1). This course includes the theory and techniques associated with performance of serologic and immunologic procedures. Procedures on patient specimens, under supervision, are performed; such as those for syphilis, rheumatoid arthritis, infectious mononucleosis, streptococcal infections, immunoglobulins and anti-nuclear antibodies.

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MTEC 490. Hematology. (3). This course includes basic principles of the methods utilized in hematology as well as discussions of the blood dyscrasias and other hematologic abnormalities. Subjects included are anemias, leukemias and changes in hematologic tests associated with multiple other diseases. The coagulation system and application of coagulation tests in patient problems is discussed.

MTEC 491. Hematology Laboratory I. (3). This course includes the theory and technique of drawing blood specimens for complete blood count analysis utilizing manual and automated procedures. Platelet counts, reticulocyte counts and sedimentation rates are included as well as organization of work flow, quality control and evaluation of test results as related to patient problems.

MTEC 492. Hematology Laboratory II. (3). This is a continuation of Hematology Laboratory I giving the student a chance to gain proficiency in techniques and procedures learned in Hematology I. Diagnosis of blood dyscrasias and other hematologic abnormalities from blood smears is also included.

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*.

d-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. This course is not intended for beginners in music. The student must have had prior musical training to take this class.

d-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.

d-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.

d-MUS 140. Introduction to Music. (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.

d-MUS 141. Music Literature and Styles I. (2). Topics for this quarter include: the raw materials of music and how they are used for stylistic analysis, classicism and romanticism, folk music and Gregorian chant and their influence on other styles of music.

d-MUS 142. Music Literature and Styles II. (2). This quarter is concerned with the general characteristics of stylistic periods from the Renaissance to the present. The composers and literature of the Baroque and Classical periods will also be considered.

d-MUS 143. Music Literature and Styles III. (2). This quarter is devoted to the composers and literature of the nineteenth and twentieth centuries.

d-MUS 150. Beginning Jazz Improvisation. (3). 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.

d-MUS 151. Jazz Theory. (2). Prerequisite MUS 160, (Music Majors), or permission

of instructor. This course covers chords, chord symbols and scales as they relate to chords. Included will be major, minor and dorian tonality and scales which can be used with each. Also covered will be chord progressions, and chord substitutions. The student will gain a basic jazz piano technique from this class.

d-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.

d-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.

d-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.

d-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.

d-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.

d-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.

d-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.

d-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.

d-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 on 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.

d-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.

d-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.

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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 210. Introduction to Music Education. (2). Prerequisite, MUS 103. An introduction course for prospective teachers of music covering the history and present status of music, the qualifications of the music teacher, and a consideration of beginning instructional problems. For music majors only. Two hours per week of observation and aiding required.

d-MUS 224. Vocal Jazz Ensemble. (1).

d-MUS 230. String Ensemble. (1).

d-MUS 231. Brass Ensemble. (1).

d-MUS 232. Woodwind Ensemble. (1).

d-MUS 233. Percussion Ensemble. (1).

d-MUS 234. Piano Ensemble. (1).

d-MUS 235. Guitar Ensemble. (1).

d-MUS 236. Dixieland Jazz Band. (1). Prerequisite, audition. This band is limited in enrollment to 1 clarinet, 1 trumpet, 1 trombone, 1 tenor sax, piano, bass, tuba and drums. This organization will perform both Chicago and New Orleans style dixieland music. Open to any UNC student.

d-MUS 237. Jazz Octet. (1). Prerequisite, audition. The Jazz Octet is limited in enrollment to 1 trumpet, 1 trombone, 1 tenor sax, piano, guitar, bass, drums, and percussionist. The Jazz Octet will perform on campus. Open to any UNC student.

d-MUS 238. Old Times Jazz Band. (1). Prerequisite, audition. This band is limited in enrollment to 3 saxophones, 3 trumpets, 1 trombone, piano, bass, guitar, and drums. An additional vocalist may be added. This organization will perform music written in the 1920's to today. Open to any UNC student.

d-MUS 239. Jazz Nonette. (1). Prerequisite, audition. The Jazz Nonette is limited in enrollment to 1 trumpet, 1 alto sax, 1 trombone, 1 tenor sax, 1 bari sax, piano, guitar/vibes, bass, drums and percussionist. The Jazz Nonette will perform on campus. Open to any UNC student.

d-MUS 240. Jazz Septet. (1). Prerequisite, audition. The Jazz Septet is limited in enrollment to 1 alto sax, 1 tenor sax, piano, bass, drums and percussionist. An additional guitar may be added. The Jazz Septet will perform on campus. Open to any UNC student.

d-MUS 241. Jazz Quartet. (1). Prerequisite, audition. The Jazz Quartet is limited in enrollment to one solo instrument, piano, bass and drums. An additional guitar and/or percussionist may be added. The Jazz Quartet will perform on campus. Open to any UNC student.

d-MUS 242. Jazz Quintet. (1). Prerequisite, audition. The Jazz Quintet is limited in enrollment to two solo instruments, piano, bass and drums. An additional guitar and/or percussionist may be added. The Jazz Quintet will perform on campus. Open to any UNC student.

d-MUS 243. 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.

d-MUS 244. History of Music II. (3). Prerequisite, MUS 243. 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.

d-MUS 245. History of Music III. (3). Prerequisite, MUS 244. A study of the musical changes caused by the Romantic, Post-Romantic and Impressionistic periods from 1800 to 1920.

d-MUS 250. Intermediate Jazz Improvisation. (3). 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.

d-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.

d-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.

d-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.

d-MUS 269. 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.

d-MUS 270. Individual Performance in Voice. (2 - 4).

d-MUS 271. Individual Performance in Piano. (2 - 4).

d-MUS 272. Individual Performance in Organ. (2 - 4).

d-MUS 273. Individual Performance in Strings. (2 - 4).

d-MUS 274. Individual Performance in Woodwinds. (2 - 4).

d-MUS 275. Individual Performance in Brass. (2 - 4).

d-MUS 276. Individual Performance in Percussion. (2 - 4).

d-MUS 277. Individual Instruction in Composition. (2 - 4).

d-MUS 278. Individual Performance in Harp. (2 - 4).

d-MUS 279. Individual Performance in Guitar. (2 - 4).

d-MUS 280. Mixed Concert Choir. (1). Membership is limited to approximately 60 singers and open to all students on an audition basis. 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 and is in demand throughout the region for concert appearances. Quarterly concerts are given on campus in addition to one yearly tour.

d-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.

d-MUS 282. University Singers. (1). Prerequisite, membership in Concert Choir or by special permission. A select group of approximately 35 voices open by audition only. Repertoire is extremely varied ranging from motets of the Renaissance to Contemporary songs to the Bach b-minor Mass.

d-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.

d-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.

d-MUS 285. Opera Workshop. (1 - 3). Workshop offering practical experience in

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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.

d-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.

d-MUS 288. Opera Orchestra. (1). This group rehearses as a pit orchestra for performances of opera and musical comedy.

d-MUS 289. Laboratory Orchestra. (1). A laboratory course to provide practice orchestra experience in stringed instruments. Orchestra materials and the use of them for continued development of string students will be discussed and demonstrated.

d-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.

d-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.

d-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 school and wish certification.

d-MUS 293. Varsity Band. (1). Open to all students regardless of major who have had high school band experience. Provide music for athletic and university functions. Read material suitable for use by high school band.

d-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.

d-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.

d-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.

d-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 combina-

tions 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 312. Teaching Elementary Instrumental Music. (PTE) (2). This course will include the testing and advising of the beginning instrumental student; stress will be given to promotion, organization, teaching techniques of classes and analysis of beginning and intermediate instrumental methods.

