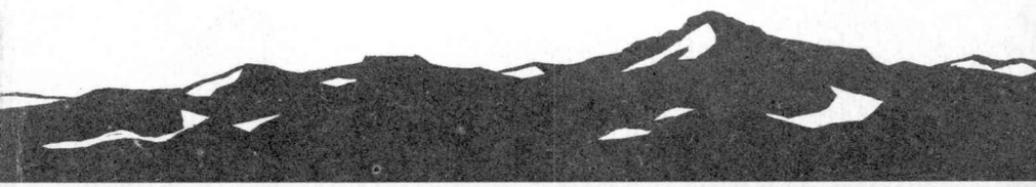


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**THE  
UNIVERSITY  
OF NORTHERN  
COLORADO**



**BULLETIN  
1973 & 74**



# University of Northern Colorado



**UNDERGRADUATE CATALOG**  
1973-74

Effective dates: June 1, 1973 to  
May 31, 1974.

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**March, 1973 ● Number 2**

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**SEPTEMBER**

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# UNIVERSITY CALENDAR

## 1973-1974

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### Summer Quarter, 1973

June 12—Registration for 10-week classes (All other classes may be enrolled for at this time)

June 13—Classes Begin

June 19—Registration for 8-week classes (Classes that have not begun may be registered for at this time. Subsequent classes may be registered for on the first day of those classes.)

July 4—Independence Day

July 23-27—Mid-term Week

August 15—Commencement (10:00 a.m.)

August 17—Quarter Ends

Summer Orientation/Pre-Registration for Fall Quarter, 1973; June 26, July 10, 17, 24, 31, and August 7, 1973.

### Fall Quarter, 1973

September 17—Laboratory School Opens

September 21—New Undergraduate Students Report

September 24-25—Registration

September 26—Classes Begin

October 29—November 2—Mid-term Week

November 9-10—Winter Quarter Preregistration (No classes November 9)

November 20—Thanksgiving Vacation (Begins after last class)

December 8—Commencement (10:00 a.m.)

December 11—Quarter Ends

### Winter Quarter, 1974

January 2—Registration

January 3—Classes Begin

February 7-14—Mid-term Week

February 15-16—Spring Quarter Preregistration (No classes February 15)

March 9—Commencement (10:00 a.m.)

March 14—Quarter Ends

### Spring Quarter, 1974

March 25—Registration

March 26—Classes Begin

April 22-26—Mid-term Week

May 3-4—Fall Quarter Preregistration (No classes May 3)

May 27—Memorial Day (No classes)

June 1—Commencement (10:00 a.m.)

June 6—Quarter Ends

### Summer Quarter, 1974

June 11—Registration for 10-week classes (All other classes may be enrolled for at this time)

June 12—Classes Begin

June 17—Registration for 8-week classes (Classes that have not begun may be registered for at this time. Subsequent classes may be registered for on the first day of those classes.)

July 4—Independence Day

July 15-19—Mid-term Week

August 14—Commencement (10:00 a.m.)

August 16—Quarter Ends

(There will be classes Friday, July 5, 1974.)

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## TO THE NEW OR PROSPECTIVE STUDENT

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This bulletin 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 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 annual Schedule of Classes. The summer schedule is given separately in the Summer Session bulletin.

**Freshman Admissions Timetable.** Applications may be filed at any time during the senior year in high school but not later than 30 days prior to registration day. Individuals are encouraged to submit applications as early as possible; since freshman enrollments may be curtailed because of limited facilities. The application must be accompanied by a \$10.00 transcript and evaluation fee, which is non-refundable. The American College Test (ACT) should be taken early enough so that the test results may be considered at the time the application is filed. An October or December test date is recommended. Junior year test scores will be accepted. Applicants for financial aid must submit the Family Financial Statement of the American College Testing Program in order to be considered for financial aid. 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 a financial aid package becomes final. Financial aid applications received by March 1 will be given first priority for consideration.

**Transfer Student Admissions Timetable.** All applications and two official transcripts from each college or university attended must 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 transfer enrollments may be curtailed because of limited facilities. 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.*

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# COLLEGES, SCHOOLS, AND DEPARTMENTS OF INSTRUCTION

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## **College of Arts and Sciences**

**Departments:** Anthropolgy, Biological Sciences (Biology, Botany, Zoology), Black Studies (not a formal department), Chemistry (with Medical Technology), Earth Sciences (Astronomy, Geology, Meteorology, Oceanography), Economics, English, Foreign Languages (French, German, Russian, Spanish), Geography, History, Mathematics, Mexican American Studies (not a formal department), Philosophy (not a formal department), Physics, Political Science, Science Education, Sociology, Speech Communication and Journalism, Theatre Arts.

## **College of Education**

**Departments:** College Student Personnel Work, Curriculum and Instruction, Educational Administration, Educational Field Experiences, Educational Media, Elementary Education and Reading, Foundations of Education, Higher Education, Laboratory School, Psychology-Counseling and Guidance, Research and Statistical Methodology, Special Education and Rehabilitation, Vocational Education.

## **School of the Arts**

**Departments:** Fine Arts, Home Economics, Industrial Arts.

## **School of Business**

**Departments:** Accounting, Finance and Insurance, General Business and Business Teacher Education, Management, Marketing.

## **School of Educational Change and Development**

## **School of Health, Physical Education and Recreation**

**Departments:** Health Education, Physical Education (Men), Physical Education (Women), Recreation.

## **School of Music**

**Departments:** Brass and Percussion, History and Literature, Music Education, Piano and Organ, Strings, Theory and Composition, Voice, Woodwind.

## **School of Nursing**

## **Division of Aerospace Studies**

## **Graduate School**

## **Special Studies and Continuing Education**

## **Summer Session**

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## GENERAL INFORMATION

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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 related areas) and pre-professions (such as pre-law, pre-medicine, and others). Historically, a principal emphasis has been upon preparing students for careers in education.

A wide variety of program offerings are organized within eight schools and colleges (College of Arts and Sciences, College of Education, School of the Arts, School of Business, School of Educational Change and Development, School of Health, Physical Education and Recreation, School of Music, and School of Nursing). Advanced programs are offered through the Graduate School, and an Air Force officers program is available through the Division of Aerospace Studies.

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

**Location.** The university is located in a residential area in the southern part of Greeley, Colorado, a city with a population of about 40,000 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 University of Northern Colorado is one of a group of institutions of higher learning controlled by the Trustees of the State Colleges in 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.

Its history 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, with a faculty of the principal and four instructors and with 96 students. 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 upward 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.

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

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

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

**Campus.** The physical facilities of the university consist of 16 academic buildings, 23 residence halls and apartments for students, and a number of other permanent or temporary buildings used for various miscellaneous purposes, such as service buildings, faculty apartments, athletic facilities, faculty offices, and sorority or fraternity houses. The campus of approximately 240 acres is situated one mile south of the main Greeley business district and is divided into three areas: East Campus, Central Campus, and West 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 West Campus have been built within the last 10 years, and further development is planned for this area. A major addition in 1970 was the main library building. A new classroom building for the arts and sciences and a new 17-story apartment-style dormitory opened in 1972.

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.

**Libraries.** The main University Library is located on the West Campus and incorporates some of the latest equipment and techniques known to library science to provide the materials and services necessary for student and faculty research and study.

A special reserve book facility and reading room, photo-duplication services, microfilm reading and storage, and a rare books room are included in the building. A multipurpose room (little theatre) which seats 300 is also provided.

The library materials collection, housed largely in the University Library, contains over 300,000 volumes, including periodicals, government documents, pamphlets, reference materials, and over 150,000 microforms. The stacks are open to all students and other patrons. Individual and group study facilities are located near all stack areas. Seating capacity has been planned for 2,700 persons.

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 Educational Resources Center is located in McKee Hall. Here education materials, textbooks, curriculum guides, and testing materials are available for the student who is preparing to teach.

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 22,000 volumes, together with other learning media, for the laboratory school student and faculty use. College students preparing to teach also find this facility and its collection worth examining.

For library orientation, a handbook entitled *A Guide to the Libraries* is available at the main desk of the University Library. Tours and special instruction in library use are available on request.

**Laboratory Schools.** A K-12 (kindergarten through high school) Laboratory School is maintained as a department of the College of Education. Enrollment is on a first-come, first-served basis. The school is organized for research

and experimentation with new educational methods and serves as a place where students in the professional teacher education programs may have actual observation-demonstration-participation experiences with school-age children. Information on enrollment procedures, fees, and the like may be obtained from the Associate Director of Student Personnel at the Laboratory School.

The campus Special Education School, a cooperative project with Weld County School District No. 6 (Greeley, Evans, Ashton), is a laboratory school enrolling physically and mentally handicapped and emotionally disturbed children. University students observe classes and do student teaching at this school. For enrollment information, consult the Dean, School of Special Education and Rehabilitation.

A Pre-School is conducted under the direction of the Department of Home Economics. For further information consult the department chairman.

**Off-Campus Instruction.** Through its Department of Special Studies and Continuing Education, the university offers both off-campus classes and correspondence work. The off-campus classes are given in various parts of the state primarily as a service to public school teachers and school systems. Correspondence courses are given for the convenience of students wishing to earn university credits who cannot attend classes either on or off the campus.

Detailed information regarding off-campus and correspondence study may be obtained by addressing the Department of Special Studies and Continuing Education.

**Summer Session.** The summer quarter, while offering the work of a regular academic quarter and thus making it possible for the student to complete a four-year undergraduate program in three years, also provides special courses and workshops not generally available during other terms. These vary in length, and it is possible to attend the summer session for as short a period as two weeks.

For the summer schedule and the list of courses available, address the Director of the Summer Session.

**Center for Special and Advanced Programs.** The Center for Special and Advanced Programs has been created to meet the educational needs of the employed adult. Programs are designed to enable students to obtain degrees without undue interference with full-time employment.

The program uses a flexible course format which permits the fully employed adult to participate in a full-time degree program that specifically utilizes and builds upon his work experience and allows the student to develop a program that will be relevant to his career objectives. Seminars preceded by directed readings, workshops, lectures, discussions, case studies, and individual study and research form the basis for much of the course work.

For further information and a special catalog, address the Campus Director for the Center for Special and Advanced Programs.

**Instructional Materials Center.** Services provided by the Instructional Materials Center cover the range of educational media. The center provides a media consulting service for faculty and others, and questions concerning audio-visual needs should be directed to this office.

Faculty film requests and orders are processed by this department. A library of 2,000 films, 900 filmstrips, several hundred audio recordings and numerous video tapes is available. All audio-visual equipment and films for the university are centrally located, supplied, and maintained in the Center. Student projectionists are provided for faculty members who desire this help.

Audio production studies provide tape recording and duplication services. A graphics production staff is also available in the Center for the creation and reproduction of visual and photographic instructional materials. Through the facilities of the Instructional Television (ITV) division, a complete production studio is available. A three-channel distribution system allows for playback of videotapes or distribution of locally originated live telecasts to most buildings on campus. Portable video units utilizing ½-inch video tapes are also available on loan from the IMC.

**Computer and Data Processing Center.** The facilities are used to support academic programs at all levels. The center is available to all students, faculty, and staff for course work and/or research projects. In addition, the administrative data-processing facet of the university is processed by the center. The center staff provide consulting service and assistance to all users.

**Educational Planning Service.** Consultant services for school districts and educational institutions are provided through the Educational Planning Service, which is organized to utilize the experience and specialized knowledge of the entire university faculty. Services to schools and colleges include curriculum planning, administration and organization problems, planning educational facilities and planning for higher education. The Educational Planning Service is a self-supporting, non-profit activity with the fees for services set on a cost basis.

**Bureau of Research.** Consultative services are provided to the university, individual faculty members, doctoral students, public schools and other educational organizations. Services include aid in preparing statistical designs, drafting of proposals for research funds and grants, dissemination of research reports, and aid in other phases of research and development. University and public school organizations are assisted in planning test programs, large scale research projects, innovative projects, and program evaluation.

**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 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.

**KUNC-FM.** The radio voice of the University of Northern Colorado, this public radio station is licensed to the Associated Students and managed by the Instructional Materials Center. Emphasis is given to the broadcasting of programs of general cultural, educational, and informational interest, plus quality music. KUNC broadcasts at 91.5 megahertz on the FM band and, with 3,000 watts of power, is Colorado's largest university-owned public station. A quarterly program guide describes the program offerings and is available free of charge.

**Rocky Mountain Special Education Instructional Materials Center.** An integral part of the special education program at the University of Northern Colorado is the new Rocky Mountain Special Education Instructional Materials Center. This facility is one of 12 such centers in the United States supported by funds from the U.S. Office of Education. The centers' chief function is to provide for acquisition and lending services of special education instructional materials to educators in a five-state area, including Montana, Wyoming, Colorado, Utah and New Mexico.

Special education students at the Greeley campus find the center's storage of materials and information services helpful in their studies and research. The center puts within the reach of students and educators alike an ever-expanding wealth of the latest in instructional materials.

**Alumni Association.** The Alumni Association of the University of Northern Colorado was reestablished February 11, 1965. A non-profit corporation independent of the university, the Association is governed by a 21-man Board of Directors and has as its purpose the creation and encouragement of activities which are mutually beneficial to the university and its alumni. Local

clubs are established in areas where 10 or more alumni indicate an interest. Regular Membership is available to any person who has enrolled in the university. Friends of the university may apply for an Associate Membership. For additional information, address the Alumni Office.

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## STUDENT PERSONNEL SERVICES

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All out-of-class activities and services for students are administered by the Department of Student Personnel. These include pre-university counseling, application for admission, veterans' counseling, matriculation and guidance examinations, registration for courses, record keeping, application for graduation, transcription of records, student health services, testing, counseling of a personal nature as well as academic guidance, remedial programs, living accommodations, recreational and social events, foreign student advisement, student employment, student loans and scholarships, and placement services.

### Admission and Academic Standards

**Admission.** A high school graduate or a person holding a high school equivalency certificate may be admitted to the University of Northern Colorado if the transcript of his high school record accompanying his application indicates he has the academic ability to do college work successfully. All applications for admission 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 limited facilities.

Minimal requirements for freshman admission are:

1. Graduation from an accredited high school with a minimum of 15 secondary school units. Graduates from high schools not accredited will be examined for admission purposes.
2. Of the 15 units required, 10 must be chosen from the following academic fields: English (minimum of three units), foreign languages, mathematics, science, and social studies.
3. Rank in the upper one-half of the high school graduating class or scores above the national average on the American College Test.
4. All new students are required to submit scores from the American College Test (ACT). Entrance examination results should be submitted as early as possible so admission status can be determined without delay. Information regarding the ACT examination may be obtained from high school principals or counselors.

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

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

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

**Medical Examination.** Prior to final admission and following a medical examination by a qualified medical practitioner, a student shall submit to the Student Health Service of the university a health report which is acceptable to the staff of the Student Health Service indicating the student is in good physical and mental health, has no communicable disease, and has no defects or deficiencies which would hinder satisfactory progress in his chosen curriculum.

**Personal and Social Qualities.** A student seeking admission to the University of Northern Colorado is expected to possess personal and social qualities befitting the curriculum he wishes to study, in keeping with the objectives and traditions of the university, and desirable for the vocation he plans to enter. After admission to the university, he 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 him to progress satisfactorily in his chosen curriculum and to perform adequately when in his later vocation.

**Transfer Credit.** Students graduating from a junior college or transferring two years of college work may have to spend more than two years at the University of Northern Colorado to complete the requirements for graduation in certain major fields. If the junior college program corresponds to the requirements of the first two years in the same plan of study at the University of Northern Colorado, graduation in two additional years is possible in most cases. Credit earned at a junior college after completion of the sophomore year or beyond 90 quarter hours of credit will not be transferable.

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 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. College foreign language credit may be transferred provided a student has satisfactorily completed one full year in one language.

Any college work earned more than 15 years prior to the time the baccalaureate degree is granted at the University of Northern Colorado may not be applicable toward a degree.

*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 nonaccredited 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.

## 12 / GENERAL INFORMATION

**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.

**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 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.

**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.

### Admission Procedures

**Freshman Students.** 1. Get an Application for Admission from your 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 not later than 30 days prior to registration day. Individuals are encouraged to submit applications as early as possible, since freshman enrollments may be curtailed because of limited facilities.

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

3. Make arrangements to 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.

5. Additional information regarding the university orientation—Pre-Registration program will be mailed prior to the opening of the university to those applicants entering Fall Quarter.

**Transfer Students.** 1. File with the Office of Admissions, the University of Northern Colorado (a) An Application for Admission including high school record; (b) two official transcripts of all credits earned at other colleges or universities; (c) an application for transfer of credit; (d) a report of health examination.

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

In order to insure an evaluation for admission, these materials must 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 transfer enrollments may be curtailed because of limited facilities. 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.*)

**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, should be mailed in time to reach the University of Northern Colorado not later than 60 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. Students are advised to begin their studies at the University of Northern Colorado with the first quarter of the academic year which begins in September.

**Academic Standards.** The normal undergraduate course load for a quarter is 15-17 hours of academic credit. This does not include physical education activity courses. During the pre-registration period, students may register for a maximum of 17 academic credit hours. During registration and ending with the last day for adding courses, students who have a 2.75 or higher cumulative grade-point average may enroll for additional hours with approval from the office of the Dean of Students. It is recommended that students desiring to take more than 17 hours seek prior departmental academic counseling. Students who have less than a 2.75 cumulative grade-point average may not take in excess of 17 academic hours plus one physical activity hour. Exceptions may be made to the policy for legitimate hardship cases by the Dean of Students Office.

All credit toward graduation is computed in "quarter credit hours." The term "quarter hours" mean a subject given one day a week through a quarter of approximately eleven weeks.

Courses offered during Fall, Winter, Spring and Summer quarters will carry the credit designated in the catalog. A student may register for a class for no credit by paying appropriate tuition fees. No audit or visitors cards are issued.

**Academic Class Status.** A minimum cumulative grade point average of 2.0 is required for graduation.

A student is a freshman until he has completed and passed 45 quarter hours of course credit. He is a sophomore after completing and passing 45 quarter hours of credit until he has completed and passed 90 quarter hours of course credit. A student is a junior after passing 90 quarter hours of credit until he has completed and passed 135 quarter hours of credit. A senior is a student who has passed 135 quarter hours until he is graduated with a baccalaureate degree. A student must have a cumulative grade point average of 2.3 and a 2.3 average in the area in which he expects to student teach when he applies for a student teaching assignment.

**Grading System.** Alphabetical grades are used: "A" indicates superior work; "B" indicates work above average; "C" indicates average work; "D" indicates work below average, but passing; "F" indicates failure. Others marks used are "I" incomplete; "W" approved withdrawal; "TF" unapproved withdrawal. An "I" must be removed by the end of the succeeding quarter. If the Incomplete is not removed by the end of the succeeding quarter, it will remain as an Incomplete on the transcript. If the student wishes to receive credit for the course in which he has received an Incomplete after the lapse of one quarter, he must again enroll in that course. A grade of "S" or "U" indicates satisfactory or unsatisfactory work.

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

**Computing Grade Averages.** Prior to September, 1966, the university computed grades on a five-point system. After the above date, grades are computed on a four-point system: Each of the letters of the marking system has a numerical value. The letter "A" has a value of four (4) points; "B" has a value of three (3) points; "C" has a value of two (2) points; "D" has a value of one (1) point; and no points are given for an "F". If all the student's marks were "C's," he would have a grade average of 2.0. If one-half of his marks were "C's," and the other half "D's," the numerical value of his grade average would be 1.5. 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 honors points.

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

1. Lower Division: (a) 100 level courses are for freshmen students; (b) 200 level courses are for sophomore students.
2. Upper Division: 300-499 level courses are for junior and senior students.
3. Graduate Division: 500-700 level courses are for graduate students. (a) Qualified juniors and seniors may be admitted to 500 level courses by special permission; (b) 600 level courses are for masters, specialists, and doctoral students; (c) 700 level courses are for specialists and doctoral candidates only.

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

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

Attendance at the first day of every class is of utmost importance to the student, the faculty, and the staff; hence all students are expected to register at the designated time and attend the first meeting of each class.

If any student thinks that his late registration fee should be refunded, he should state his reasons either in writing or personally to the Assistant Dean of Students, the University of Northern Colorado. (See Financial Information section for late registration fee rate.)

**Attendance.** Regular attendance in all classes will be assumed and encouraged. The instructor will determine the relationship between class attendance and the objectives of his class and the way in which he will evaluate attendance as a factor in the achievement of the student.

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

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

**Withdrawal from Class.** When a student registers for a class, he is considered to be a member of that class. If he should wish to withdraw from the class, he must first obtain a withdrawal form from the Records Office and obtain the signature of the faculty member teaching the class from which he desires to withdraw. If the faculty member refuses to sign the withdrawal form, the student should contact the Student Personnel Office. No withdrawals from class are permitted during the last two weeks of a quarter. Withdrawal deadlines for each quarter are posted in the Schedule of Classes.

**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 *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.

**Correspondence and Learning Package Courses.** A University of Northern Colorado policy states that a student may earn and apply a maximum of 45 quarter hours of credit through correspondence courses, learning package courses or extension courses toward a bachelor's degree. This includes: University of Northern Colorado correspondence and learning package courses and correspondence and extension work transferred from other colleges and universities. Correspondence and learning package courses must be completed, graded and recorded the quarter before the student expects to graduate.

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

A student pursuing an undergraduate degree program at the University of Northern Colorado who desires to earn credit which he expects to apply to that program by taking extension, off-campus, or correspondence courses from institutions other than the University of Northern Colorado must request written permission to take the specific courses before enrolling. The request for permission must be accompanied by a copy of the course description, an indication of where it is to be held, the number of sessions to be held, the length of each session, the hours of credit for the course, and the name, title, and position of the person offering the course. A course must be taught by a regular full-time faculty member on the staff of the college or university granting the credit and upon whose official transcript the course will appear. General education course requirements are subject to the approval of the Registrar, and major and minor requirements must have the additional approval of the school or department involved.

Students must obtain a current copy of the Correspondence Bulletin or the Off-Campus Bulletin for complete information and regulations concerning correspondence and off-campus courses. These bulletins are available from the Department of Special Studies and Continuing Education, University of Northern Colorado.

**Academic Standing.** The scholastic standing of all students is computed on the basis of courses attempted at this university only. For determining scholarship rank in the awarding of honors, the honor point system is used. The honor point average is a quotient obtained by dividing the total number of honor points earned by the total number of hours attempted (that is, those for which grades of "A," "B," "C," "D," or "F" are recorded). All grades earned by a student at the University of Northern Colorado become a permanent part of the student's academic record and are computed in the cumulative average. Courses in which a passing grade of "D" or above has been earned at the University of Northern Colorado may not be retaken for credit. If a course which was previously failed at the University of Northern Colorado is retaken, both the "F" and the second grade remain on the record and are computed in the cumulative average.

An undergraduate either currently or formerly enrolled is either:

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

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

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

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

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

**Regulations Governing Academic Probation and Dismissal.** A student will be placed on academic probation if he 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):

Freshmen students are required to maintain a cumulative grade point average of 1.5 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 1.5 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 of 2.0 by the close of their sophomore year. A sophomore achieving less than 2.0 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 2.0 at the close of the sophomore year may be suspended.

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

A junior or senior student will be placed on academic probation whenever his cumulative or quarterly average is less than 2.0 based on the courses he has taken at this university. Any junior or senior student attaining less than 1.75 in a quarter or less than 2.0 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. He may not seek such approval until after the lapse of one academic quarter.

**Readmission of Students Who Have Been Dismissed for Academic Reasons.** A student who has been required to withdraw from the university for academic reasons and is petitioning for readmission must account definitely for the expenditure of his time in a profitable way since leaving the university and should give good reasons for believing that he will improve upon his previous record if readmitted. Such a student is not eligible to be considered for readmission until after the lapse of at least one quarter, not counting the summer quarter. Petition for readmission must be made in writing to the Assistant 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.

## Graduation Requirements

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

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

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

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

5. Transcripts from all colleges and universities that contain credit necessary for completion of degree requirements must be received by the Registrar prior to the quarter of graduation. Transcripts will not be available with current courses completed until two weeks after that quarter (Summer Quarter included).

6. A student must have a University of Northern Colorado cumulative grade point average of at least 2.0.

7. A student must have completed the matriculation tests as required by the University of Northern Colorado.

8. The student must apply for graduation, and his 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.

9. The university catalog used on first classification may be used for a period of six years. After six years the student must re-apply for graduation, have his record re-evaluated and he must meet all requirements in the current catalog.

10. 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.

11. Participation in Graduation Exercises is the final 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.

12. Any college work earned more than 15 years prior to the time the baccalaureate degree is granted at the University of Northern Colorado may not be applicable toward a degree.

13. It is the student's obligation to keep the Registrar's Office informed at all times of any change in graduation plans, including: any change in the proposed quarter of graduation after the application was filed, any change of address, etc.

**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" (2.0) 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.

**Placement Service.** The Placement Center is located in the University Library, Room L-115, 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. Established credentials are maintained for a period of five years. Reenrollment and updating must transpire within five years of last enrollment or credentials are destroyed.

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 his 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.

## 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 university publications and are communicated through groups and organizations of the university community by meetings, publications, and contracts. It is the student's obligation to conduct himself as a responsible citizen and to abide by the university's stated rules and regulations. In developing responsible student conduct, counseling, guidance, and admonition, as well as disciplinary proceedings, are used. Student conduct involving minor infractions of university regulations will subject the student to disciplining probationary action by the university. Student conduct involving major infractions of university regulations will subject the student to suspension or expulsion from the institution.

## Housing

The University of Northern Colorado provides a variety of housing accommodations for students. On-campus accommodations are provided for approximately 3,000 single students in residence halls. One hundred university-owned furnished apartments are provided for married students during the academic year. Summer Quarter usage of residence hall facilities provides for an additional 280 units for families.

**Residence Requirements in Brief.** Any undergraduate student enrolled for seven or more credits a term, summer included, is considered a student and is subject to the university housing regulations.

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

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

**Food Service.** Meals prepared in each dining hall are served cafeteria style. University food staff plans menus which give proper emphasis on nutrition, quality and quantity. At least two choices of main courses, salads and desserts are offered at noon and evening meals. Special diets or menus are not provided. Three meals a day are served daily except Sunday when the evening meal is omitted. No refunds are made for meals missed. Additional servings are available at all meals on most items.

**Staff.** A professionally-trained staff is provided in each residence hall to assist students and an active student government is elected to give leadership to activities and programs. The intramural athletic program, a scholastic-cultural program, and most of the social life on campus originate from the residence

units. Activities, programs and counseling services are designed to supplement and enrich student education. Hall activities are financed by a small dues assessment on each resident. Each hall also has student representation on the coordinating body of Inter-Residence Halls Association.

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

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

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

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

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

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

November 15 (for Winter Quarter applicants)  
February 15 (for Spring Quarter applicants)  
May 15 (for Summer Quarter applicants)

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

**Rates.** Rates are established on a room and board basis and vary slightly depending upon hall location and size of the room. Changes are authorized by the Board of Trustees. Notification of changes in rates is given at least 30 days in advance of any school quarter.

**Married Student Housing Facilities.** There are 98 permanent two-bedroom furnished apartments available for students and their immediate families. These apartments are located on university-owned property near residence halls on the East Campus between 17th and 18th Streets. Applications for rentals are made to the Director of Housing, University of Northern Colorado, Greeley, Colorado, 80631. A \$50.00 deposit must accompany an application for all married housing units.

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

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

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

## Health Services

A comprehensive health program is provided by physicians, registered nurses and professionals in mental health through programs using facilities in the community as well as on the campus. A student group health and accident insurance plan provides hospitalization and care for accidental injury. All full-time students have automatic coverage for these benefits upon payment of fees. Informative brochures, which describe benefits available and how to use the services, are available at registration and at the Health Center. To obtain the brochures please write the Health Center Insurance Office. A brief description of the programs follows:

1. **The Health Center.** An on-campus clinic fully staffed by physicians and nurses to provide medical care, health maintenance, and health information for students.
2. **The Off-Campus Services.** Provides up to \$50.00 in office calls, one diagnostic x-ray, and \$10.00 for diagnostic laboratory tests each quarter by a contractual agreement with local physicians.
3. **The Student Group Hospitalization and Accident Insurance.** Provides care 52 weeks per year anywhere in the United States or Canada. Major medical benefits are *not* provided.

Copies of Medical Records will be sent to another institution for a \$2.00 fee.

## Student Activities

All campus organizations must apply each year through the Student Congress to the Department of Student Personnel for charter approval. When organizations are recognized by the Student Congress and the Department of Student Personnel, facilities of the campus set aside for such purposes may be used by the groups. The activities area in the University Center assists in coordinating student activities.

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

Students who do not maintain acceptable grade averages will not be permitted to participate in varsity athletics, dramatics, debate, and other extra-curricular activities of the university, nor are they eligible to be employed on the campus.

**Student Government.** Student government and activities on the campus are administered by the members of the Associated Students under the sponsorship of the Department of Student Personnel. The Associated Students elect in the Spring Quarter a student governing body, the Student Congress. The Student Congress serves in the succeeding school year.

Students registered for seven or more quarter hours of credit on the campus are entitled to all regular university services and privileges accorded to this group.

Membership in the Associated Students permits students to attend most cultural, social, dramatic and athletic events without additional charge. Three student publications, the *Mirror* (a tri-weekly newspaper) and *Egg* and *Nova* (general interest and literary magazines) are provided without charge to members. 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, field and track, wrestling, swimming, gymnastics, tennis, and golf. Gunter Hall, Jackson Field, and the West Campus athletic fields afford the facilities for the major indoor and outdoor sports.

The university is a member of the Rocky Mountain Athletic Conference, 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.

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. In addition, a co-recreational program is offered in several activities, and physical education indoor and outdoor facilities are made available for weekend recreational use by students.

The competitive athletic program for women offers many values beyond those of the intramural program. Competition is afforded with women from other colleges in basketball, volleyball, track and field, field hockey, softball, tennis, badminton, gymnastics, and swimming.

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

**Publications.** Students interested in journalism have an opportunity for expression in three campus publications owned and published by the students.

**Clubs and Honorary Fraternities.** Each school or college of the university sponsors honorary fraternities and clubs of various types which are of special interest to students majoring or minoring in the school or college. These organizations provide an opportunity for students and faculty members to become better acquainted.

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

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

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The following honorary and service fraternities are for men:

Alpha Phi Omega, national service fraternity;  
Arnold Air Society, honorary AFROTC society;  
Blue Key, national service fraternity;  
Kappa Kappa Psi, national band fraternity;  
Phi Delta Kappa, national professional education fraternity.

Women's honorary and service organizations include:

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

\*Members of the Association of College Honor Societies.

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

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 three representatives from each sorority, and Presidents' Council, composed of the president of each fraternity, function as coordinating agencies for their respective groups, governing pledging and initiation and maintaining a high plane of inter-sorority and inter-fraternity relations on the campus. The councils sponsor several awards to the member organizations including awards for high scholastic achievement.

**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.

**Performing Arts.** The Little Theatre of the Rockies and the Opera Guild present a wide variety of activities in theatre and music during the academic year. All students may audition and/or participate in all production activities by attending try-outs at the beginning of each quarter.

Qualified students are eligible to participate in the choirs, the university bands, the university orchestra, and the Greeley Philharmonic Orchestra. During the academic year, the School of Music presents special programs.

**Student Open Forum.** An open forum for students is held every Tuesday at 1:25 at the University Center for innovative programming, guest speakers, current issue debates, career workshops, or whatever is suggested. The concept of unifying students during a period of the day is a new one at U.N.C. and it will hopefully provide for better communication and different experiences on campus.

### Campus Ombudsman

Members of the academic community who have concerns which they are unable to reconcile through the existing University structure are encouraged to contact the Campus Ombudsman by telephoning 351-2889 or by writing him c/o University of Northern Colorado, Greeley, Colorado 80631.

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

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

## International Educational and Exchange Programs

The Office of International Education 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, such as the Fulbright-Hays, Marshall, Churchill, Rhodes, and East-West Center programs. Application forms are processed through the office.

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

Students seeking help in joining a study abroad program sponsored by other American universities and/or associations may obtain information at the Office of International Education. Such programs, besides those offered by specific universities and colleges, includes the Institute of European Studies, the Scandinavian Seminar, College Abroad, and many others.

Several departments of the University offer *Study Seminars and Tours Abroad* for one quarter's duration and fifteen hours of credit. The students attend intensive seminars on campus for one-half of the quarter on the topic of the seminar and then proceed on a faculty-escorted tour of the foreign countries or region for field study of the topic. Currently organized UNC Study Tours include HIST 327: Cultural Background of Western Soviet Russian Relations, EDF 445: Comparative Studies in Pacific and Far Eastern Education, GEOG 392/592: Field Course in Geography, and EDF 446: Western Europe: An On-Site Study of Its Peoples, Customs, Culture, and History.

Programs for exchange of students for one-year periods can be arranged between UNC and thirteen other American Universities and Colleges under a program known as the National Student Exchange. Students interested in such an exchange may obtain information and assistance at the Office of International Education.

**Special Needs Program.** A program for students with unique financial and academic needs. Supportive services are offered, such as orientation to college, study skills and study techniques, reading and writing enrichment, environmental counseling, tutoring and academic advisement.

The special needs of students are identified through personal interviews, recommendations, and testing.

## 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 thoughtful and understanding consideration of a counselor. Problems 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 testing
- (6) Study skills problems

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.

## 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 a copy of the Family Financial Statement (FFS) to the Iowa office of ACT by February 15 each year, designating the University of Northern Colorado as one of the recipients. The FFS forms may be obtained by contacting the local High School Counselor or the Director of Financial Aid at the University of Northern Colorado.

Applications for financial assistance during the academic year must be received by the Office of Financial Aids at least 60 days prior to the start of Winter, Spring, and Summer Quarters.

The Family Financial Statement is the initial application for all forms of financial aid, including the Federally Insured Student Loan Program.

**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.

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 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 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.

**Veterans Eligible for "G.I." Educational Benefits.** All ex-service personnel entering under the Veterans' Education and Training Program must present a Certificate of Eligibility valid for use at the University of Northern Colorado. This Certificate must be presented to the Veterans Counselor in the Office of Financial Aids at the time of registration. To obtain the Certificate of Eligibility, students are required to submit the veteran's Application for Program of Education or Training (VA Form 21E-1990) to the nearest Veterans Administration Regional Office at least six weeks prior to the expected date of enrollment.

Veterans transferring from one institution to another should request new Certificates of Eligibility by submitting a Request for Change of Program or Place of Training (VA Form 21E-1995) to their nearest Veterans Administration Regional Office at least six weeks prior to enrollment at the University.

Further information concerning Veterans' Affairs may be obtained from the Office of Financial Aids at the University of Northern Colorado.

## Other Awards

**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 intramural 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, fee., books and materials, room and board, and/or personal expenses while attending the University of Northern Colorado. Applications must be directed to the Director of Financial Aid, University of Northern Colorado, prior to March 15 for the following academic year. This scholarship is awarded to a Colorado resident whose father is deceased.

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

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

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

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

**Martin Luther King Memorial Scholarship.** This scholarship was established as a memorial to Dr. Martin Luther King by the University of Northern Colorado. The scholarship will be awarded annually to perpetuate the ideals and goals of the Negro leader. The scholarship will go to any high school graduate on the basis of ability and leadership potential and an interest in furthering human relations.

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

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

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

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

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

**Emily C. Newman Scholarship Fund.** This fund was established by the will of Emily C. Newman, pioneer homesteader and teacher in northern Colorado. It provides financial assistance to well-qualified and deserving freshmen 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.

**Edith M. Selberg Science Scholarship.** A fund has been instituted by Lambda Sigma Tau, honorary science fraternity, in honor of Professor Emeritus Edith M. Selberg, to provide financial aid to a meritorious member of Lambda Sigma Tau. The scholarship is tenable for one year.

**Soroptomist Club of Greeley Scholarship.** An annual scholarship of \$150 has been established by the Soroptomist Club of Greeley to be awarded to a young woman enrolled at the University of Northern Colorado in a teacher certification program with a major in special education. The scholarship is good for one year and will normally be granted to a junior or senior student.

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

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

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

Applicants are selected on the basis of qualifying test 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.

## FEES AND EXPENSES

*All rates quoted below are established for 1972-73 and are subject to a provision of the trustees that the university reserves the right to change tuition, fees, and other charges on published notice prior to the beginning of any academic quarter. As with all state-supported institutions, the rates are affected by legislative action which may not be finalized until late spring of any given year.*

Tuition and student services fees are incurred during each quarterly registration period and are due and payable at the time shown on the billing which is mailed to the student each quarter. Charges are assessed for the total of partial or full programs whether taken for credit or no credit.

### On-Campus Instruction

#### FALL, WINTER, OR SPRING QUARTERS

	Colorado Resident	Non-Resident
<b>Six Credit Hours or less:</b>		
Per Credit Hour of Enrollment .....	\$ 12.00	\$ 20.00
<b>More than six credit hours:</b>		
Tuition .....	\$ 89.00	\$355.00
Student Services Fees .....	45.00	45.00
<b>Total</b> .....	<b>\$134.00</b>	<b>\$400.00</b>

#### SUMMER QUARTER

	Colorado Resident	Non-Resident
<b>Six Credit Hours or less:</b>		
Per Credit Hour of Enrollment .....	\$ 12.00	\$ 20.00
<b>More than six credit hours:</b>		
Tuition .....	\$ 89.00	\$355.00
Student Services Fees .....	31.00	31.00
<b>Total</b> .....	<b>\$120.00</b>	<b>\$386.00</b>

### Off-Campus Instruction\* (Extension—Continuing Education Services)

	Tuition per Credit Hour	
Group Instruction .....	\$ 15.00	(Multiply credit hour unit by number of credit hours of enrollment.)
Correspondence Study .....	12.00	
Multi-media Learning Package	\$15.00 In-state \$25.00 Out-of-state	

\*Residence status is not determined for or applied to these unit programs.

Payment of tuition and student services fees entitles the registrant to instruction and a number of campus services.

On campus in the academic year a student enrolled for six or fewer credit hours is entitled to the services of the Student Health Center, library privileges, normal course materials, the student newspaper, and the use of University Center facilities.

On campus or on student teaching assignment in the academic year, a student enrolled for seven or more credit hours is entitled to obtain every regular university service accorded to full-time registrants. In addition to the

services above listed, the student is issued an identification card or validation stamp which provides for admission to campus athletic events, performing arts plays and productions, selected lectures and other public events specified for admission under the I.D. card. Full-time students are also covered by a student health services program. Details of this coverage may be obtained from the Student Health Center.

During the summer quarter, the student services fees do not provide for contractual medical treatment. They are committed for use in an expanded and varied program of campus social, recreational and instructional activities as well as carrying the cost of the campus health offices.

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 policy—Colorado Revised Statutes 1966 and Session Laws of Colorado 1967 as amended. Administrative procedures which fix status before or at the time of registration have been approved by the Trustees of the State Colleges in Colorado. 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.

In planning a full program of courses, the typical single student on campus should be prepared to meet costs of approximately the following amounts:

	<b>Resident of Colorado</b>	<b>Status Non-Resident of Colorado</b>
<b>FALL, WINTER, AND SPRING QUARTERS</b>		
Tuition and Student Services Fees* .....	\$ 402.00	\$1,200.00
Books and Supplies (estimated)** .....	180.00	180.00
Board and Room (average) .....	975.00	975.00
Personal Expenses*** .....	480.00	480.00
<b>Total Expenses Academic Year of Three Quarters .....</b>	<b>\$2,037.00</b>	<b>\$2,835.00</b>

**SUMMER QUARTER, EXCLUSIVELY**

Tuition and Student Services Fees* .....	\$ 120.00	\$ 386.00
Books and Supplies (estimated)** .....	60.00	60.00
Board and Room (average) .....	290.00	290.00
Personal Expenses*** .....	150.00	150.00
<b>Total, Full Quarter .....</b>	<b>\$ 620.00</b>	<b>\$ 886.00</b>

\*Subject to periodic increases.

\*\*Varies according to area of study.

\*\*\*Amounts given for personal expenses are the estimated normal expenses incurred for clothing, sundries, entertainment, etc. Travel, unusual expenses of a wardrobe or auto maintenance should be added. Family expenses follow the regular family budget elsewhere maintained except for quoted university expenses. Graduate fees, music fees and certain incidental fees below must also be added to the above estimates where applicable.

30 / GENERAL INFORMATION

**Residence Halls Charges**—All rates quoted shall apply to the Summer and Fall Quarters of 1973 and the Winter and Spring Quarters of 1974.

**RESIDENCE HALLS WITH ROOM AND BOARD QUARTERLY RATES**  
(Occupancy: two persons per room) **PER STUDENT**

Harrison, McCowen, Wilson, Wiebking .....	\$340.00
Belford, Tobey Kendal, Sabin, Snyder .....	325.00
Cross, Hadden, Hays, Troxel .....	320.00

**RESIDENCE HALLS, APARTMENT STYLE, WITHOUT BOARD**  
(Occupancy: four persons per apartment)

Turner Hall .....	\$160.00
New Apartment Building .....	\$185.00

Board Service only is available at the residence halls on a quarterly contract basis for students living in Turner Hall, the new apartment building or off-campus.

**Board Only**

Breakfast only .....	\$ 50.00
Lunch only .....	82.70
Dinner only .....	100.00
Full Board (20 meals per week) .....	210.00

**Family Facilities**—Additional family facilities are available Summer Quarter only, limited to the student and three (3) dependents per family, including furnishings and utilities.

**1973**  
**SUMMER QUARTER**

Turner Hall .....	\$300.00
New Apartment Building .....	350.00

**Partial Session—1973 Summer Quarter Only** **PER WEEK**  
**Board and Room, Men's and Women's Residences**

Occupancy, single person per room .....	\$ 38.50
Occupancy, two persons per room .....	34.00

**Student Family Apartments, East Campus,** **MONTHLY**  
leased on 12 month contract. (Includes  
furnishings and utilities.) .....

\$105.00

**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
Extension of Credit: Assessed if and when a deferred payment program is concluded to be effective within a quarter .....	3.00
Assessed charges are due and payable at the time shown on the billing which is mailed to the student each quarter. Deferments are arranged only for sufficient cause and only for payments by installments within the quarter. Any action which has the effect of postponing a cash collection beyond the date on which a charge is due will automatically invoke the applicable extension of credit charge. No registration is permitted without a down payment of at least one-third of total charges. No deferment is issued for a limited course program or for a campus residence of one month or less.	
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: Assessed for a fee payment completed on the first day following the days scheduled for regular fee payment .....	5.00
Assessed for each added day of late fee payment .....	2.00
Late Application for Graduation.....	10.00
Meal Ticket Replacement .....	5.00
Official Transcript of University Records, per copy .....	1.00
Optional Student Health Insurance Coverage Summer Quarter Only .....	14.50
(Full-time students for 1972-73 academic year have prepaid coverage for the Summer Quarter)	
Proficiency Examination .....	2.00
Special Billing: Assessed when an itemized invoice of an account is requested by the student or a supporting agency .....	1.00
Special Program Fees such as bowling, skiing, field trips, golf, etc. ....	At Cost
Special Tests by the Counseling Service .....	5.00
Student Identification Card Replacement.....	5.00
Transcript Evaluation Fee for applications for the baccalaureate and masters' degrees and graduate student certification program .....	10.00

**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 July 1 and ends June 30)	
Initial enrollment .....	\$10.00
Re-enrollment (Teacher Education) .....	10.00
Re-enrollment (Liberal Arts or Industrial Placement) .....	5.00
First and subsequent copies of teacher placement credentials mailed when applicant has not re-enrolled, per copy .....	2.00
First and subsequent copies of industrial placement credentials mailed when applicant has not re-enrolled, per copy .....	1.00
Telephone calls, telegrams, postage for Air Mail and Special Delivery are billed at actual cost.	

**Policy on Reassessments, Refunds, Retentions on Withdrawal**

By action of the trustees of the University of Northern Colorado, adjustments in tuition or fees are permitted after registration only under specified conditions. In most circumstances a change in the number of credit hours for which

a student registers will not affect the charges initially assessed. When the changes in a course of study within the first week result in registration of less than seven hours, applicable refund of tuition and fees will be made.

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

Refunds allowed against paid Tuition and Student Services Fees upon withdrawal are provided as follows:

On programs of three credit hours or less, none.

On programs of four through six credit hours, one-half if withdrawal occurs in the first two weeks following registration; thereafter none.

On programs of seven or more credit hours, three-fourths if withdrawal is before the close of the second week, one-half if before the close of the third week, one-fourth if before the close of the fourth week, and thereafter none.

Refunds allowed against assessed quarterly board and room charges and annual apartment rentals are permitted under the terms of the Residence Halls Lease. The Housing Office, when consulted at withdrawal, will provide information on the computations applied. Deposit refunds are calculated separately and apart from board and room charges and are remitted or credited only after all requirements of a withdrawal in good standing are met.

Incidental fees are not refunded for any cause at any time.

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## PROGRAM REQUIREMENTS

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The University of Northern Colorado offers four-year undergraduate programs leading to the Bachelor of Arts, Bachelor of Music, or Bachelor of Science degrees. Specific requirements and recommendations for each program offered will be found listed in this section of the catalog by academic department under the appropriate school or college, appearing in the following order: College of Arts and Sciences, College of Education (including the School of Special Education and Rehabilitation), School of the Arts, School of Business, School of Educational Change and Development, School of Health, Physical Education and Recreation, School of Music, School of Nursing, and Division of Aerospace Studies.

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. (See Majors and Minors, below.) In addition, students may select other courses to meet the minimum requirement for graduation of 180 quarter hours. A faculty adviser from the department of the student's major subject is assigned to assist in program planning.

### General Education Requirements

The courses listed below are required for all students in programs leading to the bachelor's degree unless a student is formally excused as the result of successfully completing one or more challenge examinations.

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
COM	101—Elementary Composition I .....	3
COM	102—Elementary Composition II .....	3
HPER	191—Personal and Family Health .....	3
HUM	201—Greek and Roman Periods .....	3
HUM	202—Middle Ages and the Renaissance .....	3
HUM	203—Eighteenth to the Twentieth Century .....	3
PSY	120—General Psychology .....	3
SCI	103—Physical Science .....	3
SCI	104—Biological Science .....	3
SCI	105—Earth Science .....	3
SP	110—Speech Communication .....	3
Two of the following six courses:		
ANT	100—General Anthropology .....	5
ECON	100—Introductory Economics .....	5
GEOG	100—World Geography .....	5
HIST	175—Unit Survey of United States History .....	5
PSCI	100—National Government of the United States .....	5
SOC	100—Principles of Sociology .....	5
or		
The following three courses:		
HIST	125—Western Civilization I .....	3
HIST	126—Western Civilization II .....	3
HIST	127—Western Civilization III .....	3
Electives*		

\*Course descriptions in back of catalog marked with asterisks (\*) may be used to meet the 18 hours of electives in general education.

The student must be certain that he completes a minimum of 60 hours of General Education prior to graduation. It will be necessary to select liberal arts courses as the electives if a deficiency exists in this requirement.

## Majors and Minors

Every student selects one academic or professional field around which he plans his undergraduate program of courses. This field is known as his **major**. In general, requirements for the major include at least 48 quarter hours of work specified by the department offering the major. This is in addition to the required General Education courses.

Some departments also require selection of a minor consisting of at least 27 quarter hours in a field other than the major. Descriptions of exact requirements for majors and minors will be found in the appropriate school or department section of the undergraduate catalog.

Majors and/or minors may be selected from the following areas of study:

Aerospace Studies	Fine Arts
Anthropology	Food and Nutrition
Biological Science	French
Black Studies	Geography
Business	German
Business Education	Health Education
Chemistry	History
Dance Education	Home Economics Education
Dietetics	Individually Planned Program
Earth Science	(see School of Educational
Economics	Change and Development be-
Educational Media	low)
Elementary Education	Industrial Arts
English	Journalism
Family Life and	Mass Communications
Consumer Education	Mathematics

Medical Technology	Political Science
Mexican-American Studies	Preschool Education
Music	Psychology
Music Education	Recreation
Nursing	Science
Outdoor Education	Social Science
Philosophy	Sociology
Physical Education (Men)	Spanish
Physical Education (Women)	Special Education
Physical Science	Speech Communication
Physics	Theatre Arts

Students who have not decided on a major at the time of registration should consult the office of the Dean of Students for advising.

### Professional Teacher Education

University of Northern Colorado offers numerous teacher preparation programs at the baccalaureate level for pre-school, elementary, junior high, and senior high school teaching. The satisfactory completion of any one of these programs earns institutional recommendation for certification as a teacher. Such recommendation presupposes the successful completion of three basic components of Teacher Education: 1. General Education; 2. Professional Education; and 3. Subject Matter Specialization.

Only students of definite professional promise are admitted to the Professional Teacher Education (PTE) program and allowed to pursue teacher education curricula at an advanced level. Admission to and graduation from a teacher education program is based upon scholarship (2.3 gpa), personality, character and the physical characteristics requisite to successful teaching. To assist in evaluating the personality requirement, teacher education candidates are required to successfully complete the 16PF personality test and are to take it the same quarter application is made to PTE on the date stated.

All students who entered as freshmen and have attended the University of Northern Colorado for two years must have completed the specified General Education Program to obtain full admission to the PTE program, but they may have three courses remaining to apply.

As soon as a student has acquired no fewer than 65 quarter hours, he should make written application to the Professional Teacher Education Committee requesting formal admission to the PTE program. The necessary application forms are available in the College of Education Office in McKee Hall. The application forms require a declaration of major to be pursued as recommendation for certification can be obtained in the major area only. Departmental endorsement for admission must be sought for each major declared, so if the student adds or changes teaching areas, new application must be made for permission to pursue curricula in the additional or new area.

Transfer students seeking PTE program admission are required to have transferred in 85 quarter hours of course work, possess a 2.3 gpa at the previously attended University, and must enroll or have completed all but three (3) general education courses. With these requirements fulfilled, they are given one quarter of tentative admission to PTE and their formal standing will be determined their second quarter, provided they have made formal PTE application during their first quarter on campus. Application must be made at that time prior to the end of the second Friday of the quarter.

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

Any student who has had his admission to PTE revoked or who has been denied admission, may request a hearing from the Chairman of the Professional

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

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

Course No.	Course Title	Hours	Credit
EDF	365—Basic Concepts of Education .....	5	5
EDF	485—Philosophy of Education .....	3	3
*EDFE	360 to 379—Introduction to Teaching (appropriate to specialization) .....	2	2
	—Methods of Teaching (appropriate to specialization) .....	3	3
**PSY	341—Educational Psychology .....	5	5
***EDFE	—Terminal Student Field Experience for initial teacher certification ....	18	18

\*These specific courses MUST be satisfactorily completed at the University of Northern Colorado.

\*\*Beginning fall term 1973, the student must select, in place of PSY 341, any 5 hours of PSY 301-326.

\*\*\*No student shall be allowed to do Student Field Work while on PTE Program probation.

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

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

**Student Field Experience.** Student field assignments are made in cooperating schools in the state and out of state with the approval of the Director of Educational Field Experiences upon the recommendation by the student's major department and the Professional Teacher Education Committee.

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

The minimum field experience requirement for graduation with institutional recommendation for a teaching certificate is 18 quarter hours of student field work. A minimum of nine hours of student field work must be in a major field. Only a very limited amount of student field work is offered during the Summer Quarter.

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

University policy does not allow students in the field to be salaried for the same experience for which he is receiving credit. An 18 hours student teacher may not enroll for any other UNC courses during that quarter.