MUS 313. Teaching Secondary Instrumental Music. (PTE) (2). This course is designed to investigate many of the problems that future instrumental music teachers will encounter in the profession. Much activity in the course will be centered on developing some of the teaching competencies that will be needed.

MUS 314. Guitar in the Classroom. (1). Prerequisite, music majors only. An introduction to playing guitar as an instrument to acquaint children with their singing heritage in U.S. Folk Music. Guitar required.

d-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.

d-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 in Early Childhood. (3). Broad range of innovative teaching ideas explored which nurture musicality in children.

d-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.

d-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.

d-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.

d-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.

d-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.

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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.

d-MUS 340. Survey of History and Literature of Jazz. (3). A survey of the history and literature of jazz music from its beginnings to the present. This course is open to all students.

d-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.

d-MUS 345. Music of Asia and the Pacific. (3). A survey of selected music cultures such as those of China, Japan, Indonesia, India, Iran and others. Musical instruments, theoretical systems, performance practice, the role of music in society, and the relationship of music to the other arts will be covered.

d-MUS 346. Traditional Music of Africa and America. (3). A survey of Africa, North American Indian, and Eskimo music. Musical instruments, performance practices, the role of music in society, and the relationship of music to the other arts will be covered.

d-MUS 347. European Folk Music. (3). A survey of selected European Folk music cultures such as those of England, Norway, Greece, France, Latvia and others. Style, structure, 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 of 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.

d-MUS 359. Woodwind Class. (1). This course is required of all music majors with vocal, piano, and general emphasis (B. M. E.). The fundamentals of woodwind instruments and training literature for woodwinds will be covered.

d-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.

d-MUS 361. Flute and Saxophone Class. (1). To develop a teaching knowledge of 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.

d-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.

d-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.

d-MUS 364. Trumpet and 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.

d-MUS 365. Low Brass Class. (1). To develop a teaching knowledge of trombone,

baritone, and tuba. To acquire sufficient skill for purposes of demonstration.

d-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.

d-MUS 367. Brass and Percussion Class. (1). This course is required of all music majors with vocal, piano, and general music emphasis (B. M. E.). The fundamentals of brass and percussion instruments and brass and percussion training will be covered.

d-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.)

d-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 Forms. (3). A study of the forms, techniques and literature of the 17th, 18th and 19th century polyphonic music.

h-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.

d-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 musical 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 406. Jazz Arranging I. (1). Prerequisite, MUS 203 or instructor consent. An introduction to the Art of Calligraphy for the first several class meetings, followed by an introduction to the basics of arranging for small jazz ensembles.

MUS 407. Jazz Arranging II. (1). Prerequisite, MUS 406 or instructor consent. Continuation of Jazz Arranging I with some emphasis on small jazz ensemble arranging followed by an introduction to large jazz ensemble and vocal jazz ensemble arranging.

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.

MUS 410. Introduction to Vocal Pedagogy. (2). The study of the problems related to establishing basic techniques for singing.

MUS 412. Instrument Repair and Care. (1). 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).

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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 Scariatti, and Handel. Offered every fourth year in the Fall quarter.

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, and Bach's sons, Haydn and Mozart. Special attention will be given to the piano concertos of Mozart. Offered every fourth year in the Winter quarter.

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. Offered every fourth year in the Spring quarter.

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. Offered every fourth year in the Fall quarter.

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 significance of Debussy, as representative of the Impressionistic School will be considered. Offered every fourth year in the Winter quarter.

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. Offered every fourth year in the Spring quarter.

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 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 427. Orchestral Excerpts (Strings). (1). Intensive study of passages which usually trouble string players along with a general survey of the literature. Separate classes in violin, viola, cello and bass will be offered, depending on the need.

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.

MUS 429. Orchestral Excerpts Class (Woodwind). (1). Prerequisite, available upon recommendation of the student's applied teacher only. Depending on the need, separate excerpt classes in bassoon, clarinet, flute, and oboe will be offered. Course may be repeated for credit.

d-MUS 424. Vocal Jazz Ensemble. (1).

d-MUS 430. String Ensemble. (1).

d-MUS 431. Brass Ensemble. (1).

d-MUS 432. Woodwind Ensemble. (1).

d-MUS 433. Percussion Ensemble. (1).

d-MUS 434. Piano Ensemble. (1).

d-MUS 435. Guitar Ensemble. (1).

d-MUS 436. Dixieland Jazz Band. (1). Prerequisite, audition. This band is limited in enrollment to 1 clarinet, 1 trumpet, 1 trombone, 1 tenor sax, piano, bass, tuba and drums. This organization will perform both Chicago and New Orleans style dixieland music. Open to any UNC student.

d-MUS 437. Jazz Octet. (1). Prerequisite, audition. The Jazz Octet is limited in enrollment to 1 trumpet, 1 trombone, 1 tenor sax, piano, guitar, bass, drums, and percussionist. The Jazz Octet will perform on campus. Open to any UNC student.

d-MUS 438. Old Times Jazz Band. (1). Prerequisite, audition. This band is limited in enrollment to 3 saxophones, 3 trumpets, 1 trombone, piano, bass, guitar and drums. An additional vocalist may be added. This organization will perform music written in the 1920's to today. Open to any UNC student.

d-MUS 439. Jazz Nonette. (1). Prerequisite, audition. The Jazz Nonette is limited in enrollment to 1 trumpet, 1 alto sax, 1 trombone, 1 tenor sax, 1 bari sax, piano, guitar/vibes, bass, drums and percussionist. The Jazz Nonette will perform on campus. Open to any UNC student.

d-MUS 440. Jazz Septet. (1). Prerequisite, audition. The Jazz Septet is limited in enrollment to 1 alto sax, 1 tenor sax, piano, bass, drums and percussionist. An additional guitar may be added. The Jazz Septet will perform on campus. Open to any UNC student.

d-MUS 441 Jazz Quartet. (1). Prerequisite, audition. The Jazz Quartet is limited in enrollment to one solo instrument, piano, bass and drums. An additional guitar and/or percussionist may be added. The Jazz Quartet will perform on campus. Open to any UNC student.

d-MUS 442. Jazz Quintet. (1). Prerequisite, audition. The Jazz Quintet is limited in enrollment to two solo instruments, piano, bass and drums. An additional guitar and/or percussionist may be added. The Jazz Quintet will perform on campus. Open to any UNC student.

d-MUS 443. Instrumental Literature. (3). This course explores the instrumental literature of public school bands and orchestras. Some discussion will be directed toward programming practices.

MUS 444. Marching Band Techniques. (2). A course to provide materials and suggestions to band directors and prospective band directors. To assist with the planning of individual football shows and pageantry.

d-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.

d-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.

d-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.

d-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.

d-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.

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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 Schools. (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 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.

MUS 465. Individual Coaching in Musical Theatre Repertory I. (2). Prerequisite, a minimum of six hours of MUS 269 and/or 469. The first of a sequence of three advanced laboratory courses in the style and technic of performing vocal musical theatre repertory. This course focuses on the application of fundamental vocal technics to musical theatre performance and the development of believability and integration in character and action.

MUS 466. Individual Coaching in Musical Theatre Repertory II. (2). Prerequisite, a minimum of six hours of MUS 269 and/or 469 and MUS 465. The second of a sequence of three advanced laboratory courses in the style and technic of performing vocal musical theatre repertory. This course continues the application of fundamental vocal technic to more vocally demanding roles with emphasis on development of characterizations for stereotypes and age.

MUS 467. Individual Coaching in Musical Theatre Repertory III. (2). Prerequisite, a minimum of six hours of MUS 269 and/or 469 and MUS 466. Third of a sequence of three advanced laboratory courses in the style and technic of performing vocal

musical theatre repertory. Students are coached in specific lead and supporting roles, dialects and advanced repertoire.

d-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.

d-MUS 470. Individual Performance in Voice. (2 - 4).

d-MUS 471. Individual Performance in Piano. (2 - 4).

d-MUS 472. Individual Performance in Organ. (2 - 4).

d-MUS 473. Individual Performance in Strings. (2 - 4).

d-MUS 474. Individual Performance in Woodwinds. (2 - 4).

d-MUS 475. Individual Performance in Brass. (2 - 4).

d-MUS 476. Individual Performance in Percussion. (2 - 4).

d-MUS 477. Individual Instruction in Composition. (2 - 4).

d-MUS 478. Individual Performance in Harp. (2 - 4).

d-MUS 479. Individual Performance in Guitar. (2 - 4).

d-MUS 480. Mixed Concert Choir. (1). Membership is limited to approximately 60 singers and open to all students on an audition basis. 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 and is in demand throughout the region for concert appearances. Quarterly concerts are given on campus in addition to one yearly tour.

d-MUS 481. University Chorus. (1). Membership of 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.

d-MUS 482. University Singers. (1). Prerequisite, membership in Concert Choir or by special permission. A select group of approximately 35 voices open by audition only. Repertoire is extremely varied, ranging from motets of the Renaissance to Contemporary songs to the Bach b-minor Mass.

d-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.

d-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.

d-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.

d-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.

d-MUS 488. Opera Orchestra. (1). This group rehearses as a pit orchestra for performances of opera and musical comedy.

d-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.

d-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

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Wind Band presents many concerts during the year, and takes an annual tour.

d-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.

d-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.

d-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.

d-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.

d-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.

d-MUS 497. Chamber Orchestra. (1). A select group of approximately 20 string students chosen by audition from the membership for 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

e-NURS 100. Orientation to the Concept of "Health" and the Health Care Delivery System. (2). Explores philosophical, historical, political, and professional relationships that exist in health care delivery system.

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 351 and BIO 261. (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 experiences which enables the student to achieve beginning clinical nursing skills in therapeutic nursing measures. S - U final mark.

*Clinical Level I Status requires application to and acceptance by the School of Nursing. (See admission criteria, Page 113, UNC Bulletin 1978 - 79.)

e-NURS 205. Growth and Development: A Conceptual Foundation of Nursing Practice. (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.

I-NURS 210. Communication: A Conceptual Foundation of Nursing Practice. (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.

e-NURS 215. Holistic Man: A Conceptual Foundation of Nursing Practice. (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.

e-NURS 220. Teaching-Learning: A Conceptual Foundation of Nursing Practice. (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.

e-NURS 225. Nursing Process: A Conceptual Foundation of Nursing Practice. (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.

g-NURS 270. Bio-Medical Ethics I. (2). An introductory course providing an overview of ethical dilemmas facing health care providers today. Moral concepts flowing from ethical theory will be examined as they affect decision-making in applied bio-medical situations. S - U grading system.

NURS 300. Normal Developmental Stressors: Clinical Practicum in Nursing Process. (5). (15 laboratory.) Prerequisite, Clinical Level II status*. Clinical application of the theory of nursing process and physical assessment skills with individuals of all age groups with developmental stressors. (To be taken concurrently with NURS 330.)

NURS 301. Chronic Stressors: Clinical Practicum in Nursing Process. (5). (15 laboratory.) Prerequisite Clinical Level II status*. Clinical application of the theory of nursing process with adults and children with chronic health stressors. (To be taken concurrently with NURS 335.)

NURS 302. Acute Stressors: Clinical Practicum in Nursing Process. (5). (15 laboratory.) Prerequisite, Clinical Level II Status*. Clinical application of the theory of nursing process with adults and children acutely ill with medical, surgical, and/or mental health problems. Emphasis is placed on hospitalized patients. (To be concurrently with NURS 340.)

NURS 303. Introduction to Techniques of Physical Assessment for R.N.'s. (5). An introduction to taking medical history, theory and experience in the utilization of inspection, palpation, auscultation, and percussion in the examination of patients to determine presence or absence of deviations from normal.

NURS 304. Organization and Implementation of Basic Nursing Interventions. (6). (180 clock hours). Prerequisite, NURS 300, 301, 302, or permission of instructor. Elective clinical practicum in making independent and interdependent clinical judgments into specific nursing actions and implementation of basic nursing interventions for groups of patients in a hospital situation. S - U final mark.

NURS 306. Interactional and Ethical/Legal Aspects of Nursing Practice. (3). Prerequisite NURS 205, 210, 215, 220, 225 or permission of instructor (R. N.

*Clinical Level II status requires satisfactory completion of: NURS 200, 201, 202, 205, 210, 215, 220, 225, ZOO 105, 121, 250, 351, BIO 261 and HEC 251. (See statement on Progression, Page 114, UNC Bulletin, 1978 - 79.)

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students prerequisite NURS 325). Examines methods of establishing relationships with individuals, progresses through group relationships and surrounding ethico/legal implications.

NURS 311. General Systems Theory Applied to Health Care. (3). Prerequisite NURS 205, 210, 215, 220, 225, 306 or permission of instructor (R. N. students prerequisite NURS 325 and 306). Examines the interactions between the client, the nurses and the larger systems of which they are a part. Emphasis is on similarities and differences in values and expectations of each major subsystem and the potential effects on the delivery of health care. Leadership styles are introduced.