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

1. Completed at least two quarters as a full-time student on the university campus.
2. Completed the following courses or their equivalent: PSY 341, EDF 365, and departmental special methods.
3. Completed one course in the series EDFA 360 to 379 (or equivalent experience) in any areas, major and minor wherein student field work is contemplated.
4. Been admitted to the PTE program in the major(s) or minors in which he will be doing student field work.
5. Met all specific departmental requirements for field experience.

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

**for Fall placement:** no later than May 1.

**for Winter placement:** no later than October 15.

**for Spring placement:** no later than February 1.

**For Summer placement:** no later than June 1.

## **Pre-Professional Courses**

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

## **Interdisciplinary and Individual Studies**

Interdisciplinary Studies are offered in appropriate areas and levels of instruction. These courses may be offered through the coordinated efforts of two or more disciplines or by one department offering courses that are appropriate to several courses of study. (See below.)

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. The applicant must have the approval evidenced by signature of the instructor who will direct the study, the student's advisor, and the department chairman of the department in which the study is to be done.

## Center for Mexican American Studies

The purpose of the Center for Mexican American Studies is to direct academic development in the areas of Mexican American Studies and Bilingual Bicultural Education programs. The center is under the supervision of a board composed of faculty, students, the dean of the College of Arts and Sciences, and the dean of the College of Education. The chairman of the board is the administrator of the center. The chairman coordinates the administration of the Bilingual Bicultural Elementary Education major and the Mexican American Studies major and in addition, coordinates the academic advisement of students majoring in programs administered by the Center for Mexican American Studies.

### Honors Program

**Eugene D. Koplitz, Associate Dean**

**Program Description.** The Honors Program at the University of Northern Colorado was created in 1957 as an experimental program for the purpose of enriching the lives of students who perform at high academic levels. In the fall of 1958 the first group of students were invited to participate. Continuous evaluations and revisions of the program are made each year for the improvement of its structure and organization.

**Admission Requirements.** A student who has completed 45 quarter hours of course work at the University of Northern Colorado and shows evidence of outstanding academic ability and possesses fine personal characteristics may be invited to participate on the basis of departmental recommendation. Sophomores, who in the selection process were overlooked for one reason or another, may apply directly to the Dean of the Honors Program by submitting a letter, placing a telephone call or by making an office appointment. Selection is limited to approximately the highest five percent of the freshman class. Other evidence of academic ability (such as scores made on standardized tests), and evidence of good character and personality will be considered. No student will be admitted who ranks below the 90th percentile in his standing in the class as measured by grades obtained in courses taken at the University of Northern Colorado.

A transfer student who has completed 45 quarter hours of work (Sophomore status) and wishes to participate in the Honors Program may apply for admission after his first, second, or third quarter of work at the University of Northern Colorado. He must be recommended by two faculty members in his field and possess a 3.25 accumulative grade point average or better.

A student who completed 45 quarter hours of work at the University of Northern Colorado and in either the first, second, or third quarter of his sophomore year and attains a 3.25 accumulative grade point average may apply for admission to the Honors Program. A recommendation from two faculty members in his field should accompany the request. All applications are reviewed by the Dean of the Honors Program.

**Program Enrichment.** The program of an Honors Student is individually planned in the light of the student's particular background, abilities and needs. An Honors Student, therefore, may be excused from certain specifically required general education courses except those which may be necessary for teacher certification. An Honors Student excused from a required course, however, must substitute another course offered by the same department. Such a substitution may be made upon the recommendation of the student's adviser, but only with the advice and consent of the department or school or college responsible for the course in question. Appropriate notice of such a substitution shall be forwarded to the Registrar's Office as soon as possible by the student's adviser.

**Sophomore Honors.** During the Sophomore year, the academic departments participating in the Honors Program offer 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, two, or three hours credit.

The content and activities of the course varies greatly from one department to another. Each academic department is responsible for providing 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. Class enrollment cards are distributed by the respective departments.

**Junior Honors.** In the junior year each Honors Student enrolls in Honors 351: Junior Honors Project. The aim of the course is to increase the student's familiarity with the literature of his field and/or the current issues in his field. The department, school, or college concerned may assign the student to an individual professor or to a seminar group conducted by one or more professors. The suggested guide for facilitating the objectives of the course are as follows: First Quarter, Define the problem; Second Quarter, Develop the research methods and procedures; Third Quarter, Gather the Data. This course carries regular university credit at the rate of one, two, or three hours per quarter. If the student wishes to spend a larger portion of his academic time on his project he may pick up enrollment cards for either one, two, or three hours credit per quarter. Generally a student does not enroll for more than three hours of credit per each quarter. Class enrollment cards are distributed by the respective departments.

**Senior Honors.** In the senior year each Honors Student enrolls in Honors 451: Senior Honors Research Project or Thesis. The course is generally offered at the rate of one, two, or three hours credit each quarter. Class enrollment cards are distributed by the respective departments. Each department has developed methods and procedures for conducting the course which best fits the unique characteristics of the particular discipline. During the senior year the student seeks assistance with his project or thesis from a professor of his own choosing or will gain assistance from a professor assigned to him by the department. Generally the professor is not responsible for more than three Honors Students at one time. The professor advises the student concerning different aspects of his subject or project for study, the result of which shall be an acceptable written report handed in at least three weeks before the Honors Student graduates. Juniors shall be invited to hear papers read which were completed by Senior Honors Students. The suggested guide for the Senior Honors Project is as follows: First Quarter, Analyze and interpret the data; Second Quarter, First Draft; Third Quarter, Final Draft. The course does not necessarily have to be taken in consecutive quarters.

For example, a student might concentrate on his project over a period of one quarter at the rate of three quarter hours of credit, or he may organize his time in other ways. It is preferred that the final draft be turned in three weeks before the graduation date.

**Study Abroad.** During the summer term of the junior year, Honors Students are offered the opportunity to study abroad. Fifteen hours of credit are given for this study in Europe, which may be substituted for certain courses in the Social Sciences and Humanities. A detailed description of the European Study is printed and is available in brochure form by writing to: The Department of History, European Study Tour, College of the Arts and Sciences, the University of Northern Colorado, Greeley, Colorado, 80631. An Asiatic Study Tour is also offered and carries fifteen hours of credit. For further information write College of Education, University of Northern Colorado, Greeley, Colorado, 80631.

**Student Review.** Accumulative grade averages of Honors Students shall be reviewed at the end of each academic year by the Honors Council. In general, an Honors Student shall be expected to register for a full-time program and to maintain better than a 3.20 accumulative average as well as a comparable average in the major and minor fields. If the student drops below this standard he should consult the Dean regarding his status. Guidance and counsel will be given at that time.

**Graduation with Honors.** Students receiving an invitation to participate in the Honors Program, those applying directly for admission to the program, or those recommended to the program by faculty members of a particular department may

graduate with Honors providing the student has completed courses designated as "honors courses" and has completed a thesis or a creative project. The level of distinction will also be indicated on the student's permanent transcript of credit and his diploma. The level of performance and description designations are as follows: 3.20-3.49 *Cum laude*; 3.50-3.79 *Magna cum laude*; 3.80-4.00 *Summa cum laude*.

Each student is required to submit the title of his Honors Thesis or project to the office of the Dean of the Honors Program 12 weeks before his graduation date. If the Honors Student has taken special courses in lieu of a thesis or project this information must be submitted to the Honors office 12 weeks before graduation.

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## COLLEGE OF ARTS AND SCIENCES

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**Robert O. Schulze, Dean**  
**John A. Beel, Associate Dean**  
**Thomas E. Boyle, Associate Dean**

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

Each student regularly admitted to the College of Arts and Sciences is required to complete General Education as specified earlier in this catalog. He must also select a major subject for concentration and must meet all the requirements of his major department. Those wishing to be recommended for certification to teach in secondary schools must also complete at least 31 quarter hours of Professional Teacher Education courses as prescribed by the College of Education during their junior and senior years.

Majors may be selected from the following academic areas:

Anthropology	Mathematics
Biological Sciences	Medical Technology
Black Studies	Mexican American Studies
Botany	Physical Science
Chemistry	Physics
Earth Sciences	Political Science
Economics	Science (junior high school teaching)
English	Social Science
French	Sociology
Geography	Spanish
German	Speech Communication
History	Theatre Arts
Journalism	Zoology

The requirements for each major are listed by departments, but a minimum of 48 quarter hours is required for a major and 27 quarter hours for a minor. The student must select a major and fulfill all requirements for the major as set forth in the catalog.

## Anthropology

**John R. Mickey, Chairman**

**Associate Professors:** Fay, B. Mickey, J. Mickey.

**Assistant Professor:** Lutz.

**Instructors:** Denning, Haug, Higgins, Wanner.

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

1. Meet all General Education requirements as specified earlier in this catalog.

2. Courses selected from each of the following areas:

	<i>Hours Credit</i>
I. General Anthropology .....	5
ANT 100	
II. Cultural Anthropology .....	7
Selected from ANT 120, 121, 122, 220, 221, 222, 281, 300, 320, 321, 322, 323, 324, 325, 326, 327, 328, 420, 421, 431	
III. Archaeology .....	7
Selected from ANT 240, 241, 242, 340, 341, 342, 343, 344, 440, 441	
IV. Linguistics & Physical Anthropology .....	7
Selected from ANT 280, 270, 360, 361, 370, 371, 372, 470	
V. Theory .....	7
Selected from ANT 280, 380, 381, 382, 383, 480, 481	
VI. Electives .....	15
	48

3. In addition, a minor of 27 quarter hours within the College of Arts and Sciences. Courses in the selected minor that are preceded by an asterisk (\*) may be counted toward fulfillment of the General Education requirements.

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

Following are the requirements for the minor:

1. Two of the following courses: GEOG 100, ECON 100, PSCI 100, SOC 100. The student should consult his assigned adviser.

2. Courses selected from each of the following areas:

	<i>Hours Credit</i>
I. General Anthropology .....	5
ANT 100	
II. Cultural Anthropology .....	4
Selected from ANT 120, 121, 122, 220, 221, 222, 281, 300, 320, 321, 322, 323, 324, 325, 326, 327, 328, 331, 420, 421, 431	
III. Archaeology .....	4
Selected from ANT 240, 241, 242, 340, 341, 342, 343, 344, 440, 441	
IV. Linguistics & Physical Anthropology .....	4
Selected from ANT 260, 270, 360, 361, 370, 371, 372, 470	
V. Theory .....	7
Selected from ANT 280, 380, 381, 382, 383, 480, 481	
VI. Electives .....	3
	27

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

## Biological Sciences (Biology, Botany, Zoology)

**Bert O. Thomas, Chairman**

**Professors:** Schmidt, Stamper, Thomas, Winchester.

**Associate Professors:** Buss, Gapter, Lindauer, Plakke, Rich, Richards, Thorpe.

**Assistant Professors:** Harmon, Manjra.

The Department of Biological Sciences offers majors in Botany or Zoology for students interested in becoming professional botanists or zoologists. In addition, a major in Biological Science for students interested in teaching biology in secondary schools is offered. Two minors are offered, one in Biological Sciences and one in Human Ecology.

## Botany Major

Students pursuing the B.A. degree with a major in Botany 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:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BIO	101—Principles of Biology .....	5	
BIO	102—Principles of Botany .....	5	
BIO	103—Principles of Zoology .....	5	
BIO	231—Genetics .....	5	
BIO	361—Microbiology .....	5	
BIO	391—Seminar in Research I .....	1	
BIO	392—Seminar in Research II .....	1	
BOT	310—Plant Taxonomy .....	5	
BOT	323—Morphogenesis of the Nonvascular Plants .....	4	
BOT	324—Morphogenesis of the Vascular Plants .....	4	
BOT	340—Plant Ecology .....	5	
BOT	350—General Plant Physiology .....	5	
	Electives to be selected with approval of major adviser .....	10	
			<hr/> 60

3. One minor of 27 or more quarter hours in chemistry, physics, or mathematics. Courses in the selected minor that are asterisked (\*) may be counted toward fulfillment of the General Education requirements.

4. A minimum of 15 quarter hours in *each* of the above fields (chemistry, physics, or mathematics) not selected as a minor.

5. It is recommended that a foreign language be included.

6. Botany majors should substitute equivalent hours in biology or botany for SCI 103 and 104. They may substitute equivalent hours in earth sciences for SCI 105.

7. Electives to complete requirements for graduation.

## Zoology Major

Students pursuing the B.A. degree with a major in Zoology 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:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BIO	101—Principles of Biology .....	5	
BIO	102—Principles of Botany .....	5	
BIO	103—Principles of Zoology .....	5	
BIO	231—Genetics .....	5	
BIO	361—Mic.obiology .....	5	
BIO	391—Seminar in Research I .....	1	
BIO	392—Seminar in Research II .....	1	
ZOO	350—Cell Physiology .....	5	
ZOO	316—Entomology .....	5	
	<i>or</i>		
ZOO	412—General Parasitology .....	5	5
ZOO	325—Comparative Morphogenesis of the Vertebrates I .....	4	
ZOO	326—Comparative Morphogenesis of the Vertebrates II .....	4	
ZOO	340—Animal Ecology .....	5	
	Electives to be selected with approval of major adviser .....	10	
			<hr/> 60

3. One minor of 27 or more quarter hours in chemistry, physics, or mathematics. Courses in the selected minor that are asterisked (\*) may be counted toward fulfillment of the General Education requirements.

4. A minimum of 15 quarter hours in *each* of the above fields (chemistry, physics, or mathematics) not selected as a minor.

5. It is recommended that a foreign language be included.

6. Zoology majors should substitute equivalent hours in biology or zoology for SCI 103 and 104. They may substitute equivalent hours in earth sciences for SCI 105.

7. Electives to complete requirements for graduation.

## Biological Sciences Major

Students majoring in Biological Sciences 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. Professional Teacher Education (PTE) 31 hours, plus EDFE 372, two hours credit, SCED 442, three hours credit, and BIO 371, one hour credit.

3. 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	
BIO	231—Genetics .....	5	
BIO	361—Microbiology .....	5	
BIO	391—Seminar in Research I .....	1	
BIO	392—Seminar in Research II .....	1	
BIO	350—Cell Physiology .....	5	
	<i>or</i>		
BOT	350—General Plant Physiology .....	5	
	<i>or</i>		
ZOO	250—Human Physiology .....	5	5
BOT	323—Morphogenesis of the Nonvascular Plants .....	4	
	<i>and</i>		
BOT	324—Morphogenesis of the Vascular Plants .....	4	
	<i>or</i>		
ZOO	325—Comparative Morphogenesis of the Vertebrates I .....	4	
	<i>and</i>		
ZOO	326—Comparative Morphogenesis of the Vertebrates II .....	4	8
BOT	310—Plant Taxonomy .....	5	
	<i>or</i>		
ZOO	316—Entomology .....	5	5
BOT	340—Plant Ecology .....	5	
	<i>or</i>		
ZOO	340—Animal Ecology .....	5	5
	Electives in biology, botany, or zoology to be selected with approval of student's minor adviser .....		10
			<hr/> 60

4. To fill the options listed above and the electives, courses must be chosen to include a minimum of 15 quarter hours in courses with the prefix BOT and 15 quarter hours in courses with the prefix ZOO.

5. A minor of 27 or more quarter hours is required. Chemistry or physics is recommended. Courses in the selected minor that are asterisked (\*) may be used as part of the 60 hours of required General Education.

6. CHEM 104 or 106, 105 or 107, 130 or 332.

7. Biological science majors may substitute PHYS 150 for SCI 103. For SCI 104 they should substitute equivalent hours in biology, botany, or zoology. For SCI 105 they may substitute equivalent hours in earth science.

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

## Biological Sciences Minor

Following are the requirements for minor:

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 .....	5	5
	Electives to be selected with approval of student's minor adviser .....	7	7
			<hr/> 27

1. Biological sciences minors should substitute equivalent hours in biology, botany, or zoology for SCI 104. It is recommended that CHEM 104 or PHYS 150 be substituted for SCI 103 and equivalent hours in earth science for SCI 105.

## Human Ecology Minor

Following are the requirements for the minor:

Course No.	Course Title	Hours	Credit
BIO	101—Principles of Biology .....	5	5
BIO	102—Principles of Botany .....	5	5
	or		
BIO	103—Principles of Zoology .....	5	5
BIO	234—Population Genetics .....	3	3
BIO	240—General Ecology .....	3	3
BIO	241—Modification of the Human Environment .....	2	2
BIO	242—Environmental Pollution .....	3	3
BIO	401—Conservation of Natural Resources .....	4	4
	Electives to be selected with approval of minor adviser .....	2	2
			<hr/> 27

1. Human ecology minors should substitute equivalent hours in biology, botany or zoology for SCI 104. It is recommended that CHEM 104 or PHYS 150 be substituted for SCI 103 and equivalent hours in earth science for SCI 105.

Biological science minors interested in being certified for teaching in the secondary school must complete the minor listed above.

**HONORS**—The Department of Biological Sciences participates in the Honors Program. See page No. 37.

## Environmental Studies Core

**Bert O. Thomas, Coordinator**

The following 29 hours of intensive environmental studies represent an interdisciplinary approach to the many complex environmental problems.

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

2. The courses in the core are:

Course No.	Course Title	Hours	Credit
ENST	110—Introduction to Environmental Studies .....	1	1
ENST	210—Science of the Environment .....	3	3
ENST	220—Population Dynamics and Genetic Probabilities .....	3	3
ENST	230—Economics of Natural Resources .....	3	3
ENST	240—Politics and the Environment .....	3	3
ENST	250—Man's Atmospheric and Geological Environment .....	3	3
ENST	260—Ecological Interpretations .....	3	3
ENST	270—Social Implications of Ecology .....	3	3
ENST	280—Natural Resources and Technology .....	3	3
ENST	310—Future Environments and Ecosystem Modification .....	1	1
ENST	350—Environmental Pollution and Man's Health .....	3	3
			<hr/> 29

## Black Studies

**Dorothe T. Clark, Coordinator**

**Assistant Professor:** Clark.

The Black Studies Program offers a major and a minor.

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

1. Meet all General Education requirements as specified earlier in this catalog.

2. The following required courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BLS	101—Crisis of Identity .....		3
BLS	220—Black Community Development .....		3
BLS	240—Dynamics of Racism .....		3
BLS	260—Themes in Afro-American Literature .....		3
HIST	277—History of the Black Man in America I .....		3
HIST	278—History of the Black Man in America II .....		3
HIST	279—History of the Black Man in America III .....		3
BLS	380—Education in the Black Community .....		3
BLS	392—Linguistic Styles of Black America .....		3
BLS	399—Community Study Project .....	1-4	
BLS	495—Interpersonal Communication .....		3
	Black Study Electives to be selected from courses listed below with the approval of the Coordinator of Black Studies .....		14-17
			<hr/> 48

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
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	465—Black Media .....		3
BLS	480—Black Curriculum Development .....		3

## Black Studies Minor

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
ENG	312—Afro-American Literature .....		3
HIST	277—History of the Black Man in America I .....		3
HIST	278—History of the Black Man in America II .....		3
HIST	279—History of the Black Man in America III .....		3
BLS	101—Crisis of Identity .....		3
BLS	240—Dynamics of Racism .....		3
BLS	220—Black Community Development .....		3
BLS	399—Community Study Project .....	1-4	
	Electives selected from the following list with the approval of the Coordinator of Black Studies .....		2-5
			<hr/> 27

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
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	465-Black Media .....	3
BLS	480-Black Curriculum Development .....	3
BLS	495-Interpersonal Communication .....	3

## Chemistry

**William G. Koch, Chairman**

**Professors:** Beel, Koch, Tomasi, Woerner

**Associate Professors:** Fields, James, Meilahn, Pringle, Schreck.

**Assistant Professor:** Kovar.

The Department of Chemistry offers three majors, one of which is American Chemical Society accredited, and three minors, including one for Medical Technology majors and one for Home Economics majors. In addition, a Physical Science major is offered jointly with the Physics Department.

Students pursuing the B.A. degree with a major in Chemistry 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:

Course No.	Course Title	Hours	Credit
CHEM	104-Principles of Chemistry I .....	5	
	or		
CHEM	106-Principles of Chemistry IA .....	5	5
CHEM	105-Principles of Chemistry II .....	5	
	or		
CHEM	107-Principles of Chemistry IIA .....	5	5
CHEM	111-Qualitative Analysis .....		5
CHEM	301-Inorganic Chemistry I .....		3
CHEM	311-Quantitative Analysis I .....		5
CHEM	332-Organic Chemistry I .....		5
CHEM	333-Organic Chemistry II .....		5
CHEM	334-Organic Chemistry III .....		5
CHEM	335-Advanced Laboratory in Organic Chemistry .....		1
CHEM	390-Chemical Literature .....		1
CHEM	401-Inorganic Chemistry II .....		3
CHEM	402-Laboratory In Inorganic Chemistry .....		1
CHEM	414-Instrumental Methods of Analysis .....		5
CHEM	431-Organic Qualitative Analysis .....		3
CHEM	451-Physical Chemistry I .....		4
CHEM	452-Physical Chemistry II .....		4
CHEM	453-Physical Chemistry III .....		4
CHEM	454-Physical Chemistry I Laboratory .....		1
CHEM	455-Physical Chemistry II Laboratory .....		1
CHEM	456-Physical Chemistry III Laboratory .....		1

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3. Mathematics including 131, 132, 133, and 234.

Courses in mathematics that are asterisked (\*) may be used as part of the 60 hours of required General Education.

4. Physics 265, 266, 267.

5. One year of foreign language (preferably German) is recommended.

6. Electives to complete requirements for graduation.

Those students planning a career in chemistry must 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.

## 46 / DEGREE PROGRAM REQUIREMENTS

Students majoring in Chemistry 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. Professional Teacher Education, 31 hours, plus EDFE 372, two hours credit, and SCED 441, three hours credit.
3. Courses in the major:

Course No.	Course Title	Hours	Credit
CHEM	104—Principles of Chemistry I .....	5	
	<i>or</i>		
CHEM	106—Principles of Chemistry IA .....	5	5
CHEM	105—Principles of Chemistry II .....	5	
	<i>or</i>		
CHEM	107—Principles of Chemistry IIA .....	5	5
CHEM	111—Qualitative Analysis .....		5
CHEM	301—Inorganic Chemistry I .....		3
CHEM	311—Quantitative Analysis I .....		5
CHEM	332—Organic Chemistry I .....		5
CHEM	333—Organic Chemistry II .....		5
CHEM	334—Organic Chemistry III .....		5
PHYS	260—Introductory Physics—Mechanics .....	4	
PHYS	261—Introductory Physics—Heat, Sound, and Light .....	4	
PHYS	262—Introductory Physics—Electricity and Magnetism .....	4	
	<i>or</i>		
PHYS	265—General Physics—Mechanics .....	5	
PHYS	266—General Physics—Electricity .....	5	
PHYS	267—General Physics—Sound, Light, and Heat .....	5	12-15
	Chemistry electives to be selected with approval of student's adviser		5-8
			58

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

Courses in the selected minor that are asterisked (\*) may be used as part of the 60 hours of required General Education.

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

## Chemistry Minors

Following are the requirements for the art and sciences minor:

Course No.	Course Title	Hours	Credit
CHEM	104—Principles of Chemistry I .....	5	
	<i>or</i>		
CHEM	106—Principles of Chemistry IA .....	5	5
CHEM	105—Principles of Chemistry II .....	5	
	<i>or</i>		
CHEM	107—Principles of Chemistry IIA .....	5	5
CHEM	111—Qualitative Analysis .....	5	
	<i>and</i>		
CHEM	130—Introductory Organic Chemistry .....	5	
	<i>and</i>		
CHEM	311—Quantitative Analysis I .....	5	15
	<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	15
	Electives to complete the minor .....		2
	Electives must be selected from the following courses: CHEM 111, 261, 301, 311, 314, 482, 483. Alternate courses must be approved by the Chemistry Department before the student enrolls in the course.		

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

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
CHEM	104—Principles of Chemistry I .....	5	
	<i>or</i>		
CHEM	106—Principles of Chemistry IA .....	5	5
CHEM	105—Principles of Chemistry II .....	5	
	<i>or</i>		
CHEM	107—Principles of Chemistry IIA .....	5	5
CHEM	111—Qualitative Analysis .....		5
CHEM	130—Introductory Organic Chemistry .....	5	
	<i>or</i>		
CHEM	332—Organic Chemistry I .....	5	5
	Electives to complete the minor .....		2
			<hr/>
			27

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

### Science Minor For Home Economics Majors

This minor consists of three or four quarters of chemistry and microbiology (BIO 361) and electives with approval of the minor adviser to complete 27 hours.

### Medical Technology Major

This major is administered by the Department of Chemistry.

The four-year program leading to the Bachelor of Arts degree in Medical Technology requires the student to earn a total of 180 academic quarter hours. A minimum of 138 quarter hours will be earned on the campus of the University of Northern Colorado during the first three years and 48 quarter hours of Medical Technology will be earned during the senior year (12 months) at one of the affiliated hospitals (Weld County General Hospital, Greeley; St. Francis Hospital, Colorado Springs; Mercy Hospital, Denver). These courses are under the supervision of the clinical staff at each hospital. Only a limited number of positions are available for the clinical year. Selection of students for placement will be made from qualified juniors in the program. Criteria for selection will include academic performance, with emphasis on work in the major and minor courses, length of time in the major and faculty recommendations.

1. Meet all General Education requirements as specified earlier in this catalog.

2. Courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
MTEC	450—Urinalysis and Clinical Microscopy .....		3
MTEC	451—Basal Metabolism and Electrocardiography .....		1
MTEC	452—Hematology .....		9
MTEC	453—Pretransfusion Tests and Blood Bank Procedures .....		5
MTEC	454—Clinical Chemistry .....		13
MTEC	455—Serology .....		3
MTEC	456—Medical Microbiology .....		12
MTEC	457—Histologic Technique .....		2
			<hr/>
			48

3. One minor of 27 or more quarter hours is required. The minor is a Medical Technology Chemistry Minor.

Courses in the selected minor that are asterisked (\*) may be used as part of the 60 hours of required General Education.

4. Thirty-eight quarter hours are required by the American Society of Clinical Pathologists and the staff of the Weld County General Hospital in the following courses: BIO 350, BIO 361, CHEM 281, PHYS 261, 262, BIO 101, 103 ZOO 250.

5. Five hours of college mathematics.

6. Twenty-three quarter hours of free electives to complete 180 quarter hours of academic credit required for graduation.

### Chemistry Minor for Medical Technology

Course No.	Course Title	Hours	Credit
CHEM	104—Principles of Chemistry I .....	5	
	<i>or</i>		
CHEM	106—Principles of Chemistry IA .....	5	5
CHEM	105—Principles of Chemistry II .....	5	
	<i>or</i>		
CHEM	107—Principles of Chemistry IIA .....	5	5
CHEM	111—Qualitative Analysis .....		5
CHEM	311—Quantitative Analysis I .....		5
CHEM	332—Organic Chemistry I .....		5
CHEM	333—Organic Chemistry II .....		5
			30

**HONORS**—The Department of Chemistry participates in the Honors Program. See page No. 37.

### Earth Sciences (Astronomy, Geology, Meteorology, Oceanography)

**K. Lee Shropshire, Chairman**

**Assistant Professors:** Cobb, Dietz, Hopkins, Matthews, Shropshire.

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

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

1. Meet all General Education requirements specified earlier in this catalog.
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.

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

1. Professional Teacher Education courses—31 hours, plus EDFE 372—two hours and SCED 441—three hours.
2. Science and mathematics courses (this list may vary depending on the background and needs of the individual student):

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—Principles of Geology I .....		4

GEOL	202—Principles of Geology II .....	4
GEOL	203—Principles of Geology III .....	4
MATH	124—College Algebra .....	5
MET	201—Principles of Meteorology I .....	4
MET	202—Principles of Meteorology II .....	4
OCN	201—Principles of Oceanography .....	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
	Astronomy, Geology, Meteorology, and/or Oceanography electives to be selected in consultation with the student's advisor.....	16
		<hr/> 80

Completion of the major requirements will also satisfy the General Education requirements in science. Earth Sciences majors should not take SCI 103, 104, or 105.

## Earth Sciences Minor

Students minoring in Earth Sciences will, in consultation with a minor advisor, 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 100, and OCN 100 are minimum recommendations. To be certified to teach earth science in secondary schools students must take a total of at least 36 quarter hours of science courses.

Completion of this program will satisfy the General Education requirement in earth science. Earth Sciences minors should not take SCI 105.

## Economics

**Orvel L. Trainer, Chairman**

**Professor:** Trainer.

**Assistant Professors:** Anderson, Garrison, Mahanty.

**Instructors:** Rivera, St. Aubyn.

### Economics Minor

1. Twenty-seven quarter hours in Economics.
2. The following is the required program:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
ECON	100—Introductory Economics .....	5
ECON	102—Contemporary Economic Problems .....	3
ECON	470—History of Economic Thought .....	3
ECON	200—Intermediate Economic Theory .....	3
	Advanced Electives .....	13
		<hr/> 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 the Social Sciences must take a major in Social Sciences rather than in Economics.

### Economic Education Minor

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
BUS	100—The American Business System .....	5
BUS	371—Personal Finance .....	3
BUED	430—Economic Education Seminar .....	3

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ECON	100—Introductory Economics .....	5
ECON	102—Contemporary Economic Problems .....	3
	Electives in Business or Economics .....	17
		<hr/> 36

The electives must be planned in cooperation with the minor adviser. Elective courses may be chosen from the economic courses listed on pages 156, 157, and 158, 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 in Family Living, three hours credit.

## English

**Chester C. Huff, Jr., Chairman**

**Professors:** Boyle, Carriar, Cross, F. Frease, Freeman, Harrison, Starr.

**Associate Professors:** C. Frease, Huff, D. Jones, Myers.

**Assistant Professors:** Agan, Applegate, Brand, Brewer, Doyle, Finnegan, E. Kearns, Loftis, Luere, C. Meyer, Princic, Rea, Thompson, N. Wilson, Witwer.

**Instructors:** Bowles, Hanselmann, Kiefer, Lackie, Mackey, Peercy, Stallings, Varner, S. Wilson.

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 27 quarter hours.
3. Courses in the major (listed below) in the following groups:

core requirements totaling 6 hours  
electives totaling 56 hours

Core requirements:

ENG	111*—Introduction to Poetry .....	3
ENG	112*—Introduction to Prose .....	3
	Electives .....	56

Choose any of the additional courses listed below or any of the courses listed under "literature options" in the program for English majors in teacher education (page 51).

\*Qualified students may be exempted by examination.

**Electives:**

Course No.	Course Title	Hours Credit
ENG	240—Creative Writing: Introduction to Poetry .....	2
ENG	241—Creative Writing: Introduction to Fiction .....	2
ENG	318—Ethnic Literature .....	4
ENG	322—Discourse Structure .....	3
ENG	340—Creative Writing: Advanced Poetry .....	2
ENG	341—Creative Writing: Advanced Fiction .....	2
ENG	401—Greek and Comparative Mythology .....	4
ENG	402—The Short Story .....	3
ENG	403—Techniques of the Novel .....	5
ENG	404—Modern Literature About Childhood and Adolescence .....	3
ENG	405—Contemporary American Drama .....	3
ENG	406—Modern Drama Since Ibsen .....	3
EED	406—Literature for Adolescents .....	3
ENG	407—The Forms and Meaning of Poetry .....	4
ENG	408—Elizabethan Drama Exclusive of Shakespeare .....	4
ENG	409—Literary Criticism .....	3
ENG	410—History of Ideas in Literature .....	3
ENG	415—Literature of the Old Testament .....	4
ENG	416—Literature of the New Testament .....	3
ENG	418—Grammatical Analysis .....	3

DEGREE PROGRAM REQUIREMENTS / 51

ENG	419—Advanced Topics in Syntax .....	3
ENG	420—Stylistics .....	3
ENG	430—Studies in World Literature .....	3-9

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

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

1. General Education requirements as specified in this catalog.
2. Professional Teacher Education Core totaling 37 quarter hours.
3. One minor totaling 27 quarter hours.
4. Courses in the major (listed below) in the following groups:

core requirements totaling 25 hours  
 literature options totaling 18 hours  
 electives totaling 19 hours

Core Requirements .....		25
ENG	111*—Introduction to Poetry .....	3
ENG	112*—Introduction to Prose .....	3
ENG	319 —Advanced Expository Writing .....	3
ENG	320 —The English Language .....	4
ENG	321 —Generative-Transformational Grammar .....	4
EED	402 —Literature and Materials in the Secondary School .....	5
EDRD	420 —Reading in the Secondary School .....	3

\*Qualified students may be exempted by examination.

Literature Options .....		18
Choose two courses from each group		

Group I:		ENG 211—English Literature from the Beginnings to 1500 .....	3
		ENG 212—English Literature from 1500 to 1660 .....	3
		ENG 213—The Restoration and Eighteenth Century .....	3
		ENG 301—Shakespeare: Early Plays .....	3
		ENG 302—Shakespeare: Later Plays .....	3
Group II:		ENG 214—The Romantic Movement .....	3
		ENG 215—Victorian Prose and Poetry .....	3
		ENG 216—American Literature to the Civil War .....	3
		ENG 217—American Literature: From the Civil War to 1914 .....	3
Group III:		ENG 220—English Literature: 1900 to 1939 .....	3
		ENG 221—English Literature: 1940 to the Present .....	3
		ENG 225—American Literature from 1914-1939 .....	3
		ENG 226—American Literature from 1940 to the Present .....	3

Electives .....		19
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Note: Courses in Groups I, II, and III above that were not taken to fulfill the literature requirement can be elected as well as any of the courses listed below.

Course No.	Course Title	Hours	Credit
ENG	240—Creative Writing: Introduction to Poetry .....	2	2
ENG	241—Creative Writing: Introduction to Fiction .....	2	2
ENG	318—Ethnic Literature .....	4	3
ENG	322—Discourse Structure .....	3	4
ENG	340—Creative Writing: Advanced Poetry .....	2	2
ENG	341—Creative Writing: Advanced Fiction .....	2	2
ENG	401—Greek and Comparative Mythology .....	4	4
ENG	402—The Short Story .....	3	3
ENG	403—Techniques of the Novel .....	5	5
ENG	404—Modern Literature About Childhood and Adolescence .....	3	3
ENG	405—Contemporary American Drama .....	3	3
ENG	406—Modern Drama Since Ibsen .....	3	3
EED	406—Literature for Adolescents .....	3	4
ENG	407—The Forms and Meaning of Poetry .....	4	4
ENG	408—Elizabethan Drama Exclusive of Shakespeare .....	4	4
ENG	409—Literary Criticism .....	3	3

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ENG	410—History of Ideas in Literature .....	3
ENG	415—Literature of the Old Testament .....	4
ENG	416—Literature of the New Testament .....	3
ENG	418—Grammatical Analysis .....	3
ENG	419—Advanced Topics in Syntax .....	3
ENG	420—Stylistics .....	3
ENG	430—Studies in World Literature .....	3-9

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

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

EDFE	260—Observations in Cooperating Schools
EDFE	270—Teaching Aide
THEA	280—Creative Dramatics

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

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

EDEM	310—Introduction to Educational Resources .....	5
EDEM	460—Television in Education .....	4
PHIL	220—Applied Logic .....	3
PSY	271—Introduction to Measurement and Evaluation .....	3
PSY	230—Child and Adolescent Psychology .....	3
SP	170—Oral Interpretation .....	3
SP	302—Small Group Communication .....	3
SP	420—General Semantics .....	4

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

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

### English Minor

Core Requirements .....	6
ENG 111*—Introduction to Poetry .....	3
ENG 112*—Introduction to Prose .....	3
Electives .....	25
	<hr/> 31

Choose any of the additional courses listed for the major.

\*Qualified students may be exempted by examination.

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

Core Requirements .....	14-15
ENG 111*—Introduction to Poetry .....	3
ENG 112*—Introduction to Prose .....	3
EED 402—Literature and Materials in the Secondary School .....	5
one of the following:	
ENG 319—Advanced Expository Writing .....	3
ENG 320—The English Language .....	4
ENG 321—Generative-Transformational Grammar .....	4
Electives .....	16-17
	<hr/> 31

\*Qualified students may be exempted by examination.

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

Note: Teaching minors (except Elementary Education majors) are advised to take EED 341, Methods of Teaching in the Secondary School, in order to qualify for certification as English teachers.

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

Students in the English program who have begun their program before 1973 should consult the head of the department for substitutions.

**HONORS**—The Department of English participates in the Honors Program. See page No. 37.

### **Humanities Minor: An Interdisciplinary Study (Administered by the English Department)**

A thirty-six hour program

Requirements:

1. Thirty-three hours of study in at least two, but no more than three of the areas of Anthropology, English, Fine Arts, History, Music, Philosophy, and Sociology.

2. Careful planning of a coordinated program by student with his adviser and the Director of Humanities.

3. A three-hour independent study on a topic selected by the student at the culmination of the course work from ideas inspired in his course work. The study is to cut across disciplinary boundaries, and 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 most adaptable to the Humanities Minor. A student may take other courses from the departments listed with the approval of his adviser and the department or professor.

ANTHROPOLOGY 100, 280\*, 360\*, 372\*, 381\*, 382\*, 383\*, 470\*, 240\*  
(\*Prerequisite: ANT 100)

ENGLISH 211, 212, 213, 214, 215, 216, 217, 220, 221, 225, 226, 301, 302, 318, 325, 401, 402, 403, 405, 406, 407, 408, 410, 415, 416, 430, 440

FINE ARTS 110, 111, 112, 360, 361, 362, 363, 364, 365, 366, 367, 368, 380, 381, 382

HISTORY 125, 126, 127, 130, 131, 132, 170, 171, 172, 210, 220, 230, 350, 360, 410, 458

MUSIC 140\*, 141\*, 142\*, 143\*, 240\*, 241\*, 242\*, 340\*, 448\*, 449\*, 285\*, 385\*, 485\*

Applied music: maximum of 3 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, 311\*, 312\*, 313\*, 314\*, 315\*, 330\*, 370\*, 401\*, 403\*, 410\*, 415\*, 480\* (\*Fulfill prerequisites or have consent of instructor.)

SOCIOLOGY 145\*, 210\*, 223\*, 245\*, 310\*, 321\*, 333\*, 345\*, 435\*, 450\*, 451\*  
(\*Prerequisite SOC 100)

SPEECH 140, 170, 212, 456, 522, 580

THEATRE 230, 430, 431, 432

## Foreign Languages

**Frank E. Keppeler, Chairman**

**Professor:** Graham.

**Assistant Professors:** Brown, Freyre, Keppeler, Sandstedt, Owechko.

**Instructors:** Ensz, Hoffman.

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

### French Major

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

1. Meet all General Education requirements as specified earlier in this catalog. (Foreign Languages majors are urged to take ANT 100 or SOC 100 or HIST 130, 131, and 132.) Student should consult his assigned adviser.

2. All work in French must be beyond the first-year level. The following courses or their equivalents are required for the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
FR 201	Intermediate French I .....	4	
FR 202	Intermediate French II .....	4	
FR 203	Intermediate French III .....	4	
FR 305	Survey of French Literature I .....	4	
FR 306	Survey of French Literature II .....	4	
FR 307	Survey of French Literature III .....	4	
	Electives in French to be chosen with the consent of the adviser .....	24	
			48

3. In addition, a minor of at least 27 quarter hours within the College of Arts and Sciences. Courses in the selected minor that are preceded by an asterisk (\*) may be counted toward fulfillment of the General Education requirements.

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

5. Students majoring in French who plan to teach in the public schools should include the following courses in their programs in addition to nine hours of electives in French (to be chosen with the consent of the adviser):

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
FR 310	Intermediate French Conversation .....	3	
FR 311	Intermediate French Composition .....	3	
FR 312	Intermediate French Syntax and Stylistics .....	3	
FR 410	French Civilization .....	3	
FR 400	Problems in Oral French .....	3	
			15

Students who desire teaching certification will also take 31 credit hours in Professional Teacher Education, plus EDFE 366 (2 hours credit) and EDCI 341 (3 hours credit). Before being permitted to apply for student teaching, a Foreign Language major must have successfully passed the department proficiency examination in the language where application is made.

### French Minor

Requirements for a French Minor are as follows:

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

Courses selected from the following: (Choose one and/or both of the following series)

FR	310-Intermediate French Conversation .....	3
FR	311-Intermediate French Composition .....	3
FR	312-Intermediate French Syntax and Stylistics .....	3
	<b>OR</b>	<b>9</b>
FR	305-Survey of French Literature I .....	4
FR	306-Survey of French Literature II .....	4
FR	307-Survey of French Literature III .....	4
		<b>12</b>
FR	400-Problems in Oral French .....	3
	Electives to be chosen with permission of minor adviser .....	3-6
		<b>30</b>

Students who desire to be certified for teaching are required to take the first series.

### German Major

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 as specified earlier in this catalog. (Foreign Language majors are urged to take ANT 100 or SOC 100 or HIST 130, 131, and 132.) Student should consult his assigned adviser.
2. All work in German must be beyond the first-year level. The following courses or their equivalents are required for the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
GER	201-Intermediate German I .....	4
GER	202-Intermediate German II .....	4
GER	203-Intermediate German III .....	4
GER	305-Survey of German Literature I .....	3
GER	306-Survey of German Literature II .....	3
GER	307-Survey of German Literature III .....	3
GER	335-Intermediate German Conversation .....	4
GER	341-Goethe .....	3
	Electives in German to be chosen with the consent of the adviser.....	20
		<b>48</b>

3. In addition, a minor of at least 27 quarter hours within the College of Arts and Sciences. Courses in the selected minor that are preceded by an asterisk (\*) may be counted toward fulfillment of the General Education requirements.
4. Electives sufficient to complete requirements for the Bachelor of Arts degree.
5. Students majoring in German who plan to teach in the public schools should include the following courses in their programs in addition to nine hours of electives in German (to be chosen with the consent of the adviser):

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
GER	335-Intermediate German Conversation .....	4
GER	336-Advanced German Composition .....	4
GER	337-Advanced German Grammar .....	4
GER	400-Problems in Oral German .....	3
		<b>15</b>

Students who desire teaching certification will also take 31 credit hours in Professional Teacher Education, plus EDFE 366 (2 hours credit) and EDCI 341 (3 hours credit). Before being permitted to apply for student teaching, a Foreign Language major must have successfully passed the department proficiency examination in the language where application is made.

**German Minor**

Requirements for a German Minor are as follows:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
GER 201	Intermediate German I	4	4
GER 202	Intermediate German II	4	4
GER 203	Intermediate German III	4	4
GER 335	Intermediate German Conversation	4	4
GER 336	Advanced German Composition	4	4

Ten hours selected from the following:

GER 305	Survey of German Literature I	3	3
GER 306	Survey of German Literature II	3	3
GER 307	Survey of German Literature III	3	3
GER 341	Goethe	3	3
GER 343	Faust	3	3
GER 426	Nineteenth Century German Literature	3	3
GER 427	Twentieth Century German Literature	3	3
			<b>30</b>

Students interested in becoming certified for teaching will take GER \*201, \*202, \*203, \*335, and 336 plus the following courses:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
GER 337	Advanced German Grammar	4	4
GER 341	Goethe	3	3
GER 400	Problems in Oral German	3	3
			<b>10</b>

\*Students who have the equivalent of these courses may choose substitutes with consent of their adviser.

**Russian Minor**

This minor requires 30 hours of Russian to be selected from the following courses with the approval of the minor adviser.

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
RUS 101	Elementary Russian I	5	5
RUS 102	Elementary Russian II	5	5
RUS 103	Elementary Russian III	5	5
RUS 201	Intermediate Russian	4	4
RUS 202	Intermediate Russian Composition and Conversation I	4	4
RUS 203	Intermediate Russian Composition and Conversation II	4	4
RUS 305	Survey of Russian Literature I	3	3
RUS 306	Survey of Russian Literature II	3	3
RUS 307	Survey of Russian Literature III	3	3
RUS 335	Russian Conversation	3	3
RUS 336	Advanced Russian Composition	3	3
RUS 337	Advanced Russian Grammar	3	3
RUS 341	Pushkin	3	3
			<b>30</b>

**Spanish Major**

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 as specified earlier in this catalog. (Foreign Languages majors are urged to take ANT 100 or SOC 100 or HIST 130, 131, and 132.) Student should consult his assigned adviser.

2. All work in Spanish must be beyond the first-year level. The following courses or their equivalents are required for the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
SPAN 201	Intermediate Spanish I	4	4
SPAN 202	Intermediate Spanish II	4	4

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SPAN	203—Intermediate Spanish III .....	4
SPAN	315—Survey of Spanish-American Literature I .....	3
SPAN	316—Survey of Spanish-American Literature II .....	3
SPAN	317—Survey of Spanish-American Literature III .....	3
SPAN	355—Survey of Spanish Literature I .....	3
SPAN	356—Survey of Spanish Literature II .....	3
SPAN	357—Survey of Spanish Literature III .....	3
SPAN	410—Spanish Civilization .....	3
	Electives in Spanish (to be chosen with the consent of the adviser) .....	15
		48

3. In addition, a minor of at least 27 quarter hours within the College of Arts and Sciences. Courses in the selected minor that are preceded by an asterisk (\*) may be counted toward fulfillment of the General Education requirements.

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

5. Students majoring in Spanish who plan to teach in the public schools should not take SPAN 315, 316, 317, 355, 356, 357. Instead they should include the following courses in their programs:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
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
		18

Students who desire teaching certification will also take 31 credit hours in Professional Teacher Education, plus EDFE 366 (2 hours credit) and EDCI 341 (3 hours credit). Before being permitted to apply for student teaching, a Foreign Language major must have successfully passed the department proficiency examination in the language where application is made.

## Spanish Minor

Requirements for a Spanish Minor are as follows:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
SPAN	201—Intermediate Spanish I .....	4
SPAN	202—Intermediate Spanish II .....	4
SPAN	203—Intermediate Spanish III .....	4
	Electives to be chosen with permission of minor adviser .....	8
		30

Students interested in becoming certified for teaching are required to take the following:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
SPAN	310—Advanced Spanish Grammar .....	4
SPAN	325—Advanced Spanish Composition .....	3
SPAN	335—Spanish Conversation .....	4
SPAN	345—Spanish Pronunciation .....	4
		14

Such students will take three hours of electives in Spanish to be chosen with permission of minor adviser.

**HONORS**—The Department of Foreign Language participates in the Honors Program. See page No. 37.

## Geography

**Kevin C. Kearns, Chairman**

**Professor:** Lehrer

**Associate Professor:** Kearns

**Assistant Professors:** Collins, Dietz

**Instructors:** Barton, Howard, Krimbill, Scott.

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

1. Meet 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:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
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.....	15	
			48

3. At least one minor of 27 quarter hours. Courses in the selected minor that are asterisked (\*) may be used as part of the 60 hours of required General Education.

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

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

## Geography Minor

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
GEOG	100-World Geography .....	5	
GEOG	148-Anglo-America .....	5	
GEOG	364-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	
			27

## History

**Barry Rothaus, Chairman**

**Professors:** Arnold, Boeck, Byerly, Larson, Reynolds.

**Associate Professors:** Cornebise, Powers, Rothaus.

**Assistant Professors:** Hamerly, Kerkham, Knott, Lonsdale, Rowe.

**Instructors:** Bowser, Willcoxon.

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

1. Meet all General Education requirements as specified earlier in this catalog. History majors must take two of the following: ANT 100, ECON 100, GEOG 100, PSCI 100, SOC 100.

## 2. The following courses in the major:

	<i>Hours Credit</i>
I. World History I, II, III .....	12
HIST 130, 131, 132	
II. United States History I, II, III .....	9
HIST 170, 171, 172	
III. The Far East .....	4
HIST 240	
IV. Introduction to Historical Research .....	3
HIST 499	
V. Advanced Electives in History .....	36
	64

3. In addition, a minor of 27 quarter hours preferably within the College of Arts and Sciences. Courses in the selected minor that are preceded by an asterisk (\*) may be counted toward fulfillment of the General Education requirements.

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

5. Electives sufficient to complete the 180 quarter hours for the Bachelor of Arts degree.

1. Students majoring in history who plan to teach in the public schools should include the following courses in their programs: 28 quarter hours of advanced electives in History instead of 36, and 25 quarter hours in the five introductory Social Science areas: ANT 100, ECON 100, GEOG 100, PSCI 100, and SOC 100. Sixteen of these 25 hours will be applied to the general education requirement. Students will also take 31 quarter hours in the Professional Teacher Education Program (requirements and prerequisites for admission listed below) plus EDFE 373, two quarter hours credit, and EDCI 341, three quarter hours credit.

a. The faculty of the History Department will not consider any student's application for the PTE program until he has passed at least 21 hours in history, and has passed at least eight hours of history at the University of Northern Colorado. General Education courses are not counted for the major.

b. To be admitted to PTE one must have a grade point average of at least 2.3 in the major. In figuring the grade point average in the major, only courses taken at the University of Northern Colorado are counted, excluding the general education courses or their substitutes.

c. Before registering for EDFE 373 and EDCI 341 one must have completed EDF 365 and PSY 341, and the following courses or their equivalents:

	<i>Hours Credit</i>
I. World History I, II, III .....	12
HIST 130, 131, 132	
II. United States History I, II, III .....	9
HIST 170, 171, 172	
III. Two of the introductory courses in the social sciences .....	10
IV. Advanced Electives in History .....	3
	34

The above requirements (1a, b, c) also apply for the History minor.

d. Before registering for EDFE 451, Student Teaching, all majors in History must have completed at least 40 hours in the major.

## History Minor

The following is the required program:

	<i>Hours Credit</i>
I. World History I, II, III .....	12
HIST 130, 131, 132	

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II. United States History I, II, III .....	9
HIST 170, 171, 172	
III. Advanced Electives in History .....	15
	<hr/>
	36

Students minoring in History will take two of the following basic courses to fulfill the nine quarter hour General Education requirement: ANT 100, ECON 100, GEOG 100, PSCI 100 and SOC 100.

**HONORS**—The Department of History participates in the Honors Program. See page No. 37.

## Mathematics

**Donald D. Elliott, Chairman**

**Professors:** Fisch, Popejoy, D. Schmidt.

**Associate Professors:** Cavanagh, Elliott, Fuelberth, Heiny, Johnson.

**Assistant Professors:** Anders, Bosch, Johnston, McNerney, Richardson, Rumford, Schweers, Tolar.

The Department of Mathematics offers a major and a minor.

Students pursuing the B.A. with a major in Mathematics must plan their programs to fulfill the following requirements. (No minor is required in this program.):

1. Meet all General Education requirements as specified earlier in this catalog.

2. Courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
MATH 131*	-Calculus with Analytic Geometry I .....	4	4
MATH 132*	-Calculus with Analytic Geometry II .....	4	4
MATH 133*	-Calculus with Analytic Geometry III .....	4	4
MATH 234*	-Calculus with Analytic Geometry IV .....	4	4
MATH 321	-Introduction to Modern Algebra I .....	4	4
MATH 322	-Introduction to Modern Algebra II .....	4	4
MATH 323	-Introduction to Modern Algebra III .....	4	4
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, 325, 341, 342, 435, 436, 464, 481, 482, 483, 521, 522, 523, 535, 536, 537, 540, 543, 544, 551, 552, 553, 591 .....	20	20

60

\*Qualified Students may be exempted by examination.