NURS 325. Core Concepts in Professional Nursing for R. N.'s (5). A course designed specifically for R. N.'s which examines the philosophy of professional nursing and the concepts of holistic man, common life processes, communication, teaching-learning, and the nursing process.

NURS 330. Normal Developmental Stressors. (3).

Nursing intervention with individuals of all age groups with developmental stressors. Emphasis on childbirth, growth and developmental stressors in the individual and family throughout the life span.

NURS 335. Chronic Stressors. (3). Nursing intervention with adults and children with chronic health stressors. Emphasis is placed on supporting life style adjustments to psychological or physiological stressors of a chronic nature.

NURS 340. Acute Stressors. (3). Nursing interventions with adults and children acutely ill with medical, surgical and/or mental health problems.

e-NURS 350. Psychopathological Concepts in Nursing. (2). Prerequisite, NURS 210. (NURS 215 may be taken concurrently.) Classification, psychodynamics, and psychogenesis of behavioral deviations.

e-NURS 360. Pathophysiological Concepts in Nursing. (4). Prerequisite, ZOO 250, ZOO 121, BIO 261. Theory of common pathophysiological processes and syndromes. Pathogenesis and symptoms of frequently occurring diseases presented using the organ systems approach.

NURS 400. Clinical Practicum in the Distributive Health Care Setting. (5). (15 laboratory.) Prerequisite, Clinical Level III status*. A clinical course designed to provide the student with experience in a variety of official community health agencies. Emphasis is placed on the use of the nursing process in family and community health service with a focus on preventive health practices throughout the life cycle. (To be taken concurrently with NURS 430.)

NURS 401. Clinical Practicum in Team Management in the Episodic Setting. (5). (15 laboratory.) Prerequisite Clinical Level III status*. A clinical course designed to provide the student with experience in the management of patient care in acute care settings. Emphasis is placed on the use of strategies in deriving sound clinical judgements when responsible for directing the care of a large group of patients. (To be taken concurrently with NURS 435.)

NURS 406. The Inquiry Process in Nursing. (3). Prerequisite NURS 306 and NURS 311 or permission of instructor. The process of critical thinking and inquiry including induction, deduction, inference and recognition of assumptions. Emphasis is placed on scientific inquiry including the research critique and identification of researchable problems in nursing practice.

NURS 408. Nursing Workshop. (1 - 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 411. Leadership in Nursing. (3). Prerequisite NURS 306 and NURS 311 or permission of instructor. Examines aspects of leader's role in planned change. Emphasis is placed on the analysis of situational variables influencing both leader behavior and the change process.

*Clinical Level III status requires satisfactory completion of NURS 300, 301, 302, 306, 311, 330, 335, 340, 350, and 360. (See statement on Progression, page 114, UNC Bulletin.)

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 Dean.

NURS 430. Nursing in the Distributive Health Care Setting. (3). Nursing roles in the delivery of health care in the community. Emphasis is placed on preventive and complex restorative health care delivery for families and communities within the context of community health agencies. (To be taken concurrently with NURS 400.)

NURS 435. Team Management in the Episodic Health Care Setting. (3). Designed to introduce the student to the role of the professional nurse in patient care management. Emphasis is placed on strategies to derive sound clinical judgements when dealing with large groups of patients. Theories of management, management styles, and intrastaff relationships and functions are also included. (To be taken concurrently with NURS 401.)

NURS 450. Special Emphasis in Selected Professional Nursing Role. (6 - 12). Prerequisite, Clinical Level III status. Clinical experience in application of professional nursing concepts in a choice of speciality areas. (Students are encouraged to choose experience in rural and underserved areas.)

OCEANOGRAPHY

Courses in oceanography are administered by the Department of Earth Sciences.

h-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.

h-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.

h-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.

h-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.

OCN 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.

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 many environmental settings. Cognitive learnings will be taught followed by definite concentration on affective and psychomotor learnings. The interdisciplinary approach, involving faculty from allied educational agencies 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 interdiscip-

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linary approach to Outdoor Education. Direct experience participation in the outdoors will be provided related to all academic disciplines and special interest areas. Faculty from many disciplines and other resource specialists will be involved in the instructional offerings. Emphasis will be placed on the cognitive, affective, and psychomotor domains.

OED 399. Outdoor Leisure 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. (2 - 4). Prerequisite, OED 250 or permission of instructor. Open only by invitation to undergraduate students. Supervised professional activity in the student's major or minor field with a minimum equivalent of twenty-five clock hours per hour of credit. One copy of a well-written paper must be filed with the instructor before credit is given.

OED 499. 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.

PHILOSOPHY

g-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.

a-PHIL 101. Basic Symbolic Skills. (4). A basic course in the general techniques of working with symbols. The aims of this course will be (1) to give the student some sense of the variety of uses to which systems of symbols can be put in areas as diverse as philosophy, logic, mathematics, computer programming, and the sciences; (2) to acquaint the student with the general features shared by all symbolic systems; and (3) to provide the student with the basic skills one needs in order to feel at home with the use of symbolic techniques in any discipline. May not be counted toward the major or minor in philosophy.

g-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."

g-PHIL 210. History of Ancient Philosophy. (4). Ancient Philosophy from the Presocratics to Plotinus. The emergence of philosophical cosmology from mythopoetic cosmogony; the Socratic ethical turn; Plato; Aristotle; Hellenistic and Roman development; Neoplatonism.

g-PHIL 220. 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.

g-PHIL 230. 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).

g-PHIL 265. 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.

g-PHIL 270. Philosophies of India. (4). An introduction to selected schools of Indian Philosophy, with emphasis on the problems of knowledge and the self.

g-PHIL 305. Contemporary Philosophical Movements. (4). Prerequisite, PHIL 220. A consideration of philosophy in the twentieth century, including Phenomenology (Husserl, Heidegger), Existentialism (Sartre, Jaspers, Camus, Marcel), Analysis (Russell, Moore, Wittgenstein), Positivism (Carnap, Ayer.)

g-PHIL 312. History of Medieval Philosophy. (4). Prerequisite, PHIL 210. A consideration of philosophy in the middle ages, including 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 with revelation; Cusa and Bruno.

g-PHIL 315. Existentialism. (4). 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.

g-PHIL 330. Aesthetics. (4). 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.

g-PHIL 335. Philosophical Ideas in Literature. (4). An in-depth examination of philosophic themes as expressed in selected classics of poetry and prose from ancient to contemporary times.

PHIL 340. Formal Logic I. (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.

PHIL 341. Formal Logic II. (4). A continuation of PHIL 340, with emphasis on metatheorems involved in propositional calculus and first-order predicate calculus compactness, effectiveness, completeness, consistency, soundness, etc.

PHIL 345. Seminar in Logic and Language. (4). 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.

g-PHIL 350. Moral Philosophy. (4). 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.

g-PHIL 355. Social Philosophy. (4). 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.

g-PHIL 370. Philosophy of Religion. (4). 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 of and against the existence of God, transcendence, immanence, hierophany, pantheism, mysticism. Classical and contemporary philosophical theories of religion will be examined.

g-PHIL 375. Philosophy of Science. (4). 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.

g-PHIL 380. Problems and Methods of Philosophy. (4). Prerequisite, three hours of philosophy. Variable content course which student may elect more than once. Such topics as scepticism, realism, phenomenology, free will, philosophy of

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mythology, inductive logic, concepts and reference, etc. The student becomes immersed in one philosophic problem and alternative methodologies for treatment.

g-PHIL 405. Studies in the History of Philosophy. (4). 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.

g-PHIL 415. American Philosophy. (4). 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.

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. Not for General Education credit.

g-PHIL 430. Epistemology. (4). 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 precepts, illusion and lies, constituting and constituted egos, etc.

g-PHIL 440. Metaphysics. (4). 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.

g-PHIL 490. Studies in 19th and 20th Century Philosophy. (4). Prerequisite, PHIL 210 or 220 or 230. 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 courses which student may elect more than once.

g-PHIL 495. Directed Research in Philosophy. (4). (Maximum 8). 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.

g-PHIL 499. Thesis in Philosophy. (4). (Maximum 8). Senior standing and 21 hours in Philosophy. Unscheduled course designed for student intent upon entering graduate programs in Philosophy. Student completes approved topic thesis exhibiting philosophic acumen, research expertise, analytic and synthetic ability. Preferred: four credits per quarter for two consecutive quarters.

PHYSICS

h-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.

h-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.

h-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.

h-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.*

h-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.

h-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.

h-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.

h-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.

h-PHYS 265. General Physics -- Mechanics. (5). (4 lecture, 3 laboratory.) Prerequisite, MATH 131, or taken concurrently. The first quarter of the general course in physics covering the laws, principles, and generalizations of mechanics.

h-PHYS 266. General Physics -- Electricity. (5). (4 lecture, 3 laboratory.) Prerequisites, PHYS 265 and MATH 132. The second quarter of the general course in physics covering the principles, laws, and generalizations in electricity.

h-PHYS 267. General Physics -- Sound, Light, and Heat. (5). (4 lecture, 3 laboratory.) Prerequisites, PHYS 266, MATH 133. The third quarter of the general course in physics treats the laws, principles and generalizations concerning sound, light and heat.

h-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 for a physics major. 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.

h-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.

h-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.

h-PHYS 364. Elementary Photography. (3). (2 lecture, 3 laboratory.) An introductory course covering the basic elements of photography. Topics include developing, printing enlarging and the use of photography in the teaching of science. *Not recommended for students with previous photography laboratory experience.*

h-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.

h-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.

h-PHYS 367. Optics I. (4). (3 lecture, 3 laboratory.) Prerequisites, PHYS 267 and

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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.

h-PHYS 366. 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.

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.

h-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.

h-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.

h-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.

h-PHYS 467. Applied Solar Energy. (3). Prerequisite, PHYS 262 or PHYS 267. A study of practical uses for solar energy. Topics include: the availability of the resource; home and industry heating systems; types of collector systems; transfer and storage in commercial applications; and special applications of interest.

h-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.

PHYS 490. Senior Research. (2 - 4, repeatable up to 12 hours.) Prerequisite, two years of physics courses which apply toward the major. An independent experimental or theoretical research project in physics along with weekly conferences with the research advisor and a paper and/or oral presentation are required.

PHYS 495. Seminar in Teaching. (2). Course designed for prospective teachers in physics and physical sciences at the secondary school level which will include a study of physics curricula and problems which the teacher may encounter in the classroom.

POLITICAL SCIENCE

f-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. Required of all PSCI majors and minors.

f-PSCI 104. Contemporary Political Issues. (3). Several contemporary issues of domestic or international significance will be examined. Course content will vary, but representative issues include social welfare, environment, political participation, the national interest, racial and ethnic concerns and institutional reform.

f-PSCI 105. Introduction to Political Science. (3). This course provides an overview of the historic philosophical concerns of political science in the context of a comparative analysis of contemporary political institutions, behavior and processes. Consideration is given to national, subnational and international aspects of politics and government. This course is required for all PSCI majors and minors.

f-PSCI 150. 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.

f-PSCI 200. Legislative Processes. (3). Prerequisites, PSCI 100. A survey of American legislative systems and processes. The structure and organization of legislatures and the process of statute law-making.

f-PSCI 201. State and Local Government. (5). Prerequisite, PSCI 100. The organization of state, county, and municipal governments.

f-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 experiences as an observer and assistant to an elected member of the Colorado State Legislature.

f-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.

f-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.

f-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 institutions will be explored.

f-PSCI 210. European Political Systems. (4). A comparative analysis of the political systems of selected European nations, including Great Britain, France, and West Germany.

f-PSCI 220. International Relations. (4). An introductory of the basic principles and problems of the international political system.

f-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.

f-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, the problems of contemporary Presidential policy making are examined.

f-PSCI 303. The Administration of Justice. (4). A comprehensive analysis of the judicial process including the appellate and jurisdictional aspects of the legal system of the United States. The focus of the course is on the administration of criminal justice including the arrest, trial, and rights of prisoners.

f-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.

f-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.

f-PSCI 320. American Foreign Policy. (4). An analysis of the development of recent American foreign policy, especially since World War I.

f-PSCI 325. Politics and Conflict in the Middle East. (4). Focus will be on the

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structure, development and policies of major Middle Eastern political systems. Domestic and international conflicts and relations to the major powers will be discussed.

I-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.

I-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.

I-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.

I-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.

I-PSCI 345. Readings in Political Science. (2). Prerequisite, Upperclass standing in Political Science or consent of instructor. Major recent contributions to the study of politics will be explicated and criticized in periodic papers prepared by the student. The reading will be assigned according to the interests and needs of the individual student.

I-PSCI 350. Comparative Public Policy. (3). Prerequisite, a course in American Government. Cross-national comparison of public policy in such areas as education, transportation, taxation, population and income maintenance. Differences and similarities across policy areas within one country and differences and similarities cross-nationally within a policy area will be identified and explanations for those differences and similarities will be essayed.

I-PSCI 400. Political Parties. (3). Prerequisites, PSCI 100. 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.

I-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.

I-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 within the metropolitan areas of the United States. The problems of urban disorganization, mass transit, housing, and minority representation will be covered.

I-PSCI 403. Problems in United States Government. (3). Prerequisites, PSCI 100. 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.

I-PSCI 410. Government and Politics of Asia. (4). A comparative study of the major political systems of Asia, including China, Japan, India, and Indochina.

I-PSCI 411. Government and Politics of Latin America. (4). A comparative study of political systems of Latin America.

I-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.