3. Electives to complete requirements for graduation.

Students majoring in Mathematics who plan to teach in the secondary school should include the following courses in their programs (No minor is required in this program.):

1. Meet all General Education requirements as specified earlier in this catalog.

2. Professional Teacher Education 31 hours, plus EDFE 370, two hours credit, and EDCI 341, three hours credit.

3. Courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
MATH 131*	-Calculus with Analytic Geometry I .....	4	4
MATH 132*	-Calculus with Analytic Geometry II .....	4	4
MATH 133*	-Calculus with Analytic Geometry III .....	4	4
MATH 234*	-Calculus with Analytic Geometry IV .....	4	4
MATH 321	-Introduction to Modern Algebra I .....	4	4
MATH 322	-Introduction to Modern Algebra II .....	4	4
MATH 323	-Introduction to Modern Algebra III .....	4	4

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MATH	341	—Introduction to Modern Geometry I .....	4
MATH	342	—Introduction to Modern Geometry II .....	4
MATH	380	—Computer Programming .....	4
MATH	250	—Elementary Probability Theory .....	4
MATH	432	—Basic Analysis I .....	4
MATH	433	—Basic Analysis II .....	4
		Electives to be selected from mathematics courses numbered 203 or higher .....	8
			60

\*Qualified Students may be exempted by examination.

**4. Electives to complete requirements for graduation.**

Students majoring in Mathematics who plan to teach in the elementary school should include the following courses in their programs:

1. Meet all General Education requirements as specified earlier in this catalog.
2. Professional Teacher Education 31 hours.
3. Courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
MATH	131*—Calculus with Analytic Geometry I .....	4
MATH	132*—Calculus with Analytic Geometry II .....	4
MATH	133*—Calculus with Analytic Geometry III .....	4
MATH	201 —Basic Mathematical Logic .....	3
MATH	202 —Theory of Sets .....	3
MATH	321 —Introduction to Modern Algebra I .....	4
MATH	322 —Introduction to Modern Algebra II .....	4
MATH	341 —Introduction to Modern Geometry I .....	4
MATH	250 —Elementary Probability Theory .....	4
	Electives: MATH 124, 125, 191, 192, 193, or any MATH or MED courses numbered 200 or higher. (Elementary Education majors cannot count MATH 191 or 192 in this major.) .....	14
		48

\*Qualified Students may be exempted by examination.

4. Complete the additional requirements as stated elsewhere in this catalog for certification as an elementary school teacher.

**Mathematics Minors**

Following are the requirements for the Liberal Arts minor:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
MATH	131*—Calculus with Analytic Geometry I .....	4
MATH	132*—Calculus with Analytic Geometry II .....	4
MATH	133*—Calculus with Analytic Geometry III .....	4
MATH	234*—Calculus with Analytic Geometry IV .....	4
	Electives in mathematics numbered 124 or higher, at least eight of which must be in courses numbered 250 or higher .....	14
		30

\*Qualified students may be exempted by examination.

Following are the requirements for the minor for persons planning to teach:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
MATH	131*—Calculus with Analytic Geometry I .....	4
MATH	132*—Calculus with Analytic Geometry II .....	4
MATH	321 —Introduction to Modern Algebra I .....	4
MATH	322 —Introduction to Modern Algebra II .....	4

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MATH 341	—Introduction to Modern Geometry I .....	4
	Electives in mathematics or mathematics education courses numbered 124 or higher** .....	10
		<hr/> 30

\*Qualified Students may be exempted by examination.

\*\*It is recommended that a course be selected from among MATH 323, 342, 250, 305, 380, 464.

Following are the requirements for the minor in mathematics for Elementary Education majors:

MATH 110	—Mathematics and the Liberal Arts .....	3
MATH 193	—Informal Geometry .....	3
	Electives to be selected with approval of the student's minor adviser .....	21
		<hr/> 27

The Mathematics Department adheres to the policy that a student teaching in Mathematics or who seeks the recommendation of the Department as a prospective teacher of Mathematics shall be required to take the methods course in the Mathematics Department.

**HONORS.** The Department of Mathematics participates in the Honors Program. See page No. 40.

## Mexican American Studies

**Carlos Leal, Coordinator**

**Assistant Professors:** Leal, Sandoval.

This major is administered by the Center for Mexican American Studies.

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

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

Course No.	Course Title	Hours	Credit
MAS 101	—Introduction to Mexican American Studies .....	3	3
MAS 102	—Oral, Reading and Written Spanish Communication I .....	3	3
MAS 103	—Oral, Reading and Written Spanish Communication II .....	3	3
MAS 104	—Oral, Reading and Written Spanish Communication III .....	3	3
MAS 105	—The Contemporary Mexican American I .....	3	3
MAS 106	—The Contemporary Mexican American II .....	3	3
MAS 270	—History of Mexico I .....	3	3
MAS 280	—History of Mexico II .....	3	3
MAS 290	—Intermediate Oral, Reading and Written Spanish Communication .....	3	3
MAS 300	—Advanced Oral, Reading and Written Spanish Communication .....	3	3
MAS 302	—Social Stratification in the Mexican American Community .....	3	3
MAS 304	—Bicultural Systems .....	3	3
MAS 306	—History of the Chicano in the Southwest .....	3	3
MAS 308	—Survey of Mexican Literature .....	3	3
MAS 410	—Survey of Contemporary Chicano Literature .....	3	3
MAS 412	—Mexican American Art .....	3	3
MAS 414	—Mexican American Philosophical Thought .....	3	3
MAS 422	—Individual Studies .....	9	9
		<hr/> 60	

3. A minor of 27 or more quarter hours or a second major (strongly recommended).

4. Electives to complete 180 quarter hours of academic credit.

**Mexican American Studies Minor**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
MAS	101—Introduction to Mexican American Studies .....	3	
MAS	105—The Contemporary Mexican American I .....	3	
MAS	106—The Contemporary Mexican American II .....	3	
HIST	258—The Hispano in the American Southwest .....	3	
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	
ANT	325—Spanish and Mexican Cultures in American Southwest .....	3	
MAS	414—Mexican American Philosophical Thought .....	3	
		<b>27</b>	

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.

**Philosophy**

**Frank A. Morelli, Director**

**Assistant Professors:** Morelli, Hodapp.

**Philosophy Minor**

Following is the required program\*:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
PHIL	210—Ethics and Value Theory .....		3
PHIL	220—Logic in Practice .....	3	
<i>or</i>			
PHIL	340—Formal Logic .....	3	3
PHIL	311—History of Ancient Philosophy .....		3
PHIL	313—History of Modern Philosophy .....		3
PHIL	314—History of Recent Philosophy .....		3
PHIL	410—Contemporary Philosophical Movements .....		3
			12
Advanced Electives (to be chosen in consultation with the advisor)			
			<b>30</b>

\*Student is urged to take PHIL 100 as a first course in Philosophy.

Philosophy minors intent upon graduate school in Philosophy must consult with Philosophy faculty.

**Physics**

**Wallace Aas, Chairman**

**Professor:** Fry.

**Associate Professors:** Aas, Hamerly.

**Assistant Professor:** Ellingson, Fadner.

The Department of Physics offers a major and a minor. In addition, a Physical Science major is offered jointly with the Chemistry Department.

Students pursuing the B.A. with a major in Physics 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:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
PHYS	265—General Physics—Mechanics .....		5
PHYS	266—General Physics—Electricity .....		5
PHYS	267—General Physics—Sound, Light, and Heat.....		5

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PHYS	365—Mechanics I .....	4
PHYS	366—Electricity and Magnetism I .....	4
PHYS	367—Optics I .....	4
PHYS	465—Mechanics II .....	3
PHYS	466—Electricity and Magnetism II .....	3
PHYS	468—Atomic Physics .....	5
PHYS	469—Nuclear Physics I .....	5
PHYS	564—Thermodynamics .....	4
PHYS	567—Optics II .....	4
	Electives to be selected with approval of student's adviser.....	4

55

3. A mathematics minor of 27 or more quarter hours (through calculus). Courses in the selected minor that are asterisked (\*) may be used as part of the 60 hours of required General Education.

4. Substitute PHYS 268, Modern Physics, for SCI 103 requirement.
5. CHEM 104 or 106 and CHEM 105 or 107.
6. Electives to complete requirements for graduation.

Students majoring in Physics 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. Professional Teacher Education, 31 hours, plus EDFE 372, two hours credit, and SCED 441, three hours credit.
3. Courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
PHYS	265—General Physics—Mechanics .....	5	5
PHYS	266—General Physics—Electricity .....	5	5
PHYS	267—General Physics—Sound, Light, and Heat .....	5	5
PHYS	361—AC Circuits .....	5	4
PHYS	365—Mechanics I .....	5	4
PHYS	468—Atomic Physics .....	5	5
	<i>or</i>		
PHYS	469—Nuclear Physics I .....	5	5
	Physics electives of 300 number or higher to be selected with approval of student's adviser .....	15	
		48	

4. A minimum of 27 quarter hours of mathematics to include calculus through MATH 234. Courses in mathematics that are asterisked (\*) may be used as part of the 60 hours of required General Education.

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.
7. Substitute PHYS 268, Modern Physics, for SCI 103 requirement.

**Physics Minor**

Following are the requirements for the arts and sciences minor:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
PHYS	265—General Physics—Mechanics .....	5	5
PHYS	266—General Physics—Electricity .....	5	5
PHYS	267—General Physics—Sound, Light, and Heat.....	5	5
PHYS	365—Mechanics I .....		
	<i>or</i>		
PHYS	366—Electricity and Magnetism I .....	4	8
	Physics electives to be selected with approval of student's minor adviser....	8	

27

Substitute PHYS 268, Modern Physics, for SCI 103 requirement.

Physics minors interested in being certified for teaching in the secondary school must complete the minor listed above.

**HONORS**—The Department of Physics participates in the Honors Program. See page No. 37.

## Physical Science

The Departments of Chemistry and Physics cooperate in offering an interdepartmental major in physical science.

Students pursuing the B.A. degree with a major in Physical 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:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
PHYS	265—General Physics—Mechanics .....		5
PHYS	266—General Physics—Electricity .....		5
PHYS	267—General Physics—Sound, Light, and Heat .....		5
PHYS	365—Mechanics I .....		4
CHEM	104—Principles of Chemistry I .....		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	332—Organic Chemistry I .....	5	5
	<i>and</i>		
CHEM	333—Organic Chemistry II .....	5	5
	<i>and</i>		
CHEM	334—Organic Chemistry III .....	5	5
			<hr/>
			15
	<i>or</i>		
CHEM	130—Introductory Organic Chemistry .....	5	5
	<i>and</i>		
CHEM	311—Quantitative Analysis I .....	5	5
	<i>and</i>		
CHEM	451—Physical Chemistry I .....	5	5
			<hr/>
			15
			15
	Physics Electives (400 course) .....		5
			<hr/>
			58

3. One minor of 27 or more quarter hours, preferably in mathematics. Courses in the selected minor that are asterisked (\*) may be used as part of the 60 hours of required General Education.

4. Substitute PHYS 268, Modern Physics, for SCI 103 requirement.

5. Electives to complete requirements for graduation.

Students majoring in Physical 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. Professional Teacher Education, 31 hours, plus EDCI 340, two hours credit, and SCED 441, three hours credit.

3. Courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
PHYS	265—General Physics—Mechanics .....		5
PHYS	266—General Physics—Electricity .....		5
PHYS	267—General Physics—Sound, Light, and Heat .....		5
PHYS	365—Mechanics I .....		4
PHYS	366—Electricity and Magnetism I .....		4

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CHEM	104—Principles of Chemistry I .....	5	
	<i>or</i>		
CHEM	106—Principles of Chemistry IA .....	5	5
CHEM	105—Principles of Chemistry II .....	5	
	<i>or</i>		
CHEM	107—Principles of Chemistry IIA .....	5	5
CHEM	111—Qualitative Analysis .....		5
CHEM	332—Organic Chemistry I .....	5	
	<i>and</i>		
CHEM	333—Organic Chemistry II .....	5	
	<i>and</i>		
CHEM	334—Organic Chemistry III .....	5	
			15
	<i>or</i>		
CHEM	130—Introductory Organic Chemistry .....	5	
	<i>and</i>		
CHEM	311—Quantitative Analysis I .....	5	
	<i>and</i>		
CHEM	451—Physical Chemistry I .....	5	
			15
			15
	Physics Electives (400 course) .....	5	
			58

4. Twenty-seven or more quarter hours Mathematics Minor required. Courses in the selected minor that are asterisked (\*) may be used as part of the 60 hours of required General Education.

5. Substitute PHYS 268, Modern Physics, for SCI 103 requirement.

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

## Political Science

**Richard Perchlik, Chairman**

**Professors:** Christensen, Perchlik.

**Associate Professors:** Bookman, Knapp.

**Assistant Professors:** Klein, Mazurana.

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

1. Meet all General Education requirements as specified earlier in this catalog. ( Students majoring or minoring in political science will take two of the following courses: GEOG 100, ANT 100, ECON 100, or SOC 100.)

2. The following required courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
a. PSCI	101—United States Government I .....		3
PSCI	102—United States Government II .....		3
PSCI	103—United States Government III .....		3
b.	Electives in political science to include at least one course from each of the following groups A, B, C, & D* .....		39
	Group A—United States Government		
PSCI	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	300—Public Opinion and Pressure Groups .....	4	
PSCI	301—Problems in United States Government .....	3	
PSCI	302—The President and the Bureaucracy .....	3	
PSCI	340—Field Research and Study in Political Science .....	3-15	
PSCI	400—Political Parties .....	3	
PSCI	401—Minority Politics .....	3	
••PSCI	500—Constitutional Law .....	5	

Group B—International Relations		
PSCI	220—International Relations .....	4
PSCI	320—American Foreign Policy .....	4
PSCI	420—Foundations of International Politics .....	4
PSCI	421—The United Nations .....	3
PSCI	423—Regional and Supranational Political Organizations .....	4
PSCI	425—Soviet Foreign Policy .....	4
◦◦PSCI	520—Seminar in International Politics .....	3
Group C—Political Theory		
PSCI	330—Political Belief-Systems I .....	3
PSCI	331—Political Belief-Systems II .....	3
PSCI	332—Political Belief-Systems III .....	3
PSCI	430—American Political Belief-Systems .....	3
PSCI	435—Problems in Political Philosophy .....	3
Group D—Comparative Government		
PSCI	210—European Political Systems .....	4
PSCI	410—Government and Politics of Asia .....	4
PSCI	411—Government and Politics of Latin America .....	4
PSCI	412—The Politics of the Developing Areas .....	4
PSCI	413—Political Systems of Sub-Saharan Africa .....	4
PSCI	414—Government and Politics of the Soviet Union .....	4
◦◦PSCI	510—Seminar in Comparative Politics .....	3
Group E—General		
◦PSCI	250—Introduction to Research in Political Science .....	3
◦◦PSCI	550—Research and Inquiry in Political Science .....	3

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◦It is recommended that majors take PSCI 250, especially those intending to do graduate work in political science.

◦◦Qualified juniors and seniors may be admitted to 500 level courses by special permission.

4. One minor of at least 27 quarter hours. Courses in the selected minor that are asterisked (\*) may be used as part of the 60 hours of required General Education program.

5. Electives to complete 180 quarter hours of academic credit.

## Political Science Minor

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
PSCI	101—United States Government I .....	3	3
PSCI	102—United States Government II .....	3	3
PSCI	103—United States Government III .....	3	3
Electives in political science selected with the approval of the Department of Political Science .....		18	18
			27

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

## Science Education

**George L. Crockett, Chairman**

**Professors:** Decker, Olson, Sund, Trowbridge.

**Associate Professors:** Crockett, McClurg.

The Science Education Department administers an interdepartmental minor in Elementary Science and an interdepartmental major in Junior High School Science.

**Elementary Science Minor**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BIO	401—Conservation of Natural Resources .....	4	
SCI	303—Elementary Biological Science .....	4	
SCI	309—Science for Elementary Teachers .....	3	
	Electives to be selected with approval of student's minor adviser .....	17	
			<b>27</b>

**Recommended Electives:**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
AST	100—General Astronomy .....	4	
BIO	101—Principles of Biology .....	5	
BIO	102—Principles of Botany .....	5	
BIO	103—Principles of Zoology .....	5	
BIO	336—Evolution .....	3	
GEOL	100—General Geology .....	4	
MET	100—General Meteorology .....	4	
SCI	508—Elementary Science Workshop .....	3	
ZOO	304—Ornithology .....	3	

**Junior High School Science Major**

Students majoring in Junior High School 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. Professional Teacher Education, 31 hours, and SCED 441, three hours credit.
3. SCED 151, Introductory Science Field Experiences, must be included. See course descriptions.
4. Courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BIO	101—Principles of Biology .....	5	
BIO	102—Principles of Botany .....	5	
BIO	103—Principles of Zoology .....	5	
CHEM	104—Principles of Chemistry I .....	5	
	or		
CHEM	106—Principles of Chemistry IA .....	5	5
CHEM	105—Principles of Chemistry II .....	5	
	or		
CHEM	107—Principles of Chemistry IIA .....	5	5
PHYS	260—Introductory Physics—Mechanics .....	4	
PHYS	261—Introductory Physics—Heat, Sound, and Light .....	4	
GEOL	100—General Geology (If an Earth Sciences Minor is elected, replace GEOL 100 with four hours of additional electives.) .....	4	
	Electives* .....	19	
			<b>58</b>

5. One minor of at least 27 quarter hours. Courses in the selected minor that are asterisked (\*) may be used as part of the 60 hours of required General Education program.

6. Sufficient electives to complete 180 quarter hours of academic credit required for graduation.

\*Other courses are recommended for adequate preparation in the junior high school science area:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
AST	100—General Astronomy .....	4	
BIO	231—Genetics .....	5	
BIO	250—Cell Physiology .....	5	
BIO	260—Microbiology .....	5	
BIO	336—Evolution .....	3	
BIO	360—Biology of Microorganisms .....	3	

BIO	401—Conservation of Natural Resources .....	4
CHEM	130—Introductory Organic Chemistry .....	5
GEOL	201—Principles of Geology I .....	5
MET	100—General Meteorology .....	4
MET	320—Climatology .....	3
MET	330—Physical Meteorology .....	3
OCN	100—General Oceanography .....	3
OCN	201—Principles of Oceanography .....	3
PHYS	262—Introductory Physics—Electricity and Magnetism .....	4
ZOO	250—Human Physiology .....	5

## Social Science

### David Lonsdale, Coordinator

The Departments of Anthropology, Economics, Geography, History, Political Science, and Sociology cooperate in offering an interdepartmental major in Social Science.

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

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

	<i>Hours Credit</i>
a. Introductory courses in five social science fields (GEOG 100, ANT 100, ECON 100, PSCI 100, SOC 100). Since two of these courses are counted toward the General Education requirements, only 16 hours of credit from this group will apply toward the major .....	16
b. Advanced electives in one, two, or three social science areas. For the areas selected, the following courses must be taken: ANT 381 or 382, ECON 200, GEOG 148, PSCI 220 or 421, SOC 450 or 310 .....	35
c. HIST 170, 171, 172 (U. S. History) .....	9
d. HIST 130, 131, 132 (World History) .....	12
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3. Electives sufficient to complete requirements for the Bachelor of Arts degree.

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:
  - a. Professional Teacher Education (PTE), 31 hours, plus EDFE 373 (2 hours) and EDCI 341 (3 hours).
  - b. No Social Science major may apply for admission to Professional Teacher Education (PTE) until he has passed at least 21 quarter hours of courses in the major, at least eight hours of which must have been taken at the University of Northern Colorado.
  - c. To be admitted to PTE, the student must have at least a 2.3 average in those courses counting toward his major which were taken at the University of Northern Colorado, and must have taken all the courses in 2a and 2c above.
  - d. Before taking EDFE 373 and EDCI 341, the student must have completed EDF 365, and PSY 341.
  - e. Before being permitted to apply for student teaching, a Social Science major must have completed successfully at least 40 hours in the major.

**HONORS**—Social Science majors may participate in the Honors Program. See page No. 37.

## Sociology

**Zehi S. Kamal, Chairman**

**Associate Professor:** Quammen.

**Assistant Professors:** Cleere, Jennison, Kamal, Murphy, Vonk, Willoughby.

**Instructors:** Barasch, Jones, Ping.

The Department of Sociology offers a major and a minor.

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

1. Meet all General Education requirements as specified earlier in this catalog. (Sociology majors must take two of the following: GEOG 100, ANT 100, ECON 100, PSCI 100. The student should consult his assigned adviser.)

2. Courses selected from each of the following areas:

	<i>Hours Credit</i>
I. Principles of Sociology ..... SOC 100	5
II. Social Theory ..... SOC 450, 451, 452	12
III. Methodology and Research ..... SOC 460, 461	8
One course from each of the following areas: .....	12
IV. Social Psychology ..... Selected from SOC 210, 310, 510, 515	.....
V. Social Institutions ..... Selected from SOC 120, 221, 223, 321, 325, 551, 527	.....
VI. Social Organization and Process ..... Selected from SOC 230, 232, 333, 337, 433, 435, 437, 438, 439, 564	.....
VII. Social Disorganization ..... Selected from SOC 145, 240, 245, 340, 345, 445, 447, 540, 541	.....
VIII. Advanced Electives ..... Electives include any Sociology course above SOC 100.	15
	52

3. In addition, a minor of 27 quarter hours within the College of Arts and Sciences. Courses in the selected minor that are preceded by an asterisk (\*) may be counted toward fulfillment of the General Education requirements.

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

Following are the requirements for the minor:

1. Two of the following courses: GEOG 100, ANT 100, ECON 100, PSCI 100.

The student should consult his assigned adviser.

2. Courses selected from each of the following areas:

	<i>Hours Credit</i>
I. Principles of Sociology ..... SOC 100	5
One course from each of the following areas: .....	12
IV. Social Psychology ..... Selected from SOC 210, 310, 510, 515	.....
V. Social Institutions ..... Selected from SOC 120, 221, 223, 321, 325, 551, 527	.....
VI. Social Organization and Process ..... Selected from SOC 230, 232, 333, 337, 433, 435, 437, 438, 439, 564	.....
VII. Social Disorganization ..... Selected from SOC 145, 240, 245, 340, 345, 445, 447, 540, 541	.....

VIII. Advanced Electives .....	10
Electives include any Sociology course above SOC 100.	
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**Students interested in being certified for teaching of the Social Sciences must take a major in Social Sciences rather than in Sociology.**

## Speech Communication and Journalism

**Donald L. Holley, Chairman**

**Professors:** Crawford, Ray DeBoer, Hartman, Holley.

**Associate Professors:** Longwell, Stewart.

**Assistant Professors:** Camp, Ehrlich, Smith, Warnemunde.

**Instructors:** Cissna, Hess, Leonard, Ross, Trapp.

The Department of Speech Communication and Journalism offers majors in Speech Communication and in Journalism.

### Speech Communication Major

Students pursuing the B.A. with a major in Speech Communication must plan their programs to fulfill the following *five* requirements:

1. Meet all General Education requirements as specified earlier in this catalog.

2. **Speech Communication core** totaling 50 quarter hours.

	<i>Hours Credit</i>
a. Required courses	
1. Communication Theory .....	10
SP 140, 420, 460	
2. Public Discussion .....	13
SP 150, 212, 302, 312	
3. Voice Science .....	3
SP 130	
4. Survey of Speech Communication .....	3
SP 120	
5. Public Address .....	6
Selected from SP 452, 453, 454, 456	
b. Speech Communication electives .....	15
	<b>50</b>

3. Any one of the following cognate areas totaling at least 27 quarter hours or any related minor (related minor must be approved by advisor).

#### a. English Cognate

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
ENG	111—Introduction to Poetry .....	3
ENG	112—Introduction to Prose .....	3
ENG	319—Advanced Expository Writing .....	3
ENG	320—The English Language .....	4

*Two of the following five courses:*

ENG	211—English Literature from Beginning to 1500 .....	3
ENG	212—English Literature from 1500 to 1660 .....	3
ENG	213—The Restoration & 18th Century .....	3
ENG	301—Shakespeare: Early Plays .....	3
ENG	302—Shakespeare: Later Plays .....	3

*Two of the following four courses:*

ENG	214—The Romantic Movement .....	3
ENG	215—Victorian Prose and Poetry .....	3
ENG	220—English Literature: 1900 to 1939 .....	3
ENG	221—English Literature: 1940 to the Present .....	3

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Two of the following four courses:

ENG	216—American Literature to the Civil War .....	3
ENG	217—American Literature Since the Civil War .....	3
ENG	225—American Literature from 1914 -1939 .....	3
ENG	226—American Literature from 1940 to the Present .....	3

6  
31

EED	402—Literature and Materials in the Secondary School (PTE STUDENTS ONLY) .....	5
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### b. Mass Communication Cognate

Course No.	Course Title	Hours	Credit
SP	240—Radio Production and Practices .....	3	
SP	340—Introduction to Television Production .....	4	
SP	441—Advanced Television Production .....	4	
JOUR	100—Introduction to Journalism .....	2	
JOUR	105—Newsriting .....	4	
JOUR	399—The Press and Current Affairs .....	3	
JOUR	496—Opinion Formation, Propaganda, & the Media .....	3	
	Electives in Journalism, Radio and TV Studies .....	6	

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### c. Psychology-Sociology Cognate\*

Course No.	Course Title	Hours	Credit
SP	400—Theories of Group Process .....	3	
SP	456—Rhetoric of Social Protest .....	3	
PSY	255—Mental Hygiene and Emotional Adjustment .....	3	
SOC	245—Problems in Inter-Group Relations .....	4	
PSY	350—Psychology of the Healthy Personality .....	3	
SOC	310—Social Psychology .....	3	
	**Electives in Psychology and Sociology .....	8	

27

\*Non-teaching cognate. Students seeking certification should elect courses to meet specific requirements imposed by accrediting agency in respective region.

\*\*Electives in Psychology and Sociology must be selected from PSY 201, PSY 266, PSY 363, PSY 365, SOC 145, SOC 210, SOC 232.

### d. Social Science Cognate\*

Course No.	Course Title	Hours	Credit
SP	452—American Public Address to 1865 .....	3	
	or		
SP	453—American Public Address 1865 to 1945 .....	3	3
SP	454—American Public Address 1945 to Present .....	3	
	or		
SP	456—Rhetoric of Social Protest .....	3	3
PSCI	101—United States Government I .....	3	
HIST	170, 171, 172—United States History (I, II, or III).....	3	
JOUR	496—Opinion Formation, Propaganda, & the Media .....	3	
	Electives in Social Science .....	12	

27

\*Non-teaching cognate. Students seeking certification should elect courses to meet specific requirements imposed by accrediting agency of respective region.

### e. Theatre Arts Cognate

Course No.	Course Title	Hours	Credit
THEA	110—Introduction to Stagecraft .....	3	
THEA	160—Acting I (Internals) .....	3	
THEA	240—Beginning Play Direction .....	3	
THEA	260—Acting II (Externals) .....	3	
THEA	310—Beginning Scene Design .....	3	
ENG	301—Shakespeare: Early Plays .....	3	
	or		
ENG	302—Shakespeare: Later Plays .....	3	3

ENG	405—Contemporary American Drama .....	3	
	or		
ENG	406—Modern Drama Since Ibsen .....	3	3
	*Electives in Theatre Arts .....		6
			<hr/> 27

\*THEA 280 and two hours of individual performance in theatre productions are required for student in the Professional Teacher Education Program.

#### f. Journalism Cognate

Course No.	Course Title	Hours	Credit
JOUR	105—Newswriting .....		4
JOUR	115—Advanced Newswriting .....		4
JOUR	250—News Editing .....		3
JOUR	284—Techniques of Advertising .....		3
IA	345—Publication Production .....		5
	*Electives in Journalism .....		8
			<hr/> 27

\*JOUR 301, Methods of Teaching Journalism in the Secondary School, is required for students in the Professional Teacher Education Program.

4. Electives to complete 180 quarter hours of academic credit.

5. Students majoring in Speech Communication are expected to participate in Speech Communication activities such as oral interpretation, radio, television, debate, discussion, persuasive speaking (oratory), judging, etc.

### Speech Communication Major (Teacher Education)

Students majoring in Speech Communication who plan to teach in the public schools should complete all the requirements for the Speech Communication major detailed earlier in this section, plus the following:

1. Students must complete one *teaching* cognate detailed earlier in this section or related *teaching* minor (approved by advisor).

2. Students must make application for admission to the Professional Teacher Education Program. Students must be at least third quarter sophomores, have at least 65 quarter hours of work completed, have completed or be enrolled in the last of the General Education courses, and have a cumulative grade point average of 2.30 or above before making application. Students seeking admission must submit their applications during the first two weeks of the quarter and they will then be ready to enroll in PTE classes the following quarter.

Double majors in the PTE program must submit an application for admission to the PTE program in both areas of concentration.

Transfer students must complete the application for admission to PTE according to the transfer evaluation sheet.

Forms for the above are available in the School of Education office.

3. Students who desire to teach Speech Communication exclusively need not take English courses beyond the 15 quarter hours of English (COM 101, 102, HUM 201, 202, 203) required in the General Education program.

4. Theatre 160, Acting I (3 hours) and Theatre 240, Beginning Play Direction (3 hours) must be taken as part of the 15 hours of electives listed in the Speech Communication core.

5. Special Education 160 (EDSE 160) Introduction to Speech Correction (3 hours) is required.

6. To enhance job opportunities it is strongly recommended that students certify in a second area of study. Consult with adviser.

7. Students desiring to get classroom experience before being admitted to the Professional Teacher Education Program may do so by enrolling in Education Field Experience 270 (EDFE 270), Teacher Aide. Students should enroll during the last quarter of the freshman year or during the sophomore year for 1 to 4 hours credit. The course must be taken before being admitted to the Professional Teacher Education Program.

## Speech Communication Minors

### 1. Speech Communication minor for majors in disciplines other than elementary education

	<i>Hours</i>	<i>Credit</i>
a. Required courses		
1. Communication Theory .....	10	
SP 140, 420, 460		
2. Public Discussion .....	10	
SP 150, 212, 302		
3. Voice Science .....	3	
SP 130		
4. Survey of Speech Communication .....	3	
SP 120		
5. Public Address .....	6	
Selected from SP 452, 453, 454, 456		
b. Speech Communication electives .....	4	
		<b>36</b>

### 2. Speech Communication minor for elementary education majors

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
SP	130—Voice and Speech Improvement .....		3
SP	150—Public Speaking .....	3	
	<i>or</i>		
SP	302—Small Group Communication .....	4	3-4
THEA	280—Creative Dramatics .....	3	
	<i>or</i>		
JOUR	105—Newswriting .....	4	4
SP	170—Oral Interpretation .....		3
SP	420—General Semantics .....		4
EDSE	160—Introduction to Speech Correction .....		3
EDSE	260—Introduction to Phonetics .....		3
	Theatre Arts Electives .....	4-6	
	<i>or</i>		
	Speech Communication—Jour. Electives .....	4-6	
			<b>28</b>

### 3. Mass Communication Minor

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
SP	140—Principles of Mass Communication .....		3
SP	240—Radio Production and Practices .....		3
SP	340—Introduction to Television Production .....		4
SP	441—Advanced Television Production .....		4
JOUR	100—Introduction to Journalism .....		2
JOUR	105—Newswriting .....		4
JOUR	399—The Press and Current Affairs .....		3
JOUR	496—Opinion Formation, Propaganda, and the Media .....		3
	Electives in Journalism, Radio and TV Studies .....		3
			<b>29</b>

**HONORS**—The Department of Speech Communication and Journalism participates in the Honors Program. See page No. 37.

## Journalism Major

### News-Editorial Journalism Sequence

Students pursuing the B.A. in Journalism with a major in news-editorial study must plan their programs to fulfill the following requirements:

1. Meet all General Education requirements as specified earlier in this catalog.
2. Journalism courses totaling 50 quarter hours.

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<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
JOUR	100—Introduction to Journalism .....	2
JOUR	105—Newswriting .....	4
JOUR	115—Advanced Newswriting .....	4
JOUR	200, 300, 400—Journalism Internship .....	6
JOUR	250—News Editing .....	3
JOUR	284—Techniques of Advertising .....	3
JOUR	297—Feature and Depth Writing for News Media .....	3
JOUR	397—Master Journalists and Their Times .....	3
JOUR	399—The Press and Current Affairs .....	3
JOUR	496—Opinion Formation, Propaganda and the Media .....	3
JOUR	498—Ethics and Libel .....	3
IA	345—Publication Production .....	5
SP	420—General Semantics .....	4
	Electives in journalism or related liberal arts courses .....	4
		<b>50</b>

2. Select one minor from among speech communication, English, business education, economics, history, political science, physical science; or select one cognate from among radio-television, social science, the arts, or business; to total 27 quarter hours; or select 27 quarter hours from various academic areas with the approval of a journalism adviser.

The cognate areas are:

**Radio-Television Cognate**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
JOUR	200—Journalism Internship-Radio .....	3
SP	130—Voice and Speech Improvement .....	3
SP	150—Public Speaking .....	3
SP	240—Radio Production and Practices .....	3
SP	340—Introduction to Television Production .....	4
	Electives in Speech or Journalism .....	11
		<b>27</b>

**Social Science Cognate\***

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
HIST	171—United States History II .....	3
HIST	172—United States History III .....	3
GEOG	312—Economic Geography .....	5
PSCI	201—State and Local Government .....	5
SOC	145—Social Problems .....	3
	Electives in one of these areas: diplomatic history, contemporary history, economic history and problems, sociology, government or foreign policy .....	8
		<b>27</b>

\*If selecting this cognate, student takes the General Education requirements of ECON 100, PSCI 100 and SOC 100.

**The Arts Cognate**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
	Electives recommended for the student interested in home economics are HEC 171, 191, 192, 211, 221, 271, 340, 415. Electives recommended for the student interested in industrial arts are IA 342, 443, 485, 542, plus fifteen additional hours .....	27
		<b>27</b>

**Business Cognate**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
BUS	220—Principles of Accounting I .....	4
BUS	260—Marketing .....	3
BUS	261—Salesmanship .....	3
BUS	461—Advertising Strategy .....	3
	Electives to fit student interest taken in one or more fields from marketing, shorthand, accounting, management, or data processing .....	14
		<b>27</b>

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4. Electives to complete 180 quarter hours. Among these electives must be at least nine hours in one liberal arts study area, beyond requirements in that area specified for General Education and for the journalism major.

5. Each major, before his last quarter, must pass a typing proficiency test and a grammar-copyediting proficiency test.

6. Each major, after finishing the junior year, should take the one-quarter internship (JOUR 450) for 15 hours credit.

7. Majors are required to have at least three quarter hours of internship on student publications or work in the UNC news office, with permission of a journalism adviser.

### Teacher Education Journalism Sequence

Students majoring in Journalism who plan to teach in the public schools should complete the requirements for the news-editorial journalism sequence listed above, with these additions:

1. Gain admittance to Professional Teacher Education with a minimum of 2.3 grade point average in courses taken here in the major and after having taken about one-half or more of the courses in the major.

2. Complete 34 quarter hours in professional education, including EDF 365, PSY 341, EDFE 260 or 270 (observation), JOUR 301 (methods), and EDFE 460, 461, or 462 (student teaching). The student teaching or internship will be substituted for the one-quarter internship (JOUR 450) listed in point 6 above. EDEM 320 is recommended as an elective.

3. Complete one minor in speech communication, English, social science, business education, or other closely related teaching field, 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:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
JOUR	100—Introduction to Journalism .....	2
JOUR	105—Newswriting .....	4
JOUR	115—Advanced Newswriting .....	4
JOUR	284—Techniques of Advertising .....	3
*JOUR	301—Methods of Teaching Journalism in the Secondary School .....	3
IA	345—Publication Production .....	5
SP	420—General Semantics .....	4
	**Electives in journalism, English, speech, or social science .....	2
		<hr/> 27

\*This course taken only if going into teacher education.

\*\*JOUR 250 recommended as elective credit.

**HONORS.** The Department of Speech Communication and Journalism participates in the Honors Program. See page No. 37.

## Theatre Arts

**John W. Willcoxon, Chairman**

**Professors:** J. Willcoxon, W. Wolfe.

**Associate Professor:** J. Girault.

**Assistant Professors:** L. Norton, C. Sturges.

**Instructor:** D. Mikkelson.

The Department of Theatre Arts offers a major and a minor.

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

1. Meet all General Education requirements as specified earlier in this catalog.

2. The following courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
THEA	110—Introduction to Stagecraft .....		3
THEA	160—Acting I (Internals) .....		3
THEA	240—Beginning Play Direction .....		3
	Individual Performance in Theatre .....		10
	Electives (at least 21 quarter hours in Theatre Arts and dramatic literature) .....		39
			58

It is possible, but not required, for the student major to specialize in such fields of theatre arts as acting, play direction, or technical theatre; *or* to generalize in theatre arts; *or* to arrange, with advisement and with the prior approval of the department, an interdisciplinary program of study in such fields as musical theatre, dance theatre, art and technical theatre, or a combination of theatre arts and other disciplines to fit the needs of the student. At least 21 quarter hours of electives in the major must consist of courses in theatre arts (THEA prefix) and in dramatic literature.

Students contemplating graduate work in theatre arts are strongly urged to seek advisement from a member of the Theatre Arts staff and to pursue a strong arts theatre course of study with a liberal arts minor, with extensive course work in dramatic literature, and with at least two years' study in one or more foreign languages.

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

Students majoring in Theatre Arts who plan to teach Drama 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. Professional Teacher Education, 31 hours, plus EDFE 364, two hours credit, and EDCI 341, three hours credit.
3. The following courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
THEA	110—Introduction to Stagecraft .....		3
THEA	160—Acting I (Internals) .....		3
THEA	210—Stagecraft .....		3
THEA	220—Beginning Stage Costuming .....		3
THEA	240—Beginning Play Direction .....		3
THEA	260—Acting II (Externals) .....		3
THEA	261—Stage Make-Up .....		2
THEA	280—Creative Dramatics .....		3
THEA	310—Beginning Scene Design .....		3
THEA	340—Directing Experimental Plays .....		3
THEA	341—Directing Period Plays .....		3
THEA	380—Children's Theatre Production .....		3
THEA	411—Stage Lighting .....		2
THEA	430—History of the Theatre I .....		3
THEA	431—History of the Theatre II .....		3
THEA	432—History of the Theatre III .....		3
THEA	440—Directing the One-Act Play .....		2
	Individual Performance in Theatre .....		10
	Electives in dramatic literature .....		6
			64

4. In addition, at least one minor of 27 or more quarter hours. Courses in the selected minor that are preceded by an asterisk (\*) may be counted toward the fulfillment of the General Education requirements.

The student desiring EDFE in the minor should check page 35 regarding general requirements.

5. Meet the minimum requirements set up by the North Central Association for teachers of Drama. Consult your adviser.

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

Following are the requirements for the minor:

### Theatre Arts Minor

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
THEA	110—Introduction to Stagecraft .....	3
THEA	160—Acting I (Internals) .....	3
THEA	230—Introduction to the Theatre .....	3
	Individual Performance in Theatre .....	2
	Electives in Theatre Arts .....	18
		29

For the student desiring certification for teaching drama, the Department of Theatre Arts requires the following teacher education program in the minor:

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

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
THEA	110—Introduction to Stagecraft .....	3
THEA	160—Acting I (Internals) .....	3
THEA	210—Stagecraft .....	3
THEA	230—Introduction to the Theatre .....	3
THEA	240—Beginning Play Direction .....	3
THEA	260—Acting II (Externals) .....	3
THEA	261—Stage Make-Up .....	2
THEA	310—Beginning Scene Design .....	3
	Individual Performance in Theatre .....	2
	Electives in Theatre Arts, Speech and English .....	11
		36

The student desiring EDFE in Theatre Arts (check page 35 regarding general requirements) must take EDFE 364, two quarter hours credit, and EDCI 341, three quarter hours credit.

3. Meet the minimum requirements set up by the North Central Association for teachers of Drama. Consult your Theatre Arts adviser.

**HONORS.** The Department of Theatre Arts participates in the Honors Program (see page No. ??).

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## COLLEGE OF EDUCATION

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**Bruce W. Broderius, Dean**  
**Richard L. Bear, Assistant Dean**  
**Geo. F. Sanderson, Assistant to the 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 education specialists for the schooling processes. These programs include offerings on the undergraduate level leading to the Bachelor of Arts and Bachelor of Science degrees.

**Bachelor of Arts Degree**

Elementary Education  
 Special Education: Teaching the Acoustically Handicapped  
 Special Education: Mental Retardation  
 Special Education: Speech Pathology  
 Special Education: Audiology

**Bachelor of Science Degree**

Special Education: Rehabilitation and Related Services  
 Psychology

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.

**Educational Field Experiences**

**Robert C. Richardson, Director**

**Professors:** Harkness, Van Maanen.

**Associate Professors:** Damgaard, Fielder, Richardson, Weltner.

**Assistant Professors:** G. Burns, Cochrane, Erickson, Febinger, J. M. Johnson, Warner.

**Instructors:** Singh, D. Sorensen.

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**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
EDFE	260—Observation in Cooperating Schools .....	1	1
EDFE	270—Teaching Aide .....	1-4	1-4
EDFE	360—Introduction to Teaching: Primary Continuum .....	2	2
EDFE	361—Introduction to Teaching: Intermediate Continuum .....	2	2
EDFE	362—Introduction to Teaching: Middle School .....	2	2
EDFE	363—Introduction to Teaching: Business .....	2	2
EDFE	364—Introduction to Teaching: Communication .....	2	2
EDFE	365—Introduction to Teaching: Fine Arts .....	2	2
EDFE	366—Introduction to Teaching: Foreign Languages .....	2	2
EDFE	367—Introduction to Teaching: Health, Physical Education and Recreation .....	2	2
EDFE	368—Introduction to Teaching: Home Economics .....	2	2
EDFE	369—Introduction to Teaching: Industrial Arts .....	2	2
EDFE	370—Introduction to Teaching: Mathematics .....	2	2
EDFE	371—Introduction to Teaching: Music .....	2	2
EDFE	372—Introduction to Teaching: Sciences .....	2	2
EDFE	373—Introduction to Teaching: Social Sciences .....	2	2
EDFE	379—Introduction to Teaching: Inner City .....	2	2
EDFE	380—Simulation of Teaching .....	4	4
EDFE	422—Individual Study in Student Field Experience .....	1-4	1-4

**II. Terminal Field Experiences for Initial Teacher Certification**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
EDFE	420 Special Education Student Teaching: Elementary .....	18	18
EDFE	430 Special Education Student Teaching: Secondary .....	18	18
EDFE	440 Pre-School Student Teaching .....	18	18
EDFE	450 Elementary Student Teaching .....	18	18
EDFE	451—Half-day Internship: Elementary .....	18	18

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EDFE	452—Full-day Internship: Elementary .....	18
EDFE	460—Secondary Student Teaching .....	18
EDFE	461—Half-day Internship: Secondary .....	18
EDFE	462—Full-day Internship: Secondary .....	18
EDFE	470—Vocational Education Student Teaching .....	18
EDFE	553—Advanced Student Teaching: Elementary .....	18
EDFE	563—Advanced Student Teaching: Secondary .....	18

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

## Educational Media

**D. Harold Bowman, Chairman**

**Professors:** Bowman, Cyphers.

**Associate Professors:** Hall, Seager.

**Assistant Professor:** Green.

**Instructor:** Gibbons.

## Educational Media Minor

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

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

1. Meet all General Education requirements as specified earlier in this catalog.
2. Complete required and elective courses below for a minimum of twenty-seven hours.

### Required Courses:

		<i>Hours Credit</i>
EDEM	410—Introduction to Educational Resources .....	5
EDEM	320—Design and Construction of Audio-Visual Materials .....	3
EDEM	330—Instructional Materials—Problems of Organization, Storage and Retrieval .....	3
EDEM	530—Cataloging and Classification .....	3
EDEM	534—Reference Materials for Educational Resource Center .....	3
EDEM	536—Evaluation and Selection of Educational Materials .....	3
EDEM	575—Organization and Administration of Educational Resource Center .....	5

### Electives:

EDEM	516—Utilization of Educational Resources .....	3
EDRD	314—Improvement of Instruction in Literature in the Elementary School .....	2

## Outdoor Education—Environmental Education

**Vincent A. Cyphers, Coordinator**

**Undergraduate Minor—Outdoor Education**

The purpose of this program is to prepare teachers in the area of Outdoor Education and Environmental Education. Numerous opportunities are provided for students to actively participate in learning experiences conducted beyond the classroom. Natural and community environmental resources are utilized in providing direct, firsthand learning experiences. Undergraduate students are provided an opportunity to participate in the outdoor school programs conducted in the Laboratory School and in Special Education. 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 guidance of the minor coordinator. Listed below are specific courses offered in this area:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
EDEM	250—Introduction to Outdoor Education .....	3	
EDEM	508—Workshop (Outdoor Education) .....	3	
EDSE	480—Outdoor Education for the Handicapped .....	3	
HPER	460—Outdoor Recreation & Environmental Awareness .....	4	
IS	422—Art and the Environment .....	3	
MUS	315—Music and Recreation .....	2	
JOUR	396—Opinion Formation, Propaganda and the Media .....	3	
BIOL	401—Conservation of Natural Resources .....	4	
GEOG	350—Geography of Colorado .....	3	
	<i>or</i>		
HIST	256—History of Colorado .....	3	

## Environmental Studies Core

Students interested in Environmental Studies should consult the program requirements listed on page 43.

## Elementary Education and Reading

**Alvin O. Mosbo, Chairman**

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

**Associate Professor:** Arnold.

**Assistant Professors:** Burron, Henry, E. Wolfe.

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

1. Meet all General Education requirements as specified earlier in this catalog.
2. The following subject matter courses.

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
FA	224—Elementary Art .....	3	
GEOG	100—World Geography .....		
	<i>or</i>		
GEOG	148—Anglo-America .....	5	
HIST	175—Unit Survey of United States History .....	5	
MATH	191—Basic Mathematics I .....	3	
MATH	192—Basic Mathematics II .....	3	
MUS	204—Music Fundamentals I .....	2	
MUS	205—Music Fundamentals II .....	1	
PSCI	100—National Government of the United States .....	5	
	Electives in history or social science .....	3	

Credit in the above courses will satisfy the social science requirements and the electives in the 60 academic quarter hour General Education requirement.

3. The following requirements in the Elementary Education Major.

## Professional Core

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
EDF	365—Basic Concepts of Education .....	5	
PSY	341—Educational Psychology .....	5	
°EDFE	450—Elementary Student Teaching .....	18	
EDF	485—Philosophy of Education .....	3	

°Student Teaching must be in elementary education in the kindergarten or in grades one through six. Internships are available.

## Elementary Teacher Education

Course No.	Course Title	Hours	Credit
EDEL 320	—Improvement of Instruction in Mathematics in the Elementary School	3	3
EDEL 330	—Teaching Handwriting and Spelling in the Elementary School	2	2
EDEL 340	—Improvement of Instruction in English in the Elementary School	3	3
EDEL 350	—Improvement of Instruction in Social Studies in the Elementary School	3	3
EDFE 360, 361, or 362	—Introduction to Student Teaching	2	2
EDRD 310	—Improvement of Instruction in Reading in the Elementary School	3	3
EDRD 314	—Improvement of Instruction in Literature in the Elementary School	2	2
EDRD 411	—Approaches to Reading Instruction	3	3
FA 225	—Methods of Teaching Art in the Elementary School	2	2
HPER 288	—Physical Education Activities for the Elementary School	2	2
HPER 301	—Health Education in the Elementary School	2	2
MUS 208	—Music Methods and Materials for Elementary Teachers	2	2
SCED 470	—Teaching Science in the Elementary School	3	3

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4. A minor in one of the following fields. Anthropology, biological science, Black studies, chemistry, earth science, elementary science, English, fine arts, foreign language, geography, history, humanities, mathematics, Mexican American studies, music, physics, political science, sociology, speech.

5. EDEL 320, 330, 340, 350, and EDRD 411 taken at University of Northern Colorado.

6. Completion of EDF 365, PSY 341, and a minimum of eighteen quarter hours in Elementary Teacher Education courses including EDEL 320, EDRD 310, and either EDFE 360, 361, or 362 before student teaching. EDEL 320, EDRD 310, and either EDFE 360, 361, or 362 must be completed before applying for student teaching.

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

Following are the requirements for the major Elementary Education: Bilingual Bicultural.

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

2. Completion of the following courses.

Course No.	Course Title	Hours	Credit
MAS 101	—Introduction to Mexican American Studies	3	3
MAS 102	—Oral, Reading, and Written Spanish Communication: I	3	3
MAS 103	—Oral, Reading, and Written Spanish Communication: II	3	3
MAS 104	—Oral, Reading, and Written Spanish Communication: III	3	3
MAS 105	—The Contemporary Mexican American I	3	3
MAS 290	—Intermediate Oral, Reading, and Written Spanish Communication	3	3
MAS 300	—Advanced Oral, Reading, and Written Spanish Communication	3	3
EDEL/MAS 472	—Evaluation and Selection of Bilingual and Bicultural Materials	2	2
EDEL/MAS 474	—Teaching in a Second Language in the Elementary Bilingual and Bicultural School	3	3
EDCI/MAS 481	—History and Philosophy of Bilingual Education	3	3

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## Psychology, Counseling and Guidance

**Professors:** D. Anderson, Blanchard, Clevenger, Koplitz, Luker, Lutey.

**Associate Professors:** Bear, Blake, Blanchard, L. Montgomery, Praul, Shaw, Schenkman.

**Assistant Professors:** Goff, Howard, Morris, Norton, Ohlson, Palmer, Poston, Rave, Richards, Severson, H. Thornburg, S. Thornburg, Welch.

**Instructor:** Barnard.

Psychology, Counseling and Guidance offers an undergraduate major and minor in psychology. The minor provides preparation in the general areas of psychology and makes course and program adaptations for needs of students majoring in such areas as Arts and Sciences and Education.

\*Students are admitted to the psychology program at the beginning of the sophomore year. Since only a limited number can be accepted at this time, application for admission should be submitted to the Psychology Department for screening during the last quarter of the freshman year.

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

1. Meet all General Education requirements as specified earlier in this catalog.
2. Second major is highly recommended.
3. The following required courses in the major (60 hours.)

### Freshman Year

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
PSY	121—General Psychology and Human Performance .....	3
PSY	161—Group Processes in Human Relations .....	3
PSY	122—Exploration Seminar in Psychology I .....	2

### Sophomore Year

PSY	122—Exploration Seminar in Psychology I .....	2
PSY	270—Introduction to Measurement and Evaluation .....	3
PSY	275—Introduction to Experimentation in Psychology .....	5

### Junior Year

PSY	322—Exploration Seminar in Psychology II .....	2
PSY	424—Psychology: Field Experiences .....	5-15

### Senior Year

PSY	425—Seminar: Psychological Issues .....	3
Minimum total credit hours		60

## Psychology Minor

Required courses for the undergraduate minor in psychology are:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
PSY	121—General Psychology and Human Performance .....	3
PSY	230—Child and Adolescent Psychology .....	3
PSY	255—Mental Hygiene and Emotional Adjustment .....	3
PSY	340—Psychology of Perception and Learning .....	5
PSY	350—Psychology of the Healthy Personality .....	3
PSY	425—Seminar: Psychological Issues .....	3
	Electives (see list in office of Psychology, Counseling and Guidance) .....	7
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## Psychology Minor (Teaching)

Required courses for the undergraduate minor in psychology are:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
PSY	121—General Psychology .....	3
PSY	201—Principles and Philosophies of Guidance .....	3
PSY	255—Mental Hygiene and Emotional Adjustment .....	3

•PSY	271-Introduction to Measurement and Evaluation .....	3
PSY	425-Seminar: Psychological Issues .....	3
EDSE	100-Education of Exceptional Children .....	3
	Electives (see list in office of Psychology, Counseling and Guidance) .....	9

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\*If a Special Education major is required to take EDSE 304, this course will be waived and an equal number of hours of electives will be taken.