I-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.

f-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.

f-PSCI 421. The United Nations. (3). The background and organization of the United Nations. Includes a detailed study of 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 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 for General Education credit.

f-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.

f-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.

f-PSCI 435. Problems in Political Philosophy. (3). Prerequisites, two of PSCI 330, 331, 332, or consent of instructor. Selected problems or philosophies will receive close and lengthy attention. Familiarization with a considerable literature and a substantial paper will be required.

PSYCHOLOGY

PSY 101. Introductory Seminar in Psychology. (1). Required no later than two quarters after declaration of PSY major. An introductory seminar for undergraduate psychology majors and prospective majors. This course is designed to provide the student with a general overview of the field of psychology and the career opportunities therein. The student will also be assisted in the preparation of a tentative course of studies to optimize career opportunities in psychology.

f-PSY 120. General Psychology. (3). 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 or her behavior.

f-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.

f-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.

PSY 161. Group Process and Human Relations. (3). 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.

f-PSY 202. Principles and Philosophies of Guidance. (3). 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. Student 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.

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1-PSY 230. Human Growth and Development. (5). Prerequisite, PSY 120 or equivalent. 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.

1-PSY 240. Human Learning and Cognition. (3). Prerequisite, PSY 120 or equivalent. 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.

1-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.

1-PSY 255. The Psychology of Emotional Adjustment. (3). 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 the reaction with regard to racially and physically different individuals.

1-PSY 261. Human Relations and Awareness. (3). A course which examines human interactions both from the study of human relations, communications, and group dynamics theory and from a skill-building, experiential perspective. Students will be exposed to and will practice effective means of communicating in one-to-one and small group situations. Included will be intercultural communication, conflict resolution, and skills in giving and receiving feedback.

1-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.

1-PSY 271. Psychological Testing and Measurements. (3). Prerequisites, RSM 203 or equivalent. 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, PSY 121, 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) (1 - 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.

1-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.

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.

i-PSY 346. Human Effectiveness in Education. (3). This course provides a human relations perspective for students and is designed to enhance their effectiveness as teachers with peers, supervisors and students; to provide skills useful in classroom management; and to explore and develop psychological skills to meet the personal needs of the teacher.

PSY 347. Developmental Psychology for Teachers. (3). Provides teachers with a knowledge of human growth and development through the school years; a knowledge of the biological and environmental factors operating in the affective, cognitive, physical and social domains; and knowledge of similarities and differences in human beings with the implications these have for teaching and learning.

PSY 348. Learning Processes in Education. (3). Provides teachers with knowledge of psychological concepts applied to the teaching/learning process such as motivation, classroom discipline concerns, teaching strategies, evaluation and grading and major theoretical approaches to human learning.

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.

f-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.

i-PSY 365. Psychology of Prejudice. Taught every quarter. (3). 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.

f-PSY 369. Ecological Psychology. (3). Prerequisite, PSY 120 or equivalent. 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.

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PSY 425. Individual Studies. Taught every quarter. (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.

PSY 425. Seminar: Psychological Issues. Taught every quarter. (3). 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.

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.)

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.

f-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.

f-PSY 468. Psychology of Women. (3). Prerequisite, junior or senior standing. 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 interdependent 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.

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 recommended 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. (1 - 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

a-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. Student is expected to know basic arithmetic and elementary algebra.

h-RSM 213. Statistics for Health Sciences. (3). This is an introductory course in statistical methods with applications to the biological and health sciences. Topics include frequency distributions, measures of central tendency, measures of dispersion, the normal distribution, standardized scores, hypothesis testing, chi-square, correlation, and regression. Restricted to nursing, biology, and health science majors.

h-RSM 303. Basic Statistical Inference. (3). Prerequisite, RSM 203 or its equivalent. The student will be acquainted at a service level with statistical procedures as used by the researcher. Emphasis will be upon applications. Topics will include simple hypothesis testing, analysis of variance, chi-square analysis, and elementary probability.

f-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.

f-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.

RSM 422. Independent 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. Not for General Education credit.

RUSSIAN

d-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.

d-RUS 102. Elementary Russian II. (5). A continuation of RUS 101.

d-RUS 103. Elementary Russian III. (5). A continuation of RUS 102.

d-RUS 201. Intermediate Russian I. (4). Prerequisite, RUS 103. Review of Russian Grammar, imitative composition and the reading of intermediate Russian texts.

d-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.

d-RUS 203. Intermediate Russian III. (4). A continuation of RUS 202. More intensive reading, oral and written reports, advanced composition, translation.

g-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.

g-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.

g-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.

d-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.

d-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.

d-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.

g-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.

RUS 422. Individual Studies. (1 - 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.

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 paper must be filed with the instructor before credit is given. Not for General Education credit.

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.

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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.

g-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.

h-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.

h-SCI 106. Reaching Beyond the Rationale. (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.

h-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.

h-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.

h-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.

h-SCI 110. Sights and Sounds. (3). A descriptive study of the wave motion as applied 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.

h-SCI 210. Values -- Act (I) 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.

h-SCI 260. Earth Science Concepts for Elementary Teachers. (4). (3 lecture, 2 laboratory). Co-requisite, SCED 260, 261, or 262. Introductory course in earth science designed especially for elementary education majors.

h-SCI 261. Biological Science Concepts for Elementary Teachers. (4). (3 lecture, 2 laboratory). Co-requisite, SCED 260, 261, or 262. A study of some basic con-

cepts 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.

h-SCI 262. Physical Science Concepts for Elementary Teachers. (4). (3 lecture, 2 laboratory). Coprequisite, 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.

h-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.

h-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.

h-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

f-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.

f-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.

f-SOC 145. Social Problems. (3). Designed to help the student understand some

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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.

All of the following Sociology courses have a prerequisite SOC 100 or equivalent.

I-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 those movements on society's processes, goals, and values.

I-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.

I-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.

I-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.

I-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.

I-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.

I-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.

I-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.

I-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.

I-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.

I-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 concepts 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.

I-SOC 333. Social Stratification. (3). Presentation of a unified portrait 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.

I-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.

tives, and interpretation of utopian designs for societies of the future, and the theoretical construction of future societies.

f-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.

f-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.

f-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.

i-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.

f-SOC 350. 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.

f-SOC 351. 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.

f-SOC 352. 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.

f-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.

i-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.

f-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.

f-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.

f-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.

SOC 422. Independent Study in Sociology. (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.

f-SOC 424. Sociology of Criminal Law. (4). An inquiry into the origins of criminal law, its administration, and the effect of legal sanctions.

f-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.

f-SOC 430. Sociology of Fascism. (3). SOC 321 recommended. An examination of the processes, relationships, and precipitating climate involved in facism as a

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social system with special reference to both compatible and incompatible features in American life.

f-SOC 432. Occupations and Professions. (3). Description and analysis of selected occupations and professions in American society.

f-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.

f-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.

f-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.

f-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.

f-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.

f-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.

f-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.

f-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.

f-SOC 480. Field Research in Sociology. (4 - 15). Prerequisite, consent of instructor. This course offers an opportunity to combine a substantial amount of self-directed research under the supervision of the instructor with actual field experience as an intern in a relevant social agency.