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## SCHOOL OF SPECIAL EDUCATION AND REHABILITATION

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**Daniel C. McAlees ,Dean**

**Alfred E. McWilliams, Jr., Assistant Dean for Administration**

**Professors:** Gearheart, Kolstoe, Lundeen, McAlees.

**Associate Professors:** Bitter, Bowen, Eldredge, Jones, Napier, Owens, Reinert, Weishahn, Wolfe.

**Assistant Professors:** Campaign, Cronin, Gay, Green, Hull, Kelso, Lane, McWilliams, Millsagle, Resnick, Tuttle.

**Instructors:** Bliler, Crouse, Schmidt, Uhrig.

The School of Special Education and Rehabilitation offers several majors at the undergraduate level and affords students the opportunity to qualify for a Colorado Teacher Certificate in the area of the acoustically handicapped or mental retardation, both educable and trainable. A pre-professional program leading to the Bachelor of Arts degree in speech pathology and audiology is offered, as well as a program leading to the Bachelor of Science degree in Rehabilitation and Related Services. Junior and senior students may take course work in the areas of teaching the visually handicapped, physically handicapped, emotionally disturbed, and in speech correction. This course work may be used for certification in the special areas of teaching when all requirements for certification are met.

The campus Special Education school, a cooperative project of the Greeley Public Schools and University of Northern Colorado, provides a laboratory for observation and student teaching. At the present time, this laboratory school enrolls mentally retarded, physically handicapped, acoustically handicapped, emotionally disturbed, and visually handicapped children. The Special Education facility also includes a speech and hearing service and complete audiometric evaluations; an apartment classroom; and provides for testing and measuring exceptional children.

\*The School of Special Education and Rehabilitation is an integral part of the College of Education.

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

1. Meet all General Education requirements as specified earlier in this catalog.

2. Professional Teacher Education Program (PTE). Exceptions: (1) Students concentrating in audiology are exempt from the PTE requirements. (2) Students concentrating in Speech Pathology have the option of choosing a program with or without the PTE courses.

## PTE Requirements for Special Education Majors:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
EDF	365—Basic Concepts of Education .....	5	
EDF	475—Philosophy of Education .....	3	
PSY	341—Educational Psychology .....	5	
EDSE	309—Introduction to Special Education Student Teaching .....	2	
EDFE	420—Special Education Student Teaching: Elementary .....	18	
	<i>or</i>		
EDFE	430—Special Education Student Teaching: Secondary .....	18	
			<b>33</b>

3. Core requirements as listed below.

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

**Mental Retardation**

(Core Requirements):

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
EDSE	100—Education of Exceptional Children .....	3	
EDSE	160—Introduction to Speech Correction .....	3	
EDSE	302—Counseling Parents of Exceptional Children.....	3	
EDSE	304—Introduction to Measurement of the Handicapped .....	3	
EDSE	305—Educational Prescription and Programming for Exceptional Children .....	4	
EDSE	309—Introduction to Special Education Student Teaching .....	2	
EDSE	310—Introduction to Mental Retardation .....	4	
EDSE	311—Education of the Trainable Mentally Retarded .....	4	
EDSE	330—Care and Pathology of the Physically Handicapped .....	3	
EDSE	412—Curriculum Development and Methodology for Mentally Retarded: Elementary Level .....	4	
EDSE	413—Curriculum Development and Methodology for Mentally Retarded: Secondary Level .....	4	
EDSE	421—Behavior Management in the Classroom .....	3	
*PSY	230—Child and Adolescent Psychology .....	3	
FA	229—Art for Exceptional Children .....	3	
HPER	301—Health Education in the Elementary School .....	2	
MUS	204—Music Fundamentals .....	2	
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\*If PSY 131 has been taken in the last five years, a Special Education elective may be substituted for PSY 230.

**Acoustically Handicapped**

(Core Requirements):

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
EDSE	150—Structure of Language .....	3	
EDSE	267—Auditory and Speech Mechanism .....	4	
EDSE	304—Introduction to Measurement of the Handicapped .....	3	
EDSE	350—Pathology and Introduction to Deaf Education .....	3	
EDSE	357—Speech Reading .....	3	
EDSE	358—Auditory Training and Hearing Aids .....	3	
EDSE	370—Basic Audiology .....	3	
EDSE	451—Speech Development for the Hearing Impaired .....	6	
EDSE	452—Language Development for the Hearing Impaired .....	6	
EDSE	453—Methods of Teaching Content Subjects to the Deaf .....	3	
EDSE	455—Methods of Teaching Reading to the Hearing Impaired .....	3	
EDRD	310—Improvement of Instruction in Reading in the Elementary School .....	3	
	<i>or</i>		
EDRD	420—Reading in the Secondary School .....	3	
EDEM	410—Introduction to Educational Resources .....	5	
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Note: Students must also complete the course work necessary for certification in Pre-School, or Elementary, or a specific area of Secondary Education. All or parts of EDSE 350, EDSE 356 and EDSE 456 may be challenged for credit.

**Speech Pathology**

(Core Requirements):

The Bachelor of Arts degree is pre-professional and does not lead to certification of any type. The Master of Arts degree is the professional degree and enables the student to meet the academic and practicum requirements for certification by the American Speech and Hearing Association (ASHA).

If the student desires future educational certification in addition to the certification of ASHA, he must take Professional Teacher Education (PTS) and methods courses. These above requirements are not necessary if the student wishes only to qualify for future ASHA certification, without educational certification.

A minor is not required but the student must elect a minimum of 14 hours in courses dealing with the normal use, growth, and development of speech, hearing and language.

Course requirements:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
EDSE 100	Education of Exceptional Children .....	3	3
EDSE 160	Introduction to Speech Correction .....	3	3
EDSE 260	Introduction to Phonetics .....	3	3
EDSE 265	Acoustics of Speech .....	3	3
EDSE 266	Speech and Language Development .....	3	3
EDSE 267	The Auditory and Speech Mechanisms .....	4	4
EDSE 360	Articulation Disorders I .....	4	4
EDSE 361	Voice Disorders I .....	3	3
EDSE 362	Stuttering I .....	3	3
EDSE 363	Introduction to Organic Disorders .....	3	3
EDSE 364	Clinical Principles .....	3	3
EDSE 365	Language Disorders in Children I .....	3	3
EDSE 369	Neurological Basis for Speech and Hearing .....	4	4
EDSE 370	Basic Audiology .....	3	3
EDSE 371	Speech Audiometry I .....	3	3
EDSE 372	Advanced Audiometry .....	3	3
EDSE 464	Clinical Practice in Speech Pathology .....	6	6
EDSE 467	Diagnosis in Speech Pathology .....	3	3

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Recommended electives are PSY 121, PSY 530, PSY 340, PSY 341, PSY 550 or PSY 555, SP 420, EDSE 150, EDSE 357, EDSE 374.

**Audiology**

(Core Requirements):

The Bachelor of Arts degree is pre-professional and does not lead to certification of any type. The Master of Arts degree is the professional degree and enables the student to meet the academic and practicum requirements for certification in Audiology by the American Speech and Hearing Association. No educational certification is granted.

A minor is not required but the student must elect a minimum of 14 hours in courses dealing with the normal use, growth, and development of speech, hearing and language.

The following is the required program.

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
EDSE 100	Education of Exceptional Children .....	3	3
EDSE 160	Introduction to Speech Correction .....	3	3
EDSE 260	Introduction to Phonetics .....	3	3
EDSE 265	Acoustics of Speech .....	3	3
EDSE 266	Speech and Language Development .....	3	3
EDSE 267	Auditory and Speech Mechanisms .....	4	4
EDSE 270	Pathologies of the Auditory Mechanism .....	3	3
EDSE 350	Pathology and Introduction to Education of the Hearing Impaired .....	3	3
EDSE 357	Speechreading .....	3	3
EDSE 358	Auditory Training and Hearing Aids .....	3	3

EDSE	360--Articulation Disorders I .....	4
EDSE	369--Neurological Disorders for Speech and Hearing .....	4
EDSE	370--Basic Audiology .....	3
EDSE	371--Speech Audiometry I .....	3
EDSE	372--Advanced Audiometry .....	3
EDSE	474--Practicum in Audiology .....	6
ZOO	156--Elements of Human Physiology and Anatomy .....	5

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Recommended electives are IA 180, IA 383, IA 384, ZOO 121, ZOO 250, PSY 341, PHYS 460, EDSE 150, EDSE 350, EDSE 304, EDSE 357, EDSE 451, EDSE 456, EDSE 369, PSY 330.

## Rehabilitation and Related Services Major

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 advisor approved non-teaching minor consisting of at least 27 quarter hours of course work.
4. 27 quarter hours of advisor approved electives to complete the 180 quarter hours of academic credit required for graduation.

### Core Requirements:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
EDSE	100--Education of Exceptional Children .....	3	3
EDSE	290--Orientation to Rehabilitation and Related Services .....	3	3
EDSE	302--Counseling Parents of Exceptional Children .....	3	3
EDSE	391--Seminar: Problems in Social and Rehabilitation and Related Services .....	3	3
EDSE	490--Introduction to Rehabilitation Counseling .....	3	3
EDSE	491--Interviewing Techniques in Social Rehabilitation Services .....	3	3
EDSE	492--Casework Techniques in Social and Rehabilitation Services .....	3	3
EDSE	494--Supervised Field Practice in Rehabilitation and Related Services .....	15	15

Anthropology: At least six (6) hours selected from the following courses:

ANT	100--General Anthropology .....	5
ANT	320--Ethology of Mexico and Central America .....	4
ANT	326--Indians of the Southwest .....	3
ANT	381--Enculturation .....	4
ANT	382--Acculturation .....	4

Sociology: At least twelve (12) hours selected from the following courses:

SOC	100--Principles of Sociology .....	5
SOC	145--Social Problems .....	3
SOC	210--Social Movements .....	3
SOC	240--Criminology .....	4
SOC	245--Problems of Intergroup Relations .....	4
SOC	310--Social Psychology .....	3
SOC	340--Juvenile Delinquency .....	4
SOC	445--Social Conflict .....	4

Political Science:

PSCI	100--National Government .....	5
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Psychology:

PSY	350--Psychology of the Healthy Personality .....	3
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Recommended Elective: EDSE 394 Practicum in Social and Rehabilitation Service. Up to eight hours, two hours/quarter maximum.

## Vocational Education

**Louise J. Keller, Chairman and Director**

**Professor:** Keller.

**Assistant Professors:** Bennett, Dierks, Koeninger, Peiffer, Spooner.

**Instructors:** Johnson, Parks.

**Center for Career Development:** Parks, Nick, Ward.

Students who plan to seek a vocational education credential in Colorado will need to meet the minimal requirements established by the State Board for Community Colleges and Occupational Education and published in the State Plan. The Department of Vocational Education at the University of Northern Colorado is recognized by this State agency for the training of vocational teachers, counselors, and administrators, as well as for the training of vocational para-professional personnel.

**Credential Requirements.** The requirements for vocational teaching credentials include *approved occupational experience, a bachelor's degree* in a recognized vocational program and from an approved institution, and specific vocational courses. The courses VE 310 and 311 "Foundations of Vocational Education" and "History of Vocational Education" which are taken concurrently are required of *all* majors seeking vocational credentials.

Individuals enrolled in the following major fields and who plan to teach in a Colorado secondary school system should be aware of the requirements for a vocational credential.

### *Major Field*

Distributive Education

Business and Office Education

Trade and Industrial Education

Home Economics Education

Special Education (Work Experience and Study Programs)

Health Occupations Education

(In addition to the above areas, individuals, majoring in other fields, who have a major interest in school-community job development and placement activities should visit personnel in the Department of Vocational Education about new career opportunities in education.)

**Work Experience/Career Planning and Guidance Services.** The Department of Vocational Education's staff are qualified to discuss credential requirements with undergraduate students and assist them in gaining related work experience while attending college in order to qualify for a vocational teaching credential upon graduation. Program Specialists as well as the Field Service Coordinator will be glad to visit with students regarding their career plans. A special seminar VE 210 Career Opportunities Seminar is recommended for those individuals wishing more information on multiple career options. The "Center for Career Development," McKee Hall, Room 328 is open daily to serve students preparing for teaching careers in vocational education.

## State Approved Undergraduate Vocational Teacher Education Courses

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
VE	210—Career Opportunities Seminar .....	1	
VE	290—Directed Occupational Experiences .....	Max. 8	
VE	296—Directed Occupational Internship .....	Max. 12	
VE	310—Foundations of Vocational and Technical Education .....	2	
VE	311—History of Vocational Education—A Laboratory Approach .....	1	
VE	412—Cooperative Education and Coordination Techniques .....	3	
VE	414—Vocational Youth Organizations .....	3	
VE	416—Adult Vocational Education .....	3	
VE	422—Individual Studies in Vocational Education .....	Max. 6	

VE	430—Vocational Education for Learners with Special Needs .....	3
VE	450—Preparation for Teaching Vocational Distributive Education .....	3
VE	451—Preparation for Teaching Vocational Business and Office Education .....	3
VE	452—Preparation for Teaching Vocational Home Economics .....	3
VE	480—Teaching Improvement Seminar in Vocational Distributive Education.....	2
VE	481—Teaching Improvement Seminar in Vocational Business and Office Education .....	2
VE	482—Teaching Improvement Seminar in Vocational Home Economics .....	2
VE	485—Laboratory Experiences in Vocational Education .....	Max. 12
VE	488—Seminars in Vocational Education .....	Max. 6

Qualified seniors may enroll in 500 level courses. These courses appear in the Graduate Catalog and have been approved for undergraduate vocational teacher education.

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## SCHOOL OF THE ARTS

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**William R. Erwin, Jr., Dean**

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

The school gives interested individuals an opportunity to acquire professional competence (specialized and general culture) in the following majors for the Bachelor of Arts degree:

- Dietetic
- Family Life and Consumer Education
- Fine Arts
- Food and Nutrition
- Home Economics Education
- Industrial Arts
- Preschool Education

Bachelor of Science degree:

- Industrial Arts

### Fine Arts

**Professors:** Ball, Mariani.

**Associate Professors:** D. Johnson, Schumacher, Moody.

**Assistant Professors:** Barucchieri, Blubaugh, Cordiner, Moody, Myers.

**Instructors:** Durr, Haas, B. Johnson, Luster, Macfarlane, Naumer, Shin, Welsh.

## 90 / DEGREE PROGRAM REQUIREMENTS

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:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
FA	100—Drawing .....	3
FA	102—Figure Drawing .....	3
FA	105—Design Theory .....	3
FA	106—Design Application .....	3
FA	207—Problems in Design .....	3
FA	110—Art History I .....	3
FA	111—Art History II .....	3
FA	112—Art History III .....	3
FA	203—Introduction to Watercolor Painting .....	3
FA	215—Crafts: Design on Fabrics	
	<i>or</i>	
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
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3. Complete two (2) areas of emphasis in Fine Arts totaling 30 hours. (An area of emphasis must consist of at least 12 quarter hours.)

Area of Emphasis:

- Ceramics
- Crafts
- Design
- Drawing
- History of Art
- Painting
- Printmaking
- Sculpture

4. Complete 12 additional electives in Fine Arts (other than art education courses).

5. During the student's last quarter in residence, an exhibit of work from the student's two areas of emphasis must be installed for a minimum of two weeks in an area designated by the Department of Fine Arts.

6. General education electives to meet requirements for graduation.

Students majoring in Fine Arts 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. Professional teacher education, 33 quarter hours including EDFE 365, Introduction to Student Teaching, two hours credit, and EDFE 460, Student Teaching, 18 hours credit.

3. The following required courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
FA	100—Drawing .....	3
FA	102—Figure Drawing .....	3
FA	105—Design Theory .....	3
FA	106—Design Application .....	3
FA	207—Problems in Design .....	3
FA	110—Art History I .....	3
FA	111—Art History II .....	3
FA	112—Art History III .....	3
FA	203—Introduction to Watercolor Painting .....	3

FA	215—Crafts: Design on Fabrics <i>or</i>	
FA	216—Craft Expression in Construction .....	3
FA	217—Introduction to Pottery .....	3
FA	220—Introduction to Painting .....	3
FA	258—Introduction to Sculpture .....	3
FA	259—Printmaking .....	3
*EDFE	270—Teacher Aide, Fine Arts .....	1-4
*FA	339—Philosophy of Art Education .....	2
FA	428—The Curriculum in Art Education (El-Sec) .....	3
FA	430—Seminar in Art Education (El-Sec) .....	2

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\*Majors must enroll in a minimum of one hour EDFE 270 (Elem.) and one hour EDFE 270 (secondary).

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

4. Complete one area of emphasis in Fine Arts for a minimum of 12 quarter hours.

Areas of Emphasis: Ceramics, crafts, design, drawing, history of art, painting, printmaking, sculpture.

5. Summary of Fine Arts major requirements: Fifty-one (51) hours of required Fine Arts courses, twelve (12) hours in one area of Fine Arts emphasis and twenty-one (21) hours of Fine Arts electives must be completed for a total of eighty-four (84) hours in the major.

6. During the student's last quarter in residence an exhibit of work from the student's area of emphasis and supporting work from other art courses must be installed for a minimum of two weeks in an area designated by the Department of Fine Arts.

7. The student may elect to become certified for (1) elementary art education, (2) secondary art education (including grades 7 through 12), or (3) elementary and secondary (K-12). If the student elects option 1, he is required to enroll in FA 244, FA 245, and FA 229. If he elects option 2, he will be required to enroll in FA 341 and EDFE 365. If he elects option 3 he will be required to enroll in all five of the courses listed for options 1 and 2.

## Fine Arts Minor

### 1. Requirements for the Minor:

Course No.	Course Title	Hours Credit
FA	100—Drawing .....	3
FA	102—Figure Drawing .....	3
FA	105—Design Theory .....	3
FA	106—Design Application .....	3
FA	207—Problems in Design .....	3
FA	110—Art History I .....	3
FA	111—Art History II .....	3
FA	112—Art History III .....	3

2. Elect 12 additional quarter hours to complete 36 quarter hours from the following courses:

FA	215—Crafts: Design on Fabrics <i>or</i>	
FA	216—Craft Expression in Construction .....	3
FA	217—Introduction to Pottery .....	3
FA	220—Introduction to Painting .....	3
	<i>or</i>	
FA	203—Introduction to Watercolor Painting .....	3
FA	258—Introduction to Sculpture .....	3
FA	259—Printmaking .....	3

## Home Economics

**Elisabeth P. Wirick, Chairman**

**Associate Professors:** Burns, Funderburk, Wirick.

**Assistant Professors:** Egeness, Reeves, Sorensen, Taylor, Walters.

**Instructors:** Baker, Grable, Jones, Krosky, Oreskovich, Sommers.

The Department of Home Economics, in cooperation with other departments, provides a liberal education on which emphasis courses are built to prepare a student (male or female) for the "now", but also for tomorrow's largely unknown opportunities.

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

1. Meet all General Education requirements as specified earlier in this catalog.

2. From the General Education requirements (refer to page 33) the following selections are recommended during the Sophomore year:

A. Dietetic major:	ANT 100
	SOC 100
	ECON 100
B. Food and Nutrition emphasis:	ANT 100
	SOC 100
	ECON 100
C. Family Life and Consumer Education major:	ANT 100
	SOC 100
	ECON 100
D. Preschool major:	ANT 100
	SOC 100
E. Home Economics Education major: (Required for Vocational Homemaking Credential Option)	ECON 100
	SOC 100

3. Courses as specified in the major selected plus electives to complete 180 quarter hours of academic credit.

4. HEC 108. The Home Economics Profession. To be taken during the first year the student is enrolled as a major in the Department of Home Economics. A transfer student that has taken a comparable course may be exempted.

**CHALLENGE TESTS:** A student with sufficient background in the following areas will be eligible to take a challenge test for possible exemption:

HEC	141—Food Selection and Preparation .....	4
HEC	171—Art in Home Living .....	2
HEC	192—Creative Clothing Construction .....	5

Check with the department for the date these tests will be given.

### Dietetic

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

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

1. No minor required.

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

**Freshman Year**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
HEC	108—The Home Economics Profession .....	1	
HEC	141—Food Selection and Preparation I .....	4	
BUS	180—Introduction to Data Processing .....	3	
CHEM	104—Principles of Chemistry I .....	5	
CHEM	105—Principles of Chemistry II .....	5	
CHEM	130—Introductory Organic Chemistry .....	5	
JOUR	105—Newsriting .....	4	
ZOO	105—General Zoology (sub. for SCI 104 in Gen. Ed.) .....	5	
		<hr/>	32

**Sophomore Year**

HEC	242—Principles of Food Preparation II .....	4	
HEC	251—Nutrition I .....	3	
BIO	261—Medical & Public Health Microbiology .....	5	
BUS	220—Principles of Accounting I .....	4	
CHEM	281—Human Biochemistry .....	5	
PSY	266—Industrial Psychology .....	3	
ZOO	250—Human Physiology .....	5	
		<hr/>	29

**Junior Year**

HEC	343—Meal Planning and Service .....	4	
HEC	353—Diet Therapy .....	3	
HEC	362—Demonstration Techniques .....	2	
HEC	374—Equipment Selection and Maintenance .....	4	
BUS	205—Business Communications .....	3	
PSY	340—Psychology of Perception and Learning .....	5	
		<hr/>	21

**Senior Year**

HEC	445—Experimental Food Studies .....	4	
HEC	446—Food Service Administration .....	3	
HEC	447—Quantity Food Purchasing and Preparation .....	4	
HEC	448—Organization and Management of Food Service .....	3	
HEC	453—Nutrition II .....	3	
HEC	456—Infant and Child Nutrition .....	3	
BUS	453—Personnel Management .....	5	
		<hr/>	25

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

**Family Life and Consumer Education**

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

1. No minor required.
2. The following courses are required in the recommended sequence:

**Freshman Year**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
HEC	108—The Home Economics Profession .....	1	
HEC	141—Food Selection and Preparation I .....	4	
HEC	171—Art in Home Living .....	2	
HEC	181—Textile Fundamentals .....	5	
HEC	192—Creative Clothing Construction .....	5	
CHEM	104—Principles of Chemistry I .....	5	
CHEM	105—Principles of Chemistry II .....	5	
CHEM	130—Introductory Organic Chemistry .....	5	
PHYS	150—Principles of Physics .....	5	
		<hr/>	37

**Sophomore Year**

HEC	211—Management for Today's Family .....	3
HEC	221—Family Relationships .....	3
HEC	242—Principles of Food Preparation II .....	4
HEC	251—Nutrition I .....	3
HEC	271—The Home and Its Furnishings .....	4
		<hr/>
		17

**Junior and Senior Year**

HEC	331—Development of the Infant and Toddler .....	3
HEC	333—Development and Guidance of the Preschool Child .....	4
HEC	343—Meal Planning and Service .....	4
HEC	362—Demonstration Techniques .....	2
HEC	374—Equipment Selection and Maintenance .....	4
HEC	415—Consumer Education .....	3
HEC	419—Home Management Practicum .....	3
HEC	445—Experimental Food Studies .....	4
HEC	465—Home Economics Programs for Special Needs .....	3
		<hr/>
		30

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

**Food and Nutrition**

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

1. No minor required.
2. The following courses are required and listed according to the recommended sequence:

**Freshman Year**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
HEC	108—The Home Economics Profession .....	1
HEC	141—Food Selection and Preparation I .....	4
CHEM	104—Principles of Chemistry I .....	5
CHEM	105—Principles of Chemistry II .....	5
CHEM	130—Introductory Organic Chemistry .....	5
JOUR	105—Newsriting .....	4
		<hr/>
		24

**Sophomore Year**

HEC	211—Management for Today's Family .....	3
HEC	221—Family Relationships .....	3
HEC	242—Principles of Food Preparation II .....	4
HEC	251—Nutrition I .....	3
BIO	260—Microbiology .....	5
BUS	205—Business Communications .....	3
CHEM	281—Human Biochemistry .....	5
		<hr/>
		26

**Junior Year**

HEC	331—Development of the Infant and Toddler .....	3
HEC	333—Development and Guidance of the Preschool Child .....	4
HEC	343—Meal Planning and Service .....	4
HEC	362—Demonstration Techniques .....	2
IA	342—Basic Photography .....	3
IA	345—Publication Production .....	5
		<hr/>
		21

**Senior Year**

HEC	419—Home Management Practicum .....	3
HEC	445—Experimental Food Studies .....	4
HEC	446—Food Service Administration .....	3
HEC	447—Quantity Food Purchasing and Preparation .....	4
HEC	448—Organization and Management of Food Service .....	3
HEC	453—Nutrition II .....	3
HEC	456—Infant and Child Nutrition .....	3
		<hr/>
		23

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

**Home Economics Education (Non-Vocational)**

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

**Freshman Year**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
HEC	108—The Home Economics Profession .....	1
HEC	141—Food Selection and Preparation I .....	4
HEC	171—Art in Home Living .....	2
HEC	181—Textile Fundamentals .....	5
HEC	192—Creative Clothing Construction .....	5
CHEM	104—Principles of Chemistry I .....	5
CHEM	105—Principles of Chemistry II .....	5
CHEM	130—Introductory Organic Chemistry .....	5
		<hr/>
		32

**Sophomore Year**

HEC	211—Management for Today's Family .....	3
HEC	221—Family Relationships .....	3
HEC	242—Principles of Food Preparation II .....	4
HEC	251—Nutrition I .....	3
HEC	271—The Home and Its Furnishings .....	4
HEC	293—Intermediate Clothing Construction .....	4
		<hr/>
		21

**Junior Year**

HEC	331—Development of the Infant and Toddler .....	3
HEC	333—Development and Guidance of the Preschool Child .....	4
HEC	343—Meal Planning and Service .....	4
HEC	362—Demonstration Techniques .....	2
HEC	374—Equipment Selection and Maintenance .....	4
		<hr/>
		17

**Senior Year**

HEC	415—Consumer Education .....	3
HEC	419—Home Management Practicum .....	3
HEC	494—Tailoring .....	4
		<hr/>
		10

With fulfillment of specified requirements under alternate options a student becomes prepared to teach in one or more types of home economics programs in the junior and senior high schools.

## 2. Education Courses Required:

- A. Professional Teacher Education courses, 31 hours. Department requirement of a 2.3 cumulative G.P.A. for admission into P.T.E.
- B. EDFE 368 Introduction to Student Teaching: Home Economics. Two hours credit.
- C. VE 452 Preparation for Teaching Vocational Home Economics. Three hours credit.
- D. EDFE 470 Student Field Experience. 18 hours credit.

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

**Vocational Homemaking Credential**

In order to qualify for a Vocational Homemaking Credential in addition to a degree in Home Economics Education under the State Board for Community Colleges and Occupational Education, the following courses are required. If these are successfully completed another minor is not required but strongly recommended for the Bachelor of Arts degree. For an outline of a complete program the student will confer with adviser.

Course No.	Course Title	Hours Credit
SOC	100-Principles of Sociology .....	5
ECON	100-Introductory Economics .....	5
*HEC	325-Home Nursing .....	2
HEC	363-Intro. to Curriculum in Home Economics Education .....	3
HEC	367-Principles and Practices of Evaluations in Home Economics Education .....	3
HEC	395-Costume Design-Flat Pattern .....	3
HEC	460-Occupational Home Economics Education .....	3
HEC	464-Home Economics Youth Organization .....	2
HEC	465-Home Economic Programs for Special Needs .....	3
VE	310-Foundations of Vocational Education .....	2
VE	311-History of Vocational Education .....	1
VE	412-Cooperative Education and Coordination Techniques .....	3
*HPER	262-First Aid (may be substituted) Electives to be chosen from any of these areas: Economics, Sociology, History, Anthropology .....	2 3

For students who desire to develop occupational programs in vocational home economics, the following courses are recommended:

VE	290-Directive Occupational Experience .....	arr.
VE	296-Directed Occupational Internship .....	arr.
VE	414-Vocational Youth Organizations .....	2
VE	416-Adult Vocational Education .....	3
VE	424-Occupational Analysis .....	2
VE	425-Program Development .....	3
VE	430-Vocational Education for Learners with Special Needs .....	3

**Preschool Education**

This major prepares a student for a position as Head Start Teacher; director and head teacher in preschool or day care centers; for child welfare and case work; and pre-kindergarten instruction in the public schools.

1. Education courses required: Professional Teacher Education, 31 hours.
2. The following courses are required for the major and listed according to recommended sequence:

**Freshman Year**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
HEC	108--The Home Economics Profession .....	1	
HEC	136--Introduction to Preschool .....	2	
EDSE	160--Introduction to Speech Correction .....	3	
PSY	121--General Psychology and Human Performance .....	3	
SP	130--Voice and Speech Improvement .....	3	
			<hr/>
			12

**Sophomore Year**

HEC	221--Family Relationships .....	3	
HEC	251--Nutrition I .....	3	
HEC	340--Basic Food Preparation and Service (preschool section) .....	4	
HPER	291--Rhythms for the Elementary School .....	2	
THEA	280--Creative Dramatics .....	3	
			<hr/>
			12 or 13

**Junior Year**

HEC	331--Development of the Infant and Toddler .....	3	
HEC	333--Development and Guidance of the Preschool Child .....	4	
HEC	334--Preschool Curriculum and Methods .....	3	
HEC	335--Observation and Participation in Preschool .....	3	
HEC	456--Infant and Child Nutrition .....	3	
EDSE	306--Identification of Learning Disabilities in Early Childhood .....	3	
PSY	255--Mental Hygiene and Emotional Adjustment .....	3	
			<hr/>
			22

**Senior Year**

HEC	437--Administration of Programs for Young Children .....	3	
HEC	438--Practicum in Preschool Teaching .....	3	
HEC	439--Parent Education .....	3	
HPER	262--First Aid .....	2	
			<hr/>
			11

3. No minor required.

4. The department has examined university offerings and finds many areas and courses complementary to the preparation in Preschool Education. The student with guidance of an advisor will select from courses in various departments to supplement major requirements and to meet individual needs and interests.

**Minors**

A student who wishes to minor in Home Economics must register with the department prior to enrollment in either of the first two programs listed below.

**General Home Economics**

A minimum of 27 credit hours needs to be selected from the following courses (this is not a teaching minor):

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
HEC	171--Art in Home Living .....	2	
HEC	181--Textile Fundamentals .....	5	
HEC	192--Creative Clothing Construction .....	5	
HEC	211--Management for Today's Family .....	3	
HEC	221--Family Relationships .....	3	
HEC	251--Nutrition I .....	3	
HEC	271--The Home and Its Furnishings .....	4	
HEC	331--Development of the Infant and Toddler .....	3	

## 98 / DEGREE PROGRAM REQUIREMENTS

HEC	333—Development and Guidance of the Preschool Child .....	4
HEC	340—Basic Food Preparation and Service .....	4
HEC	415—Consumer Education .....	3
HEC	456—Infant and Child Nutrition .....	3
IA	454—Construction Activities for the Elementary School .....	3

### Preschool

Minors in Preschool need an advisor to plan course sequence.

Course No.	Course Title	Hours	Credit
HEC	136—Introduction to Preschool .....	2	
HEC	251—Nutrition I .....	3	
HEC	331—Development of the Infant and Toddler .....	3	
HEC	333—Development and Guidance of the Preschool Child .....	4	
HEC	334—Preschool Curriculum and Methods .....	3	
HEC	335—Observation and Participation in Preschool .....	3	
HEC	437—Administration of Programs for Young Children .....	3	
HEC	438—Practicum in Preschool Teaching .....	3	
	Electives .....	3	
		<hr/>	
		27	

### Recommended Electives for Preschool Minor:

Course No.	Course Title	Hours	Credit
HEC	221—Family Relationships .....	3	
HEC	439—Parent Education .....	3	
EDEL	460—Kindergarten Education .....	3	
SP	130—Voice and Speech Improvement .....	3	

### Business

A student with a major in the Department of Home Economics may choose the following program for a minor in Business.

Course No.	Course Title	Hours	Credit
BUS	100—The American Business System .....	5	
BUS	150—Principles of Management .....	3	
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	
		<hr/>	
		31	

### Options

#### Textiles and Clothing Option

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, the family, and the home.

The option 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. The selection and sequence of courses is subject to approval by the major advisor in textiles and clothing.

#### Vocational Homemaking Credential

A student may qualify for a Vocational Homemaking Credential under the State Board for Community Colleges and Occupational Education, and teach in both vocational and non-vocational Home Economics programs.

1. No minor is required.

2. The student with the guidance of an advisor will select from courses in various departments to meet the requirements for a Vocational Homemaking Credential.

**SPECIAL NOTE:**

Under an interdisciplinary program, a student can select 80 hours, without a minor, equally divided among Business, Economics, Home Economics, and Journalism to attain expertise in consumer affairs.

**HONORS.** The Department of Home Economics participates in the Honors Program. See page No. 37.

**Industrial Arts**

**Robert G. Hammond, Chairman**

**Professors:** Erwin, Hammond, Jelden, Johnson, Olson.

**Associate Professors:** Lubbers, Roy.

**Assistant Professor:** Kruger.

**Instructor:** Morimoto.

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

1. Meet all General Education requirements as specified earlier in this catalog.
2. Mathematics 123 and 124.
3. Chemistry 104 and 105.
4. Physics 250 and 261.
5. Industrial Arts core which consists of 61 academic quarter hours as follows:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
IA	150—Wood Processing .....	3
IA	350—Woodworking Technology .....	5
IA	161—Principles of Drafting .....	3
IA	261—Pictorial Drafting .....	2
IA	362—Working Drawings .....	3
IA	170—General Metals .....	3
IA	272—Gas and Electric Welding .....	3
IA	374—Machine Tool Operation .....	2
IA	141—Graphic Arts Fundamentals .....	3
IA	241—Graphic Arts .....	2
IA	180—General Electricity .....	3
IA	281—Electro-Mechanical Equipment and Measuring Instruments .....	2
IA	383—Electronic Hardware and Components .....	2
IA	384—Electronic Circuitry .....	3
IA	190—Introduction to Power .....	2
IA	291—Internal Combustion and Reciprocating Engines .....	3
IA	118—General Plastics (Synthetic Materials) .....	3
IA	219—Plastics .....	2
IA	433—Industrial Materials .....	3
BUS	457—Production Management .....	3
	Business and/or Economics Electives .....	6

6. Twenty academic quarter hour electives in industrial arts.
7. Free electives to complete 180 quarter hours of academic credit for graduation. Suggested areas as follows:

Air Science	Earth Science
Biology	Economics
Botany	Education
Business	Fine Arts
Chemistry	Mathematics

## 100 / DEGREE PROGRAM REQUIREMENTS

Philosophy  
Physics  
Psychology, Counseling &  
Guidance

Special Education  
Statistics  
Zoology

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

1. Meet all General Education requirements as specified earlier in this catalog.

2. Professional Teacher Education, 31 hours, plus EDFE 369, two hours credit; EDFE 260, one hour credit; and EDFE 270, minimum of two hours credit.

3. Required courses in the major:

Course No.	Course Title	Hours	Credit
IA	118—General Plastics (Synthetic Materials) .....	3	
IA	141—Graphic Arts Fundamentals .....	3	
IA	150—Wood Processing .....	3	
IA	161—Principles of Drafting .....	3	
IA	170—General Metals .....	3	
IA	180—General Electricity .....	3	
IA	190—Introduction to Power .....	2	
IA	219—Plastics .....	2	
IA	241—Graphic Arts .....	2	
IA	261—Pictorial Drafting .....	2	
IA	272—Gas and Electric Welding .....	3	
IA	281—Electro-Mechanical Equipment and Measuring Instruments .....	2	
IA	291—Internal Combustion and Reciprocating Engines .....	3	
IA	320—Course Organization in Industrial Arts .....	3	
IA	330—Methods of Teaching in the Secondary School Industrial Arts .....	3	
IA	335—History and Philosophy of Industrial Arts .....	3	
IA	336—Principles of General Shop Organization .....	5	
IA	350—Woodworking Technology .....	5	
IA	362—Working Drawings .....	3	
IA	374—Machine Tool Operation .....	2	

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4. Elect 10 additional hours from the following areas of industrial arts: Wood, Metal, Crafts, Drafting, Power, Graphic Arts and Electricity-Electronics (Total IA Major is 68 hours).

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

### Minors in Industrial Arts

All students who wish to minor in Industrial Arts must register with the Department prior to enrollment in either of the two programs listed below.

### Industrial Arts Minor (With Teacher Preparation)

Required courses in the minor:

Course No.	Course Title	Hours	Credit
IA	161—Principles of Drafting .....	3	
IA	261—Pictorial Drafting .....	2	
IA	320—Course Organization in Industrial Arts .....	3	
IA	336—Principles of General Shop Organization .....	5	

Elect 17 quarter hours in industrial arts to meet the minor requirement 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.

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# SCHOOL OF BUSINESS

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## Ramon P. Heimerl, Dean

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

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

### Bachelor of Arts Degree:

Business Teacher Education—Specializations in Accounting, Basic Business and Economics, Distributive Education, and Secretarial.

### Bachelor of Science Degree:

Business Administration—Specializations in Accounting, Finance, General Business, Management, Marketing, Office Administration, and Secretarial (two year non-degree).

**Professors:** Damgaard, Heimerl, Kennedy, Teglovic, Waterman, Yetka.

**Associate Professors:** H. Anderson, R. Anderson, Clithero, Duff, McConnell, Palmer.

**Assistant Professors:** Bohrer, Halldorson, Hansen, Harris, Robins, Saam.

**Instructors:** Brown, DeBoer, Massin, Muhs, Otto, Unger.

## 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 all General Education requirements as specified earlier in this catalog. Majors in this area must take BUS 100 and ECON 100 as part of the requirement in general education.

2. Teacher Education Program courses as listed on page 35 plus BUED 340 and three hours credit selected from BUED 341, 342, 343, 344, 346, and 348. (The specific methods courses required in each of the specializations listed below is indicated for each specialization.)

3. The required courses listed in the Business Core plus the required courses in one of the areas of specialization plus business teacher education electives for a total of 75 quarter hours.

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

## 102 / DEGREE PROGRAM REQUIREMENTS

5. A minor is not required.

6. All majors in any of the business teacher education specializations should check with the Department of Vocational Education concerning the requirements for a vocational teaching credential since many schools require this credential in all areas of business teaching.

### Business Teacher Education Core

Course No.	Course Title	Hours	Credit
*BUS	010—Typewriting I .....	0	
BUS	130—Business Law I .....	3	
BUS	150—Principles of Management .....	3	
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	260—Marketing .....	4	
*BUS	370—Business Finance .....	3	
BUED	371—Evaluation in Business Subjects .....	3	
ECON	102—Contemporary Economic Problems .....	3	

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

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

### Specialization in Accounting

Note: Business Teacher Education majors electing this specialization must complete both BUED 341, Methods and Materials of Teaching Typewriting, one hour credit, and BUED 343, Methods and Materials of Teaching Book-keeping, one hour credit, in partial fulfillment of requirement two listed above.

Course No.	Course Title	Hours	Credit
BUS	111—Typewriting II .....	4	
BUS	112—Typewriting III .....	4	
BUS	181—Data Processing—Unit Record .....	3	
BUS	281—Electronic Data Processing—FORTRAN .....	3	
BUS	320—Intermediate Accounting I .....	4	
BUS	321—Intermediate Accounting II .....	4	
BUS	323—Cost and Managerial Accounting I .....	4	
BUS	428—Income Tax Accounting I .....	3	
VE	310—Foundations of Vocational and Technical Education .....	2	
VE	311—History of Vocational Education—A Laboratory Approach .....	1	
VE	416—Adult Vocational Education .....	3	
	Electives in Business, Economics, or Business Teacher Education .....	7	

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### Specialization in Basic Business and Economics

Note: Business Teacher Education majors electing this specialization must complete both BUED 341, Methods and Materials of Teaching Typewriting, one hour credit, and BUED 344, Methods and Materials of Teaching Basic Business Subjects, one hour credit, in partial fulfillment of requirement two listed above.

Course No.	Course Title	Hours	Credit
BUS	111—Typewriting II .....	4	
BUS	112—Typewriting III .....	4	
BUS	131—Business Law II .....	3	
BUS	132—Business Law III .....	3	
BUS	340—Introduction to Insurance .....	3	
BUS	471—Investments .....	3	
BUED	430—Economic Education Seminar .....	3	
ECON	250—History of Economic Systems .....	3	
ECON	377—Government and Business .....	3	
	Electives in Business, Economics, or Business Teacher Education .....	13	

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**Specialization in Distributive Education**

Business Teacher Education majors electing this specialization must complete BUED 346, Methods and Materials of Teaching Distributive Classes, two hours credit, in partial fulfillment of requirement two listed above. Approved occupational experience in the areas of marketing of at least 4000 hours is required for a vocational teaching credential. The student should contact the Program Specialist for Distributive Education in the Department of Vocational Education during his first enrollment at UNC to discuss the occupational experience requirement. An application regarding occupational experience is submitted to the Coordinator of Occupational Experience during the quarter in which you plan to graduate. It is recommended that during the Sophomore year of enrollment that the student enroll in VE 210, Career Opportunities Seminar in Vocational Education (one hour credit).

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
BUS	251—Job Analysis .....	2
BUS	261—Salesmanship .....	3
BUS	360—Retailing Promotions .....	2
BUS	361—Retail Management .....	4
BUS	365—Marketing Strategy .....	4
BUED	345—Introduction to Distributive Education .....	3
VE	310—Foundations of Vocational and Technical Education .....	2
VE	311—History of Vocational Education—A Laboratory Approach .....	1
VE	412—Cooperative Education and Coordination Techniques .....	3
VE	450—Preparation for Teaching Vocational Distributive Education .....	3
VE	480—Teaching Improvement Seminar in Vocational Distributive Education.....	2
	Electives in Marketing .....	6
	Electives in Business Teacher Education, or Vocational Education planned by major adviser .....	7
		<b>42</b>

**Specialization in Secretarial**

Note: Business Teacher Education majors electing this specialization must complete BUED 341, Methods and Materials of Teaching Typewriting, one hour credit, BUED 342, Methods and Materials of Teaching Shorthand, one hour credit, and BUED 348, Methods and Materials of Teaching Office Practice, one hour credit.

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
BUS	111—Typewriting II .....	
BUS	112—Typewriting III .....	4-8
BUS	113—Secretarial Machines .....	2
BUS	117—Intermediate Gregg Shorthand .....	
BUS	118—Advanced Shorthand .....	4-8
BUS	181—Data Processing—Unit Record .....	3
BUS	210—Secretarial Procedures .....	3
BUS	214—Records Management .....	2
BUS	219—Shorthand Transcription .....	4
BUS	452—Office Management .....	3
VE	310—Foundations of Vocational and Technical Education .....	2
VE	311—History of Vocational Education—A Laboratory Approach .....	1
	Electives in Business, Economics, or Business Teacher Education .....	6
		<b>24-42</b>

**Business Teacher Education Minor**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
BUS	010—Typewriting I .....	0
BUS	100—The American Business System .....	5
BUS	111—Typewriting II .....	(4)
BUS	112—Typewriting III .....	(4)
BUS 116, 117, 118, 219	—Beginning, Intermediate, Advanced, Gregg Shorthand Transcription .....	4- 8 (4-16)

or

## 104 / DEGREE PROGRAM REQUIREMENTS

BUS	220, 221—Principles of Accounting I, II .....	(4-8)
	<i>or</i>	
BUS	130—Business Law I .....	(3)
BUS	150—Principles of Management .....	(3)
BUS	260—Marketing .....	(4)
BUS	371—Personal Finance .....	(3)
ECON	100—Introductory Economics .....	(5)
	Electives to complete 36 hours .....	13-23

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

### Economic Education Minor

Course No.	Course Title	Hours	Credit
BUS	100—The American Business System .....	5	
BUS	371—Personal Finance .....	3	
BUED	430—Economic Education Seminar .....	3	
ECON	100—Introductory Economics .....	5	
ECON	102—Contemporary Economic Problems .....	3	
	Electives in Business or Economics .....	17	

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The electives must be planned in cooperation with the minor adviser. Elective courses may be chosen from the economic courses listed on pages 169, 170, 171, 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 in Family Living, three hours credit.

### Business Administration

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

1. Complete all General Education requirements as specified earlier in this catalog. Majors in this area must have BUS 100, ECON 100, and MATH 115 as part of the requirement in general education. (Two years of high school algebra may be substituted for MATH 115.)
2. The required courses listed in the Business Core plus the requirements in one of the areas of specialization.
3. Additional course work, of which at least 15 hours must be in courses offered in the School of Arts, the College of Arts and Sciences, the School of Music, and the Department of Psychology, Counseling, and Guidance.
4. A minor is not required.

### Business Core

Course No.	Course Title	Hours	Credit
BUS	130—Business Law I .....	3	
BUS	150—Principles of Management .....	3	
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	260—Marketing .....	4	
BUS	291—Business Statistics I .....	3	
BUS	295—Introduction to Operations Research .....	3	
BUS	370—Business Finance .....	3	
ECON	102—Contemporary Economic Problems .....	3	

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**Specialization in Accounting**

The specialization 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 specialization meet the academic requirements for taking the Certified Public Accountant examination in Colorado.

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BUS	131—Business Law II .....	3	
BUS	132—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 .....	4	
BUS	427—Auditing .....	4	
BUS	428—Income Tax Accounting I .....	3	

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

BUS	421—Advanced Accounting II .....	(4)	
BUS	423—Governmental and Institutional Accounting .....	(4)	
BUS	429—Income Tax Accounting II .....	(3)	6
			<hr/> 43

**Specialization in Finance**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BUS	170—Principles of Finance .....	3	
BUS	320—Intermediate Accounting I .....	4	
BUS	340—Introduction to Insurance .....	3	
BUS	456—Business Policies and Management .....	3	
BUS	470—Financial Management .....	3	
BUS	471—Investments .....	3	
ECON	202—Money and Banking .....	5	
ECON	241—Public Finance .....	5	
	Electives in Business and Economics .....	10	
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**Specialization in General Business**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BUS	292—Business Statistics II .....	3	
BUS	323—Cost and Managerial Accounting I .....	4	
BUS	365—Marketing Strategy .....	4	
BUS	453—Personnel Management .....	4	
BUS	456—Business Policies and Management .....	3	
BUS	471—Investments .....	3	
ECON	200—Intermediate Economic Theory .....	3	
	Electives in Business, Economics, and the Behavioral Science areas .....	15	
			<hr/> 39

**Specialization in Management—Administration Option**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BUS	292—Business Statistics II .....	3	
BUS	323—Cost and Managerial Accounting I .....	4	
BUS	395—Management Science I .....	3	
BUS	453—Personnel Management .....	4	
BUS	456—Business Policies and Management .....	3	
PSY	266—Industrial Psychology .....	3	
SOC	421—Formal Organizations .....	3	
ECON	305—Labor-Management Relations .....	3	
ECON	350—National Income Analysis .....	3	
	Electives (in Business, Economics, Political Science, Psychology, or Sociology with approval of adviser) .....	10	
			<hr/> 39

**Specialization in Management—Information Science Option**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BUS	181—Data Processing—Unit Record .....	3	
BUS	281—Electronic Data Processing—FORTRAN .....	3	
BUS	292—Business Statistics II .....	3	
BUS	323—Cost and Managerial Accounting I .....	4	
BUS	324—Cost and Managerial Accounting II .....	4	
BUS	383—Electronic Data Processing—COBOL .....	3	
BUS	385—Electronic Data Processing—Advanced Programming .....	3	
BUS	388—Systems and Procedures .....	3	
BUS	453—Personnel Management .....	4	
BUS	489—Computer Simulation Models .....	3	
	Business Electives (from other management courses) .....	6	
			<b>39</b>

**Specialization in Management—Management Science Option**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BUS	281—Electronic Data Processing—FORTRAN .....	3	
BUS	292—Business Statistics II .....	3	
BUS	323—Cost and Managerial Accounting I .....	4	
BUS	395—Management Science—Introduction .....	3	
BUS	396—Management Science—Deterministic Models .....	3	
BUS	397—Management Science—Probabilistic Models .....	3	
BUS	456—Business Policies and Management .....	3	
ECON	200—Intermediate Economic Theory .....	3	
ECON	350—National Income Analysis .....	3	
	Business Electives (from other management courses) .....	11	
			<b>39</b>

**Specialization in Management—Public Administration Option**

The Public Administration Option is to include the following courses:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BUS	181—Data Processing—Unit Record .....	3	
BUS	281—Electronic Data Processing—FORTRAN .....	3	
BUS	292—Business Statistics II .....	3	
BUS	388—Systems and Procedures .....	3	
BUS	395—Management Science—Introduction .....	3	
BUS	396—Management Science—Deterministic Models .....	3	
BUS	397—Management Science—Probabilistic Models .....	3	
BUS	423—Governmental and Institutional Accounting .....	4	
BUS	453—Personnel Management .....	4	
ECON	241—Public Finance .....	5	
ECON	377—Government and Business .....	3	
	Electives .....	2	
			<b>39</b>

Note: This is a highly interdisciplinary program. Students electing this option should consult their adviser to determine the recommended elective courses.

**Specialization in Marketing**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BUS	261—Salesmanship .....	3	
BUS	292—Business Statistics II .....	3	
BUS	361—Retail Management .....	4	
BUS	362—Advertising .....	3	
BUS	365—Marketing Strategy .....	4	
BUS	456—Business Policies and Management .....	3	
BUS	460—Marketing Analysis and Research .....	4	
BUS	462—Marketing Problems .....	4	
BUS	470—Financial Management .....	3	

Student will elect two of the following courses:

BUS	363	–Sales Management	(3)	
BUS	364	–Physical Distribution	(3)	
BUS	376	–Credit Management	(3)	
BUS	461	–Advertising Strategy	(3)	
BUS	463	–Industrial Marketing	(3)	
BUS	464	–International Marketing	(3)	6
		Electives in Marketing area courses		2
				<hr/> 39

### Specialization in Office Administration

Course No.	Course Title	Hours	Credit
BUS	112 –Typewriting III		4
BUS	113 –Secretarial Machines		2
BUS	118 <sup>o</sup> –Advanced Shorthand		4
BUS	190 –Calculating Machines and Business Arithmetic		3
BUS	210 –Secretarial Procedures		3
BUS	214 –Records Management		2
BUS	219 –Shorthand Transcription		4
BUS	281 –Electronic Data Processing–Fortran		
	or		
BUS	383 –Electronic Data Processing–Cobol		3
BUS	452 –Office Management		3
BUS	453 –Personnel Management		4
SP	420 –General Semantics		4
	Business Electives (at 300 and 400 level)		2
			<hr/> 39

The following course is recommended as an elective:

SP	300	–Parliamentary Leadership Training	2
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<sup>o</sup>Prerequisites to these courses cannot be taken as part of the specialization.