For 500 level classes -- see Graduate Catalog.

SPANISH

d-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 of the language.

d-SPAN 102. Elementary Spanish II. (5). A continuation of SPAN 101.

d-SPAN 103. Elementary Spanish III. (5). A continuation of SPAN 102.

e-SPAN 111. Medical Spanish I. (3). A course designed to give students involved in the medical field a basic knowledge of Spanish. The course will include intensive practice in speaking and using vocabulary that would be essential for effective communication with Spanish speaking individuals in a hospital or clinical setting. Mexican-American folk medicine or "curanderismo" will also be discussed.

e-SPAN 112. Medical Spanish II. (3). Continuation of SPAN 111.

e-SPAN 113. Medical Spanish III. (3). Continuation of SPAN 112.

d-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.

d-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.

d-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 culture 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.

d-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.

g-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.

g-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.

g-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.

d-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.

d-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.

d-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.

g-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.

g-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.

g-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.

g-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.

d-SPAN 400. Problems in Oral Spanish. (3). Prerequisite, two years of college

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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.

g-SPAN 405. Latin American Short Story. (3). Study of the Latin American short story from romanticism to the present. To include Quiroga, Borges, Rulfo, Cortázar, Marquez.

g-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.

g-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.

g-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.

g-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. Not for General Education credit.

g-SPAN 425. Chicano Spanish. (3). Prerequisite, two years of college Spanish. Chicano Spanish is a course designed to acquaint future Spanish teachers with the regional and social characteristics of the Spanish spoken by the Spanish speakers of the Southwestern United States.

g-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.

g-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-Columbian period to the present will be included. Primary emphasis will be placed upon Mexico. The class is conducted in Spanish.

g-SPAN 475. Spanish Reading. (1 - 4). Prerequisite, two years of college Spanish. Designed to fit the reading abilities and interests of various students. Extensive reading is reported in class and in conference. Reading will be chosen from a specific movement of literature to be determined by the instructor.

SOCIAL STUDIES EDUCATION

SSSED 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

d-THEA 105, 106, 107. Individual Performance in Theatre. (1 each). Open to all students who desire to participate in production activities of The Little Theatre of the Rockies. S - U final marks. To receive S, students must participate a minimum of 30 hours.

d-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 in the laboratory experiences on basic stage construction, shifting and rigging procedures, and scene painting.

d-THEA 130. Introduction to the Theatre. (3). A survey of the history of the theatre with study of representative plays from each historical period.

d-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.

d-THEA 170, 171, 172. 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 movement, strength, agility, and control.

d-THEA 205, 206, 207, 208. Individual Performance in Theatre. (2 each). Open to all students who desire to participate in production activities of The Little Theatre of the Rockies. S - U final marks. To receive an S, students must participate a minimum of 60 hours.

d-THEA 210. Stagecraft. (3). (2 lecture, 2 laboratory. Lab card required.) Prerequisite, THEA 110. A study of advanced construction, problems, 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.

d-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.

d-THEA 240. Beginning Stage Directing. (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 courses is on contemporary theories and practices of stage directing.

d-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.

d-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.

d-THEA 280. Creative Drama in the Community. (3). (Laboratory arranged. Lab card required.) A study in creative dramatics including content areas, methods of application, service to special community groups (e. g., the handicapped, the elderly) and use in recreation center programs.

d-THEA 281. Creative Drama in Education. (3). (Laboratory arranged. Lab card required.) A study in creative dramatics including content areas, methods of application, communication and social skill development, and function in contemporary society; emphasizing all basic concepts usable within the framework of each student's own specific teaching methodology in education.

d-THEA 305, 306, 307, 308. Individual Performance in Theatre. (3 each). Open to

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all students who desire to participate in production activities of The Little Theatre of the Rockies. S - U final marks. To receive an S, students must participate a minimum of 90 hours.

d-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.

d-THEA 320, 321. Stage Costume Design I, II. (4 each). An introduction to designing costumes for the stage, with emphasis on the historical, conventional and visual tools and media available to the designer for translating verbal script to visual and tactile form.

d-THEA 330. 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.

d-THEA 331. 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.

d-THEA 332. 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.

d-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.

d-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.

d-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.

d-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 hours 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.

d-THEA 353. Theatre Production. (2). (6 laboratory.) Prerequisite, acceptance by the Theatre Arts staff director. A laboratory class in the production and presentation of touring theatre before live audiences. Triple period, two days a week. Repeatable for eight hours maximum credit.

d-THEA 360. Acting III. (Musical Theatre). (3). (2 lecture, 3 laboratory. Lab card required.) Prerequisite, THEA 160. The primary focus of the course follows the structure of THEA 260, Acting II (Externals) but in the medium of musical theatre. The laboratory experiences will include singing, dancing and acting.

d-THEA 361. Advanced State 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.

d-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.

d-THEA 380. Children's Theatre Production. (3). (Laboratory arranged. Lab card

required.) 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.

d-THEA 390. Chamber Theatre. (4). 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.

THEA 401. Practicum in Theatre. (1 - 4). (Maximum 12). Qualified undergraduates; permission of instructor, student adviser, department chairperson. Supervised and specialized field-work in theatre, involving theory and methodology in practice; two to eight hours per week. Critical evaluation by instructor. Copies of a written evaluation of the work performed must be filed with the instructor and department.

d-THEA 405, 406, 407, 408. Individual Performance in Theatre. (3 each). Open to all students who desire to participate in production activities of The Little Theatre of the Rockies. S - U final marks. To receive an S, students must participate a minimum of 60 hours.

d-THEA 410. Advanced Staging Techniques. (4). 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.

d-THEA 411. Stage Lighting. (3). (2 lecture, 2 laboratory. Lab card required.) Prerequisite, THEA 210. An introduction to lighting theory and lighting design applicable to staging practices.

THEA 422. ID Research in Theatre. (1 - 4). (Maximum 12). Qualified undergraduates; permission of instructor, student adviser, department chairperson. Supervised individual research in theatre, involving the standards and methodologies of research procedures; two to eight hours of research/writing per week. Critical evaluation by instructor. Copies of a standard research paper must be filed with the instructor and department.

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 prompt book will be required.

d-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.

d-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.

d-THEA 462. Problems in Acting Conventions. (2). (4 contact hours per week.) Prerequisite, THEA 260. An advanced laboratory course in acting, concentrating on 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.

THEA 465. Musical Theatre Repertory I. (2). (4 contact hours per week. Taken concurrently with MUS 465.) Prerequisite, THEA 360. 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.

THEA 466. Musical Theatre Repertory II. (2). (4 contact hours per week. Taken concurrently with MUS 466.) Prerequisite, THEA 465. The second of a sequence of

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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.