### Secretarial (Two-Year Non-Degree Program)

The following is required:

Course No.	Course Title	Hours	Credit
BUS	100 –The American Business System		5
BUS	111 –Typewriting II		4
BUS	112 –Typewriting III		4
BUS	113 –Secretarial Machines		2
BUS	116 –Beginning Gregg Shorthand		4
BUS	117 –Intermediate Gregg Shorthand		4
BUS	118 –Advanced Shorthand		4
BUS	130 –Business Law I		3
BUS	150 –Principles of Management		3
BUS	180 –Introduction to Business Data Processing		3
BUS	181 –Data Processing–Unit Record		3
BUS	190 –Calculating Machines and Business Arithmetic		3
BUS	205 –Business Communications		3
BUS	210 –Secretarial Procedures		3
BUS	214 –Records Management		2
BUS	219 –Shorthand Transcription		4
BUS	220 –Principles of Accounting I		4
BUS	221 –Principles of Accounting II		4
COM	101 –Elementary Composition I		3
COM	102 –Elementary Composition II		3
SP	110 –Speech Communication		3
PSY	120 –General Psychology		3
	Business Electives		16
			<hr/> 90

**Business Administration Minor**

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
BUS	100—The American Business System .....		5
BUS	130—Business Law I .....		3
BUS	150—Principles of Management .....		3
BUS	205—Business Communications .....		3
BUS	220—Principles of Accounting I .....		4
BUS	221—Principles of Accounting II .....		4
ECON	100—Introductory Economics .....		5
	Electives in Business or Economics .....		9
			—
			Minimum 36

**HONORS**—The School of Business participates in the Honors Program. See page No. 37.

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## SCHOOL OF EDUCATIONAL CHANGE AND DEVELOPMENT

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**Donald G. Decker, Dean**  
**Donald M. Luketich, Program Director**

Bachelor of Arts  
Bachelor of Science

The School is an approved administrative unit of the university. The major purpose of the school is to cooperate with and facilitate innovative programs and ideas anywhere within the university.

Students who wish to pursue innovative programs leading to a degree may submit a proposal to the school. The school does not duplicate any academic program of the university, but exists as an option for those students who wish to pursue programs that require the use of the total resources of the university. Admission will be by invitation and based on the program the student submits that has been approved by the Advisory Board and the Resource Board. In general, the program will be of an interdisciplinary nature and will use the total resources of the university, and may use the resources of the community, state and nation.

A Student Manual is available in the University Bookstore. It contains information about the school, the procedures the students are to follow, and the forms the student uses as he pursues his program.

Programs and projects submitted to the school that do not involve a degree are administered by the Program Director. Departments, schools, and colleges within the university may request the services of the Program Director. Public schools, institutions, and other colleges and universities who desire the services of the school may work with the Program Director to develop programs and projects.

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## SCHOOL OF HEALTH, PHYSICAL EDUCATION AND RECREATION

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**L. C. Butler, Dean**

**Professors:** Barham, Behling, Cyphers, Everett, Lindahl, R. Montgomery, Sage, Shirley, Steffy, Van Anne.

**Associate Professors:** Blasi, Cooke, Heiss, Malumphy, McKain, Phillips, Rossi, Wright.

**Assistant Professors:** Benich, Cody, Dixon, Fri, Hedberg, Hildreth, LaBonde, Maughan, McMillen, Mosser, Parkos, Peterson, Petroff, Van Dinter.

**Instructors:** Carlisle, DoBell, Harrison, James, Johnson, Libera, Minton, Rodriguez, Rollins, Wheeler, Zimmer.

The School of Health, Physical Education and Recreation performs two primary functions as follows:

1. The professional preparation of teachers, coaches, supervisors, and administrators of Health and Physical Education.
2. The professional preparation of recreation leaders and administrators.

The following specific areas of professional preparation are offered:

Health Education Major

Health Education Minor

Men's Physical Education Major

Men's Physical Education Minor — Secondary Level

Men's Coaching Minor

Women's Physical Education Major

Women's Physical Education Minor — Secondary Level

Physical Education Major—Elementary Level

Physical Education Minor—Elementary Level

Dance Minor

Recreation Major

## Health Education

**Bryan E. M. Cooke, Chairan**

The Department of Health Education offers a major and a minor.

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

1. Meet all General Education requirements as specified earlier in this catalog.
2. Professional Teacher Education, 31 hours.
3. The following required courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
CHEM	130—Introductory Organic Chemistry .....	5
HPER	222—Physiological Kinesiology .....	3
	<i>or</i>	
ZOO	156—Elements of Human Physiology & Anatomy .....	5
	<i>or</i>	
ZOO	250—Human Physiology .....	5
HPER	224—Maturational Kinesiology .....	3
	<i>or</i>	

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PSY	230-Child and Adolescent Psychology .....	3
HPER	262-First Aid .....	2
HPER	299-Community Health .....	4
HPER	301-Health Education in the Elementary School .....	2
	<i>or</i>	
HPER	200-Introduction to Health Education .....	2
HPER	342-Modern Concepts of Health and Disease .....	3
HPER	343-Methods and Observation of Health Education .....	5
HPER	350-Introduction to Environmental Health .....	3
HPER	405-Issues in Health .....	3
HPER	471-Safety Education .....	3
BIO	231-Genetics .....	5
	<i>or</i>	
BIO	234-Population Genetics .....	3
BIO	360-Biology of Microorganisms .....	4
HEC	251-Nutrition I .....	3
PSY	255-Mental Hygiene & Emotional Adjustment .....	3
	<i>or</i>	
PSY	350-Psychology of the Healthy Personality .....	3

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4. A teaching minor of 30 quarter hours or more. 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 Physical Education or in Dance Education. Courses in the selected minor that are preceded by an asterisk (\*) may be counted toward fulfillment of the General Education requirements.

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

### Health Education Minor

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
HPER	262-First Aid .....	2
HPER	299-Community Health .....	4
HPER	301-Health Education in the Elementary School* .....	2
	<i>or</i>	
HPER	200-Introduction to Health Education .....	2
HPER	342-Modern Concepts of Health and Disease .....	3
HPER	343-Methods and Observation of Health Education .....	5
HPER	350-Introduction to Environmental Health .....	3
HPER	405-Issues in Health .....	3
HPER	471-Safety Education .....	3
PSY	255-Mental Hygiene and Emotional Adjustment .....	3
	<i>or</i>	
PSY	350-Psychology of the Healthy Personality .....	3
	<i>or</i>	
PSY	230-Child and Adolescent Psychology .....	3

\*Elementary School Emphasis (HPER 301) must have 2 hours electives to be approved by major adviser

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### Physical Education (Men)

George H. Sage, Chairman

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

1. Meet all General Education requirements as specified earlier in this catalog.

2. The student must complete a minimum of 21 quarter hours from the following list of courses:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
HPER	138-Senior Lifesaving .....	2

HPER	139—Water Safety Instructors Course .....	2
HPER	270—Analysis and Movements of Weight Training and Conditioning .....	1
HPER	271—Analysis and Movements of Soccer .....	1
HPER	273—Analysis and Movements of Basketball .....	2
HPER	274—Analysis and Movements of Volleyball .....	1
HPER	275—Analysis and Movements of Wrestling .....	1
HPER	276—Analysis and Movements of Football .....	2
HPER	277—Analysis and Movements of Track .....	2
HPER	278—Analysis and Movements of Baseball .....	2
HPER	279—Analysis and Movements of Self Defense .....	1
HPER	280—Analysis and Movements of Badminton .....	1
HPER	282—Analysis and Movements of Bowling .....	1
HPER	283—Analysis and Movements of Swimming .....	1
HPER	284—Analysis and Movements of Tennis .....	1
HPER	285—Analysis and Movements of Tumbling and Gymnastics .....	2
HPER	287—Analysis and Movements of Golf .....	1
HPER	289—Analysis and Movements of Skiing .....	1
HPER	290—Analysis and Movements of Folk and Square Dance .....	2

3. The MPE Department has a required Motor Activity Competency Program which must be met for graduation of each student. In order to meet the Motor Activity Competency requirements a student must pass established Competency Examinations in nine (9) of the following motor activity areas:

Football	Tennis
Basketball	Self Defense
Tumbling & Gymnastics	Soccer
Wrestling	Volleyball
Track	Weight Training and Conditioning
Baseball	Folk and Square Dance

Motor Activity 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 motor 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 sport or activity has been passed. The Competency Program and the Analysis and Movements series of classes are independent of each other. The Analysis and Movement classes are designed to help students improve their ability in the various motor activities but some students will not have mastered an activity well enough to pass the Men's Physical Education Department Competency requirement for it by the end of one quarter, although they may receive a passing grade for the class.)

B. Competency examinations may be taken after a student has completed the Analysis and Movements class for that motor activity, if the student does not meet the Competency Requirement while taking the class.

C. When Competency examinations are to be taken in (B) above, the student must arrange the examination at the convenience of the instructors. Normally, competency examinations given in (B) will be given only once per quarter.

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

Course No.	Course Title	Hours	Credit
HPER	220—Anatomical Kinesiology .....	3	
HPER	221—Mechanical Kinesiology .....	3	
HPER	222—Physiological Kinesiology .....	3	
HPER	223—Psychological Kinesiology .....	3	
HPER	262—First Aid .....	2	
HPER	361—Coaching of Football .....	2	
HPER	362—Coaching of Basketball or HPER 365—Coaching of Wrestling .....	2	
HPER	363—Coaching of Track and Field or HPER 364—Coaching of Baseball .....	2	
HPER	380—Prevention and Care of Sports Injuries .....	2	
HPER	405—Issues in Health .....	3	

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HPER	426—Tests and Measurement in Physical Education .....	3
HPER	435—Educational Interpretations of Health, Physical Education and Recreation .....	3
HPER	450—Administration of Physical Education .....	3

5. Professional Teacher Education, 31 hours, plus HPER 344, three hours credit, and HPER 345, two hours credit.

6. HPER 345 and at least 14 hours of the HPER Analysis and Movement classes *must be* completed before a student may student teach in this field.

7. A teaching minor of 30 quarter hours or more. 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. Courses in the selected minor that are preceded by an asterisk (\*) may be counted toward fulfillment of the General Education requirements.

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 Student Teaching and Methods of Teaching in their minor.

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

10. Electives may be used at the students' options and under advisement to complete teaching competencies in Health Education and Driver and Traffic Safety Education.

### Physical Education Minor for Men (Coaching Emphasis)

Entry to this minor requires athletic participation at the University of Northern Colorado and approval by the athletic department. *Before enrolling* in courses in this minor, secure applications from the school HPER office.

Course No.	Course Title	Hours	Credit
A minimum of 6 hours elected from: .....		6	
HPER	270—Analysis and Movements of Weight Training and Conditioning .....	1	
HPER	273—Analysis and Movements of Basketball .....	2	
HPER	275—Analysis and Movements of Wrestling .....	1	
HPER	276—Analysis and Movements of Football .....	2	
HPER	277—Analysis and Movements of Track .....	2	
HPER	278—Analysis and Movements of Baseball .....	2	
HPER	283—Analysis and Movements of Swimming .....	1	
HPER	284—Analysis and Movements of Tennis .....	1	
HPER	285—Analysis and Movements of Tumbling and Gymnastics .....	2	
A minimum of 6 hours elected from: .....		6	
HPER	227—Coaching and Officiating of Gymnastics .....	2	
HPER	232—Coaching and Officiating of Tennis .....	2	
HPER	233—Coaching and Officiating of Swimming .....	2	
HPER	361—Coaching of Football .....	2	
HPER	362—Coaching of Basketball .....	2	
HPER	363—Coaching of Track and Field .....	2	
HPER	364—Coaching of Baseball .....	2	
HPER	365—Coaching and Officiating of Wrestling .....	2	
And the following:			
HPER	220—Anatomical Kinesiology .....	3	
And two of the following:			
HPER	221—Mechanical Kinesiology .....	3	
HPER	222—Physiological Kinesiology .....	3	
HPER	223—Psychological Kinesiology .....	3	
And the following:			
HPER	380—Prevention and Care of Sports Injuries .....	2	
HPER	435—Educational Interpretations of Health, Physical Education, and Recreation .....	3	
HPER	470—Administration of Athletics .....	3	

## Physical Education Minor for Men (Teaching Emphasis— Secondary Level)

1. The student must complete a minimum of 21 quarter hours from the following list of courses:

Course No.	Course Title	Hours	Credit
HPER	138—Senior Lifesaving .....	2	
HPER	139—Water Safety Instructors Course .....	2	
HPER	270—Analysis and Movements of Weight Training and Conditioning .....	1	
HPER	271—Analysis and Movements of Soccer .....	1	
HPER	273—Analysis and Movements of Basketball .....	2	
HPER	274—Analysis and Movements of Volleyball .....	1	
HPER	275—Analysis and Movements of Wrestling .....	1	
HPER	276—Analysis and Movements of Football .....	2	
HPER	277—Analysis and Movements of Track .....	2	
HPER	278—Analysis and Movements of Baseball .....	2	
HPER	279—Analysis and Movements of Self Defense .....	1	
HPER	280—Analysis and Movements of Badminton .....	1	
HPER	282—Analysis and Movements of Bowling .....	1	
HPER	283—Analysis and Movements of Swimming .....	1	
HPER	284—Analysis and Movements of Tennis .....	1	
HPER	285—Analysis and Movements of Tumbling and Gymnastics .....	2	
HPER	287—Analysis and Movements of Golf .....	1	
HPER	289—Analysis and Movements of Skiing .....	1	
HPER	290—Analysis and Movements of Folk and Square Dance .....	2	

2. See Physical Education major for Men for a description of the Motor Activity Competency Program which must be met for this Minor.

3. The following courses are also required for this minor:

Course No.	Course Title	Hours	Credit
HPER	220—Anatomical Kinesiology .....	3	

And two of the following:

HPER	221—Mechanical Kinesiology .....	3	
HPER	222—Physiological Kinesiology .....	3	
HPER	223—Psychological Kinesiology .....	3	

And the following:

HPER	262—First Aid .....	2	
HPER	345—Methods and Observations of Teaching Physical Education in the Secondary School .....	2	
HPER	426—Tests and Measurement in Physical Education .....	3	
	or		
HPER	435—Educational Interpretations of Health, Physical Education, and Recreation .....	3	

4. HPER 345 and at least 14 hours of the HPER Analysis and Movement classes *must be* completed before a student may student teach in this field.

## Physical Education (Women)

**Margaret E. Everett, Chairman**

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

1. Meet all General Education requirements as specified earlier in this catalog.

2. The Physical Education Major for Women is based on a competency program in Movement, Coaching and Officiating.

A. *Movement Competencies*: There are three levels of movement competencies.

Level one: Minimum movement competencies as determined by a candidacy test taken prior to enrolling in Analysis and Movement classes.

Level two: Competencies indicating good basic fundamental skills and knowledge.

Level three: A high level of competency in skills and knowledge.

### Movement Competencies Required:

Level two competencies are required in each of the activities listed below:

#### Group A: Team Sports

Basketball, Softball, Speedball, Field Hockey, Volleyball, Flag Football.

#### Group B: Individual and Dual Sports

Archery, Fencing, Tennis, Badminton, Bowling, Golf, Track & Field

#### Group C: Other Activities

Swimming, Modern Dance, Folk & Square Dance, Gymnastics.

Level three competencies are required in four (4) of the above activities, no more than two of which can come from the same group.

Level one competencies may be met in three ways. Pass the candidacy test 1) on entrance into the program, 2) after having taken a service class in the activity, 3) after individual work and practice in the activity.

Competency examinations for levels two and three may be taken by the student 1) while enrolled in an Analysis and Movements class in that activity (Note: Passing the class would not necessarily mean the competency had been achieved unless the level of skill and knowledge met the competency standard), 2) after a student has completed the Analysis and Movements class if the level of competency has not been reached in a class, 3) without enrolling in an Analysis and Movements class in the Activity if the student feels she has sufficient knowledge and skill.

The following courses are available to help the student meet level two and three competencies:

Course No.	Course Title	Hours	Credit
HPER	271—Analysis and Movements of Speedball .....	1	1
HPER	272—Analysis and Movements of Hockey .....	1	1
HPER	273—Analysis and Movements of Basketball .....	2	2
HPER	274—Analysis and Movements of Volleyball .....	1	1
HPER	276—Analysis and Movements of Flag Football .....	1	1
HPER	277—Analysis and Movements of Track .....	2	2
HPER	278—Analysis and Movements of Softball .....	2	2
HPER	280—Analysis and Movements of Badminton .....	1	1
HPER	281—Analysis and Movements of Fencing .....	1	1
HPER	282—Analysis and Movements of Bowling .....	1	1
HPER	283—Analysis and Movements of Swimming .....	2	2
HPER	284—Analysis and Movements of Tennis .....	1	1
HPER	285—Analysis and Movements of Tumbling and Gymnastics .....	2	2
HPER	286—Analysis and Movements of Archery .....	1	1
HPER	287—Analysis and Movements of Golf .....	1	1
HPER	290—Analysis and Movements of Folk Dance .....	2	2
HPER	293—Analysis and Movements of Modern Dance .....	2	2
HPER	294—Problems in Dance Composition .....	2	2

**B. Coaching and/or Directing Competencies:** A student must display competency in two of the following:

Coaching—Badminton, Basketball, Field Hockey, Gymnastics, Softball, Swimming, Tennis, Track & Field, Volleyball.

Directorship—Modern Dance Show, Synchronized Swimming Show, Intramurals.

**C. Officiating Competencies:** A student must earn at least an Apprentice DGWS rating (or an equivalent nationally recognized rating) in two of the following sports: Badminton, Basketball, Field Hockey, Gymnastics, Softball, Swimming, Tennis, Track & Field, Volleyball. The following Coaching and Officiating classes are available to help the student meet these competencies:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
HPER	227—Coaching and Officiating of Gymnastics .....	2
HPER	228—Coaching and Officiating of Track and Field .....	2
HPER	229—Coaching and Officiating of Field Sports .....	2
HPER	230—Coaching and Officiating of Volleyball .....	2
HPER	231—Coaching and Officiating of Basketball .....	2
HPER	232—Coaching and Officiating of Tennis .....	2
HPER	233—Coaching and Officiating of Swimming .....	2
HPER	234—Coaching and Officiating of Softball .....	2
HPER	459—Dance Production in High School and College .....	2

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

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
HPER	220—Anatomical Kinesiology .....	3
HPER	221—Mechanical Kinesiology .....	3
HPER	222—Physiological Kinesiology .....	3
HPER	223—Psychological Kinesiology .....	3
HPER	235—Teaching Experiences Seminar .....	1
HPER	262—First Aid .....	2
HPER	295—Analysis of Movement Fundamentals .....	1
HPER	325—Teaching of Sports .....	2
HPER	326—Teaching of Dance .....	2
HPER	346—Assistant Teaching .....	1
HPER	380—Prevention and Care of Sports Injuries .....	2
HPER	405—Issues in Health .....	3
HPER	426—Tests and Measurement in Physical Education.....	3
HPER	432—Adapted Physical Education .....	3
HPER	435—Educational Interpretations of Health, Physical Education, and Recreation .....	3
HPER	450—Administration of Physical Education .....	3

4. Professional Teacher Education, 31 hours, plus HPER 344, three hours credit, and HPER 345, two hours credit.

5. HPER 344 and 345 and at least 14 hours of the HPER Analysis and Movements classes must be completed before a student may student teach in this field.

6. A teaching minor of 30 quarter hours or more. 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. Courses in the selected minor that are preceded by an asterisk (\*) may be counted toward fulfillment of the General Education requirements.

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

### Physical Education Minor for Women (Secondary Level)

1. Students selecting this minor must have a major in a Teacher Education Program.

2. This minor is based on a competency program in Movement, Coaching and Officiating. See Physical Education Major for Women for definition of levels of competency and how they may be met.

A. *Movement Competencies*: Level one competencies are prerequisite for admission in the Analysis and Movements classes. Level two competencies are required in four (4) activities out of each of the following groups:

Group A: **Team Sports**  
Basketball, Softball, Speedball, Field Hockey, Volleyball, Flag Football.

Group B: **Individual and Dual Sports**  
Archery, Fencing, Tennis, Badminton, Bowling, Golf, Track & Field

Group C: **Other Activities**  
Swimming, Modern Dance, Folk & Square Dance, Gymnastics.

Level three competencies are required in four (4) of the above activities, no more than two of which can come from the same group.

**B. Coaching Competency:** A student must display competency in at least one of the coaching areas listed in Physical Education Major for Women.

**C. Officiating Competency:** A student must earn at least an Apprentice DGWS rating (or an equivalent nationally recognized rating) in at least one of the officiating areas listed in Physical Education Major for Women. The Coaching and Officiating courses listed may be used to gain these competencies.

3. The following courses are also required in the minor:

Course No.	Course Title	Hours	Credit
HPER	220-Anatomical Kinesiology .....	3	3
HPER	221-Mechanical Kinesiology .....	3	3
HPER	222-Physiological Kinesiology .....	3	3
HPER	223-Psychological Kinesiology .....	3	3
HPER	262-First Aid .....	2	2
HPER	345-Methods and Observation of Teaching Physical Education in the Secondary School (Women) .....	2	2
HPER	426-Tests and Measurement in Physical Education.....	3	3

4. HPER 345 and all level two movement competencies must be completed before a student may student teach in this field.

### Physical Education (Men and Women Elementary School Emphasis)

*This program is being revised. A copy of the latest requirements should be obtained from the Physical Education office.*

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

1. Meet all General Education requirements as specified earlier in this catalog.

2. The Physical Education major Elementary School Emphasis is based on a competency program. See Physical Education major for Women for definition of levels of competency and how they may be met.

**A. Movement Competencies:** Level one competencies are prerequisite for admission in the Analysis and Movements classes. Level two competencies are required in each of the activities listed below:

**Group A: Team Sports**

Basketball, Softball, Volleyball, Soccer or Speedball, Football or Flag Football.

**Group B: Individual Sports**

Track & Field.

**Group C: Other Activities**

Folk & Square Dance, Gymnastics, Swimming.

Level three competencies are required in three of the above activities, (no more than two of which can come from the same group).

**B. Coaching Competency:** A student must display competency in at least one of the coaching areas.

3. The following courses are also required:

Course No.	Course Title	Hours	Credit
HPER	220-Anatomical Kinesiology .....	3	3
HPER	221-Mechanical Kinesiology .....	3	3
HPER	222-Physiological Kinesiology .....	3	3
HPER	223-Psychological Kinesiology .....	3	3

HPER	224—Maturational Kinesiology .....	3
HPER	245—Tumbling, Apparatus, and Self-testing Activities for the Elementary School Child .....	2
HPER	262—First Aid .....	2
HPER	291—Rhythmic Education in the Elementary School .....	2
HPER	301—Health Education in the Elementary School .....	2
HPER	426—Tests and Measurement in Physical Education .....	3
HPER	432—Adapted Physical Education .....	3
HPER	435—Educational Interpretations of Health, Physical Education, and Recreation .....	3
EDEM	250—Introduction to Outdoor Education .....	3

4. Professional Teacher Education, 31 hours, plus HPER 344, 3 hours credit.

5. HPER 344 and all level two competencies must be completed before a student may student teach in this field.

6. A teaching minor of 30 quarter hours or more. 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.

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

### Physical Education Minor (Men and Women— Elementary Level)

*This program is being revised. A copy of the latest requirements should be obtained from the Physical Education office.*

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

2. This minor is based on a competency program in Movement and Coaching. See Physical Education major for women for definitions of levels of competency and how they can be met.

A. *Movement Competencies:* Level one competencies are prerequisite for admission in the Analysis and Movements classes. Level two competencies are required in each of the following activities listed below:

Group A: **Team Sports**  
Basketball, Softball, Volleyball, Soccer or Speedball, Football or Flag Football.

Group B: **Individual Sports**  
Track & Field.

Group C: **Other Activities**  
Folk & Square Dance, Gymnastics, Swimming.

Level three competencies are required in three of the above activities, no more than two of which can come from the same group.

B. *Coaching Competency:* A student must display competency in at least one of the coaching areas.

3. The following courses are required:

Course No.	Course Title	Hours Credit
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
HPER	245—Tumbling, Apparatus and Self-testing Activities for the Elementary School Child .....	2
HPER	262—First Aid .....	2

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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 level two competencies must be completed before a student may student teach in this field.

### Dance Education Minor (Men and Women)

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

2. The following courses are required.

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
HPER	255—Modern Dance Techniques .....	4
HPER	256—Improvisation and Composition Forms .....	2
HPER	290—Analysis and Movements of Folk and Square Dance .....	2
HPER	291—Rhythms for the Elementary School .....	2
HPER	293—Analysis and Movements of Modern Dance .....	2
HPER	294—Problems in Dance Composition .....	2
HPER	296—Rhythmic Analysis and Dance Accompaniment .....	2
HPER	326—Teaching of Dance .....	2
HPER	456—Workshop in Modern Dance .....	4
HPER	457—Dance History and Philosophy .....	4
HPER	459—Dance Production in High School and College .....	3
	Electives .....	2
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### Recreation

#### J. Max Shirley, Chairman

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

1. Meet all General Education requirements as specified earlier in this catalog.

2. The following required courses in the major:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours Credit</i>
HPER	200—Introduction to Recreation .....	2
HPER	252—Social Recreation .....	2
HPER	253—Camp Counseling .....	3
HPER	262—First Aid .....	2
HPER	265—Recreation Skills in Individual & Dual Sports .....	2
HPER	266—Recreation Skills in Team Sports .....	2
HPER	267—Recreation Skills in the Recreation Center & On The Playground .....	2
HPER	288—Physical Education Activities for the Elementary School .....	2
HPER	290—Analysis and Movements of Folk and Square Dance .....	2
HPER	368—Programs in Recreation .....	4
HPER	369—Therapeutic Recreation .....	3
HPER	435—Educational Interpretations of Health, Physical Education, and Recreation .....	3
HPER	451—Administration of Community Recreation .....	4
HPER	471—Safety Education .....	3
HPER	472—Recreation Leadership .....	3
FA	550—Art In Recreation .....	3
MUS	315—Music and Recreation .....	2
PSY	230—Child and Adolescent Psychology .....	3
THEA	280—Creative Dramatics .....	3
		<hr/> 50

3. One minor of 30 quarter hours, or 30 quarter hours of supporting courses selected with the approval of the major adviser. Courses in the selected minor that are preceded by an asterisk (\*) may be counted toward fulfillment of the General Education requirements.

4. Senior recreation majors will complete HPER 452, Internship in Recreation, 18 hours. Courses HPER 368, 369, 451, and 472 and a GPA of 2.3 in the required courses, as well as a 2.3 cumulative are prerequisites for HPER 452.

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

**HONORS**—The School of Health, Physical Education, and Recreation participates in the Honors Program. See page No. 37.

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## SCHOOL OF MUSIC

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**James E. Miller, Dean**

**Robert S. James, Administrative Assistant Dean**

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

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 applications for admission to the School of Music must be made through the office of the Dean of the School of Music. Auditions and interviews are part of the admission requirements. Admission forms are available upon request. Admission may be limited by availability of staffing and facilities.

Bachelor of Arts (non-teaching)

Music Major  
Music Minor

Bachelor of Music (non-teaching)

Music (vocal, instrumental, piano or theory and composition) Major  
Music (combined with Bachelor of Arts Degree in music education) Major

Bachelor of Arts (teaching)

Music Education Major (instrumental or vocal, piano and general emphasis)  
Music Education and Elementary Education Majors (a double major)  
Music Education and Music Majors (combined with Bachelor of Music Degree)

**Brass and Percussion Department:** Edwin Baker, Chairman.

**History and Literature Department:** James Upton, Chairman.

**Music Education Department:** Dwight Nofziger, Chairman.

**Piano and Organ Department:** Rita Hutcherson, Chairman.

**String Department:** Howard Mickens, Chairman.

**Theory and Composition Department:** Dale Dykins, Chairman.

**Voice Department:** Claude Schmitz, Chairman.

**Woodwind Department:** Loren Bartlett, Chairman.

**Professors:** Dykins, Fluke, Garlick, Himmel, Hutcherson, King, J. Miller, Schenkman, Schmitz, Skinner, Walker.

**Associate Professors:** Baker, Bartlett, Copley, Evans, James, Mickens, K. Miller, Nofziger, Upton.

**Assistant Professors:** Ehle, Garcia, Ginsburg, Goes, Graham, Jamieson, Lehnert, Linscome, Murrar, Pfund, Rhoads, Robinson.

**Instructors:** Bourassa, Coppom, Herrick, Hines, W. Smith.

## Bachelor of Arts Degree

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

1. Complete all General Education requirements as specified earlier in this catalog.

2. A 51-hour major in music as follows: MUS 100, 101, 102, 103, 141, 142, 143, 201, 202, 203, 240, 241, 242, 301, 302 and nine hours of music electives.

3. One academic minor of 27 quarter hours outside the School of Music.

4. Two years of French or German.

5. One quarter hour 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, University Symphony Orchestra, Chamber 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

Course No.	Course Title	Hours	Credit
MUS	140—Music Appreciation .....	2	
MUS 141, 142,	143—Music Literature and Styles I, II, III .....	6	
MUS	204—Music Fundamentals I .....	2	
	*Music Performance (Applied) .....	3	
	**Music Performance (Major Ensemble) .....	3	
	***Music Electives .....	11	

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\*It is recommended that at least three hours of applied music credit be earned by taking three quarters of individual instruction in a single musical medium.

\*\*At least three hours of ensemble credit must be earned by performance in a major musical organization (Concert Band, Varsity Band, Symphonic Wind Band, Laboratory Orchestra, University Symphony Orchestra, Chamber Orchestra, Mixed Concert Choir, University Singers, University Chorus, Women's Concert Choir, or Varsity Men's Glee Club).

\*\*\*To be selected upon consultation with minor adviser.

## Bachelor of Music Degree

Students pursuing the B.M. degree must plan their programs to meet the following requirements:

1. Complete all General Education requirements as specified earlier in this catalog, including six hours of MUS 141, 142, 143, Music Literature and Styles I, II, III.

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. Two or three credit hours (where applicable) 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.

#### **Instrumental Emphasis (Performance)**

Required Courses: MUS 100, 101, 102, 103, 141, 142, 143; six hours class piano 160, 161, 162, 260, 261, 262, or Individual Instruction in Piano 171, 271, 371, 471; 201, 202, 203, 240, 241, 242, 301, 302, 303, 320, 321, 322, 402, 403, 422 (Orchestral Excerpts Class); 423 or 425; 449, twenty-six hours of applied music, twelve hours of major musical organizations and twelve hours of small ensembles. (MUS 141, 142, and 143 may be used as part of the sixty hours of required General Education.)

#### **Voice Emphasis (Performance)**

Required Courses: MUS 100, 101, 102, 103, 141, 142, 143; six hours class piano 160, 161, 162, 260, 261, 262 or Individual Instruction in Piano 171, 271, 371, 471; 185, 285, 385, 485, 201, 202, 203, 240, 241, 242, 301, 302, 303; 323, 324 or 424; 325, 402, 441, 442, 445, 446, 447, twenty-six hours of applied music, twelve hours of major musical organizations, twenty-seven to thirty hours of languages, twelve to fifteen hours of music electives. (MUS 141, 142, and 143 may be used as part of the sixty hours of required General Education.)

#### **Piano Emphasis (Performance)**

Required Courses: MUS 100, 101, 102, 103, 134, 234, 334, 434, 141, 142, 143, 170, 270, 370, 470, 171, 271, 371, 471, 201, 202, 203, 240, 241, 242, 301, 302, 323, 324, 401, 402, 403, 404, 405, 406, 424, 437, 438, 439, 461, 462, 463, twelve hours of major musical organizations. (MUS 141, 142, and 143 may be used as part of the sixty hours of required General Education.)

#### **Theory and Composition Emphasis**

Required Courses: MUS 100, 101, 102, 103, 141, 142, 143; six hours of class piano 160, 161, 162, 260, 261, 262 or twelve hours of Individual Instruction in Piano 171, 271, 371, 471; 163, 164, 165, 201, 202, 203, 240, 241, 242, 301, 302, 303, 320, 321, 322, 323, 324, 340, 360, 361, 362, 363, 364, 365, 366, 401, 402, 403, 422 (Canon and Fugue), 422 (20th Century Contrapuntal Techniques), 422 (Form and Analysis), 177, 277, 377, 477, twelve hours of major musical organizations. (MUS 141, 142, and 143 may be used as part of the sixty hours of required General Education.)

Students wishing to enter this program in the freshman year must submit to the Department of Theory and Composition evidence of prior training in the area. This evidence should consist of compositions, high school credits earned in theory, text books used, etc. A personal interview with a member of Theory and Composition staff should be arranged if at all possible.

Students entering this program in the freshman year may divide the 24 hours of Individual Instruction in Composition into one hour per quarter the first year, two hours per quarter the next two years, and three hours per quarter the final year. Students entering this program in the sophomore year may divide the 24 hours into two hours per quarter the sophomore year and three hours per quarter the last two years.

Students planning to enter this program in the sophomore year should devise a schedule for the freshman year which could serve as the basis for one of the other areas of emphasis, the first year of all programs being quite similar.

## Bachelor of Arts with Teacher Preparation

Students pursuing the B.A. degree with a major in Music Education for the purpose of teaching must plan their programs to meet the following requirements:

1. Complete all General Education requirements as specified earlier in this catalog, including six hours of MUS 141, 142, 143, Music Literature and Styles I, II, III.
2. Professional Teacher Education, 31 hours as listed on page 35.
3. The required courses listed for the Instrumental Emphasis or the Vocal, Piano and General Emphasis.
4. One hour of applied music credit to be earned each quarter in 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, Laboratory Orchestra, University Symphony Orchestra, Chamber Orchestra, Mixed Concert Choir, University Singers, University Chorus, Women's Concert Choir, or Varsity Men's Glee Club).
5. Meet all music performance and recital attendance requirements as listed in the respective departmental Applied Music and Performance Handbook.
6. Electives to meet requirements for graduation.
7. Meet requirements for Admission to the Professional Teacher Education Program.
8. Four hours of credit of Marching Band is required for all male Bachelor of Arts degree (with teacher preparation) students.

### Instrumental Emphasis

*Required courses:* MUS 100, 101, 102, 103, 141, 142, 143; six hours of Class Piano 160, 161, 162, 260, 261, 262; or electives (upon evidence of piano proficiency) 163, 164, 165, 201, 202, 203, 210, 240, 241, 242, 301, 302, 303, 312, 313, 320, 321, 322, 360, 361, 362, 363, 364, 365, 366, 412, 443, eleven hours of applied music, eleven hours of major musical organizations, and eight hours of

*Music electives* to be selected from MUS 206, 314, 317, 319, 323, 326, 340, 401, 410, 411, 444, 449. (MUS 141, 142, and 143 may be used as part of the sixty hours of required General Education.)

### Vocal, Piano, and General Emphasis

*Required courses:* MUS 100, 101, 102, 103, 141, 142, 143; three hours of Class Piano 160, 161, 162 and/or 260, 261, 262 or three hours of Individual or Class Instruction in Piano (for voice majors); 201, 202, 203, 210, 240, 241, 242, 301, 302, 303, 310, 311, 313, 314, 323, 324, 367, 368, 369, eleven hours of Applied Music, eleven hours of Major Musical Organizations, and sixteen hours of

*Music electives* to be selected from MUS \*185, \*285, \*385, \*485, 206, 317, 319, 323, 325, 326, 401, 404, 405, 406, 410, 437, 438, 439, 441, 442, \*\*445, \*\*446, \*\*447, and 461, 462, 463. (MUS 141, 142, and 143 may be used as part of the sixty hours of required General Education.)

\*Maximum of ten hours applicable toward the sixteen required hours of electives.

\*\*Requires a proficiency level II in piano or voice as a prerequisite.

## Admission to the Professional Teacher Education Program

In addition to meeting the general requirements for formal admission to the Professional Teacher Education Program at close of the sophomore year the student majoring in music must:

1. Demonstrate an acceptable level of performance on his major instrument or voice. Such ability will be evaluated by a jury examination conducted by the music faculty, and through the scheduled performances of the student in the weekly recital series.

2. Pass a proficiency examination in functional piano in which he will demonstrate his ability to play, at sight, piano accompaniments suitable for community and classroom singing.

3. Demonstrate to a jury of the music faculty his ability to read music vocally at sight with the use of solfege.

4. Show acceptable aptitude for music study as demonstrated by his record in the required freshman and sophomore music courses—Sight-singing and Theory, Harmony, and Literature and Styles.

5. Demonstrate to the satisfaction of a reviewing music education committee, professional promise as a teacher.

6. Submit transcript with PTE Admission Application.

7. Meet all music performance and recital attendance requirements as listed in the respective departmental Applied Music and Performance Handbook.

## Combined Degrees Program

Admission to candidacy for the combined Bachelor of Arts and Bachelor of Music degrees is based upon the recommendation of a School of Music faculty reviewing committee. The student who desires to complete the combined degrees must demonstrate outstanding musical talent. Application for admission to the combined degree program must take place prior to the close of the student's second year in the university.

### Requirements:

1. Complete the requirements for the B.A. degree in Music Education.

2. Present a complete graduation recital.

3. Meet all music performance and recital attendance requirements as listed in the respective departmental Applied Music and Performance Handbook.

## Instrumental Major

1. Complete a minimum of an additional 15 hours in applied music and 12 hours in large and small ensembles.

2. Complete the following courses: MUS 100, 177, 277, 377, 477, 402, 403; 423 or 425; 449.

## Voice Major

1. Complete a minimum of an additional 12 hours in applied music.

2. Complete two years of French or German and one additional year of a second language.

3. Complete the following courses: MUS 100, 185, 285, 385, 485, 325, 402, 424, 441, 442, 445, 446, 447.

## Music Education and Elementary Education

### (Double Major Program)

Students pursuing the B.A. degree with a double major in Music Education and Elementary Education must plan their programs to meet the following requirements:

1. Complete all General Education requirements as specified earlier in this catalog.

2. 54-hour major in music as follows: MUS 100, 101, 102, 103; three hours class piano 160, 161, 162, 260, 261, 262 or Individual Instruction in Piano 171, 271, 371, 471; six hours applied music, six hours major ensemble, 201, 202, 206; 320 or 323.

3. Conditions for admission to the program: (1) Current registration as a major in Elementary Education or Special Education; (2) Proficiency in music: (a) successful completion of Music 101, 102, 103 (an average grade of "C" or above); (b) successful completion of a proficiency examination in music skills administered by the music faculty.

4. The student teaching assignment shall include nine hours experience in music teaching in the elementary classroom under an approved music supervisor.

5. Meet all music performance and recital attendance requirements as listed in the applied Music and Performance Handbook.

6. The following courses in the major:

#### **Music History and Literature**

Elect 5-6 hours from the following courses: MUS 140, 141, 142, 143.

#### **Music Theory**

Elect 5-6 hours from the following courses: MUS 203, 301, 302, 303, 401.

#### **Music Education**

Elect 6-7 hours from the following courses: MUS 210, 317, 318, 319, 323 (required of Special Education Double Major), 326, 360.

#### **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*.

### **Applied Music**

The music major must demonstrate continuous growth in his ability to perform on his major instrument. Each student will be expected to appear frequently as a soloist in the weekly student recital series. During the senior year he will be presented in joint recital with other graduating seniors. Such proficiency in performance requires continuous study of the major instrument, or voice, under the 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.A.) or 3. the Non-music Major.

Refer to the "Handbook" for specific references.

100-200 series—Introductory work in the fundamentals of the chosen performance medium—technical studies and repertoire will be selected according to the student's need. FOR FRESHMEN AND SOPHOMORES.

300-400 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.

- 169, 269, 369, 469. INDIVIDUAL PERFORMANCE IN VOICE FOR NON-VOICE MUSIC MAJOR. *One hour credit.*
- \*170, 270, 370, 470. INDIVIDUAL PERFORMANCE IN VOICE. *One-three hours credit.*
- \*171, 271, 371, 471. INDIVIDUAL PERFORMANCE IN PIANO. *One-three hours credit.*
- \*172, 272, 372, 472. INDIVIDUAL PERFORMANCE IN ORGAN. *One-three hours credit.*
- \*173, 273, 373, 473. INDIVIDUAL PERFORMANCE IN STRINGS. *One-three hours credit.*

- \*174, 274, 374, 474. INDIVIDUAL PERFORMANCE IN WOODWINDS. *One-three hours credit.*  
 \*175, 275, 375, 475. INDIVIDUAL PERFORMANCE IN BRASS. *One-three hours credit.*  
 \*176, 276, 376, 476. INDIVIDUAL PERFORMANCE IN PERCUSSION. *One-three hours credit.*  
 \*177, 277, 377, 477. INDIVIDUAL INSTRUCTION IN COMPOSITION. *One-three hours credit.*  
 \*178, 278, 378, 478. INDIVIDUAL PERFORMANCE IN HARP. *One-three hours credit.*  
 \*179, 279, 379, 479. INDIVIDUAL PERFORMANCE IN GUITAR. *One-three 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 music organization in which his instrument normally belongs—band, orchestra, or choir. Piano and organ majors may select either a vocal or an instrumental organization for a minimum of eight hours. The remaining three quarter hours will be in a piano ensemble.

Credit for all music performance organizations will be entered on the student's registration under the title and course number appearing below:

100 series—Freshmen  
 200 series—Sophomores  
 300 series—Juniors  
 400 series—Seniors

- \*130, 230, 330, 430. STRING ENSEMBLE. *One hour credit.*  
 \*131, 231, 331, 431. BRASS ENSEMBLE. *One hour credit.*  
 \*132, 232, 332, 432. WOODWIND ENSEMBLE. *One hour credit.*  
 \*133, 233, 333, 433. PERCUSSION ENSEMBLE. *One-hour credit.*  
 \*134, 234, 334, 434. PIANO ENSEMBLE. *One hour credit.*  
 \*135, 235, 335, 435. GUITAR ENSEMBLE. *One hour credit.*  
 \*180, 280, 380, 480. MIXED CONCERT CHOIR. *One hour credit.*  
 \*181, 281, 381, 481. UNIVERSITY CHORUS. *One hour credit.*  
 \*182, 282, 382, 482. UNIVERSITY SINGERS. *One hour credit.*  
 \*183, 283, 383, 483. WOMEN'S CONCERT CHOIR. *One hour credit.*  
 \*184, 284, 384, 484. VARSITY MEN'S GLEE CLUB. *One hour credit.*  
 \*185, 285, 385, 485. OPERA WORKSHOP. *One-three hours credit.*  
 \*186, 286, 386, 486. CHORUS AND ORCHESTRA WORKSHOP. *One hour credit.*  
 \*190, 290, 390, 490. SYMPHONIC WIND BAND. *One hour credit.*  
 \*191, 291, 391, 491. CONCERT BAND. *One hour credit.*  
 \*192, 292, 392, 492. MARCHING BAND. *One hour credit.*  
 \*193, 293, 393, 493. VARSITY BAND. *One hour credit.*  
 \*194, 294, 394, 494. JAZZ ENSEMBLE. *One hour credit.*  
 \*195, 295, 395, 495. UNIVERSITY BRASS CHOIR. *One hour credit.*  
 \*196, 296, 396, 496. UNIVERSITY SYMPHONY ORCHESTRA. *One hour credit.*  
 \*197, 297, 397, 497. CHAMBER ORCHESTRA. *One hour credit.*  
 \*198, 298, 398, 498. LABORATORY ORCHESTRA. *One hour credit.*

\*May be used by non-music majors as part of the 60 hours of required General Education.

**HONORS**—The School of Music participates in the Honors Program. See page No. 37.

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## SCHOOL OF NURSING

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**L. Elaine McMinn, Dean**

**Professor:** McMinn.

**Associate Professors:** Sawatzky, Thompson.

**Assistant Professors:** Babich, Biegel, Bossart, Hallan, Heckman, Hurlock, Payton, Stroh, Swingle, Szigeti.

**Instructors:** Browne, Hoffman, Menousek, Perry, Taylor, Waers, Yelton.

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

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

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

1. Meet all General Education requirements as specified earlier in this catalog.

2. Contributory and supporting courses:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
CHEM	104 -Principles of Chemistry I .....	5	
CHEM	105 -Principles of Chemistry II .....	5	
CHEM	130 -Introductory Organic Chemistry .....	5	
CHEM	281 -Biochemistry .....	5	
PHYS	150 -Principles of Physics .....	5	
ZOO	105 -Vertebrate Zoology .....	5	
ZOO	121 -Mammalian Anatomy .....	5	
ZOO	250 -Human Physiology .....	5	
BIO	261 -Medical and Public Health Microbiology .....	5	
PSY	120 -General Psychology .....	3	
PSY	121 -General Psychology and Human Performance .....	3	
PSY	131 -Human Growth Processes and Developmental Tasks .....	5	
PSY	342 -Teaching Learning Process .....	3	
SOC	100 -Principles of Sociology .....	5	
HEC	251 -Nutrition I .....	3	
HEC	353 -Diet Therapy .....	3	

3. Nursing Courses:

<i>Course No.</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
NURS	100 -Orientation to Nursing .....	2	
NURS	300 -Basic Principles of Nursing (summer only) .....	10	
NURS	301 -Pharmacology (summer only) .....	3	
NURS	302 -Maternity Nursing .....	10	
NURS	303 -Medical-Surgical Nursing .....	10	
NURS	304 -Community Mental Health Nursing .....	10	
NURS	305 -Human Relations in Nursing .....	3	
NURS	400 -Community Nursing .....	10	
NURS	401 -Public Health Sciences and Resources .....	3	
NURS	402 -Nursing of Children .....	10	
NURS	403 -Advanced Medical-Surgical Nursing .....	11	
NURS	404 -Trends in Nursing .....	3	
NURS	405 -Emergency Nursing (Elective) .....	3	

4. Electives sufficient to complete requirements for graduation.

### Policy for Admission of Students to the Nursing Major

**Lower Division.** Applicants seeking admission to the School of Nursing must meet the general admission requirements of the university. It is highly recom-

mended 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.

Applicants who have had chemistry in high school may challenge Chemistry 104 and Chemistry 105. Applicants wishing to challenge these courses should do so during the summer preceding fall registration. See Challenge system page 12 of this catalog for further details.

In addition to the general health requirements, applicants to the nursing program must bring the following immunizations up to date before entering the university: smallpox, adult diphtheria-tetanus, and polio.

Application is made to the University of Northern Colorado Office of Admissions. Each year the number of applicants exceeds the number of students that can be admitted to the School of Nursing. Applicants are urged to submit their applications at least six months prior to the desired admission date. Early applicants will be given first consideration. Applicants who are accepted for admission are enrolled in the required pre-nursing program.

**Upper Division.** After completing 60 hours of the required pre-nursing curriculum students must make application to the School of Nursing to continue the upper division nursing program. Application forms may be obtained from the School of Nursing Office. Completed applications must be submitted no later than the first week of the quarter preceding the desired admission date. Only those applicants who have demonstrated by their qualifications that they are well suited for the nursing profession will be considered. The number of students admitted is based on available spaces. Applicants who complete pre-nursing requirements at the University of Northern Colorado are considered first.

A nursing admissions and promotions committee will review all applications. Educational records, advisor's recommendations, health records and all available information about university performance and suitability for nursing will be used to determine eligibility for admission.

The following criteria will be utilized in screening applications to the upper division nursing major:

1. Applicants must be able to satisfactorily complete all lower division course requirements before enrolling in Nursing 300 and Nursing 301.
2. Applicants must have a cumulative g.p.a. of 2.25 at the University of Northern Colorado.
3. Consistency of performance at the lower division will be considered. Special attention will be given to the number of D's earned in lower division courses.
4. Results of the health examination must be satisfactory. (See health policies for nursing majors, page 128 of this catalog.)
5. An interview with the applicant's advisor must be completed.
6. Applicants must have demonstrated personal and social qualities appropriate for professional nursing. These include: intellectual curiosity, self direction, motivation to master the knowledge and skills required to practice nursing, emotional stability, dependability, and ability to work well with others.

**Graduate Nurse Students.** Graduates of state approved diploma or associate degree programs who are currently licensed to practice as registered nurses are eligible for admission to the nursing program. The registered nurse student will follow the same admission, progression and curriculum requirements as the basic baccalaureate student. Graduate nurse students may request placement examinations in selected nursing courses after formal admission to the University of Northern Colorado. Satisfactory scores on these examinations will result in recorded earned credit towards graduation.

#### **Policy for Promotion and Graduation of Nursing Students**

**Promotion.** An average of 2.0 must be maintained each quarter of the upper division nursing program for promotion without condition. A grade below 2.0

in a clinical nursing course will place a student on probation. A second grade below a 2.0 in a clinical nursing course will terminate the student from the program.

At the end of each quarter of the nursing major the student's progress is considered by the nursing admissions and promotions committee. Accomplishments in theory and practice, relationships with patients and others, and general development are considered. The School of Nursing faculty reserves the right to place on probation or to require withdrawal from the nursing major any student who, in their professional judgment, fails to satisfy the requirements of scholarship, health, nursing performance, or personal suitability for nursing.

**Graduation.** The degree of Bachelor of Science in nursing will be granted by the University of Northern Colorado upon the recommendation of the faculty of the School of Nursing for those who have successfully completed the prescribed curriculum with an average of C or above.

**HONORS**—See page 37.

### **Policies for Attending Nursing Classes**

Attendance is expected at all nursing classes, laboratory and clinical assignments. Excused absence may be granted only upon the permission of the instructor in charge or the Dean of the School. Students who are unable for any reason to report for nursing practice as assigned are required to report to the instructor, or to the School of Nursing office, not less than one hour prior to the time the assignment is scheduled. No unexcused absences are allowed.

Students are responsible to the instructor in charge for making up any work missed due to illness, leave of absence or non-attendance for any reason. The number of excused absences allowed for each course will be determined by the instructor in charge on the basis of the nature of the content and activities missed and the ability of the student. Students who are unable to meet the objectives of a clinical nursing course due to excessive excusable absences will be required to withdraw and repeat the course. If the course is not offered in the succeeding quarter it may be necessary for the student to discontinue further study until the course is offered again.

### **Health Policies for Nursing Majors**

Within the academic year preceding the first clinical nursing course a conference with a nurse in the Student Health Service is required. The student's admission physical examination will be reviewed. A nursing assessment of the student's health status will be made. Students who show evidence of health problems will be required to have a physical examination by a physician.

In addition to the Nursing Conference the following are required:

1. Immunizations: smallpox, adult tetanus-diphtheria, and polio. The student's previous immunization record should be checked. A complete series, a booster or no further immunizations may be indicated at this time.
2. Tests: a tuberculin skin test, a large chest x-ray\*, VDRL, and a rubella titer. If the rubella titer is negative, the student will be advised to consult with a physician to determine whether immunization for rubella is indicated.

\*The University does not own an x-ray machine. Chest x-rays will be at the student's expense.

During the quarter the student plans to graduate it is recommended that:

1. The tuberculin skin test be repeated. If the skin test is positive, a large chest x-ray should be taken.
2. The student's immunization record be reviewed and immunizations brought up to date as indicated.

**Additional Expenses for Nursing Majors**

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

<i>Year</i>	<i>Quarter</i>	<i>Item</i>	<i>Amount*</i>
Sophomore	Spring	Uniforms and caps	55.00
		Chest x-ray	10.00
Junior	Summer	White shoes	10-15.00
		Name pin	.50
		Bandage scissors	1.50
		Watch with second hand (May be inexpensive)	Variable
Senior	Spring	School pin	16.65
		Chest x-ray	10.00

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

Students are responsible for their own transportation to all health facilities where learning experiences are provided. Use and maintenance of a car, a current Colorado driver's license, and liability insurance are required. These are at the student's expense.

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## AEROSPACE STUDIES

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**Lt. Col. John C. Brown, Jr., Chairman**

**Assistant Professor:** Maj. James R. Clark.

**Assistant Professor:** Capt. Charles S. Erwin.

**History.** A four-year Air Force ROTC curriculum was established at Colorado State College Fall Quarter, 1951. The ROTC Vitalization Act of 1964 expanded the traditional four-year curriculum to include a two-year curriculum designed primarily for transfer students. Beginning Fall Quarter, 1964, Air Force ROTC became a voluntary course of study.

**General Information.** The Air Force ROTC offers a two-year and a four-year campus program. Both programs are elective and lead to an Air Force commission. Air Force ROTC commissioned graduates enter active duty in the grade of Second Lieutenant with all pay and allowances of that grade.

Physically qualified graduates receive additional pilot or navigator training and the non-flying officer is given an initial duty assignment in a specialty closely related to his academic major. Women applicants were accepted beginning with the Fall Quarter 1970. Nurses are eligible for the WAF program.

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

## AFROTC Curriculum

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

**Two-Year.** The two-year program requires student participation in six academic undergraduate and/or graduate quarters concurrently with the POC. Students will compete for selection during Fall and Winter Quarters of 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, and (3) six quarters of undergraduate/graduate academic work, and (4) a college degree. Testing information is available at the AFROTC office.

**Flight Instruction Program.** Pilot qualified students receive 36½ hours of flight instruction and ground school during the senior year of the POC. Only males may participate in the flying portion of the FIP. Students possessing a private flying license are excluded from this portion of training.

**Deferment.** The National Selective Service Act authorizes deferment for full-time students enrolled in the AFROTC program.

## 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 based on active duty service. Also, the GMC may be compressed into one year to accommodate students entering out-of-phase.

Freshmen enroll in the following courses:

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

Sophomores enroll in the following courses:

AS 200	U. S. Military Forces in the Contemporary World IV	.....	2
AS 201	U. S. Military Forces in the Contemporary World V	.....	2
AS 202	U. S. Military Forces in the Contemporary World VI	.....	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 Reserve. 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 arranged is within the cadet corps on an individual basis.

Required Professional Officer Courses:

Course No.	Course Title	Hours	Credit
AS 300	Growth and Development of Aerospace Power I	.....	3
AS 301	Growth and Development of Aerospace Power II	.....	3

AS	302—Growth and Development of Aerospace Power III .....	3
AS	400—Concepts of Air Force Leadership .....	3
AS	401—Concepts of Air Force Leadership and Management I .....	3
AS	402—Concepts of Air Force Leadership and Management II .....	3
AS	403—Flight Instruction .....	3*

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

**Staff.** Air Force personnel are assigned by Headquarters, United States Air Force. The Professor of Aerospace Studies (PAS) and instructional staff are highly qualified professional 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.

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## COURSE DESCRIPTIONS

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### AEROSPACE STUDIES

**AS 100. U. S. MILITARY FORCES IN THE CONTEMPORARY WORLD I.**  
*Two hours credit.*

An introductory course presenting the doctrine, mission and organization of the U. S. Air Force and an introduction to strategic offensive forces employed by the U. S. Corps Training is included as a laboratory portion of the course.

**AS 101. U. S. MILITARY FORCES IN THE CONTEMPORARY WORLD II.**  
*Two hours credit.*

A continuing study of doctrine, mission and organization of the U. S. Air Force and an introduction to strategic defensive forces and General Purpose Forces employed by the U. S. Corps Training is conducted as the laboratory portion of the course.

**AS 102. U. S. MILITARY FORCES IN THE CONTEMPORARY WORLD III.**  
*Two hours credit.*

A continuing study of the employment of General Purpose Forces plus an introduction to the employment of Aerospace Support Forces. Corps Training is conducted as the laboratory portion of the course.

**AS 200. U. S. MILITARY FORCES IN THE CONTEMPORARY WORLD IV.**  
*Two hours credit.*

A study of the doctrine, organization and mission of the U. S. Aerospace Support Forces. The course also includes an introduction to alliances and collective security. Corps Training is conducted as the laboratory portion of the course.

**AS 201. U. S. MILITARY FORCES IN THE CONTEMPORARY WORLD V.**  
*Two hours credit.*

A continuing study of alliances and collective security and their relation to national objectives. This study includes expanded coverage on organization and role of the military instrument of national power. Corps Training is conducted as the laboratory portion of the course.

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### **AS 202. U. S. MILITARY FORCES IN THE CONTEMPORARY WORLD VI.** *Two hours credit.*

A study of Soviet and Chinese Defense Policies. The course also includes an introduction to the formulation of U. S. Defense Policy. Corps Training is conducted as the laboratory portion of the course.

### **AS 300. GROWTH AND DEVELOPMENT OF AEROSPACE POWER I.** *Three hours credit.*

Prerequisite, Enrollment in POC. A survey course about the development of airpower in the United States, including the beginning of manned flight, from Kitty Hawk to Versailles, the Inter-war years, development of an independent Air Force, Korea, and the challenges and changes. Development of communicative skill is a major goal of this course.

### **AS 301. GROWTH AND DEVELOPMENT OF AEROSPACE POWER II.** *Three hours credit.*

Prerequisite, Enrollment in POC. A study of Aerospace power today including concepts, doctrine and employment of aerospace forces; the future of manned aircraft and man's role in a flying air force, types and uses of future aircraft and technological developments.

### **AS 302. GROWTH AND DEVELOPMENT OF AEROSPACE POWER III.** *Three hours credit.*

Prerequisite, Enrollment in POC. A study of astronautics, space operations, and the future development in space. The development of communicative skill is a major goal in this course.

### **AS 400. CONCEPTS OF AIR FORCE LEADERSHIP.** *Three hours credit.*

Prerequisite, Enrollment in POC. An introduction to AF teaching methods by way of student participation. A study of human behavior and human relations as they affect AF leadership. The need for discipline and the study of non-judicial punishment and the courts-martial system.

### **AS 401. CONCEPTS OF AIR FORCE LEADERSHIP AND MANAGEMENT I.** *Three hours credit.*

Prerequisite, Enrollment in POC. A study of the variables affecting leadership including the trait, situational and interactional approaches. The study of military management. Discusses planning, organizing, coordinating, directing and controlling.

### **AS 402. CONCEPTS OF AIR FORCE LEADERSHIP AND MANAGEMENT II.** *Three hours credit.*

Prerequisite, Enrollment in POC. 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.

### **AS 403. FLIGHT INSTRUCTION.** *Three hours credit.*

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.

## **ANTHROPOLOGY**

### **\*ANT 100. GENERAL ANTHROPOLOGY.** *Five hours credit.*

The nature and scope of anthropology, organic man, and the nature of culture. Emphasis upon cultural anthropology.

*All of the following Anthropology courses have as a prerequisite ANT 100.*

- \*ANT 120. WORLD ETHNOLOGY.** *Three hours credit.*  
Ethnologies are selected from various culture areas throughout the world. Emphasis is upon strategies for analysis of ethnographic data.
- \*ANT 121. ABORIGINAL CULTURES OF NORTH AMERICA.** *Three hours credit.*  
Ethnographic study of North American Indian cultures between the time of contact and prior to massive acculturational influences.
- \*ANT 122. SOUTH AMERICAN INDIANS.** *Three hours credit.*  
Study of aboriginal peoples of South America.
- \*ANT 220. SEMINAR IN MODERN ETHNOLOGY.** *Three to nine hours credit.*  
A study and analysis of selected modern ethnographies to present up-to-date materials and problems in various culture areas.
- \*ANT 221. FOLK CULTURES.** *Four hours credit.*  
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. Special emphasis on the peasant societies of Middle and South America.
- \*ANT 222. CULTURAL ADAPTATIONS OF NOMADISM.** *Four hours credit.*  
A study of the adaptations made by nomadic peoples to the variety of environments they encounter and to the semipermanent nature of their locations.
- \*ANT 240. ARCHAEOLOGY OF NORTH AMERICA.** *Four hours credit.*  
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.
- \*ANT 241. ARCHAEOLOGY—FIELD METHODS.** *Two-eight hours credit.*  
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.
- \*ANT 242. ARCHAEOLOGY OF SOUTH AMERICA.** *Three hours credit.*  
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.
- \*ANT 260. PHONEMIC ANALYSIS.** *Four hours credit.*  
The theory and practice of analyzing sound systems in selected languages.
- \*ANT 270. PHYSICAL ANTHROPOLOGY.** *Four hours credit.*  
A general survey of the subfields of physical anthropology: primatology; human paleontology, variation and adaptation. The course will include an introduction to evolutionary theory and population genetics as they apply to problems of human origins and present day racial variation.
- \*ANT 280. PRIMITIVE RELIGIONS.** *Three hours credit.*  
The religions of the peoples not involved in the Indic complex of Hindu-Buddhist or the Judaic tradition of the Mid-East.
- \*ANT 281. PRINCIPLES OF SOCIAL ORGANIZATION.** *Four hours credit.*  
Basic principles of social structure, with emphasis on kinship.
- \*ANT 300. NORTH AMERICAN INDIANS IN CONTEMPORARY SOCIETY.** *Four hours credit.*  
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.

- \*ANT 320. ETHNOLOGY OF MIDDLE AMERICA.** *Four hours credit.*  
Indian, mestizo, and urban cultures of Middle America; interethnic relationships; acculturation trends.
- \*ANT 321. NORTH AFRICA AND THE MIDDLE EAST.** *Three hours credit.*  
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.
- \*ANT 322. OCEANIA.** *Four hours credit.*  
Peoples of Polynesia, Melanesia and Micronesia.
- \*ANT 323. INDIA AND PAKISTAN.** *Three hours credit.*  
A study of modern ethnic populations of India, Pakistan and Ceylon, as well as a review of their ancient cultural heritage and religion.
- \*ANT 324. SOUTHEAST ASIA.** *Three hours credit.*  
A study of modern ethnic populations and primitive peoples inhabiting Burma, Thailand, Laos, Cambodia and Vietnam, as well as the Philippine Islands and Indonesia.
- \*ANT 325. SPANISH AND MEXICAN-AMERICAN CULTURES IN AMERICAN SOUTHWEST.** *Three hours credit.*  
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.
- \*ANT 326. INDIANS OF THE SOUTHWEST.** *Three hours credit.*  
Ethnology of the Pueblo, Navajo, Apache, Yuman tribes and the Pima-Papago groups.
- \*ANT 327. ARCTIC CULTURES.** *Three hours credit.*  
A descriptive survey of the native cultures of the Arctic forests (tiaga) and tundra of Siberia; the Eskimo, Aleut and sub-Arctic cultures of North America; and the Lapps of Scandinavia.
- \*ANT 328. EASTERN ASIA.** *Four hours credit.*  
A study of societies and cultures in Eastern Asia—with special emphasis on the ethnic populations of Tibet, Sinkiang, Mongolia and Korea, and an archaeological-ethnological review of China and Japan.
- \*ANT 331. URBAN ETHNOLOGY.** *Four hours credit.*  
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.
- \*ANT 340. ARCHAEOLOGY OF THE SOUTHWEST.** *Four hours credit.*  
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.
- \*ANT 341. OLD WORLD ARCHAEOLOGY I.** *Four hours credit.*  
The development of Paleolithic, Mesolithic, Neolithic, and The Age of Metal, Cultures of Europe, Africa, and Asia, emphasizing the interpretation of archaeological data, Pleistocene geology, and chronology.
- \*ANT 342. OLD WORLD ARCHAEOLOGY II.** *Four hours credit.*  
A survey of the prehistoric foundations and cultural development of civilizations in Egypt, the Near East, and the Indus Valley, as revealed by major archaeological discoveries; theories of cultural evolution and diffusion.
- \*ANT 343. ARCHAEOLOGY OF MEXICO.** *Four hours credit.*  
A comparative study of cultural development in ancient Mexico and Central

America with emphasis on agricultural beginnings, settlement patterns and urbanization, hieroglyphics, calendrical systems, and religious activities. A thorough examination of Archaic, Toltec, Aztec, and Maya cultures.

**\*ANT 344. ARCHAEOLOGY OF AFRICA.** *Three hours credit.*

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).

**\*ANT 360. ANTHROPOLOGICAL LINGUISTICS.** *Four hours credit.*

The study of speech and language within the context of anthropology. Cognitive categories formed through language, the nature of language, cultural focus in language, linguistic change.

**\*ANT 361. DESCRIPTIVE LINGUISTICS.** *Three hours credit.*

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.

**\*ANT 370. HUMAN EVOLUTION.** *Four hours credit.*

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.

**\*ANT 371. ADVANCED PHYSICAL ANTHROPOLOGY.** *Four hours credit.*

Prerequisite, ANT 270 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.

**\*ANT 372. PRIMATE BEHAVIOR.** *Three hours credit.*

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.

**\*ANT 380. GREAT IDEAS IN ANTHROPOLOGY-SEMINAR.** *Three to nine hours credit. Consult with instructor before enrolling.*

The purpose of the course is to provide information about current important ideas in special fields of anthropology.

**\*ANT 381. ENCULTURATION.** *Three hours credit.*

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.

**\*ANT 382. ACCULTURATION.** *Four hours credit.*

The study of cultures in contact and the influences they have one upon the other.

**\*ANT 383. CULTURE AND PERSONALITY.** *Three hours credit.*

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.

**\*ANT 420. AFRICA SOUTH OF THE SAHARA I: EAST AND SOUTH AFRICA.** *Four hours credit.*

Emphasis will be placed on tribal backgrounds and acculturation that is taking place between European and African systems in East and South Africa.

**\*ANT 421. AFRICA SOUTH OF THE SAHARA II: NIGER-CONGO AREA.** *Four hours credit.*

Emphasis will be placed on tribal backgrounds and acculturation that is taking place between European and African systems in the Niger-Congo drainage systems in Africa.

**\*ANT 422. INDIVIDUAL STUDIES.** *Four hours credit maximum.*  
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.

**\*ANT 431. URBAN POOR.** *Four hours credit.*  
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.

**\*ANT 440. TECHNIQUES OF ARCHAEOLOGY.** *Three hours credit.*  
A review of field methods and laboratory techniques utilized in *prehistoric* archaeology. Special attention paid to stratigraphy, typological analysis, dating techniques, and research publication.

**\*ANT 441. HISTORICAL ARCHAEOLOGY.** *Three hours credit.*  
A review of the methods and techniques of archaeology as applied to the excavation and preservation of *historic* sites. Reconstruction and interpretation of historical archaeological materials.

**\*ANT 470. THE NATURE OF MAN.** *Three hours credit.*  
Prerequisite, ANT 100 and permission of instructor. A study of man as a bio-social 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.

**\*ANT 480. SURVEY OF ANTHROPOLOGICAL THEORY.** *Three hours credit.*  
Seminar on the development of anthropological theory from Tylor to the present. Includes cultural evolution, diffusion and historical reconstruction, functionalism, and psychologically oriented theories.

**\*ANT 481. ANTHROPOLOGICAL THEORY I.** *Three hours credit.*  
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.

## ASTRONOMY

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

**\*AST 100. GENERAL ASTRONOMY.** *Four hours credit. (Three hours lecture, two hours laboratory.)*  
The development of man's understanding of the universe and his place in it. No mathematics background required.

**\*AST 301. PRINCIPLES OF ASTRONOMY I.** *Four hours credit. (Three hours lecture, two hours laboratory.)*  
The solar system: A survey of the dynamics and physical properties of its members.

**\*AST 302. PRINCIPLES OF ASTRONOMY II.** *Three hours credit.*  
Prerequisite, AST 301. The universe beyond the solar system: stars and stellar systems.

**\*AST 310. OBSERVATIONAL ASTRONOMY.** *Four hours credit. (Two hours lecture, six hours laboratory.)*  
Prerequisite, AST 100 or 301. Equipment, materials, and techniques used in astronomical research. Students will conceive and carry out observational projects.

**\*AST 420. LUNAR AND PLANETARY ASTRONOMY.** *Three hours credit.*  
Prerequisite, AST 302. Techniques and results of space exploration. Students will select topics for intensive individual study.

## BIOLOGY

Courses in biology are administered by the Department of Biological Sciences.

**\*BIO 101. PRINCIPLES OF BIOLOGY.** *Five hours credit. (Three hours lecture, four hours 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.

**\*BIO 102. PRINCIPLES OF BOTANY.** *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisite, BIO 101. A study of plant diversity concerned with morphology, habitats, structure, function, and economic relationships of the plant kingdom.

**\*BIO 103. PRINCIPLES OF ZOOLOGY.** *Five hours credit. (Three hours lecture, four hours 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.

**\*BIO 131. HEREDITY AND YOUR LIFE.** *Three hours credit.*

A course dealing with the principles of heredity as they apply to man, presented on an elementary level which requires no background in science. Topics included are superstitions and facts about human heredity, method of inheritance of common human traits, heredity and race, heredity and environment, effects of radiation on future generations, and eugenic and population problems. Especially appropriate for non-science majors. Credit not allowed toward major or minor in Biological Sciences.

**\*BIO 231. GENETICS.** *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisites, BIO 101, 102, 103. A study of the fundamental laws of heredity and their application to plants and animals, with emphasis on the heredity of man.

**\*BIO 234. POPULATION GENETICS.** *Three hours credit.*

A study of genes in human populations together with a consideration of the influence of various environmental factors on the distribution of these genes. Credit not allowed for major in Biological Sciences.

**\*BIO 240. GENERAL ECOLOGY.** *Three hours credit. (Two hours lecture, three hours 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. Credit not allowed for major in Biological Sciences.

**\*BIO 241. MODIFICATION OF THE HUMAN ENVIRONMENT.** *Two hours credit.*

Prerequisites, BIO 101, 240 or consent of instructor. Discussions regarding the alteration of the earth's surface due to man's planned and unplanned activities and developments. Effects of man-made changes on the world ecosystem. Social implications of environmental change.

**\*BIO 242. ENVIRONMENTAL POLLUTION.** *Three hours credit. (Two hours lecture, three hours laboratory.)*

Prerequisites, BIO 101, 240 or consent of instructor. A study of the various types of pollutants and their effect on man and his environment. Laboratory will include the identification of different pollutants, their source and their effects on biological systems.

**BIO 261. MEDICAL AND PUBLIC HEALTH MICROBIOLOGY.** *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisites, CHEM 130, ZOO 121. This course places emphasis on the micro-

organisms of public health significance, their detection, the diseases they cause and treatment of these diseases. The course is primarily designed for students in dietetics, nursing, pre-medicine, pre-dentistry, and pre-veterinary medicine.

**\*BIO 336. EVOLUTION.** *Three hours credit.*

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.

**BIO 346. AQUATIC BIOLOGY.** *Five hours credit. (Three hours lecture, six hours 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.*

**BIO 350. CELL PHYSIOLOGY.** *Five hours credit. (Three hours lecture, four hours 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.

**BIO 360. BIOLOGY OF MICROORGANISMS.** *Four hours credit. (Three hours lecture, two hours laboratory.)*

A survey of microorganisms with emphasis on basic principles and techniques of microbiology as well as the role of microorganisms in nature, industry, and disease. Credit not allowed for biology major.

**BIO 361. MICROBIOLOGY.** *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisite, CHEM 130 or 332, recommended BIO 350, CHEM 281. A basic course in microbiology (bacteriology, mycology, virology, rickettsiology, and protozoology) with emphasis on the structure, function, physiology, and identification of microorganisms and their relationships to other organisms. The course is recommended for biological sciences and medical technology students.

**BIO 371. TECHNIQUES OF BIOLOGICAL PREPARATION.** *One hour credit (Three hours laboratory.)*

This is a course designed to acquaint the student with the techniques of laboratory preparation and biological investigation. Emphasis is placed on instrumentation and methods of preparing culture media, experimental solutions, and living material. Required of all senior biology majors; to be taken concurrently with SCED 440.

**BIO 391. SEMINAR IN RESEARCH I.** *One hour credit.*

Prerequisite, junior classification. A course designed to acquaint the student with the preliminary procedures in scientific research. Techniques of problem delineation, literature survey and synthesis of data are stressed. Credit not allowed for graduate students. This course is a prerequisite for BIO 392.

**BIO 392. SEMINAR IN RESEARCH II.** *One hour credit.*

Prerequisites, BIO 391 and junior classification. This is a course designed to acquaint the student with the values and techniques of research in biology. An original research project is required. Credit not allowed for graduate students. (A continuation of the research initiated in BIO 391.)

**\*BIO 399. UNDERGRADUATE RESEARCH.** *Maximum ten hours credit.*

Prerequisite, Consent of Instructor. An introduction to the theories and practice of research in the biological sciences. A problem will be selected in one of the following fields: animal ecology, aquatic biology, embryology, bacteriology, mycology, genetics, animal physiology, plant physiology, plant ecology, ornithology, invertebrate zoology, vertebrate zoology, parasitology, vertebrate anatomy, upon consultation with the professor who specializes in that area. Original research will

be conducted by the student and final report will be submitted by him to the supervising instructor.

**\*BIO 401. CONSERVATION OF NATURAL RESOURCES.** *Four hours credit.*  
A study of the relation of natural resources to the development of man and his culture. Units of study are organized on soil, water, forest and forest products. Range management, wildlife, and mineral resources are also covered. The emphasis throughout is on their relation to man.

Field trips required. Credit will not be allowed for students who have taken BIO 501.

**BIO 471. BIOLOGICAL MICROTECHNIQUE.** *Three hours credit. (One hour lecture, six hours laboratory.)*

Prerequisites, BIO 101, 102, 103. The skills of killing, staining and preparing plant and animal tissues for microscopic study.

**BIO 475. BIOLOGICAL PHOTOGRAPHY.** *Two hours credit. (One hour lecture, three hours 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.

## BLACK STUDIES

**\*BLS 101. CRISIS OF IDENTITY.** *Three hours credit.*

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.

**\*BLS 220. BLACK COMMUNITY DEVELOPMENT.** *Three hours credit.*

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.

**\*BLS 240. DYNAMICS OF RACISM.** *Three hours credit.*

The exploration of the socio-psychological variables involved in the production and maintenance of attitudes of bigotry and racism.

**\*BLS 260. THEMES IN AFRO-AMERICAN LITERATURE.** *Three hours credit.*

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.

**\*BLS 322. BLACK NATIONALISM.** *Three hours credit.*

An analysis of the development of Black social movements: nationalism, integration, and separation, including Vesey, Garvey, Malcolm X, and Pan-Africanist movements.

**\*BLS 340. THE BLACK FAMILY.** *Three hours credit.*

A social systems 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.

**\*BLS 350. BLACK PSYCHOLOGY.** *Three hours credit.*

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.

**\*BLS 360. RHYTHM AND THE BLACK EXPERIENCE.** *Three hours credit.*

A study of the historical, thematic, and stylistic development of Black music from ancient Africa to the present.

**\*BLS 380. EDUCATION IN THE BLACK COMMUNITY.** *Three hours credit.*

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.

**\*BLS 392. LINGUISTIC STYLES OF BLACK AMERICA.** *Three hours credit.*

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.

**\*BLS 399. COMMUNITY STUDY PROJECT.** *One to four hours credit.*

A field work course which will require a community-based project in housing, education, or social services.

**\*BLS 420. BLACK URBAN POLITICS.** *Three hours credit.*

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 430. LAW IN THE BLACK COMMUNITY.** *Three hours credit.*

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.

**\*BLS 460. BLACK RELIGION.** *Three hours credit.*

An explorative analysis of historical and social forces in the formation of Black religious institutions in the United States.

**\*BLS 462. THEATRE OF BLACK AMERICA.** *Three hours credit.*

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.

**\*BLS 465. BLACK MEDIA.** *Three hours credit.*

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.

**\*BLS 480. BLACK CURRICULUM DEVELOPMENT.** *Three hours credit.*

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.

**\*BLS 495. INTERPERSONAL COMMUNICATION.** *Three hours credit.*

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.

**BOT 306. ECONOMIC BOTANY.** *Two hours credit.*

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.

**BOT 310. PLANT TAXONOMY.** *Five hours credit. (Three hours lecture, six hours 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.

**BOT 312. IDENTIFICATION OF TREES AND SHRUBS.** *Three hours credit. (Two hours lecture, three hours laboratory.)*

Prerequisites, BIO 101, 102. Identification of native and cultivated trees and shrubs, their distribution and economic importance. Use of keys.

**BOT 323. MORPHOGENESIS OF THE NONVASCULAR PLANTS.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, BIO 101, 102, 103. Structure, morphogenesis and phylogenetic relationships of the algae, fungi, bryophytes and mosses.

**BOT 324. MORPHOGENESIS OF THE VASCULAR PLANTS.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, BIO 101, 102, 103. Structure, morphogenesis and phylogenetic relationships of the ferns, gymnosperms and angiosperms.

**BOT 340. PLANT ECOLOGY.** *Five hours credit. (Three hours lecture, six hours 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.

**BOT 350. GENERAL PLANT PHYSIOLOGY.** *Five hours credit. (Four hours lecture, three hours 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.

**BOT 424. MYCOLOGY.** *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisites, BIO 101, 102. A survey of the groups of fungi including taxonomy, phylogeny, physiology, reproductive patterns and cultural techniques.

**BOT 471. PRINCIPLES OF PLANT CULTURE.** *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisites, BIO 101, 102. A study of greenhouse and garden culture of the higher plants. Emphasis will be on the recognition and control of plant diseases, soil preparation, propagation techniques, and the control of insects.

## BUSINESS

All business courses ending in the ten numbers as designated in the categories below belong to that business area of study:

- 1- 9 General courses
- 10-19 Secretarial courses
- 20-29 Accounting courses
- 30-39 Business Law courses
- 40-49 Insurance courses
- 50-59 Management courses
- 60-69 Marketing courses
- 70-79 Finance courses
- 80-89 Data Processing & Computer courses
- 90-99 Quantitative (mathematical) courses

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**BUS 010. TYPEWRITING I.** *No Credit. (A fee for a four hour credit course will be assessed.)*

A beginning course in typewriting. Emphasis will be given to both personal and vocational use.

**\*BUS 100. THE AMERICAN BUSINESS SYSTEM.** *Five hours credit.*

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.

**BUS 111. TYPEWRITING II.** *Four hours credit.*

Prerequisite, BUS 010 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.

**BUS 112. TYPEWRITING III.** *Four hours credit.*

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.

**BUS 113. SECRETARIAL MACHINES.** *Two hours credit. (Two hours lecture, two hours laboratory.)*

Prerequisite, BUS 112 with a grade of "C" or better. An introduction to machines used in the business world. Emphasis will be on attaining some skill in using various duplicating machines and dictating and transcribing machines.

**BUS 116. BEGINNING GREGG SHORTHAND.** *Four hours credit.*

Prerequisite, BUS 111. Course comprises complete theory of Gregg shorthand. Students who have one year of high school shorthand or the equivalent cannot take this course for credit, but should take BUS 117.

**BUS 117. INTERMEDIATE GREGG SHORTHAND.** *Four hours credit.*

Prerequisite, BUS 116 with a grade of "C" or better, or take dictation at 60 w.p.m. Course comprises intensive review of Gregg shorthand theory. Students who have had two years of high school shorthand or the equivalent may not take this course for credit.

**BUS 118. ADVANCED SHORTHAND.** *Four hours credit.*

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.

**BUS 130. BUSINESS LAW I.** *Three hours credit.*

The first part of this course is designed to give the student a foundation for the study of law. It is concerned with the nature of the law, social forces, law enforcement, and certain aspects of tort and criminal law. The second part consists of the law of contracts and agency and employment.

**BUS 131. BUSINESS LAW II.** *Three hours credit.*

Prerequisite, BUS 130. Using the framework of the Uniform Commercial Code, the discussions will center around the following topics: commercial paper, personal property, bailments, sales, security devices, and insurance.

**BUS 132. BUSINESS LAW III.** *Three hours credit.*

Prerequisite, BUS 130. This course continues the study of business law dealing especially with the topics of partnerships, corporations, real property and the environment, estates, bankruptcy, government and business, consumer protection and special interest topics.

**BUS 150. PRINCIPLES OF MANAGEMENT.** *Three hours credit.*

Prerequisite, BUS 100. An introductory course in management. An analysis of principles and concepts as they relate to the management function. Topics include

traditional principles, external environment of the firm, the behavioral side of management, planning and control, analytical tools for decision making, organization theory and international management.

**BUS 170. PRINCIPLES OF FINANCE.** *Three hours credit.*

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.

**BUS 180. INTRODUCTION TO BUSINESS DATA PROCESSING.** *Three hours credit. (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.

**BUS 181. DATA PROCESSING-UNIT RECORD.** *Three hours credit. (Laboratory arranged.)*

Prerequisite, BUS 180 or consent of instructor. This is a course in using punched card data processing equipment. It is concerned with terminology, concepts, various machines, and applications.

**BUS 190. CALCULATING MACHINES AND BUSINESS ARITHMETIC.** *Three hours credit. (Two hours lecture, two hours laboratory.)*

An office machines course emphasizing the operation and use of printing, electronic, and rotary calculators. Business arithmetic is studied in its applications to the routine business calculations in retail and wholesale businesses.

**BUS 205. BUSINESS COMMUNICATIONS.** *Three hours credit.*

Prerequisite, BUS 010. An introductory course in business communications. Basic principles and practices of business letters, reports, and oral communications are studied and applied.

**BUS 206. FUNCTIONAL BUSINESS WRITING.** *Three hours credit.*

Prerequisite, BUS 205. A study and application of the principles used in effective letter writing for business and industry.

**BUS 210. SECRETARIAL PROCEDURES.** *Three hours credit.*

Prerequisites, BUS 112, 113, 214, 219. Advanced instruction in and practical application of the skills and knowledge needed to be a secretary.

**BUS 214. RECORDS MANAGEMENT.** *Two hours credit.*

Prerequisite, BUS 010 completed satisfactorily. An introduction to various records systems used in the business world. Practice will be provided in the various filing systems also.

**BUS 219. SHORTHAND TRANSCRIPTION.** *Four hours credit.*

Prerequisites, BUS 112 and 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.

**BUS 220. PRINCIPLES OF ACCOUNTING I.** *Four hours credit.*

A beginning course in accounting. Students who have previously studied book-keeping 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.

**BUS 221. PRINCIPLES OF ACCOUNTING II.** *Four hours credit.*

Prerequisite, BUS 220. The emphasis in this course is on principles of accounting as they apply to the measurement and reporting of assets, liabilities, ownership equities, periodic revenues, and periodic expenses.

**BUS 251. JOB ANALYSIS.** *Two hours credit.*

Job analysis is studied as part of a job-study program. Techniques of preparing job analysis forms, collecting information, processing information, and putting the job analysis to work are considered. Job descriptions are developed and analyzed.

**BUS 260. MARKETING.** *Four hours credit.*

Prerequisite, ECON 100. Marketing as an institution and as a managerial variable is studied in this course. Particular attention is placed upon the interdisciplinary contributions made to marketing as they affect the role of the marketing manager.

**BUS 261. SALESMANSHIP.** *Three hours credit.*

An introductory course in the principles and practices of salesmanship. Emphasis is placed on both "in store" and "outside" selling. Selling demonstrations are conducted.

**BUS 281. ELECTRONIC DATA PROCESSING—FORTRAN.** *Three hours credit. (Laboratory arranged.)*

Prerequisite, BUS 180 or equivalent. This course includes an introduction to electronic computers and to Fortran programming. The student's work involves analyzing and developing a program relative to his field of interest.

**BUS 291. BUSINESS STATISTICS I.** *Three hours credit. (Laboratory arranged.)*

Prerequisite, MATH 115 or second year of high school algebra. A course designed to orient the business student to statistics and its use in business affairs. The major emphasis will be on the nature of statistics, decision based on statistics, and collection of business data.

**BUS 292. BUSINESS STATISTICS II.** *Three hours credit. (Laboratory arranged.)*

A continuation of the foundation started in BUS 291. Major emphasis will be on probability, normal distributions, sampling distributions, statistical inference, decision procedures, sampling designs, quality control, and the time series analysis.

**BUS 295. INTRODUCTION TO OPERATIONS RESEARCH.** *Three hours credit. (Laboratory arranged.)*

Prerequisite, MATH 115 or second year of high school algebra. A course of business-oriented mathematical concepts applicable to analysis and control in business. Control of variables in operations, as used in decision making, in the establishment of standards and limits for performance, to maximize operational efficiency. New mathematical techniques related to statistical measurement of economic activity.

**BUS 307. ADMINISTRATIVE BUSINESS REPORTS.** *Three hours credit.*  
Prerequisite, BUS 205. Organization, preparation, and analysis of business and technical reports with emphasis on techniques of collecting, interpreting, and presenting information.**BUS 316. SHORTHAND THEORY FOR TEACHERS.** *One hour credit.*

Prerequisite, Concurrent enrollment with BUED 342. Gregg shorthand theory is thoroughly explored; rules for joining strokes, rules for formation of words, the mastery of brief forms, and the theory underlying the construction of the Gregg shorthand system are covered.

**BUS 320. INTERMEDIATE ACCOUNTING I.** *Four hours credit.*

Prerequisite, BUS 221 and minimum grade point average of 2.00 in BUS 220 and 221. An advanced course in accounting principles stressing statement presentation and valuation problems in presenting current assets and liabilities on the statements.

**BUS 321. INTERMEDIATE ACCOUNTING II.** *Four hours credit.*

Prerequisite, BUS 320. A continuation of BUS 320. Emphasizes problems encountered in valuing investments, plant and equipment, and stockholder's equity for statement presentation.

**BUS 322. INTERMEDIATE ACCOUNTING III.** *Four hours credit.*

Prerequisite, BUS 321. 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.

**BUS 323. COST AND MANAGERIAL ACCOUNTING I.** *Four hours credit.*

Prerequisite, BUS 221. The emphasis in this course is on the accumulation and analysis of financial data for management purposes.

**BUS 324. COST AND MANAGERIAL ACCOUNTING II.** *Four hours credit.*

Prerequisite, BUS 323. This course gives emphasis to both costing for inventory valuation and income determination and costing for planning and control .

**BUS 333. REAL ESTATE LAW.** *Two hours credit.*

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.

**BUS 334. LIFE INSURANCE LAW AND COMPANY OPERATION.** *Three hours credit.*

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)

**BUS 339. PROPERTY INSURANCE LAW.** *Three hours credit.*

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)

**BUS 340. INTRODUCTION TO INSURANCE.** *Three hours credit.*

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.

**BUS 341. LIFE AND HEALTH INSURANCE.** *Three hours credit.*

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)

**BUS 342. SOCIAL AND GROUP INSURANCE.** *Three hours credit.*

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.

**BUS 343. PENSION PLANNING.** *Three hours credit.*

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)

**BUS 344. INSURANCE AND TAXATION.** *Three hours credit.*

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.

**BUS 349. INSURANCE MANAGEMENT.** *Six hours credit. (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

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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)

### **BUS 352. PROCUREMENT.** *Three hours credit.*

Prerequisite, BUS 150. The course deals primarily with the procurement of proper equipment, materials, and supplies for the business firm. Topics discussed include: automation, budgets, procedures, quality, sources of supply, price policies, forward buying, and the legal status of the procurement officer.

### **BUS 354. HUMAN RELATIONS.** *Three hours credit.*

Prerequisite, BUS 150. The course is concerned with both formal and informal human behavior in organizations. Topics include: motivation, interaction, meaning of work, human needs, the personality and organization, perception, attitude behavior, interpersonal conflict, the political nature of organization, T-groups, change agents, and organization health.

### **BUS 355. BUSINESS ORGANIZATIONAL THEORY.** *Three hours credit.*

Prerequisite, BUS 150. The course is concerned with the process of business organization. Areas studied include not only the classical theories of organization, but also organization development, organizational dynamics, communications specialization, the systems approach, centralization, control, the personality and organization structure, and organization mechanics.

### **BUS 360. RETAILING PROMOTIONS.** *Two hours credit.*

Prerequisite, Distributive Education specialization or consent of instructor. A course designed to familiarize the student with the various methods of retail promotion with emphasis placed on visual merchandising, advertising, show card writing, and other retail promotion techniques.

### **BUS 361. RETAIL MANAGEMENT.** *Four hours credit.*

Prerequisite, BUS 260. A study of the basic principles and techniques of retail merchandising and store operation.

### **BUS 362. ADVERTISING** *Three hours credit.*

An introductory course in advertising including a study of psychological principles, advertising media and types of advertising business organizations. Students participate in the preparation of advertising layouts and radio and TV announcements.

### **BUS 363. SALES MANAGEMENT.** *Three hours credit.*

Prerequisite, BUS 261. A study of sales management, the major problems involved, and the relationship of sales management to the total business operation.

### **BUS 364. PHYSICAL DISTRIBUTION.** *Three hours credit.*

Prerequisite, BUS 260. A systems approach to the marketers' problems of physical distribution including inventories, transportation, warehousing, packaging and order processing.

### **BUS 365. MARKETING STRATEGY.** *Four hours credit.*

Prerequisite, BUS 260. This course is designed to familiarize the student with operations of marketing organizations. The understandings and administrations of marketing strategy with regard to consumer analysis, product planning, and promotion.

### **BUS 370. BUSINESS FINANCE.** *Three hours credit.*

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.

### **BUS 371. PERSONAL FINANCE.** *Three hours credit.*

Prerequisite, BUS 100. The course is designed to help those students interested in the problems of allocating income and managing personal finances.

**BUS 372. PRINCIPLES OF REAL ESTATE.** *Three hours credit.*

The course is designed to be a beginning course in the real estate area. Theories and practices that have a significant influence on the real estate market both locally and nationally are discussed. The course will be useful to the consumer, the practitioner in real estate, and the general employee in business.

**BUS 376. CREDIT MANAGEMENT.** *Three hours credit.*

This course provides information and understanding of the credit operations of business for both students of business and practicing businessmen. The various kinds of credit (consumer and commercial) are discussed, and the management of credit by business firms is given emphasis in the course.

**BUS 383. ELECTRONIC DATA PROCESSING—COBOL.** *Three hours credit. (Laboratory arranged.)*

Prerequisite, BUS 180 or equivalent. This course includes an introduction to electronic computer operation and to Cobol programming. The student's work involves analyzing and developing programs relative to his field of interest.

**BUS 385. ELECTRONIC DATA PROCESSING—ADVANCED PROGRAMMING.** *Three hours credit. (Laboratory arranged.)*

Prerequisite, BUS 383. Advanced computer programming techniques with special reference to business problems and applications. This course will require approximately 3 hours of lab per week. This course will make repeated use of the principles presented in 281.

**BUS 388. SYSTEMS AND PROCEDURES.** *Three hours credit.*

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. Analysis of operations by a study of work simplification, work measurement, work sampling. Current development in human engineering, job design, forms control, records management, and company manuals.

**BUS 395. MANAGEMENT SCIENCE—INTRODUCTION.** *Three hours credit.*

Prerequisite, BUS 291 and 295. This course is designed to provide theoretical and practical foundations for the use of linear programming as a "systems approach" to management decision making. The course is quantitative analysis distilled from and based on the descriptive and qualitative aspects of management problems.

**BUS 396. MANAGEMENT SCIENCE—DETERMINISTIC MODELS.** *Three hours credit.*

Prerequisite, BUS 291 and 295. Managerial decision making based upon optimality analysis, microanalytic methods including inventory control, games and strategies, queuing theory and Markov Analysis.

**BUS 397. MANAGEMENT SCIENCE—PROBABLISTIC MODELS.** *Three hours credit.*

Prerequisite, BUS 292 and 295. Decision making in uncertain environments. Application of modern statistical techniques, with particular emphasis on probability models, including Bayesian methods of analysis.

**BUS 406. INTERNSHIP IN BUSINESS.** *Nine hours credit.*

Prerequisite, Consent of Faculty Coordinator. A practical experience course providing opportunities to utilize the theory of academic business administration courses in marketing, finance, insurance, and management situations.

**BUS 420. ADVANCED ACCOUNTING I.** *Four hours credit.*

Prerequisite, BUS 320. This course includes a study of partnerships, installment sales, consignment sales, home and branch office relationships, business combinations, and an introduction to consolidations.

**BUS 421. ADVANCED ACCOUNTING II.** *Four hours credit.*

Prerequisite, BUS 321 and 420. An advanced course dealing with special problems of consolidations, foreign subsidiaries and branches, and fiduciary accounting.

**BUS 423. GOVERNMENTAL AND INSTITUTIONAL ACCOUNTING.** *Four hours credit.*

Prerequisite, BUS 221. Accounting principles and procedures relating to schools, hospitals, and other non-profit institutions and to cities, counties and other governmental units.

**BUS 425. INTERNSHIP IN ACCOUNTING.** *Nine hours credit.*

Prerequisite, Consent of Faculty Coordinator. A practical experience course providing opportunities to utilize the theory of academic accounting courses in accounting practice.

**BUS 427. AUDITING.** *Four hours credit.*

Prerequisites, BUS 291 and 321. This course involves a study of professional ethics and legal responsibility of public accountants, generally accepted accounting principles, and auditing procedures.

**BUS 428. INCOME TAX ACCOUNTING I.** *Three hours credit.*

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 the 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.

**BUS 429. INCOME TAX ACCOUNTING II.** *Three hours credit.*

Prerequisite, BUS 428. A continuation of BUS 428, with emphasis on federal income tax rules applicable to partnerships and corporations.

**BUS 440. BUSINESS INSURANCE.** *Three hours credit.*

Prerequisite, BUS 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)

**BUS 441. ESTATE PLANNING AND LIFE INSURANCE.** *Three hours credit.*

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)

**BUS 442. ANALYSIS OF INSURANCE FUNCTIONS I.** *Three hours credit.*

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)

**BUS 443. ANALYSIS OF INSURANCE FUNCTIONS II.** *Three hours credit.*

A continuation of BUS 442. (Second part of C.P.C.U. Part II)

**BUS 452. OFFICE MANAGEMENT.** *Three hours credit.*

Prerequisite, 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.

**BUS 453. PERSONNEL MANAGEMENT.** *Four hours credit.*

Prerequisite, Bus Core or consent of instructor. A study of the principles and techniques of personnel management with attention given to their psychological foundations.

**BUS 455. SMALL BUSINESS MANAGEMENT.** *Three hours credit.*

Prerequisite, BUS Core or consent of instructor. 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 function.

**BUS 456. BUSINESS POLICIES AND MANAGEMENT.** *Three hours credit.*  
Prerequisite, Bus Core. A course for the senior student designed to integrate the various functional areas of business in terms of policy level decision making. Cases are emphasized.

**BUS 457. PRODUCTION MANAGEMENT.** *Three hours credit.*  
Prerequisites, BUS 292 and 295. A course which emphasizes the methods of production control in industrial processes. The elements of control applied in planning, scheduling, routing of the product in process, and the appraisal and measurement of industrial performance as applied by conventional administrative methods, assisted by data processing and computer-controlled processes.

**BUS 460. MARKET ANALYSIS AND RESEARCH.** *Four hours credit.*  
Prerequisites, BUS 260 and 292. This course is designed to acquaint the student with the typical marketing problems on which research can be used effectively. Analysis of basic research designs and basic methods of collecting data will be covered. Special emphasis will be placed on motivational research, product research, advertising research, marketing research, consumer-demand research and sales control research.

**BUS 461. ADVERTISING STRATEGY.** *Three hours credit.*  
Prerequisite, BUS 362. A study of current advertising strategy, and the functions of advertising departments and agencies leading into the development and management of a complete advertising program.

**BUS 462. MARKETING PROBLEMS.** *Four hours credit.*  
Prerequisites, BUS 365, 460, and senior standing or consent of the instructor. A course dealing with the problems of marketing managers. This senior level course is designed to acquaint the student with current marketing problems. Included will be a study of business cases and/or business games and a current reading of related materials.

**BUS 463. INDUSTRIAL MARKETING.** *Three hours credit.*  
Prerequisite, BUS 260. This course deals with the marketing of industrial goods. The major topics are: planning products and markets, planning strategy, pricing policies, managing distribution, and managerial control.

**BUS 464. INTERNATIONAL MARKETING.** *Three hours credit.*  
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.

**BUS 470. FINANCIAL MANAGEMENT.** *Three hours credit.*  
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.

**BUS 471. INVESTMENTS.** *Three hours credit.*  
Prerequisite, BUS 370 or consent of instructor. 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.

**BUS 472. INVESTMENT ANALYSIS.** *Three hours credit.*  
Prerequisite, BUS 471. An analysis of various types of securities and the management of investment portfolios.

**BUS 473. COMMERCIAL BANK POLICIES AND MANAGEMENT.** *Three hours credit.*  
Prerequisite, BUS 170, 370, and ECON 202. The internal operations of commercial banks, including managerial problems.

**BUS 489. COMPUTER SIMULATION MODELS.** *Three hours credit. (Laboratory arranged.)*

Prerequisites, BUS 291 and 295 and a course in computer programming or consent of instructor. This course introduces the student to the methodology of systems analysis by the use of models and computer simulation. The primary emphasis will be on decision making with special attention devoted to automated applications.

## **BUSINESS TEACHER EDUCATION**

**BUED 340. INTRODUCTION TO BUSINESS TEACHER EDUCATION** (PTE). *Two hours credit.*

Prerequisites, EDF 365 and PSY 341 (or concurrently). A beginning course for future business teachers designed to acquaint students with problems of teaching, the business program, philosophy of business education, common methods for business classes, and devices common to many classes. Observation of high school business classes is one of the course requirements.

**BUED 341. METHODS AND MATERIALS OF TEACHING TYPEWRITING.** (PTE) *One hour credit.*

Prerequisites, BUS 112 and BUED 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.

**BUED 342. METHODS AND MATERIALS OF TEACHING SHORTHAND.** (PTE). *One hour credit.*

Prerequisites, BUS 219, BUED 340 (or concurrently), and concurrently with BUS 316. An introduction to the teaching of shorthand for business teachers with emphasis on devices, techniques, and materials.

**BUED 343. METHODS AND MATERIALS OF TEACHING BOOKKEEPING.** (PTE) *One hour credit.*

Prerequisites, BUS 221 and BUED 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.

**BUED 344. METHODS AND MATERIALS OF TEACHING BASIC BUSINESS SUBJECTS.** (PTE) *One hour credit.*

Prerequisites, BUS 100, BUED 340 (or concurrently), and ECON 100. A course designed to aid beginning business teachers in the teaching of basic business subjects of general business, business law, economics, consumer economics, etc. Material available for such classes will be examined by the class.

**BUED 345. INTRODUCTION TO DISTRIBUTIVE EDUCATION.** (PTE) *Three hours credit.*

Prerequisite, BUED 340. A study of the organization, supervision, and coordination of secondary school, post secondary school, and adult distributive education programs.

**BUED 346. METHODS AND MATERIALS OF TEACHING DISTRIBUTIVE EDUCATION.** (PTE) *Two hours credit.*

Prerequisites, BUED 245 and BUED 340. 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.

**BUED 348. METHODS AND MATERIALS OF TEACHING OFFICE PRACTICE.** (PTE) *One hour credit.*

Prerequisites, BUS 113, 190, 214, and BUED 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.

**BUED 371. EVALUATION IN BUSINESS SUBJECTS (PTE).** *Three hours credit.*

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.

**BUED 430. ECONOMIC EDUCATION SEMINAR (PTE).** *Three hours credit.*  
Prerequisites, ECON 100 and 102. A study of the conceptual framework of economic education for potential teachers, administrators, curriculum specialists, and guidance personnel.**BUED 460. CURRICULUM DEVELOPMENT IN DISTRIBUTIVE EDUCATION.** *Three hours credit.*

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.

**BUED 461. DIRECTION OF DISTRIBUTIVE EDUCATION CLUB ACTIVITIES.** *Two hours credit.*

A course designed to give the aims and objectives of the D. E. clubs and to relate its position to the total overall Distributive Education Program. An emphasis will be placed on the development of program activities and direction of activities.

## CHEMISTRY

**\*CHEM 101. FOUNDATIONS OF CHEMISTRY I.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

This course deals with chemical principles on an elementary level which requires no background in chemistry. When possible, the relationship between chemistry, man, and his environment will be stressed. Recommended as a substitute for SCI 103. Credit will not be allowed toward a chemistry major or minor.

**\*CHEM 102. FOUNDATIONS OF CHEMISTRY II.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, CHEM 101. This course is a continuation of CHEM 101 and will treat such topics as quantitative relationships in chemical reactions, the gas laws, and radiochemistry.

**\*CHEM 103. APPLIED ORGANIC CHEMISTRY.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, CHEM 102 or 104. An introduction to the chemistry of common organic compounds will be presented. The chemistry of fuels, polymers (including textiles), compounds associated with living systems, foods and food additives, and drugs will be stressed. Enrollment restrictions: This course may not be counted for credit toward a major or a minor in chemistry.

**\*CHEM 104. PRINCIPLES OF CHEMISTRY I.** *Five hours credit. (Four hours lecture, three hours 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, nursing, and home economics students.

**\*CHEM 105. PRINCIPLES OF CHEMISTRY II.** *Five hours credit. (Four hours lecture, three hours 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.

**\*CHEM 106. PRINCIPLES OF CHEMISTRY IA.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, one year high school chemistry, three years high school mathematics or MATH 123. The course presents the principles of chemistry rigorously to those students who have a strong background in high school chemistry and mathematics. Descriptive chemistry will be used to illustrate the theoretical basis of modern chemistry. Laboratory work will emphasize quantitative aspects of chemistry.

**\*CHEM 107. PRINCIPLES OF CHEMISTRY IIA.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisites, 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.

**\*CHEM 111. QUALITATIVE ANALYSIS.** *Five hours credit. (Three hours lecture, six hours 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 discussion.

**\*CHEM 130. INTRODUCTORY ORGANIC CHEMISTRY.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, CHEM 105 or 107. 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.

**\*CHEM 281. HUMAN BIOCHEMISTRY.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, CHEM 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.

**CHEM 301. INORGANIC CHEMISTRY I.** *Three hours credit.*

Prerequisite, CHEM 311. This course is an introduction to inorganic chemistry. Literature, atomic structure and chemical bonding will be presented.

**\*CHEM 311. QUANTITATIVE ANALYSIS I.** *Five hours credit. (Three hours lecture, six hours 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.

**\*CHEM 312. QUANTITATIVE ANALYSIS II.** *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisite, CHEM 311. Corequisite, CHEM 452. Special attention is given to the analysis of complex mixtures, and the use of certain analytical instruments.

**\*CHEM 314. INSTRUMENTAL ANALYSIS.** *Three hours credit. (Two hours lecture, three hours 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.

**CHEM 315. FOOD ANALYSIS.** *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisite, CHEM 130. This course deals with some of the techniques of qualitative and quantitative analysis of foods for certain inorganic and organic constituents.

**\*CHEM 332. ORGANIC CHEMISTRY I.** *Five hours credit. (Four hours lecture, three hours 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.

**\*CHEM 333. ORGANIC CHEMISTRY II.** *Five hours credit. (Four hours lecture, three hours 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.

**CHEM 334. ORGANIC CHEMISTRY III.** *Five hours credit. (Four hours lecture, three hours 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.

**CHEM 335. ADVANCED LABORATORY IN ORGANIC CHEMISTRY.** *One hour credit. (Three hours laboratory.)*

Prerequisite, CHEM 334 or taken concurrently. This is a laboratory course dealing with organic preparations, analysis, and structure determination using the more advanced research tools of nmr, gpc, ir, and uv.

**CHEM 350. COMPUTER PROGRAMMING IN CHEMISTRY.** *One hour credit.*

Prerequisites, MATH 125, CHEM 105 or 107. An introduction to programming in the BASIC language and its application to problems in chemistry.

**CHEM 381. ENZYME CHEMISTRY.** *Two hours credit.*

Prerequisite, CHEM 281. A study of the structure and function of enzymes with an emphasis on the kinetics and mechanisms of enzyme-catalyzed reactions.

**CHEM 390. CHEMICAL LITERATURE.** *One hour credit.*

Prerequisite, CHEM 334. This course covers the use of the library and the function of chemical literature. Problems in the use of the library are assigned.

**CHEM 401. INORGANIC CHEMISTRY II.** *Three hours credit.*

Prerequisites, CHEM 301, 452. Corequisite, CHEM 453. The chemistry of typical inorganic compounds will be presented. Emphasis will be placed on the relationship of bonding and structure to chemical properties.

**CHEM 402. LABORATORY IN INORGANIC CHEMISTRY.** *One hour credit. (Three hours laboratory.)*

Prerequisite, CHEM 301. The student will perform experiments which will explore the structure, bonding and chemical properties of inorganic substances.