THEA 467. Musical Theatre Repertory III. (2). (4 contact hours per week. Taken concurrently with MUS 467.) 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.

d-THEA 480. Advanced Creative Dramatics. (3). (Laboratory arranged. Lab card required.) Prerequisite, THEA 280 or THEA 281. A teaching experience in creative dramatics emphasizing the drama leader's role as planner, player and evaluator.

VOCATIONAL TEACHER EDUCATION

e-VTE 210. Career Opportunities and Explorations. (3). This course will provide the student an opportunity to identify teaching careers in Vocational Technical 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 5). Prerequisite, instructor's permission. This combination supervised work experience/related class provides the opportunity for students to improve their technical and professional skills in a specific occupational field related to their major area of study. The experience is designed around major components of secondary/post-secondary cooperative programs including developmental training plans and related class activities. Students must obtain permission from the supervised work experience coordinator and major adviser prior to registering. S - U final mark. May be repeated.

VTE 308. Workshops in Vocational Teacher Education. (Maximum 9). Workshops provide opportunities for vocational educators to concentrate their study on common instructional or administrative problems. Each workshop will have a subtitle and no subtitle may be repeated for credit. Undergraduate students working toward a degree should check with their adviser to determine if the credit may apply toward degree requirements.

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 400. Organization and Administration of Health Occupations. (3). Prerequisite VTE310. This is an introduction to the field of vocational allied health occupations for instructors. This course places emphasis upon external factors affecting health programs at secondary and post-secondary levels. This course is divided into three modules: 1) Organization of Health Occupations, 2) Delivery of Health Occupations Education Programs, 3) Implications for Program Operations.

VTE 401. Health Occupations Instructional Design-Occupational Analysis. (1). This one hour module is designed to aid the student in identifying tasks in health occupation specialties and in outlining the cognitive and affective components of those tasks.

VTE 402. Health Occupations Instructional Design-Performance Objectives. (1).

This one hours module will enable the student to identify well-stated objectives and to write performance objectives which contain condition, performance and criteria in each domain for health occupations programs.

VTE 403. Health Occupations Instructional Design-Classroom Evaluation. (1). Prerequisites, VTE 401, 402. This one hour module will enable the student to design classroom test items which match objectives as to domain and level for health occupations programs.

VTE 404. Health Occupations Instructional Design-Instructional Methods. (1). This one hour module identifies characteristics of classroom methods of instruction used in health occupations. The student will develop materials to be used with these instructional methods.

VTE 405. Health Occupations Instructional Design-Media Utilization. (1). This one hour module is designed to aid the student in critiquing and in using media in health occupations programs.

VTE 406. Student Evaluation in the Clinical Setting. (3). Prerequisite 402 or equivalent. This course is designed for health occupations instructors who are involved with the selection of the clinical sites and the evaluation of students in these sites. There are four modules to be completed: 1) Site Selection, 2) Clinical Objectives, 3) Coordination and Scheduling Techniques, and 4) Evaluation Procedures.

VTE 410. Cooperative Education and Coordination Techniques. (3). Prerequisite, VTE 310, or 610. 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). Must 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 enrollee understand the purpose and function of such organizations as DECA, FLBA/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 for VTE 411 concurrently.

VTE 418. Adult Vocational Education. (3). Prerequisites 310 or 610. 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 419. Advisory Committees Seminar in Vocational Education. (2). Prerequisite VTE 310, or 610. Advisory committees are a unique component of vocational programs. This course is designed to outline the optimal organization and utilization of advisory committees within reimbursed vocational education programs.

VTE 422. Individual Studies in Vocational Teacher Education. (Maximum 4). A

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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. Vocation Education for Learners with Special Needs. (3). Provides an overview of the requisites and characteristics of students with "special needs." Particular emphasis is placed on meeting the needs of both the disadvantaged and handicapped student by providing supplemental services through regular vocational education programs.

VTE 463. Preparation for Teaching Vocational Health Occupations -- Seminar. (3). There are three modules that must be completed immediately preceding student teaching: 1) Instrument for Comprehensive and Relevant Education, (ICARE), 2) Application of Methodology and 3) Classroom Management.

VTE 483. Teaching Improvement Seminar in Vocational Health Occupations. (2). Prerequisite, EDFE 444. This seminar follows the supervised teaching experience. The modules to be completed are: 1) Improvement of Instruction and 2) Placement/Continuing Education Planning.

VTE 488. Seminars in Vocational Teacher 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.

h-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.

h-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.

h-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.

h-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.

h-ZOO 302. 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.

h-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.

h-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.

h-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.

h-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.

h-ZOO 351. Medical Pharmacology. (4). (3 lecture, 3 laboratory.) Prerequisites, BIO 103 or ZOO 105, ZOO 121 or 428, ZOO 250, CHEM 130 or equivalent. A detailed study of the principles underlying absorption, distribution, metabolism, excretion, and interaction of drugs in the human.

h-ZOO 410. Medical Parasitology. (4). (3 lecture, 2 laboratory.) The principals and practices of parasitology, emphasizing parasites of human medical importance. Clinical procedures are not stressed. The morphology, biology, pathology, and epidemiology of selected species are discussed, and their effects on contemporary world health, economics and demography are considered. The historical significance of slavery on parasite distribution is emphasized. No credit allowed for majors.

h-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.

h-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.

h-ZOO 428. Comparative Vertebrate Anatomy. (5). (3 lecture, 6 laboratory.) Prerequisites, 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.

h-ZOO 441. Mammal and Herptile Survey. (5). (3 lecture, 6 laboratory.) Prerequisites, BIO 101, 103. An advanced taxonomy and ecological survey of mammals, reptiles, and amphibians with emphasis on Colorado fauna. 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.

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- Paul Charles LaBorne**, Instructor Emeritus in Foreign Languages -- 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.
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GUIDE TO CAMPUS OFFICES

Post Office Address:

University of Northern Colorado
Greeley, Colorado 80639

Telephone:

(Area Code 303) 351-1890

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Affirmative Action

Affirmative Action Office, Frasier 201 (351-2957)

Bulletins and Catalogs

Publications Office, Carter 206A (351-2772)

Counseling Services

Counseling and Testing Center, 103 Gray Hall (351-2497)

Fee Payments

Accounting Office, Frasier 11 (351-2201)

Financial Assistance and Student Employment

Financial Aids Office, Carter 209 (351-2502)

Graduate Program Information

Graduate Office, 1410 - 20th Street (351-2831)

Housing

Housing Office, Gordon Hall (351-2721)

Off-Campus and Correspondence Courses

Center for Non-Traditional and Outreach Education,
Faculty Apts. Unit 1, Garden Level (351-2891)

Registration

Registrar and Records Office, Frasier 123 (351-2231)

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Financial Aids Office, Carter 209 (351-2502)

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Admissions Office, Carter 209 (351-2881)