**CHEM 411. QUANTITATIVE ANALYSIS.** *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisites, MATH 123 and CHEM 105 or 107. Lectures treat the equilibria existing in solutions of acids, bases, and slightly soluble salts, and the application of such equilibria to gravimetric and acid-base and volumetric precipitation analysis. Laboratory work consists of illustrating these three types of analyses. Students having credit in any quantitative analysis course must obtain permission of instructor before enrolling in this course.

**CHEM 414. INSTRUMENTAL METHODS OF ANALYSIS.** *Five hours credit. (Three hours lecture, six hours 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.

**CHEM 421. ELEMENTS OF GLASS BLOWING.** *One hour credit. (Three hours laboratory.)*

Demonstrations and practice in the elementary operations of glass blowing; the construction and repair of borosilicate glass laboratory equipment.

**CHEM 431. ORGANIC QUALITATIVE ANALYSIS.** *Three hours credit. (One hour lecture, six hours laboratory.)*

Prerequisite, CHEM 334. This course is an advanced laboratory course in organic chemistry. The identification of organic compounds by classical and modern spectral methods constitutes the laboratory work. Lecture will consider theory and technique of analysis.

**CHEM 451. PHYSICAL CHEMISTRY I.** *Four hours credit.*

Prerequisites, CHEM 333, MATH 133, PHYS 267. Corequisites, CHEM 311, 454. This course is an advanced study of the theoretical principles upon which chemistry is based. The properties of the gaseous, liquid, and solid states, the principles of thermodynamics and thermochemistry and the theories of atomic and molecular structure are considered.

**CHEM 452. PHYSICAL CHEMISTRY II.** *Four hours credit.*

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.

**CHEM 453. PHYSICAL CHEMISTRY III.** *Four hours credit.*

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.

**CHEM 454. PHYSICAL CHEMISTRY I LABORATORY.** *One hour credit.*

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.

**CHEM 455. PHYSICAL CHEMISTRY II LABORATORY.** *One hour credit.*

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.

**CHEM 456. PHYSICAL CHEMISTRY III LABORATORY.** *One hour credit.*

Corequisite, CHEM 453. This course is a continuation of CHEM 455 and will deal principally with the concepts covered in CHEM 453.

**CHEM 457. SELECTED TOPICS IN PHYSICAL CHEMISTRY.** *Two hours credit.*

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.

**CHEM 481. PHYSICAL BIOCHEMISTRY.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, CHEM 334, 453 (or taken concurrently.) The physical and organic bases of modern biochemistry will be studied. Enzyme chemistry, the

physical chemistry of macromolecules, and the molecular organization of the cell will be emphasized.

**CHEM 482. GENERAL BIOCHEMISTRY I—THE CHEMISTRY OF BIOLOGICAL COMPOUNDS.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, One year of organic chemistry or its equivalent. An introduction to the chemistry of biologically important compounds. The chemistry of the organic compounds in the living system will be stressed, but bioinorganic chemistry will be included.

**CHEM 483. GENERAL BIOCHEMISTRY II—INTERMEDIARY METABOLISM.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, CHEM 482 or its equivalent. A detailed study of the chemistry of living processes. The regulation of intermediary metabolism will be considered.

**CHEM 490. SENIOR RESEARCH.** *Two hours credit. (Minimum four hours credit, maximum six hours credit.)*

Prerequisites, CHEM 334, 453. An introduction to research in chemistry. The student will initiate and pursue an independent original investigation. A paper and oral presentation of his work are required. Weekly conferences with instructor are required. The student may earn a maximum of six hours credit.

**CHEM 495. SEMINAR IN TEACHING CHEMISTRY.** *Two hours credit.*

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.

## COLLEGE STUDENT PERSONNEL WORK

**\*CSPW 410. CONTEMPORARY DRUG SCENE.** *Two hours credit.*

Prerequisite, permission of the instructor. Class trains students to work constructively with individuals desiring drug information or help with drug problems. Class centers on dissemination of drug information, introduction to and utilization of community and university resources, and current research on drug use and crises intervention techniques.

**\*CSPW 423. SUICIDOLOGY: CRISIS INTERVENTION.** *Three hours credit.*

The course is an examination of scientific principles related to suicidology and crisis intervention and includes a 60 hour practicum working on the hot line telephone. Students enrolled in the course are expected to read scientific materials related to the concepts of suicidology, drug abuse and community resources. Prerequisite, permission of the instructor.

## COMMUNICATIONS

**\*COM 101. ELEMENTARY COMPOSITION I.** *Three hours credit.*

The first of the two quarters of elementary expository writing, with introduction to functional grammar, sentence structure, punctuation, and paragraph organization.

**\*COM 102. ELEMENTARY COMPOSITION II.** *Three hours credit.*

Prerequisite, COM 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.

## EARTH SCIENCE

**ESCI 100. INTRODUCTION TO EARTH SCIENCE TEACHING.** *Three hours credit.*

This course is designed to introduce beginning students in the teacher education programs to the broad aspects of the field of Earth Science, to present unifying concepts and principles of the total program, and to introduce students to the teaching of Earth Science.

**ESCI 499. SEMINAR IN EARTH SCIENCE.** *Two hours credit.*

Prerequisite, consent of student's major adviser. The final course for Earth Sciences majors in the teacher education program. It will provide students with an opportunity to investigate and discuss earth science topics of special interest beyond the scope of existing departmental course offerings, as well as problems which might be encountered in teaching earth science in the schools. Special attention will be given to the unifying concepts and principles of earth science.

## ECONOMICS

**\*ECON 100. INTRODUCTORY ECONOMICS.** *Five hours credit.*

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.

**\*ECON 102. CONTEMPORARY ECONOMIC PROBLEMS.** *Three hours credit.*

Prerequisite, ECON 100. An examination into critical economic problems facing modern society, most of which are in sharp focus within the decade. Particular attention is given to agricultural adjustment, high-level employment maintenance, federal taxation influences, monetary controls, stabilization of prices, obstructions to foreign trade.

**\*ECON 200. INTERMEDIATE ECONOMIC THEORY.** *Three hours credit.*

The purpose of this course is to provide a summary exposition of contemporary economic theory for those students intending to undertake graduate courses in economics. Emphasis is upon value and distribution theory. It is assumed that students will have had an introductory course in economics.

**ECON 202. MONEY AND BANKING.** *Five hours credit.*

Prerequisite, ECON 100. A study of the origins and present roles of our monetary system, commercial banking and Federal Reserve System.

**\*ECON 241. PUBLIC FINANCE.** *Five hours credit.*

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 solutions of public debt.

**\*ECON 242. STATE AND LOCAL FINANCE.** *Three hours credit.*

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.

**\*ECON 250. HISTORY OF ECONOMIC SYSTEMS: SOCIALISM, COMMUNISM, CAPITALISM, FASCISM.** *Three hours credit.*

A survey of socio-economic reform movements, including Utopian schemes, mercantilism, monopolistic capitalism, socialism, communism, fascism and modified capitalism.

**\*ECON 300. INTERNATIONAL ECONOMICS.** *Three hours credit.*

Prerequisite, ECON 100. Consideration of the theories, policies and practices related to international economics. The course seeks an understanding of the fundamental causal relationships, basic institutions, and unifying concepts which are found in the world economy.

- \*ECON 302. INTERNATIONAL FINANCE.** *Three hours credit.*  
Prerequisites, ECON 100, 210, or the consent of the instructor. A study of the financial instruments, institutions and organizations which comprise international finance and which assist international trade.
- \*ECON 305. LABOR-MANAGEMENT RELATIONS.** *Three hours credit.*  
A study into the origins of the labor movement and an examination of the impact of trade unionism on contemporary industrial organization.
- \*ECON 320. RUSSIA'S SOVIET ECONOMY.** *Three hours credit.*  
A synthesis of available knowledge regarding all major sectors of the Soviet economy, particularly as regards their organization and operation.
- \*ECON 350. NATIONAL INCOME ANALYSIS.** *Three hours credit.*  
Prerequisite, ECON 100. This course will incorporate major areas of modern aggregate economics analysis. Income measurement and determination of the level of income will be combined with problems of growth and fluctuations.
- \*ECON 360. DEVELOPMENTAL ECONOMICS.** *Three hours credit.*  
Prerequisites, ECON 100, 200, or the consent of the instructor. A study of the economic factors which aid or impair economic development with primary emphasis placed on evolving national economies and regional economic problems of advanced economies.
- \*ECON 370. AGRICULTURE ECONOMICS.** *Three hours credit.*  
Prerequisite, ECON 100. A study of the economics of agriculture and the relation of agricultural economic factors to the total modern economy.
- \*ECON 377. GOVERNMENT AND BUSINESS.** *Three hours credit.*  
Prerequisite, ECON 100. A study of the relation of American public policy to the challenge of industry, labor, agriculture and inflation-depression periods.
- \*ECON 390. EUROPEAN ECONOMIC HISTORY.** *Three hours credit.*  
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.
- \*ECON 420. INDUSTRY STUDIES.** *Three hours credit.*  
Prerequisite, ECON 100. This will be a course in the application of basic economic principles. Students should be prepared to do an extensive case study of an industry.
- \*ECON 425. THE ECONOMICS OF PUBLIC UTILITIES.** *Three hours credit.*  
Prerequisite, ECON 100. A study of public-utility concepts in the American business system and the problems relative to effective regulation and growth of these industries.
- \*ECON 451. INTRODUCTION TO QUANTITATIVE ECONOMICS.** *Three hours credit.*  
Prerequisite, ECON 200 or the consent of the instructor. An introductory course in the use of mathematical techniques in economics. High school algebra and a good background in economic theory would be sufficient preparation.
- \*ECON 452. EMPIRICAL METHODS IN ECONOMICS.** *Three hours credit.*  
Prerequisite, ECON 100 or consent of the instructor. The course will present an examination of national income accounting practices, compilation of economic statistics, index number computation and related topics. Only elementary statistical background will be needed.
- \*ECON 455. ANALYSIS OF BUSINESS CYCLES.** *Three hours credit.*  
Prerequisites, ECON 200, 350 or the consent of the instructor. The course will present a theoretical and empirical investigation of economic fluctuations.

**\*ECON 460. ECONOMIC COLONIALISM AND IMPERIALISM.** *Three hours credit.*

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.

**\*ECON 462. ECONOMIC HISTORY OF THE UNITED STATES.** *Three hours credit.*

A review of the historical changes in the major American economic institutions with emphasis on the post-Civil War period.

**\*ECON 470. HISTORY OF ECONOMIC THOUGHT.** *Three hours credit.*

Prerequisite, ECON 100. This course will trace the evolution of economic thinking from the period of the Old Testament up to the present day. Particular attention will be given the roles played by particular "schools" of economic thinkers, the genesis of their ideas and their contributions.

**ECON 480. SEMINAR IN ECONOMIC THOUGHT.** *Three hours credit.*

Prerequisite, ECON 100, or the consent of the instructor. This course is primarily concerned with independent study and limited guided research in the development of economic thought. The group will meet for regular discussions and criticism of their work.

## **EDUCATIONAL CURRICULUM AND INSTRUCTION**

**EDCI 340. INTRODUCTION TO STUDENT TEACHING IN THE SECONDARY SCHOOL.** (PTE) *Two hours credit.*

Student is assigned to a specific class in his major or minor area under supervision in the Laboratory School. He will meet with the class and the supervising teacher five days per week and arrange for one additional conference hour.

**EDCI 341. METHODS OF TEACHING IN THE SECONDARY SCHOOL.** (PTE) *Three hours credit.*

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.** *Three hours credit.*

Designed to assist the preservice teacher in dealing appropriately with problems common to classroom teaching, such as the disruptive student, parent conferences, adapting teaching materials, etc., through the use of simulation, role-playing, films, videotape and other techniques.

**EDCI 422. INDIVIDUAL STUDIES.** *Maximum of four hours credit.*

Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with instructor and one with the chairman of the department.

**EDCI 481. HISTORY AND PHILOSOPHY OF BILINGUAL EDUCATION.** *Three hours credit.*

Designed to provide an understanding of how a language other than English may be used as an instructional tool in teaching children of a culturally different background. Specific emphasis will be given to the Renaissance Movement of bilingualism in southwest U.S. since the passage of the Bilingual Education Act.

**EDCI 551. PROBLEMS IN TEACHING MINORITY GROUPS.** *Three hours credit.*

An indepth 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 of three hours credit.*

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.*

## EDUCATIONAL FIELD EXPERIENCES

**EDFE 260. OBSERVATION IN COOPERATING SCHOOLS. *One hour credit.***

Open to individual students of any level or department. Credit granted on basis of one hour per 25 classroom observation hours. Student-instructor co-planned observational experiences in a variety of local or distant school situations. Evaluation consists of oral reporting periodically, filing a final log, and estimation of insight growth of the student. S-U final mark.

**EDFE 270. TEACHING AIDE. *One to four hours credit. May be repeated.***

Open to individual students of any level or department. Credit based on one hour per 20 actual hours in the classroom. Placement in local or nearby cooperating schools. Experience consists of a regular, steady assignment in a single teaching station all quarter, not to exceed 10 hours a week. Experience is guided by the principal and teacher; includes bit teaching, tutoring and classroom routine management under close supervision. Evaluation is by S-U mark and is based on behavioral observation of student progress in insight, planning, adaptation and bit instruction.

**EDFE 360. INTRODUCTION TO TEACHING: PRIMARY CONTINUUM.**  
*Two hours credit. PTE.*

Student engages in directed participation in a teaching situation four hours per week under the supervision of a master elementary teacher in the Laboratory School and arranges for one additional conference hour. S-U final mark.

**EDFE 361. INTRODUCTION TO TEACHING: INTERMEDIATE CONTINUUM. *Two hours credit. PTE.***

Course description same as EDFE 360.

**EDFE 362. INTRODUCTION TO TEACHING: MIDDLE SCHOOL.**  
*Two hours credit. PTE.*

Course description same as EDFE 360.

**EDFE 363. INTRODUCTION TO TEACHING: BUSINESS. *Two hours credit. PTE.***

Student is assigned to a specific class in his major or minor area under supervision in the Laboratory School. He will meet with the class and the supervising teacher four days per week and arrange for one additional conference hour. S-U final mark.

**EDFE 364. INTRODUCTION TO TEACHING: COMMUNICATIONS.**  
*Two hours credit. PTE.*

Course description same as EDFE 363.

**EDFE 365. INTRODUCTION TO TEACHING: FINE ARTS. *Two hours credit. PTE.***

Student is assigned to a specific class in his major or minor area under supervision. He will meet with the class and the supervising teacher five days per week. S-U final mark.

**EDFE 366. INTRODUCTION TO TEACHING: FOREIGN LANGUAGES.**  
*Two hours credit. PTE.*

Course description same as EDFE 363.

**EDFE 367. INTRODUCTION TO TEACHING: HEALTH, PHYSICAL EDUCATION AND RECREATION.** *Two hours credit. PTE.*  
Course description same as EDFE 363.

**EDFE 368. INTRODUCTION TO TEACHING: HOME ECONOMICS.** *Two hours credit. PTE.*  
Course description same as EDFE 363.

**EDFE 369. INTRODUCTION TO TEACHING: INDUSTRIAL ARTS.** *Two hours credit. PTE.*  
Student is assigned to a specific teaching situation in the public schools in his major area. The student is also required to visit selected schools in reorganized districts and large urban areas. S-U final mark.

**EDFE 370. INTRODUCTION TO TEACHING: MATHEMATICS.** *Two hours credit. PTE.*  
Course description same as EDFE 363.

**EDFE 371. INTRODUCTION TO TEACHING: MUSIC.** *Two hours credit. PTE.*  
Course description same as EDFE 363.

**EDFE 372. INTRODUCTION TO TEACHING: SCIENCES.** *Two hours credit. PTE.*  
Course description same as EDFE 363.

**EDFE 373. INTRODUCTION TO TEACHING: SOCIAL SCIENCES.** *Two hours credit. PTE.*  
Course description same as EDFE 363.

**EDFE 379. INTRODUCTION TO TEACHING: INNER CITY.** *Two hours credit. PTE.*  
Student engages in directed participation in a teaching situation four hours a week under the supervision of a master teacher in an inner city school. One additional hour of conference each week is arranged with the instructor. S-U final mark.

**EDFE 380. SIMULATION OF TEACHING.** *Four hours credit. PTE.*  
Prerequisite to EDFE 451, 452, 461 or 462. Consists of a variety of simulation materials and activities. Thought and action centers on school-like problems. Evaluation is by S-U mark and is based on participation, tests and oral and written reporting.

**EDFE 420. SPECIAL EDUCATION STUDENT TEACHING: ELEMENTARY.** *Eighteen hours credit. PTE.*  
Designed to allow students the opportunity to bridge the gap between theory and practice in the teaching of handicapped children on the elementary level. Opportunity is provided for the student to use special methods, materials and techniques and to progressively assume the responsibilities related to teaching. S-U final mark.

**EDFE 422. INDIVIDUAL STUDY IN STUDENT FIELD EXPERIENCE.** *One to four hours credit. May be repeated.*  
Qualified undergraduate students may pursue a special study related to the real school classroom under the direction of an Education Field Experience Area Coordinator. S-U final mark.

**EDFE 430. SPECIAL EDUCATION STUDENT TEACHING: SECONDARY.** *Eighteen hours credit. PTE.*  
Designed to allow students the opportunity to bridge the gap between theory and practice in the teaching of handicapped children on the secondary level. Opportunity is provided for the students to use special methods, materials and techniques and to progressively assume the responsibilities related to teaching. S-U final mark.

**EDFE 440. PRESCHOOL STUDENT TEACHING.** *Eighteen hours credit. PTE.*  
Provides for the practical application, under supervision, of the principles of

learning and the techniques of instruction in the classroom. S-U final mark. Specially designed for preschool level experience.

**EDFE 450. ELEMENTARY STUDENT TEACHING.** *Eighteen hours credit.* PTE.

Provides for the practical application, under supervision, of the principles of learning and the techniques of instruction in the elementary classroom. S-U final mark.

**EDFE 451. HALF-DAY INTERNSHIP: ELEMENTARY.** *Eighteen hours credit.* (6 hours each for three consecutive quarters). PTE.

Half-day, all-year elementary internship. Salary, full-staff status. Opportunity for continued employment on second salary step. In lieu of regular student teaching requirement. Prerequisites: EDEM 410 and EDFE 380 (or equivalents). S-U final mark.

**EDFE 452. FULL-DAY INTERNSHIP: ELEMENTARY.** *Eighteen hours credit.* (6 hours each for three consecutive quarters.) PTE.

Prerequisites: EDEM 410 and EDFE 380 (or equivalents). A full-day, full-year teaching internship in an elementary classroom. Salaried, full-staff status with opportunity for continued employment on second salary step. In lieu of regular student teaching requirement. Assignment possibilities: statewide. S-U final mark.

**EDFE 460. SECONDARY STUDENT TEACHING.** *Eighteen hours credit.* PTE.

Provides for the practical application, under supervision, of the principles of learning and the techniques of instruction in the secondary school classroom. Must be limited to the PTE and departmentally approved teaching subject area(s). S-U final mark.

**EDFE 461. HALF-DAY INTERNSHIP: SECONDARY.** *Eighteen hours credit.* (6 hours each for three consecutive quarters.) PTE.

Half-day, all-year secondary classroom teaching internship in approved teaching subject area(s) only. Salary, full-staff status. Opportunity for continued employment on second salary step. In lieu of regular student teaching requirement. Prerequisites: EDEM 410 and EDFE 380 (or equivalents). S-U final mark.

**EDFE 462. FULL-DAY INTERNSHIP: SECONDARY.** *Eighteen hours credit.* (6 hours each for three consecutive quarters.) PTE.

Prerequisites: EDEM 410 and EDFE 380 (or equivalents). A full-day, full-year teaching internship in the secondary classroom in the approved subject area(s) only. Salaried, and full-staff status. Opportunity for continued employment on secondary salary step. In lieu of regular student teaching requirement. Assignment possibilities: statewide. S-U final mark.

**EDFE 470. VOCATIONAL EDUCATION STUDENT TEACHING.** *Eighteen hours credit.* PTE.

Designed for student who will apply for a vocational credential to teach vocational programs in Colorado. Students will be placed with state approved vocational supervising teachers. Program limited to approved teaching subject areas. S-U final grade.

## EDUCATIONAL MEDIA

**EDEM 250. INTRODUCTION TO OUTDOOR EDUCATION.** *Three hours credit.*

Introductory course to orient students to the basic concepts of outdoor education. Natural and community resources are utilized in providing direct learning experiences. Short field trips and participation in outdoor laboratory school programs are provided. The interdisciplinary approach, involving instructors from academic areas and the Laboratory School, will be followed.

**EDEM 320. DESIGN AND CONSTRUCTION OF AUDIO-VISUAL MATERIALS.** *Three hours credit.*

Provides experience in the production of teaching materials using equipment and facilities available to most teachers. Includes preparation and mounting of pictures and the production of graphic materials, slides and recordings.

**EDEM 330. INSTRUCTIONAL MATERIALS—PROBLEMS OF ORGANIZATION, STORAGE AND RETRIEVAL.** *Three hours credit.*

A basic knowledge of the philosophy, terminology and practices used in the preparation, storage and retrieval of instructional materials is important to Media Center personnel. This information is also valuable to classroom teachers, particularly those who are using many materials to individualize instruction.

**EDEM 410. INTRODUCTION TO EDUCATIONAL RESOURCES.** *Five hours credit.*

Introduces students to most of the materials, both print and nonprint, available for instruction; each is demonstrated, and psychological basis for use is discussed as well as its characteristics, advantages and disadvantages; designed to be of value to all interested in education.

**EDEM 422. INDIVIDUAL STUDIES.** *Maximum of four hours credit.*

Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter on a problem. One copy of a well-written paper must be filed with the instructor before credit is given.

**EDEM 460. TELEVISION IN EDUCATION.** *Four hours credit.*

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.

## **ELEMENTARY EDUCATION AND READING**

**EDEL 320. IMPROVEMENT OF INSTRUCTION IN MATHEMATICS IN THE ELEMENTARY SCHOOL. (PTE)** *Three hours credit.*

A comprehensive analysis of the meaning theory, developmental method of teaching, what to teach, grade placement of content, methods of instruction with major emphasis on how to bring about insightful learning tools of instruction including concrete and semi-concrete materials, and means of evaluating achievement.

**EDEL 330. TEACHING HANDWRITING AND SPELLING IN THE ELEMENTARY SCHOOL. (PTE)** *Two hours credit.*

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)** *Three hours credit.*

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)** *Three hours credit.*

A detailed basic consideration of objectives, construction and use of units, problem solving, selection and grade placement of content, methodology including the use of concrete experiences, audio-visual materials, group processes, questioning, reading, and techniques of evaluation.

**EDEL 422. INDIVIDUAL STUDIES.** *Maximum of four hours credit.*

Qualified undergraduate students outline and spend a minimum of 25 clock hours

per quarter hour on a problem. A copy of a well-written paper must be filed with the instructor before credit is given.

**EDEL 460. KINDERGARTEN EDUCATION.** (PTE) *Three hours credit.*

A course covering theory and practices for education in kindergarten. Organization, scheduling, and equipping of kindergartens, the readiness program, and parent education will have pertinent handlings within the course.

**EDEL/MAS 472. EVALUATION AND SELECTION OF BILINGUAL AND BICULTURAL MATERIALS.** (PTE) *Two hours credit.*

The discussion of material selection principles. Evaluation of bilingual and bicultural materials for the elementary school. Course covers learning level and interests of bilingual children in the elementary school.

**EDEL/MAS 474. TEACHING IN A SECOND LANGUAGE IN THE ELEMENTARY BILINGUAL AND BICULTURAL SCHOOL.** (PTE) *Three hours credit.*

Prerequisite, MAS 300 or permission of instructor. This course is designed to prepare the elementary bilingual and bicultural teacher to teach Spanish as a second language or English as a second language. Special consideration is given to methods of instruction, selection of materials, and student evaluation.

**EDRD 130. COLLEGE READING STUDY SKILLS.** *Two hours credit.*

A course designed to enable college students to develop proficiency in the reading study skills required of them in regular college courses. As differentiated from a remedial course, the course develops skills, which will include flexibility in reading and promote vocational growth and reading skills.

**EDRD 131. SPEED READING.** *Two hours credit.*

A course designed for college students and mature readers to increase their rate of reading and to develop flexibility in reading rates through completion of various reading exercises.

**EDRD 310. IMPROVEMENT OF INSTRUCTION IN READING IN THE ELEMENTARY SCHOOL.** (PTE) *Three hours credit.*

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) *Two hours credit.*

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) *Three hours credit.*

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.** *Three hours credit.*

Suggested for English majors, undergraduates preparing to be secondary content area teachers, and graduate students with no background in reading instruction. Course content: Reading theory, concept of reading level, reading as skills development, detection of individual differences in reading ability, scope and sequence of skills development, reinforcement of reading skills.

**EDRD 422. INDIVIDUAL STUDIES.** *Maximum of four hours credit.*

Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. A copy of a well-written paper must be filed with the instructor before credit is given.

**EDRD 440. PRACTICUM IN DIAGNOSTIC ORAL READING.** *One hour credit.*

Prerequisite, enrollment in or completion of EDRD 411 or 420. A practicum designed to develop sensitivity to the use of oral reading for diagnostic purposes. A student will spend 20 hours listening to taped readings on electronic notebooks of an entire class or on remedial students.

## ENGLISH

**ENG 100. WRITING CLINIC.** *No credit.*

A laboratory designed to help students improve their writing.

**\*ENG 111. INTRODUCTION TO POETRY.** *Three hours credit.*

Critical approaches to poetry and drama. Qualified students may be exempted by examination.

**\*ENG 112. INTRODUCTION TO PROSE.** *Three hours credit.*

Critical approaches to short stories and novels. Qualified students may be exempted by examination.

**\*ENG 211. ENGLISH LITERATURE FROM THE BEGINNINGS TO 1500.** *Three hours credit.*

A study of English poetry and prose of the Old English and Middle English periods. Emphasis is placed on *Beowulf*, *Sir Gawain and the Green Knight*, *The Canterbury Tales*, and *Le Morte Darthur*.

**\*ENG 212. ENGLISH LITERATURE FROM 1500 TO 1660.** *Three hours credit.*

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.

**\*ENG 213. THE RESTORATION AND EIGHTEENTH CENTURY.** *Three hours credit.*

A study of major writers of the period with attention to their influence on subsequent ideas and literary forms.

**\*ENG 214. THE ROMANTIC MOVEMENT.** *Three hours credit.*

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.

**\*ENG 215. VICTORIAN PROSE AND POETRY.** *Three hours credit.*

A study of the poems and more important prose works of the major Victorian writers, and of their relation to the life of the times.

**\*ENG 216. AMERICAN LITERATURE TO THE CIVIL WAR.** *Three hours credit.*

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. Emphasis is given to the works of Edwards, Franklin, Paine, Bryant, Emerson, Poe, Hawthorne, and Melville.

**\*ENG 217. AMERICAN LITERATURE: THE CIVIL WAR TO 1914.** *Three hours credit.*

A study of selected American writers and/or themes from the years 1865 to 1914.

**\*ENG 220. ENGLISH LITERATURE: 1900 TO 1939.** *Three hours credit.*

A study of English literature from approximately 1900 to the beginning of World War II, as selected by the instructor.

**\*ENG 221. ENGLISH LITERATURE: 1940 TO THE PRESENT.** *Three hours credit.*

A study of English literature from approximately 1940 to the present, as selected by the instructor.

**\*ENG 225. AMERICAN LITERATURE: 1914-1939.** *Three hours credit.*

An intensive study of selected American writers and/or themes of the years 1914-1939.

**\*ENG 226. AMERICAN LITERATURE: 1940 TO THE PRESENT.** *Three hours credit.*

An intensive study of selected American writers and/or themes of the years 1940 to the present.

**\*ENG 240. CREATIVE WRITING: INTRODUCTION TO POETRY.** *Two hours credit.*

Prerequisites, COM 101, 102. An introduction to the techniques involved in writing poetry.

**\*ENG 241. CREATIVE WRITING: INTRODUCTION TO FICTION.** *Two hours credit.*

Prerequisites, COM 101, 102. An introduction to the techniques involved in writing fiction.

**\*ENG 301. SHAKESPEARE: EARLY PLAYS.** *Three hours credit.*

The reading and understanding of the early plays of Shakespeare.

**\*ENG 302. SHAKESPEARE: LATER PLAYS.** *Three hours credit.*

The reading and understanding of the later plays of Shakespeare.

**\*ENG 318. ETHNIC LITERATURE.** *Four hours credit.*

The study of works by and about minority people—Blacks, Hispanos, Indians—living in the United States.

**\*ENG 319. ADVANCED EXPOSITORY WRITING.** *Three hours credit.*

Prerequisites, COM 101, 102. For upper division and graduate students with adequate preparation in grammar and composition. Application of the elements of style to the development of effective prose.

**\*ENG 320. THE ENGLISH LANGUAGE.** *Four hours credit.*

A history of the development of the English language, the historical basis of usage and grammar and the sources of the English vocabulary.

**\*ENG 321. GENERATIVE - TRANSFORMATIONAL GRAMMAR.** *Four hours credit.*

Prerequisite, ENG 320. A study of the generation of English sentences: blocks, kernels (phrase-structure rules), transformations (single and double base); conceptual postulates, operations, and processes underlying a generative-transformational grammar.

**\*ENG 322. DISCOURSE STRUCTURE.** *Three hours credit.*

Prerequisite: one previous language course or permission. Students especially proficient in writing may substitute this course for Advanced Expository Writing. An introduction to the assumptions and analytical principles of recent structural linguistics and the application of these principles to units of discourse larger than the sentence.

**\*ENG 325. STUDIES IN SCIENCE FICTION.** *Three hours credit.*

Reading and discussion of works of science fiction and a view of science fiction's history and relevance.

**\*ENG 340. CREATIVE WRITING: ADVANCED POETRY.** *Two hours credit.*

Prerequisite, ENG 240 or permission of instructor. A course for students to improve their writing of poetry.

**\*ENG 341. CREATIVE WRITING: ADVANCED FICTION.** *Two hours credit.*

Prerequisite, ENG 241 or permission of instructor. A course for students to improve their writing of fiction.

**\*ENG 401. GREEK AND COMPARATIVE MYTHOLOGY.** *Four hours credit.*

A study of Greek myths as one of the important sources of literary allusion and imagery and a comparison of Greek myths with those of other cultures to show what is common to all mythologies.

**\*ENG 402. THE SHORT STORY.** *Three hours credit.*

The study of typical modern short stories to observe the methods of modern writers and the interpretation of our present-day life embodied in this form of literature.

**\*ENG 403. TECHNIQUES OF THE NOVEL.** *Five hours credit.*

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.

**\*ENG 404. MODERN LITERATURE ABOUT CHILDHOOD AND ADOLESCENCE.** *Three hours credit.*

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.

**\*ENG 405. CONTEMPORARY AMERICAN DRAMA.** *Three hours credit.*

A comprehensive view of the best dramatic literature of the modern American theater.

**\*ENG 406. MODERN DRAMA SINCE IBSEN.** *Three hours credit.*

A study of the developments in modern European and American drama since the time of Ibsen, emphasizing the works of such writers as Ibsen, Shaw, Synge, O'Casey, O'Neill, and such other European and American writers as have been significant in the development of the twentieth century drama.

**\*ENG 407. THE FORMS AND MEANING OF POETRY.** *Four hours credit.*

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.

**\*ENG 408. ELIZABETHAN DRAMA EXCLUSIVE OF SHAKESPEARE.** *Four hours credit.*

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.

**\*ENG 409. LITERARY CRITICISM.** *Three hours credit.*

A study of the theory and history of literary criticism from Plato to Wayne C. Booth, with some application of critical theory.

**\*ENG 410. HISTORY OF IDEAS IN LITERATURE.** *Three hours credit.*

An intensive chronological study of various of the significant themes in literature.

**\*ENG 415. LITERATURE OF THE OLD TESTAMENT.** *Four hours credit.*

A study of selected books of the Old Testament with emphasis on their literary qualities, and on the moral and religious progress they reveal. The historical and cultural background of these writings will be studied.

**\*ENG 416. LITERATURE OF THE NEW TESTAMENT.** *Three hours credit.*

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.

**\*ENG 418. GRAMMATICAL ANALYSIS.** *Three hours credit.*

A study and 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 tests that advocate each system.

**\*ENG 419. ADVANCED TOPICS IN SYNTAX.** *Three hours credit.*

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.** *Three hours credit.*

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 430. STUDIES IN WORLD LITERATURE.** *Three to nine hours credit.*

The study of a particular theme, form or problem that cuts across periods and national boundaries. Topic will be designated by sub-title. No sub-title may be taken more than once for credit.

**\*ENG 440. LITERATURE AND THE DEATH OF THE GODS.** *Three hours credit.*

A consideration of what has been called "the death of God," especially as has been attested to by late 19th-century and 20th-century writers.

## ENGLISH EDUCATION

**EED 341. METHODS OF TEACHING IN THE SECONDARY SCHOOLS—ENGLISH.** *Four hours credit.*

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.

**EED 401. WORKSHOP IN THE TEACHING OF ENGLISH.** (PTE) *Maximum of nine hours credit.*

A series of workshops in special problems in the teaching of English, conducted by authorities in the field.

**EED 402. LITERATURE AND MATERIALS IN THE SECONDARY SCHOOL.** (PTE) *Five hours credit.*

Materials for teaching English in secondary schools. Principles for the selection of literature for high school pupils. Critical study of selected readings.

**EED 405. THE TEACHING OF LANGUAGE.** (PTE) *Four hours credit.*

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.

**EED 406. LITERATURE FOR ADOLESCENTS.** *Three hours credit.*

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.

## ENVIRONMENTAL STUDIES

Courses in Environmental Studies are administered by the Department of Biological Sciences.

**\*ENST 110. INTRODUCTION TO ENVIRONMENTAL STUDIES.** *One hour credit.*

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.

**\*ENST 210. SCIENCE OF THE ENVIRONMENT.** *Three hours credit.*

Prerequisite, ENST 110. A study of the chemical and physical aspects of pollution and the environment, and the basis for improvement, limited by chemical and physical laws.

**\*ENST 220. POPULATION DYNAMICS AND GENETIC PROBABILITIES.** *Three hours credit.*

Prerequisite, ENST 110. Methods of animal population analysis with particular reference to human populations. Includes consideration of population size, its regulation and factors influencing changes in size; statistical methods applicable to population studies; genetic variation within populations and between different populations, and lateration of the gene pool with its implications for the future of man.

**\*ENST 230. ECONOMICS OF NATURAL RESOURCES.** *Three hours credit.*

Prerequisite, ENST 110. 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.

**\*ENST 240. POLITICS AND THE ENVIRONMENT.** *Three hours credit.*

Prerequisite, ENST 110. 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.

**\*ENST 250. MAN'S ATMOSPHERIC AND GEOLOGICAL ENVIRONMENT.** *Three hours credit.*

Prerequisite, ENST 110. The structure and nature of the atmosphere as it relates to man and his varied activities; climate modification; water and mineral resources and their management; geological considerations in urban planning, including hazards such as earthquakes, landslides and flood control.

**\*ENST 260. ECOLOGICAL INTERPRETATIONS.** *Three hours credit.*

Prerequisite, ENST 110. This course is based on recognition of the existence of functional and structural ecosystems. The interpretation of these systems in relation to man's survival is the main aim of this course.

**\*ENST 270. SOCIAL IMPLICATIONS OF ECOLOGY.** *Three hours credit.*

Prerequisite, ENST 110. 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.

**\*ENST 280. NATURAL RESOURCES AND TECHNOLOGY.** *Three hours credit.*

Prerequisite, ENST 110. This course is a study of the rise of agricultural, industrial, domestic, transportation and environmental technologies and their impact on natural resources and the environment.

**\*ENST 310. FUTURE ENVIRONMENTS AND ECOSYSTEM MODIFICATION.** *One hour credit.*

Prerequisites, all 100 and 200 ENST courses. This course will be concerned with man's place in future environments, which result from ecosystem modification. Topics to be included are: Crisis in the city, organism adaptability, economic and social pattern and environmental impact planning and development.

**\*ENST 350. ENVIRONMENTAL POLLUTION AND MAN'S HEALTH.**  
*Three hours credit.*

Prerequisite, ENST 110. This course is designed to acquaint the students with many of the current environmental problems and relate how these problems directly or indirectly affect the health of man.

## FINE ARTS

**\*FA 100. DRAWING.** *Three hours credit.*

The basic principles of drawing with emphasis on visual perception and technical procedures.

**\*FA 102. FIGURE DRAWING.** *Three hours credit.*

The principles of drawing applied to the human figure. Study from life emphasizing essential anatomy and aesthetic relationships.

**\*FA 105. DESIGN THEORY.** *Three hours credit.*

Introduction into philosophy of visual arts; development of basic understanding of purposes behind visual communication with some studio experiments using formal elements of design.

**\*FA 106. DESIGN APPLICATION.** *Three hours credit.*

Prerequisite: FA 105. Studio experiences with emphasis on process of designing and the use of materials and tools.

**\*FA 110. ART HISTORY I.** *Three hours credit.*

A survey course from pre-historic times through the exciting ancient civilizations up to the Holy Roman Empire.

**\*FA 111. ART HISTORY II.** *Three hours credit.*

A survey of man's artistic activity from the Roman Empire into the drama of the Renaissance and through the flowering of Rococo Art.

**\*FA 112. ART HISTORY III.** *Three hours credit.*

A study of art which occurred after Rococo, including the upheaval of the industrial revolution and bringing the survey to the present day.

**\*FA 113. LETTERING.** *Two hours credit.*

A study of basic letter forms and their variants, layout and design, manuscript writing, showcards and posters.

**\*FA 114. ELEMENTARY CRAFTS DESIGN.** *Two hours credit.*

Various approaches and uses of simple paper construction suitable for use in the elementary art program.

**\*FA 115. ELEMENTARY EARTHENWARE.** *Two hours credit.*

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.

**FA 203. INTRODUCTION TO WATERCOLOR PAINTING.** *Three hours credit.*

Prerequisites: FA 100, 102, 105, 106. Purposes and experience in painting with watercolor.

**\*FA 207. PROBLEMS IN DESIGN.** *Three hours credit.*

Prerequisites: FA 105, 106. Problems associated with form and function in design with emphasis on physical space.

**\*FA 215. CRAFTS: DESIGN ON FABRICS.** *Three hours credit.*

Prerequisites: FA 105, 106, 207. A study involving the processes of silk screen, batik, hooking, stitchery, and weaving-without-a-loom with their relationship to textile design application.

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**\*FA 216. CRAFT EXPRESSION IN CONSTRUCTION.** *Three hours credit.*  
Prerequisites: FA 105, 106, 207. An experimental approach to the problems of working with contemporary materials in: mosaics, copper enameling, wood-craft, paper mache, modeling and carving.

**\*FA 217. INTRODUCTION TO POTTERY.** *Three hours credit.*  
Prerequisites: FA 100, 102, 105, 106, or 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.

**\*FA 218. HANDLOOM WEAVING TECHNIQUES.** *Three hours credit.*  
A study of the basic fundamentals of threading and weaving on four harness looms: emphasis on the basic weaves.

**\*FA 220. INTRODUCTION TO PAINTING.** *Three hours credit.*  
Prerequisites: FA 100, 102, 105, 106 or permission of the instructor. A study of the basic principles and techniques of painting.

**FA 224. ELEMENTARY ART.** *Three hours credit.*  
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.** *Two hours credit.*

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.)

**\*FA 227. CERAMIC DESIGN.** *Three hours credit.*  
Prerequisite: FA 217 or permission of the instructor. An exploration of various methods of constructing large handbuilt forms with an emphasis on sculptural considerations.

**FA 229. ART FOR THE EXCEPTIONAL CHILD.** *Three hours credit.*  
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.** *Three hours credit.*

Practical experience in adapting the basic media and techniques of the artist to art activities for the elementary child. Restricted to art majors and minors. To be taken concurrently with FA 245.

**FA 245. METHODS OF TEACHING AND COORDINATING ART IN THE ELEMENTARY SCHOOL.** *Two hours credit.*

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.

**\*FA 258. INTRODUCTION TO SCULPTURE.** *Three hours credit.*  
Prerequisites: FA 100, 102, 105, 106 or permission of the instructor. Basic technology of sculpture, clay and plaster modeling, and simple mold-making. Elements of three-dimensional design related to sculpture problems.

**\*FA 259. PRINTMAKING.** *Three hours credit.*  
Prerequisites: FA 100, 102, 105, 106 or permission of the instructor. Technical instruction in traditional intaglio methods: Drypoint, Etching, Engraving, Mezzotint, Bitten lines, Soft ground, Lift ground, Aquatint.

**\*FA 270. INTRODUCTION TO JEWELRY AND SILVERSMITHING.** *Three hours credit.*  
Prerequisites: FA 100, 102, 105, 106 or permission of instructor. Basic forming,

forging, soldering, casting techniques and finishing incorporated in creative jewelry techniques.

**\*FA 300. INTERPRETIVE DRAWING.** *Three hours credit.*

Study from nature, still-life, imagination. Emphasis on individual interpretation, pictorial composition, inventive media.

**\*FA 302. LIFE DRAWING.** *Three hours credit.*

Prerequisites: FA 100, 102. Study from life emphasizing individual interpretation, pictorial composition, inventive media.

**FA 303. WATERCOLOR PAINTING.** *Three hours credit.*

Prerequisites: FA 203. Watercolor painting with special emphasis on composition and design.

**\*FA 305. PROBLEMS IN ADVANCED DESIGN.** *Three hours credit.*

Prerequisites: FA 105, 106, 207. Practical application of design theories with emphasis on individual student experiences.

**\*FA 307. SCULPTURE: METHODS AND MATERIALS.** *Three hours credit.*

Prerequisite: FA 258. Theoretical and practical experience in traditional and experimental approaches to making sculpture.

**\*FA 308. SCULPTURE STUDIO.** *Three hours credit.*

Prerequisite: FA 258. Individual application of design and technical skills in making sculpture.

**\*FA 309. INTERMEDIATE PRINTMAKING.** *Three hours credit.*

Prerequisites: FA 100, 102, 105, 106, 259 or permission of the instructor. Creative intaglio methods: etching, drypoint, softground, liftground, stenciling, touche, glue and light sensitive methods.

**\*FA 310. ADVANCED INTAGLIO AND RELIEF PRINTMAKING.** *Three hours credit.*

Prerequisites: FA 100, 102, 105, 106, 259. Individual development in creative color printmaking. Color etching, mixed media mono and dry point.

**\*FA 317. POTTERY.** *Three hours credit.*

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.

**\*FA 319. SILK SCREEN PRINTING PROCESS.** *Three hours credit.*

Prerequisites: FA 100, 102, 105, 106, 259. A study of various methods and techniques in the graphic process of silk screening, with applied problems in all the processes.

**\*FA 320. OIL PAINTING STUDIO.** *Three hours credit.*

Prerequisite: FA 220. Advanced study in oil painting to provide the student with more time to develop individual expression and mastery of the medium.

**\*FA 327. CERAMIC DESIGN.** *Three hours credit.*

A study involving the application of various ceramic decorative processes to hand built and wheel thrown clay forms.

**\*FA 331. WORKSHOP IN FINE ARTS.** *Three hours credit.*

Workshops in specialized areas of Fine Arts conducted by specialists in the field. The subject to be completed in any one workshop will be determined by subtitle. No sub-title may be repeated for credit.

**\*FA 337. GLAZE FORMULATION.** *Three hours credit.*

Prerequisite: FA 217. An exploration of ceramic glazes as related to their use in pottery studio.

**FA 339. PHILOSOPHY OF ART EDUCATION (Elementary-Secondary).**  
*Three hours credit.*

Prerequisites: 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.

**\*FA 340. CRAFT STUDIO.** *Three hours credit.*

An in-depth workshop in one specific craft technique; developing skills and individual expression. Will be listed under separate sub-heading each session.

**FA 341. METHODS OF TEACHING IN THE SECONDARY SCHOOL, FINE ARTS.** *Three hours credit.*

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.

**\*FA 359. INTAGLIO AND RELIEF PRINTMAKING.** *Three hours credit.*  
Prerequisites: FA 100, 102, 105, 106, 259. Problems in intaglio printmaking including technical process, etching and monoprints.

**\*FA 360. ANCIENT NEAR EASTERN ART.** *Three hours credit.*

A survey of ancient civilizations of the Near East that attempts to understand more clearly the arts and history of these people. From Pre-Historic to Alexander the Great.

**\*FA 361. ISLAMIC ART.** *Three hours credit.*

A survey of the art of the Islam which will establish the vastly important influences of Islamic Art and their relationships to the West.

**\*FA 362. FAR EASTERN ART.** *Three hours credit.*

The exploration of the important cultures of the East and their visual manifestations.

**\*FA 363. PRE-COLUMBIAN ART.** *Three hours credit.*

A study of the ancient civilizations of the American continents in order to expose the student to a rich heritage of art.

**\*FA 364. MEDIEVAL ART.** *Three hours credit.*

A detailed study of the 12th, 13th and 14th century art as it relates to Medieval philosophy.

**\*FA 365. CLASSICAL ART.** *Three hours credit.*

An in-depth study of classical art.

**\*FA 366. RENAISSANCE ART.** *Three hours credit.*

A detailed study of Renaissance Art with emphasis on the humanistic aspects.

**\*FA 367. BAROQUE ART.** *Three hours credit.*

An in-depth study of the Art of Mannerism and Baroque.

**\*FA 368. PRIMITIVE ART.** *Three hours credit.*

An in-depth study of the concepts and cultures of primitive art.

**\*FA 370. JEWELRY DESIGN AND SILVERSMITHING.** *Three hours credit.*

Prerequisite: FA 270. Basic casting design and techniques including charcoal, sand and centrifugal casting together with methods of stone setting.

**\*FA 380. NINETEENTH CENTURY ART.** *Three hours credit.*

The development of the art of the western world through the nineteenth century from the revivalist styles to the brink of modern art.

**\*FA 381. MODERN ART 1905-1945.** *Three hours credit.*

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.

**\*FA 382. MODERN ART 1945 TO PRESENT.** *Three hours credit.*

An in-depth survey of the major avant-garde art movements in the United States and Europe since 1945.

**\*FA 400. INTERPRETIVE DRAWING.** *Three hours credit.*

Prerequisite: FA 300. Study from nature, still-life, imagination. Emphasis on individual interpretation, pictorial composition, inventive media.

**\*FA 402. LIFE DRAWING.** *Three hours credit.*

Prerequisite: FA 302. Study from life emphasizing individual interpretation, pictorial composition, inventive media.

**\*FA 403. WATERCOLOR PAINTING.** *Three hours credit.*

Prerequisite: FA 303. Individual problems in water mediums with special emphasis on specific techniques, materials, and design objectives suitable for developing personal expression.

**\*FA 405. PROBLEMS IN ADVANCED DESIGN.** *Three hours credit.*

Prerequisite: FA 305. Practical application of design theories with emphasis on individual student experiences.

**FA 406. SPECIAL PROBLEMS IN ART EDUCATION.** *Three hours credit.*

Supervised research and reporting of student design and originated problems in art education.

**\*FA 407. SCULPTURE: METHODS AND MATERIALS.** *Three hours credit.*

Prerequisites: FA 258, 307. Theoretical and practical experience in traditional and experimental approaches to making sculpture.

**\*FA 408. SCULPTURE STUDIO.** *Three hours credit.*

Prerequisites: FA 258, 308. Individual application of design and technical skills in making sculpture.

**\*FA 409. INTERMEDIATE PRINTMAKING.** *Three hours credit.*

Prerequisites: FA 309. Advanced creative intaglio methods: etching, drypoint, sugarlift ground, mixed media with mono print.

**\*FA 410. ADVANCED INTAGLIO AND RELIEF PRINTMAKING.** *Three hours credit.*

Prerequisites: FA 310. Advanced color intaglio and relief printmaking. Wood-cut, etching and monoprint mixed media.

**\*FA 415. CRAFTS: DESIGN ON FABRICS.** *Three hours credit.*

Prerequisites: FA 215. Exploring old and new techniques of fabric decoration.

**\*FA 416. CRAFT EXPRESSION IN CONSTRUCTION.** *Three hours credit.*

Prerequisites: FA 216. Experimental approach to the problems of working with contemporary materials in mosaics, copper enameling, wood craft, paper mache, modeling and carving.

**\*FA 417. POTTERY.** *Three hours credit.*

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.

**\*FA 418. HAND LOOM WEAVING TECHNIQUES.** *Three hours credit.*

Prerequisite: FA 218. Investigation and exploration of the various techniques suitable for present day weaving.

**\*FA 419. SILK SCREEN PRINTING PROCESS.** *Three hours credit.*

Prerequisites: FA 319. Laboratory problems in practical advertising design with emphasis on mass media with silk screen print.

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**\*FA 420. OIL PAINTING STUDIO.** *Three hours credit.*

Prerequisite: FA 320. Advanced study in oil painting to provide the student with more time to develop individual expression and mastery of the medium.

**\*FA 425. FIGURE PAINTING STUDIO.** *Three hours credit.*

Prerequisites: FA 220, 302. Painting from the human figure.

**\*FA 427. CERAMIC DESIGN.** *Three hours credit.*

A study of mold making techniques. Plaster, wood, cardboard and related materials will be used in the forming of clay objects.

**FA 428. THE CURRICULUM IN ART EDUCATION.** *Three hours credit.*

Prerequisite, EDFE 460. A course designed to help the student understand the preparation of curriculums for use at the level of his educational emphasis.

**FA 430. SEMINAR IN ART EDUCATION (El-Sec.).** *Two hours credit.*

Prerequisite, EDFE 460. Research of philosophical issues in contemporary elementary and secondary art education.

**\*FA 433. MIXED MEDIA PAINTING STUDIO.** *Three hours credit.*

Prerequisite: FA 220. Experimental approaches to problems in painting emphasizing a variety of media and techniques.

**\*FA 437. GLAZE FORMULATION.** *Three hours credit.*

Prerequisite: FA 337. A study of clay and clay bodies for studio use. Emphasis will be combining clays to suit the various needs of the individual potter and general classroom needs.

**\*FA 459. INTAGLIO AND RELIEF PRINTMAKING.** *Three hours credit.*

Prerequisites: FA 359. Advanced creative intaglio printmaking including advanced technical process and monoprint mixed media.

**\*FA 470. JEWELRY DESIGN AND SILVERSMITHING.** *Three hours credit.*

Prerequisite: FA 370. An experimental approach to the problem of contemporary silver jewelry, including the exploration of combining wood, bone, and stones.

## FOREIGN LANGUAGES

**FL 331. TEACHING FOREIGN LANGUAGE IN THE ELEMENTARY SCHOOL.** *One to three hours credit.*

Prerequisite, intermediate standing or permission. Students will cooperate in planning, creating and presenting foreign language materials in a clinic capacity at the elementary level. The emphasis will be oral.

**FL 410. LINGUISTICS.** *Three hours credit.*

A brief survey of the world's chief languages, their geographical distribution, main cultural features and appearance. In more detail, classification of the Indo-European languages, with particular stress on historical development, basic grammatical structure, resemblances, differences and relationships of English, French, German and Spanish.

**FL 431. THE TEACHING OF FOREIGN LANGUAGES.** *Four hours credit.*

Prerequisite, two years of foreign language. A study of problems in the teaching of foreign languages at the secondary and elementary school levels. Includes development of content for course of study, organization of learning materials, procedures in teaching, testing and evaluating.

**FL 432. TEACHING FOREIGN LANGUAGE IN THE ELEMENTARY SCHOOL.** *Three hours credit.*

Especially for teachers of the elementary school level, but including all levels of instruction. A study of today's practical values, aims, methods, approaches, procedures, and means and materials for attaining success in teaching modern foreign languages.

## FRENCH

### **\*FR 101. ELEMENTARY FRENCH I.** *Five hours credit.*

Summer Quarter: Must enroll for FR 102 and 103. Credit is not given until three quarters are completed. 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.

### **\*FR 102. ELEMENTARY FRENCH II.** *Five hours credit.*

Summer Quarter: Must enroll for FR 101 and 103. Credit is not given until three quarters are completed. A continuation of FR 101.

### **\*FR 103. ELEMENTARY FRENCH III.** *Five hours credit.*

Summer Quarter: Must enroll for FR 101 and 102. Credit is not given until three quarters are completed. A continuation of FR 102.

### **\*FR 201. INTERMEDIATE FRENCH I.** *Four hours credit.*

Prerequisite, two years of high school French or one year of college French. Grammar review, study of idioms, imitative composition. Drill in use of the phonetic alphabet.

### **\*FR 202. INTERMEDIATE FRENCH II.** *Four hours credit.*

Prerequisite, two years of high school French or one year of college French. This course aims at developing the student's ability to express himself in correct and idiomatic French. (This course may be taken without having had FR 201.)

### **\*FR 203. INTERMEDIATE FRENCH III.** *Four hours credit.*

Prerequisite, two years of high school French or one year of college French. Reading of one play and several short stories, with exercises and discussion in French based on the reading. (This course may be taken without having had FR 201 or 202.)

### **\*FR 280. SEMINAR IN FRENCH DRAMA.** *Three hours 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. Material will be selected from the seventeenth, eighteenth and nineteenth centuries.

### **\*FR 305. SURVEY OF FRENCH LITERATURE I.** *Four hours credit.*

Prerequisite, two years of college French. Reading of an anthology, with lectures and discussion in French. This course deals with medieval and Renaissance literature.

### **\*FR 306. SURVEY OF FRENCH LITERATURE II.** *Four hours credit.*

Prerequisite, two years of college French. Reading of an anthology with lectures and discussion in French. This course deals with the literature of the seventeenth and eighteenth centuries.

### **\*FR 307. SURVEY OF FRENCH LITERATURE III.** *Four hours credit.*

Prerequisite, two years of college French. Reading of an anthology, with lectures and discussion in French. This course deals with nineteenth and early twentieth century literature.

### **\*FR 310. INTERMEDIATE FRENCH CONVERSATION.** *Three hours credit.*

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.

### **\*FR 311. INTERMEDIATE FRENCH COMPOSITION.** *Three hours credit.*

Prerequisite, two years of college French. A course designed to perfect the student's ability to express himself in French, through the use of translation

passages and free compositions, and to provide an active review of certain grammatical problems. The class will be conducted in French.

**\*FR 312. INTERMEDIATE FRENCH SYNTAX AND STYLISTICS.** *Three hours credit.*

Prerequisite, two years of college French. A study of the more complex elements of French syntax and the common difficulties incurred in sentence structure. A study of styles employed in French literature, and the methods of studying them. The class will be conducted in French.

**\*FR 326. FRANCO-CANADIAN LITERATURE.** *Three hours credit.*

Prerequisite, two years of college French. The study of the Franco-Canadian novel in the twentieth century, the historical and political background, and the place of Franco-Canadian literature in the world of French letters.

**\*FR 340. THE FRENCH NOVEL TO 1800.** *Three hours credit.*

Prerequisite, two years of college French. The development of the novel in France from Mme. de Lafayette (1634-1693) to Chateaubriand (1768-1848), with emphasis on l'Abbé Prévost, Jean-Jacques Rousseau, Benjamin Constant, and Mme. de Staël. Six novels will be read during the course.

**\*FR 341. THE NINETEENTH CENTURY FRENCH NOVEL.** *Three hours credit.*

Prerequisite, two years of college French. The development of the novel in France during the nineteenth century, with emphasis on Balzac, Stendhal, Flaubert, and Zola. Representative novels of these and other authors will be read in the original, and the course will be conducted in French.

**\*FR 400. PROBLEMS IN ORAL FRENCH.** *Three hours credit.*

Prerequisite, two years of college French, or equivalent. To enable the student to reach a high level of accuracy and fluency in oral French. Time will be spent working on individual problems so that each student will be able to correct and strengthen his particular shortcomings. French phonetics will also be studied.

**FR 401. STUDY ABROAD PROGRAM.** *One to fifteen hours credit.*

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 and composition along with lectures and research of the contemporary and historical cultural phenomena of France.

**\*FR 405. FRENCH DRAMATISTS OF THE SEVENTEENTH CENTURY: CORNEILLE, RACINE, MOLIÈRE.** *Three hours credit.*

Prerequisite, two years of college French. A study of the three great dramatists of the seventeenth century, and of their contribution to French theater and French literature as a whole. Several plays by each author will be read in the original and discussed. The class will be conducted in French.

**\*FR 410. FRENCH CIVILIZATION.** *Three hours credit.*

Prerequisite, two years of college French. The study of French civilization and culture, including the historical, economic, political, and artistic development of the country from prehistoric times to the present. The class will be conducted in French.

**\*FR 415. EXPLICATION DE TEXTES.** *Three hours credit.*

Prerequisite, two years of college French. The study of the French method 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.

**\*FR 422. INDIVIDUAL STUDIES.** *One to four hours credit.*

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.

**\*FR 450. TWENTIETH CENTURY FRENCH THEATER.** *Three hours credit.*  
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.

**\*FR 451. TWENTIETH CENTURY FRENCH PROSE.** *Three hours credit.*  
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.

**\*FR 460. ANDRE GIDE.** *Four hours credit.*  
Prerequisite, permission of the instructor. The life and work of André Gide. The development of the writer and his influence on twentieth century French literature. Special attention will be given to *Les Caves du Vatican* and *Les Faux-Monnayeurs*. The class will be conducted in French.

**\*FR 461. CONTEMPORARY FRENCH POETRY.** *Four hours credit.*  
Prerequisite, permission of the instructor. The study of the poetry of France between 1918 and the 1960's. Special emphasis will be placed on Prévert, Chars and Saint-John Perse. The class will be conducted in French.

**\*FR 462. CONTEMPORARY FRENCH CRITICS AND ESSAYISTS.** *Four hours credit.*  
Prerequisite, permission of the instructor. An examination of French literary criticism and the work of French essayists in the nineteenth and twentieth centuries. Special attention will be devoted to the French literary journals and their role. The class will be conducted in French.

**FR 490. FRENCH FOR READING KNOWLEDGE I.** *No credit.*  
Prerequisite, none. The course will be conducted to help graduate students prepare for the Ph.D. language reading examination in French. The basic grammatical structures of the language will be introduced from a traditional viewpoint.

## GERMAN

**\*GER 101. ELEMENTARY GERMAN I.** *Five hours credit.*  
Three quarters completion necessary for credit to be given. To develop four lingual skills (listening, speaking, reading, writing) with stress on the first two. Emphasis on developing accurate pronunciation and ability to use German actively with minimum translation, using controlled drills, dialogs, and free conversation. Supplementary work in the language laboratory is required. Language structure is covered inductively.

**\*GER 102. ELEMENTARY GERMAN II.** *Five hours credit.*  
Credit is not given until three quarters are completed. A continuation of GER 101.

**\*GER 103. ELEMENTARY GERMAN III.** *Five hours credit.*  
Credit is not given until three quarters are completed. A continuation of GER 102.

**\*GER 201. INTERMEDIATE GERMAN I.** *Four hours credit.*  
Prerequisite, one year college German or placement by examination. A continuation of GER 103. While stress is placed on oral skills, language structure is analyzed in detail. Reading and writing increase to balance proficiency in all four skills. Well-chosen reading materials and intermediate text with conversational approach used with continued drill in the language laboratory.

**\*GER 202. INTERMEDIATE GERMAN II.** *Four hours credit.*  
Prerequisite, GER 201. A continuation of German 201.

**\*GER 203. INTERMEDIATE GERMAN III.** *Four hours credit.*

Prerequisite, GER 202. A continuation of GER 202.

**\*GER 305. SURVEY OF GERMAN LITERATURE I.** *Three hours credit.*

Prerequisite, two years of college German. German literature from the earliest beginnings through the seventeenth century. Pagan and early Christian literature, and then emphasis on the folk epic, the courtly epic, the courtly lyric, and on the Reformation period, with readings from Martin Luther and the humanists. (The course will be conducted primarily in German.)

**\*GER 306. SURVEY OF GERMAN LITERATURE II.** *Three hours credit.*

Prerequisite, two years of college German. German literature of the eighteenth and nineteenth centuries. Emphasis on the six great classical writers, with more intense effort on Goethe and Schiller. The historical and social background of all six will be explored. The decline of Classicism and the flowering of Romanticism will be traced. (The course will be conducted primarily in German.)

**\*GER 307. SURVEY OF GERMAN LITERATURE III.** *Three hours credit.*

Prerequisite, two years of college German or equivalent. A survey of modern German literature—later nineteenth and twentieth century writing. Emphasis on development and importance of Rainer Maria Rilke. Prose writings of Thomas and Heinrich Mann, Kafka and Hesse. (The course will be conducted primarily in German.)

**\*GER 335. INTERMEDIATE GERMAN CONVERSATION.** *Four hours credit.*

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.

**\*GER 336. ADVANCED GERMAN COMPOSITION.** *Four hours credit.*

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.

**\*GER 337. ADVANCED GERMAN GRAMMAR.** *Four hours credit.*

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.

**\*GER 341. GOETHE.** *Three hours credit.*

Prerequisite, two years of college German. This course is designed as an introduction to the life and work of Germany's greatest classic. Special emphasis is placed upon developing understanding of Goethe's *Weltanschauung* and his contributions to *Sturm und Drang*. Classicism and Romanticism. This course will be conducted in German.

**\*GER 343. FAUST.** *Three hours credit.*

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.

**\*GER 345. PHONETICS OF THE GERMAN LANGUAGE.** *Three hours credit.*

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.

**\*GER 400. PROBLEMS IN ORAL GERMAN.** *Three hours credit.*

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.** *One to fifteen hours credit.*

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 and composition along with lectures and research of the contemporary and historical cultural phenomena of Germany.

**\*GER 410. GERMAN CIVILIZATION.** *Three hours credit.*

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.** *One to four hours credit.*

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.

**\*GER 425. EIGHTEENTH CENTURY GERMAN LITERATURE.** *Three hours credit.*

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.

**\*GER 426. NINETEENTH CENTURY GERMAN LITERATURE.** *Three hours credit.*

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.

**\*GER 427. TWENTIETH CENTURY GERMAN LITERATURE.** *Three hours credit.*

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.

**\*GER 430. GERMAN POETRY.** *Three hours credit.*

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.

## ITALIAN

**\*ITAL 101. ELEMENTARY ITALIAN I.** *Five hours credit.*

Credit is not given until three quarters are completed. 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.

**\*ITAL 102. ELEMENTARY ITALIAN II.** *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of ITAL 101.

**\*ITAL 103. ELEMENTARY ITALIAN III.** *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of ITAL 102.

## RUSSIAN

**\*RUS 101. ELEMENTARY RUSSIAN I.** *Five hours credit.*

Credit is not given until three quarters are completed. 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 of approximately 1,100 words. Audio-visual aids will be used as needed.

**\*RUS 102. ELEMENTARY RUSSIAN II.** *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of RUS 101.

**\*RUS 103. ELEMENTARY RUSSIAN III.** *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of RUS 102.

**\*RUS 201. INTERMEDIATE RUSSIAN.** *Four hours credit.*

Prerequisite, RUS 103. Review of Russian grammar, imitative composition and the reading of intermediate Russian texts.

**\*RUS 202. INTERMEDIATE RUSSIAN COMPOSITION AND CONVERSATION I.** *Four hours credit.*

Prerequisite, RUS 201. A continuation of RUS 201 but emphasizing more intensive reading, oral reports, advanced composition and more extensive conversation.

**\*RUS 203. INTERMEDIATE RUSSIAN COMPOSITION AND CONVERSATION II.** *Four hours credit.*

Prerequisite, RUS 202. A continuation of RUS 202. A study of three Russian authors in their shorter works (Turgenev, Lermontov, Pushkin). Oral reports, advanced composition, and translation.

**\*RUS 305. SURVEY OF RUSSIAN LITERATURE I.** *Three hours credit.*

Prerequisite, two years college Russian or equivalent. The course is designed to introduce students to masterpieces of Russian literature from beginning to end of the eighteenth century. Introductory to the life and work of Russia's greatest classics.

**\*RUS 306. SURVEY OF RUSSIAN LITERATURE II.** *Three hours credit.*

Prerequisite, RUS 305. The course is designed to introduce students to masterpieces of Russian literature of the nineteenth century.

**\*RUS 307. SURVEY OF RUSSIAN LITERATURE III.** *Three hours credit.*

Prerequisite, RUS 306. The course is designed to introduce students to masterpieces of Russian literature of the twentieth century.

**\*RUS 335. RUSSIAN CONVERSATION.** *Three hours credit.*

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.

**\*RUS 336. ADVANCED RUSSIAN COMPOSITION.** *Three hours credit.*

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.

**\*RUS 337. ADVANCED RUSSIAN GRAMMAR.** *Three hours credit.*

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.

**\*RUS 341. PUSHKIN.** *Three hours credit.*

Prerequisite, three years college Russian or permission of instructor. Life and works of A. Pushkin. Emphasis on his contribution as "The Sun of Russian Literature." The course will converse in Russian.

## SPANISH

**\*SPAN 101. ELEMENTARY SPANISH I.** *Five hours credit.*

Credit is not given until three quarters are completed. A three-quarter sequence in the basic elements of Spanish through the aural-oral conversational approach; intensive and extensive use of aural-oral materials: writing and reading exercises; the use of audio-visual aids and devices to provide practical materials for pronunciation, comprehension, adequate construction, and fluency of expression in the language.

**\*SPAN 102. ELEMENTARY SPANISH II.** *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of SPAN 101.

**\*SPAN 103. ELEMENTARY SPANISH III.** *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of SPAN 102.

**\*SPAN 201. INTERMEDIATE SPANISH I.** *Four hours credit.*

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 communication.

**\*SPAN 202. INTERMEDIATE SPANISH II.** *Four hours credit.*

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.

**\*SPAN 203. INTERMEDIATE SPANISH III.** *Four hours credit.*

Prerequisite, two years of high school Spanish or one year of college Spanish. A continuation of SPAN 202. Based on Spanish-American cultural materials, sources, films, audio-visual materials and a higher level of all-round comprehension and fluent functional use of the language and culture.

**\*SPAN 310. ADVANCED SPANISH GRAMMAR.** *Four hours credit.*

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.

**\*SPAN 315. SURVEY OF SPANISH-AMERICAN LITERATURE I.** *Three hours credit.*

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.

**\*SPAN 316. SURVEY OF SPANISH-AMERICAN LITERATURE II.** *Three hours credit.*

Prerequisite, two years of college Spanish. A study of the literature of Spanish America between 1888 and 1910, the Modernist period.

**\*SPAN 317. SURVEY OF SPANISH-AMERICAN LITERATURE III.** *Three hours credit.*

Prerequisite, two years of college Spanish. A study of the main works of the contemporary period of Spanish-American literature.

**\*SPAN 325. ADVANCED SPANISH COMPOSITION.** *Three hours credit.*

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.

**\*SPAN 335. SPANISH CONVERSATION.** *Four hours credit.*

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.

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**\*SPAN 345. SPANISH PRONUNCIATION.** *Four hours credit.*

Prerequisite, two years of Spanish. A study of the mechanics of Spanish pronunciation. Methods of recognizing and correcting pronunciation errors.

**\*SPAN 355. SURVEY OF SPANISH LITERATURE I.** *Three hours credit.*

Prerequisite, two years of college Spanish. A study of Spanish literature and civilization from the late medieval period to the Renaissance.

**\*SPAN 356. SURVEY OF SPANISH LITERATURE II.** *Three hours credit.*

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.

**\*SPAN 357. SURVEY OF SPANISH LITERATURE III.** *Three hours credit.*

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.

**\*SPAN 400. PROBLEMS IN ORAL SPANISH.** *Three hours credit.*

Prerequisite, two years of college Spanish beyond first year, or permission of instructor. A course designed to provide advanced oral training; to help students with persistent individual problems in spoken Spanish to overcome those difficulties.

**\*SPAN 401. STUDY ABROAD PROGRAM.** *One to fifteen hours credit.*

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 and composition along with lectures and research of the contemporary and historical cultural phenomena of Spain.

**\*SPAN 410. SPANISH CIVILIZATION.** *Three hours credit.*

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.

**\*SPAN 420. CERVANTES.** *Four hours credit.*

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.** *One to four hours credit.*

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.

**\*SPAN 430. A PANORAMA OF MEXICAN LITERATURE.** *Three hours credit.*

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.

**\*SPAN 475. SPANISH READING.** *Maximum of four hours credit.*

Prerequisite, two years of college Spanish. Designed to fit the reading abilities and interests of various students. Class meets two days a week for intensive reading. Extensive outside reading is reported in conference.

**\*SPAN 490. SPANISH FOR GRADUATE STUDENTS.** *No credit.*

Prerequisite, none. A course to enable doctoral candidates in other fields to pass the Ph.D. language reading examination in Spanish.

## FOUNDATIONS OF EDUCATION

**\*EDF 365. BASIC CONCEPTS OF EDUCATION.** (PTE) *Five hours credit.*

A conceptual approach to the problems and issues facing educators in contemporary

American Society, designed to create an environment in which the student can select and evaluate concepts and information from the many disciplines related to the educational enterprise. 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.

**EDF 445. COMPARATIVE STUDIES IN INTERNATIONAL EDUCATION.**  
*Twelve or Fifteen hours credit.*

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.

**\*EDF 446. WESTERN EUROPE: AN ON-SITE STUDY OF ITS PEOPLE, CUSTOMS, CULTURE, AND HISTORY.** *Eighteen hours credit.*

A study tour designed to provide, (1) An overview of modern Western Europe focussing upon its cultural history, geography, economics, and political circumstances, (2) A survey of significant educational institutions known for their innovative practices, and (3) An opportunity for serious study and research.

**EDF 475. HISTORY OF EDUCATION IN THE UNITED STATES.** *Three hours credit.*

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)** *Three hours credit.*

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.

## GEOGRAPHY

**\*GEOG 100. WORLD GEOGRAPHY.** *Five hours credit.*

World survey of the interrelationships of man and his culture to the climates, animal life, minerals, soils and surface features of the earth.

**\*GEOG 120. PHYSICAL GEOGRAPHY I.** *Three hours credit.*

The study of the relationship between man and his physical environment, with an emphasis on the climatic and edaphic qualities of the earth.

**\*GEOG 121. PHYSICAL GEOGRAPHY II.** *Three hours credit.*

The study of the relationship between man and his physical environment, with an emphasis on landforms—their characteristics, distribution, and effects upon human settlement.

**\*GEOG 122. CULTURAL GEOGRAPHY I.** *Three hours credit.*

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."

**\*GEOG 123. CULTURAL GEOGRAPHY II.** *Three hours credit.*

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.

**\*GEOG 148. ANGLO-AMERICA.** *Five hours credit.*

A study of regions and their interdependence. Land use, social and economic problems emphasized.

**\*GEOG 312. ECONOMIC GEOGRAPHY.** *Five hours credit.*

Geographic and economic conditions affecting the products, industries, commerce and resources of the world. Special emphasis on the United States.

**\*GEOG 318. AUSTRALIA AND THE PACIFIC.** *Two hours credit.*

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.

**\*GEOG 326. AFRICA.** *Five hours credit.*

Relationships between the physical and cultural patterns. Land use, resource development, social and political problems.

**\*GEOG 336. GEOGRAPHY OF MEXICO AND THE CARIBBEAN.** *Three hours credit.*

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.

**\*GEOG 337. GEOGRAPHY OF CENTRAL AMERICA.** *Three hours credit.*

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.

**\*GEOG 338. SOUTH AMERICA.** *Three hours credit.*

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.

**\*GEOG 343. EUROPE.** *Three hours credit.*

Physical and cultural patterns. The nations of Europe, their regions, cultures, social and economic organizations with resulting conflicts.

**\*GEOG 344. ASIA.** *Three hours credit.*

The countries of Asia in terms of their physiography, climates, regions, cultural landscapes, social organizations and economic activities.

**\*GEOG 348. PHYSICAL GEOGRAPHY OF THE UNITED STATES.** *Four hours credit.*

The study of the major climatic, edaphic, vegetational, and landform patterns of the United States, with an emphasis on Colorado. Weekend field trip. Prerequisites: GEOG 120 and 121 or permission of instructor.

**\*GEOG 350. GEOGRAPHY OF COLORADO.** *Three hours credit.*

A study of the geographical and human resources of Colorado. The course is concerned with the physical features, climate, land form 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.

**GEOG 353. GEOGRAPHY OF THE GREAT PLAINS.** *Two hours credit.*

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.

**\*GEOG 355. POPULATION GEOGRAPHY.** *Three hours credit.*

Investigates the distribution of world population through the related topics of migration, settlement, urbanization and utilization of natural resources.

**\*GEOG 356. AGRICULTURAL GEOGRAPHY.** *Two hours credit.*

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.

**GEOG 357. TRANSPORTATION GEOGRAPHY.** *Three hours credit.*

A study of the mechanism of areal exchange, emphasizing modes and networks of transportation and their effect on the spatial distribution of human activities.

**\*GEOG 360. POLITICAL GEOGRAPHY.** *Three hours credit.*

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.

**\*GEOG 364. MAPS AND THEIR USES.** *Two hours credit.*

The course presents the basis for an effective use of maps and globes. It is designed to develop the skill of map reading and map interpretation.

**\*GEOG 365. THE SOVIET UNION.** *Five hours credit.*

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.

**\*GEOG 370. URBAN GEOGRAPHY.** *Five hours credit.*

A study of the urban community as a geographical phenomenon. Opportunity is provided for students to obtain practical field experience within the local area. Attention is also given to the development of cartographic skills as an aid to meaningful organization and presentation of data.

**GEOG 392. FIELD COURSE IN GEOGRAPHY.** *Three to fifteen hours credit.* (undergraduate and graduate) Study and application of the techniques used in solving of geographic problems in the field, together with the effective presentation of the results of such studies.

**\*GEOG 402. CARTOGRAPHY.** *Four hours credit.*

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 490. PROBLEMS IN GEOGRAPHY.** *Maximum of nine hours credit.*

A series (three) of advanced undergraduate research seminars. Each seminar will be conducted by an instructor who specializes in the regional or systematic study upon which the seminar is based (e.g., Latin America, Africa, Urban, Economic).

## GEOLOGY

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

**\*GEOL 100. GENERAL GEOLOGY.** *Four hours credit. (Three hours lecture, two hours laboratory.)*

This course presents an introduction to the minerals and rocks that make up the Earth's crust, the building-up processes of vulcanism and diastrophism, the counter processes of weathering and erosion, the interior of the Earth, and Earth history. Field trips required. Not open to earth sciences majors.

**\*GEOL 201. PRINCIPLES OF GEOLOGY I.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

One of the three basic geology courses required of Earth Sciences majors. Earth materials, the processes of vulcanism, metamorphism, and diastrophism, geologic structures, earthquakes, and the nature of the solid earth and its interior will be

thoroughly investigated. Field trips required. Students cannot receive credit for both GEOL 100 and 201.

**\*GEOL 202. PRINCIPLES OF GEOLOGY II.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, GEOL 201. One of the three basic geology courses required of Earth Science majors. The processes of weathering, mass movements, and erosion by the agents of streams, glaciers, wind, waves and currents, and groundwater will be thoroughly investigated, along with the resulting landforms. Some attention will be given to the development of soils and to interpretation of topographic maps and aerial photographs. Field trips required. Students cannot receive credit for both GEOL 100 and 202.

**\*GEOL 203. PRINCIPLES OF GEOLOGY III.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, GEOL 100 or 202. One of the three basic geology courses required of Earth Sciences majors. Geologic time, the origin and development of the earth's hydrosphere and atmosphere, the origin of life, the geosynclinal theory, and basic stratigraphic principles will be investigated. Earth history and the evolution of life on earth will be developed through studies of regional stratigraphy and fossils. Field trips required.

**\*GEOL 320. MINERALOGY.** *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisite, GEOL 100 or 202. This course includes introductory work in crystallography, optical crystallography, descriptive and determinative mineralogy, and the study of mineral occurrences and associations. The laboratory stresses identification of minerals by means of physical and chemical techniques. One Saturday field trip required.

**GEOL 330. INTRODUCTORY PETROLOGY.** *Three hours credit. (Two hours lecture, two hours laboratory.)*

Prerequisites, GEOL 100 or 202. A study of igneous, sedimentary, and metamorphic rocks: their origins, descriptions, and bases for classifications.

**\*GEOL 340. PALEONTOLOGY.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, GEOL 100 or 203 or consent of instructor. This course is a study of fossil animals and plants—their morphologies, classifications, life histories, trends of evolution, ecologies, and their uses as stratigraphic tools.

**GEOL 370. STRUCTURAL GEOLOGY.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, GEOL 100 or 202. This course deals with the mechanics of rock deformation, and the geologic structures of the Earth's crust—their description and classification, theories and facts regarding their origins, and methods of investigating them.

**GEOL 410. ENVIRONMENTAL GEOLOGY.** *Three hours credit.*

Prerequisites, GEOL 100 or 202. The role of geology in man's interaction with his environment. Geological aspects of urban growth, land-use planning, and natural hazards; problems of water resource management, waste disposal, and pollution; exploitation of mineral resources and related environmental implications.

**GEOL 420. OPTICAL CRYSTALLOGRAPHY AND PETROGRAPHY.** *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisite, GEOL 320. In the classroom theories and methods of optical crystallography are investigated, and the optical properties of minerals are discussed. In the laboratory various petrographic techniques are learned including use of the petrographic microscope for identifying mineral grains in immersion media and in rock thin sections.

**GEOL 425. ECONOMIC GEOLOGY.** *Three hours credit.*

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.

**GEOL 450. SEDIMENTOLOGY.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, GEOL 203 or consent of instructor. A study of processes of sedimentation, environments of deposition, and genesis, classification, and analysis of sedimentary rocks.

**GEOL 455. STRATIGRAPHY.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, GEOL 203 or consent of instructor. Principles and techniques of analyzing and interpreting sedimentary rock strata to build the geologic story of the earth. Regional stratigraphy of northeastern Colorado will be investigated.

**GEOL 460. GEOMORPHOLOGY.** *Four hours credit. (Three hours lecture, three hours 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.

**GEOL 464. GLACIAL AND PLEISTOCENE GEOLOGY.** *Three hours credit.*

Prerequisite, GEOL 100 or 202. A survey of geologic phenomena which characterized the Pleistocene Epoch with emphasis on the behavior of glaciers—their dynamics, growth and recession, associated landforms and sediments, and climatic implications.

**GEOL 468. INTRODUCTION TO SOILS.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, 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.

**GEOL 480. GEOLOGIC FIELD METHODS.** *Four hours credit. (Two hours lecture, six hours laboratory.)*

Prerequisites, GEOL 203. An introduction to the techniques employed by the field geologist to obtain and record information from rocks in the field. Using standard geological field equipment each student will conduct investigations and prepare a geologic map of an area of moderately complex structure in the foothills west of Loveland.

**GEOL 490. ROCKY MOUNTAIN GEOLOGY.** *Three hours credit.*

Prerequisite, GEOL 203. This course seeks to apply the student's geologic knowledge to regional problems in the Rocky Mountains. Emphasis is placed on the use of an extensive geological literature dealing with the Rocky Mountain area, particularly Colorado. Two-day field trip required.

## HEALTH, PHYSICAL EDUCATION AND RECREATION GENERAL EDUCATION COURSES

These courses are numbered from 101-191 inclusive with courses numbered from 101 to 190 counting towards the completion of the electives in the General Education Program. These activity courses are graded on an individualized option basis with the student electing either satisfactory-unsatisfactory or a letter grade for the course on a non-revocable basis. When an activity is offered at more than one level of skill it will be noted in the printed class schedule. Skill standards are posted on school bulletin boards. HPER 191, Personal and Family Health, is an academic requirement of General Education.

- HPER 101.** FIELD SPORTS. *One hour credit.*  
**HPER 102.** WINTER SPORTS. *One hour credit.*  
**HPER 103.** BADMINTON. *One hour credit.*  
**HPER 104.** ARCHERY. *One hour credit.*  
**HPER 105.** MOVEMENT FUNDAMENTALS. *One hour credit.*  
**HPER 106.** TUMBLING. *One hour credit.*  
**HPER 108.** GYMNASTICS. *Two hours credit.*  
**HPER 109.** PHYSICAL FITNESS AND CONDITIONING. *One hour credit.*  
**HPER 110.** ORIENTATION TO PHYSICAL EDUCATION ACTIVITIES. *One hour credit.*  
**HPER 111.** SOFTBALL. *One hour credit.*  
**HPER 112.** TENNIS. *Two hours credit.*  
**HPER 115.** VOLLEYBALL. *Two hours credit.*  
**HPER 116.** GOLF. *Two hour credit.*  
**HPER 118.** BASKETBALL. *One hour credit.*  
**HPER 120.** BOWLING. *One hour credit.*  
**HPER 122.** FENCING. *Two hours credit.*  
**HPER 125.** SWIMMING. *One hour credit.*  
**HPER 126.** SKIING. *One hour credit.*  
**HPER 127.** HORSEMANSHIP. *One hour credit.*  
**HPER 128.** ROLLER SKATING. *One hour credit.*  
**HPER 129.** BASIC MOUNTAINEERING. *One hour credit.*  
**HPER 130.** MODERN DANCE. *One hour credit.*  
**HPER 133.** SOCIAL DANCE. *One hour credit.*  
**HPER 134.** FOLK DANCE. *One hour credit.*  
**HPER 135.** AMERICAN SQUARE AND COUPLE DANCE. *One hour credit.*  
**HPER 138.** SENIOR LIFE SAVING. *Two hours credit.*  
**HPER 139.** WATER SAFETY INSTRUCTORS COURSE. *Two hours credit.*  
 Prerequisite, HPER 138.  
**HPER 140.** FRESHMAN FOOTBALL. *One hour credit.*  
**HPER 141.** VARSITY FOOTBALL. *One hour credit.*  
**HPER 142.** FRESHMAN BASKETBALL. *One hour credit.*  
**HPER 143.** VARSITY BASKETBALL. *One hour credit.*  
**HPER 144.** FRESHMAN WRESTLING. *One hour credit.*  
**HPER 145.** VARSITY WRESTLING. *One hour credit.*  
**HPER 147.** VARSITY GYMNASTICS. *One hour credit.*  
**HPER 149.** VARSITY SWIMMING. *One hour credit.*  
**HPER 150.** FRESHMAN BASEBALL. *One hour credit.*  
**HPER 151.** VARSITY BASEBALL. *One hour credit.*  
**HPER 153.** VARSITY TRACK. *One hour credit.*  
**HPER 155.** VARSITY TENNIS. *One hour credit.*  
**HPER 157.** VARSITY GOLF. *One hour credit.*  
**HPER 160.** INTERCOLLEGIATE BASKETBALL (WOMEN). *One hour credit.*  
**HPER 161.** INTERCOLLEGIATE GYMNASTICS (WOMEN). *One hour credit.*  
**HPER 162.** INTERCOLLEGIATE SWIMMING (WOMEN). *One hour credit.*  
**HPER 163.** INTERCOLLEGIATE TRACK (WOMEN). *One hour credit.*  
**HPER 164.** INTERCOLLEGIATE TENNIS (WOMEN). *One hour credit.*  
**HPER 165.** INTERCOLLEGIATE GOLF (WOMEN). *One hour credit.*  
**HPER 166.** INTERCOLLEGIATE VOLLEYBALL (WOMEN). *One hour credit.*  
**HPER 167.** INTERCOLLEGIATE FIELD HOCKEY (WOMEN). *One hour credit.*  
**HPER 168.** INTERCOLLEGIATE SOFTBALL (WOMEN). *One hour credit.*

**\*HPER 191.** PERSONAL AND FAMILY HEALTH. *Three hours credit.*  
 Designed to develop the understandings, attitudes, and practices which contribute to better individual and family health. Emphasis is placed upon the major health and safety problems of the college years and early adulthood.

## SPECIAL CERTIFICATION COURSES

**Water Safety:** HPER 138, 139.

**First Aid:** HPER 262, 263, 264.

**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 courses designed to improve teaching competency in this area of specialization. Students may secure complete information from the School of HPER office.

## PROFESSIONAL COURSES FOR SCHOOL MAJORS AND MINORS

Courses numbered 200 and higher are intended primarily for the professional preparation of degree candidates completing a major or a minor in the school.

### **HPER 200. INTRODUCTION TO HEALTH EDUCATION OR PHYSICAL EDUCATION OR RECREATION.** *Two hours credit.*

Designed to orient freshman majors with the breadth, scope, and nature of the professional program in health education or physical education or recreation.

### \***HPER 220. ANATOMICAL KINESIOLOGY.** *Three hours credit. (One hour laboratory to be arranged.)*

A study of the structural components of human movement with special attention being given to the analysis of movement problems.

### \***HPER 221. MECHANICAL KINESIOLOGY.** *Three hours credit. (One hour 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.

### \***HPER 222. PHYSIOLOGICAL KINESIOLOGY.** *Three hours credit. (One hour laboratory to be arranged.)*

A study of the physiological components of human movement with special attention being given to the analysis of movement problems.

### \***HPER 223. PSYCHOLOGICAL KINESIOLOGY.** *Three hours credit. (One hour laboratory to be arranged.)*

A study of the neuropsychological components of human movement with special attention being given to the analysis of movement problems.

### \***HPER 224. MATURATIONAL KINESIOLOGY.** *Three hours credit. (One hour laboratory to be arranged.)*

Prerequisites, HPER 222 and 223. A study of the maturational components of human movement with special attention being given to the analysis of movement problems.

### **HPER 227. COACHING AND OFFICIATING OF GYMNASTICS.** *Two hours credit.*

Prerequisite, HPER 285. Designed to prepare the student in the techniques and strategies of coaching competitive gymnastics, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

### **HPER 228. COACHING AND OFFICIATING OF TRACK AND FIELD. (WOMEN)** *Two hours credit.*

Prerequisite, HPER 277. Designed to prepare the student in the techniques and strategies of coaching competitive track and field events, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

## 190 / COURSE DESCRIPTION

### **HPER 229. COACHING AND OFFICIATING OF FIELD SPORTS. *Two hours credit.***

Prerequisite, HPER 271, 272. Designed to prepare the student in the techniques and strategies of coaching competitive field sports, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

### **HPER 230. COACHING AND OFFICIATING OF VOLLEYBALL. *Two hours credit.***

Prerequisite, HPER 274. Designed to prepare the student in the techniques and strategies of coaching competitive volleyball, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

### **HPER 231. COACHING AND OFFICIATING OF BASKETBALL. (WOMEN) *Two hours credit.***

Prerequisite, HPER 273. Designed to prepare the student in the techniques and strategies of coaching competitive basketball, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

### **HPER 232. COACHING AND OFFICIATING OF TENNIS. *Two hours credit.***

Prerequisite, HPER 284. Designed to prepare the student in the techniques and strategies of coaching competitive tennis to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

### **HPER 233. COACHING AND OFFICIATING OF SWIMMING. *Two hours credit.***

Prerequisite, HPER 139. Designed to prepare the student in the techniques and strategies of coaching competitive swimming, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

### **HPER 234. COACHING AND OFFICIATING OF SOFTBALL. *Two hours credit.***

Prerequisite, HPER 278. Designed to prepare the student in the techniques and strategies of coaching competitive softball, to provide a background and understanding of the rules and techniques of officiating, and to give practical experience in officiating.

### **HPER 235. TEACHING EXPERIENCE SEMINAR. *One hour credit.***

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 244. ELEMENTARY PHYSICAL EDUCATION LEADERSHIP. *Two hours credit.***

This course is designed for the purpose of planning activities for and teaching elementary children in the areas of rhythms, sports and games, and aquatics.

### **HPER 245. TUMBLING, APPARATUS AND SELF-TESTING ACTIVITIES FOR THE ELEMENTARY SCHOOL CHILD. *Two hours credit.***

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.

### **\*HPER 252. SOCIAL RECREATION. *Two hours credit.***

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 home.

### **HPER 253. CAMP COUNSELING. *Three hours credit.***

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.** *Four hours credit.*

Prerequisites. HPER 293, 294. Basic techniques, movement analysis and composition for the advanced dance student.

**\*HPER 256. IMPROVISATION AND COMPOSITION FORMS.** *Two hours credit.*

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.

**HPER 262. FIRST AID.** *Two hours credit.*

**HPER 263. ADVANCED FIRST AID.** *One hour credit.*

Prerequisite, HPER 262.

**HPER 264. INSTRUCTOR'S COURSE IN FIRST AID.** *One hour credit.*

Prerequisites. HPER 262, 263.

**HPER 265. RECREATION SKILLS IN INDIVIDUAL AND DUAL SPORTS.** *Two hours credit.*

An introductory course, designed to acquaint the undergraduate Recreation major with the skills necessary to organize and conduct activities in the area of individual and dual sports, with emphasis on the lifetime sport approach.

**HPER 266. RECREATION SKILLS IN TEAM SPORTS.** *Two hours credit.*

An introductory course, designed to acquaint the undergraduate Recreation major with the skills necessary to develop activities in the area of team sports, with emphasis on the lifetime sport approach.

**HPER 267. RECREATION SKILLS IN THE RECREATION CENTER, AND ON THE PLAYGROUND.** *Two hours credit.*

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 270. ANALYSIS AND MOVEMENTS OF WEIGHT TRAINING AND CONDITIONING.** *One hour credit.*

Principles, methods, and techniques of weight training for athletics.

**HPER 271. ANALYSIS AND MOVEMENTS OF SOCCER OR SPEED-BALL.** *One hour credit.*

Movement skills, rules, and strategies.

**HPER 272. ANALYSIS AND MOVEMENTS OF HOCKEY.** *One hour credit.*

Movement skills, rules, and strategies.

**HPER 273. ANALYSIS AND MOVEMENTS OF BASKETBALL.** *Two hours credit.*

Movement skills, rules, and strategies.

**HPER 274. ANALYSIS AND MOVEMENTS OF VOLLEYBALL.** *One hour credit.*

Movement skills, rules, and strategies.

**HPER 275. ANALYSIS AND MOVEMENTS OF WRESTLING.** *One hour credit.*

Movement skills, rules, and strategies.

**HPER 276. ANALYSIS AND MOVEMENTS OF FOOTBALL OR FLAG FOOTBALL.** *Two hours credit.*

Movement skills, rules, and strategies.

**HPER 277. ANALYSIS AND MOVEMENTS OF TRACK.** *Two hours credit.*  
Movement skills, rules, and strategies.

**HPER 278. ANALYSIS AND MOVEMENTS OF BASEBALL OR SOFTBALL.** *Two hours credit.*  
Movement skills, rules, and strategies.

**HPER 279. ANALYSIS AND MOVEMENTS OF SELF DEFENSE.** *One hour credit.*  
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.** *One hour credit.*  
Movement skills, rules, and strategies.

**HPER 281. ANALYSIS AND MOVEMENTS OF FENCING.** *One hour credit.*  
Movement skills, rules, and strategies.

**HPER 282. ANALYSIS AND MOVEMENTS OF BOWLING.** *One hour credit.*  
Movement skills, rules, and strategies.

**HPER 283. ANALYSIS AND MOVEMENTS OF SWIMMING.** *Two hours credit.*  
Movement skills, rules, and strategies.

**HPER 284. ANALYSIS AND MOVEMENTS OF TENNIS.** *One hour credit.*  
Movement skills, rules, and strategies.

**HPER 285. ANALYSIS AND MOVEMENTS OF TUMBLING AND GYMNASTICS.** *Two hours credit.*  
Movement skills, rules, and strategies.

**HPER 286. ANALYSIS AND MOVEMENTS OF ARCHERY.** *One hour credit.*  
Movement skills, rules, and strategies.

**HPER 287. ANALYSIS AND MOVEMENTS OF GOLF.** *One hour credit.*  
Movement skills, rules, and strategies.

**HPER 288. PHYSICAL EDUCATION ACTIVITIES FOR THE ELEMENTARY SCHOOL.** *Two hours credit.*  
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.** *One hour credit.*  
Movement skills and methods of teaching skiing.

**HPER 290. ANALYSIS AND MOVEMENTS OF FOLK AND SQUARE DANCE.** *Two hours credit.*  
Fundamental and advanced skills of folk and square dance.

**HPER 291. RHYTHMIC EDUCATION IN THE ELEMENTARY SCHOOL.** *Two hours credit.*  
Methods and materials of creative dance, singing games and folk dances including the movement exploration approach.

**HPER 293. ANALYSIS AND MOVEMENTS OF MODERN DANCE.** *Two hours credit.*  
The analysis and techniques of movement in relation to the aspects of time, space and force.

**HPER 294. PROBLEMS IN DANCE COMPOSITION.** *Two hours credit.*  
Prerequisite HPER 293. Problems in dance composition includes rhythmic analysis and accompaniment for dance.

**HPER 295. ANALYSIS OF MOVEMENT FUNDAMENTALS.** *One hour credit.*

Skills and techniques of conditioning, body mechanics and movement patterns.

**\*HPER 296. RHYTHMIC ANALYSIS AND DANCE ACCOMPANIMENT.** *Two hours credit.*

A course designed to present the fundamental principles of rhythm and dance accompaniment through practical dance application.

**HPER 297. ANALYSIS OF SWIMMING TECHNIQUES (Women).** *One hour credit.*

Prerequisite, HPER 283. Analysis of swimming and diving and synchronized swimming techniques.

**HPER 298. INSTRUCTIONAL MEDIA IN HEALTH, PHYSICAL EDUCATION AND RECREATION.** *Two hours credit.*

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 299. COMMUNITY HEALTH.** *Four hours credit.*

Prerequisite, HPER 191. Designed to acquaint students with health problems in a community and to make them aware of community agencies which cope with these problems.

**HPER 301. HEALTH EDUCATION IN THE ELEMENTARY SCHOOL.** (PTE) *Two hours credit.*

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 (WOMEN),** (PTE) *Two hours credit.*

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) *Two hours credit.*

Prerequisites, HPER 290, 292, 293, 294. Teaching procedures of dance activities for the physical education major student.

**\*HPER 337. SOCIO-PSYCHOLOGICAL CONCEPTS OF LEISURE.** *Three hours credit.*

It is the purpose of this course to familiarize the student with basic sociological and psychological concepts of leisure.

**HPER 340. HEALTH AND PHYSICAL EDUCATION FOR THE HANDICAPPED.** *Three hours credit.*

Discussion of basic characteristics of the handicapped as related to participation in physical education, recreation, and outdoor education. Emphasis is placed on interests, needs, limitations, and potentialities of the handicapped. Special consideration is given to types of activity programs, modification of activities, and approach to teaching the mentally and physically handicapped.

**\*HPER 342. MODERN CONCEPTS OF HEALTH AND DISEASE.** *Three hours credit.*

A thorough investigation of the current theories of and defenses against disease, followed by a review of prevalent congenital, communicable, chronic, and degenerative diseases.

**HPER 343. METHODS AND OBSERVATION OF HEALTH EDUCATION.** (PTE) *Five hours credit.*

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)**  
*Three hours credit.*

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 OBSERVATIONS OF TEACHING PHYSICAL EDUCATION IN THE SECONDARY SCHOOL. (PTE)**  
*Two hours credit.*

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. *One hour credit.***

Designed to afford undergraduate students an opportunity to teach under close supervision with immediate feedback and discussion with the supervising teacher.

**HPER 350. INTRODUCTION TO ENVIRONMENTAL HEALTH. *Three hours credit.***

An introductory course designed to promote an understanding of environmental health problems. In addition, equal emphasis will be placed on the effect environmental pollution has on personal and community health.

**HPER 361. COACHING OF FOOTBALL. (PTE) *Two hours credit.***

Prerequisites, HPER 140, or 141, or 276. The techniques and strategy of coaching football, with emphasis upon type of formations, defense, play series, rules, and football coaching in general.

**HPER 362. COACHING OF BASKETBALL. (MEN) (PTE) *Two hours credit.***

Prerequisites, HPER 142, or 143, or 273. Theory and practice in scouting, charting, scoring, timing, and officiating. Principles of successful modern offensive and defensive play. Procedures in developing and utilizing playing personnel.

**HPER 363. COACHING OF TRACK AND FIELD. (MEN) (PTE) *Two hours credit.***

Prerequisite, HPER 153 or 277. A study of the techniques of coaching the various events in track and field, the rules, and the methods of conducting track events.

**HPER 364. COACHING OF BASEBALL. (PTE) *Two hours credit.***

Prerequisite, HPER 150, or 151 or 278. Techniques and procedures in developing individual and team play. Defensive baseball: pitching, catching, infielding, outfielding, strategy. Offensive baseball: batting, base-running, strategy.

**HPER 365. COACHING AND OFFICIATING OF WRESTLING. *Two hours credit.***

A study of the techniques and strategy of coaching competitive wrestling with theory and practice provided in officiating, scoring, timing, and scouting of wrestling meets.

**HPER 368. PROGRAMS IN RECREATION. *Four hours credit.***

Prerequisite HPER 200. Designed to prepare the student for effective planning of varied types of recreation programs. Special attention is given to programs for public playgrounds, community centers, and such special groups as the aging, teenagers, young adults, and the handicapped.

**HPER 369. THERAPEUTIC RECREATION. *Three hours credit.***

Adaptation of recreation activities to meet the varying needs of handicapped individuals in hospitals, schools, homes, recreation and rehabilitation centers. Reports, discussions, observations, and visitations.

**HPER 380. PREVENTION AND CARE OF SPORTS INJURIES.** *Two hours credit.*

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 405. ISSUES IN HEALTH.** *Three hours credit.*

Prerequisite Health 191 or equivalent. A comprehensive and intensive study of the major contemporary individual and social health problems relating to family life, sex education, the use of stimulants, narcotics, halucinogens, alcohol, tobacco, and other crucial health problems.

**HPER 426. TESTS AND MEASUREMENT IN PHYSICAL EDUCATION.** (PTE) *Three hours credit.*

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) *Three hours credit.*

Prerequisites, HPER 220, 221. Developmental, remedial, and corrective programs in physical education. Emphasis is given to adaptations which are designed to meet the needs of individuals requiring special attention above and beyond the regular physical education program.

**HPER 435. EDUCATIONAL INTERPRETATIONS OF HEALTH, PHYSICAL EDUCATION AND RECREATION.** (PTE) *Three hours credit.*

A foundational approach to interpretations and objectives of physical education, health education, and recreation in general education. Designed to assist the mature professional major in developing a sound philosophic background for continued growth in the professional field.

**\*HPER 436. SOCIOLOGICAL DIMENSIONS OF SPORT IN AMERICAN SOCIETY.** *Three hours credit.*

It is the main objective of this course to examine and utilize basic sociological concepts and demonstrate their manifestations within the area of sport.

**HPER 441. ADMINISTRATION OF INTRAMURAL SPORTS AND STUDENT RECREATION PROGRAMS.** *Two hours credit. (Laboratory required.)*

The administrative problems confronted by the Intramural Director: organization, supervision, scheduling, facility management, financing, equipment, and evaluation.

**HPER 450. ADMINISTRATION OF PHYSICAL EDUCATION.** (PTE) *Three hours credit.*

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 RECREATION.** *Four hours credit.*

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.** *Eighteen hours credit.*

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 456. WORKSHOP IN MODERN DANCE.** *Four hours credit.*  
Problems connected with the staging of dance performances.

**\*HPER 457. DANCE HISTORY AND PHILOSOPHY.** *Four hours credit.*  
History and development of dance as it is culturally determined and the philosophy influencing dance.

**HPER 458. DANCE METHODS AND MATERIALS.** *Four hours credit.*  
Prerequisites, HPER 293, 294. Procedures and materials for teaching contemporary dance. For the dance education major and minor student. This includes dance accompaniment.

**HPER 459. DANCE PRODUCTION IN HIGH SCHOOL AND COLLEGE.**  
*Two hours credit.*

Prerequisites, HPER 293, 294, 456. A practical application and principles which serve 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.

**HPER 460. OUTDOOR RECREATION AND ENVIRONMENTAL AWARENESS.** *Four hours credit.*

Emphasis will be placed on initiating and developing outdoor recreation programs through the multi-disciplinary (team approach), involving state and national professional educational associations, governments, organizations, and private agencies.

**HPER 464. SPORTS OFFICIATING FOR MEN.** *One to four hours credit.*  
Designed for coaches, administrators, and officials. Considers general principles and philosophy of officiating as well as study of the mechanics of officiating the sports for men in the school program.

**HPER 470. ADMINISTRATION OF ATHLETICS.** *Three hours credit.*  
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.** *Three hours credit.*  
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.** *Three hours credit.*  
Reading, reports and projects covering the philosophy, methods, and materials for the recreation leader.

**HPER 474. DRIVER AND TRAFFIC SAFETY EDUCATION I.** *Three hours credit.*

Fundamentals, principles, practices and content of high school driver education and traffic safety programs. Primary emphasis is placed on teaching the classroom phase of driver and traffic safety education.

**HPER 475. DRIVER AND TRAFFIC SAFETY EDUCATION II.** *Three hours credit.*

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 dual control automobiles.

## HISTORY

**\*HIST 125. WESTERN CIVILIZATION I.** *Three hours credit.*  
The course will cover the most significant aspects of European civilization from about 1492 to 1815. Emphasis will be on the cultural, intellectual and religious developments which have had an enduring value. Not open to history majors or minors.

**\*HIST 126. WESTERN CIVILIZATION II.** *Three hours credit.*

The emphasis of this course will be on the principal developments of Western civilizations between 1815 and 1914, the rise of nationalism, liberalism, constitutionalism and industrialism, and the impact of these on life and culture in the nineteenth century. Not open to history majors or minors.

**\*HIST 127. WESTERN CIVILIZATION III.** *Three hours credit.*

The course will cover the period from 1914 to the present. The emphasis will be on the two great wars, the rise of dictatorships, and the quest for peace and security. Not open to history majors or minors.

**\*HIST 130. WORLD HISTORY I.** *Four hours credit.*

World history—early times to 800. Major civilizations.

**\*HIST 131. WORLD HISTORY II.** *Four hours credit.*

World History—800 to 1800. Major civilizations.

**\*HIST 132. WORLD HISTORY III.** *Four hours credit.*

World History—1800 to the present. Major civilizations.

**\*HIST 170. UNITED STATES HISTORY I.** *Three hours credit.*

United States history to 1848, European background of American history, the age of discovery and colonization, the imperial rivalries, the revolution and the new nation, nationalism and sectionalism.

**\*HIST 171. UNITED STATES HISTORY II.** *Three hours credit.*

United States history, 1848-1912. The war between the states, reconstruction, the emergence of modern America, the United States as a world power, the new nationalism.

**\*HIST 172. UNITED STATES HISTORY III.** *Three hours credit.*

United States history, 1912 to the present. The New Freedom, World War I, prosperity and depression, the New Deal, the long armistice, World War II, post-war problems since 1945.

**\*HIST 175. UNIT SURVEY OF UNITED STATES HISTORY.** *Five hours credit.*

Detailed consideration of specific units in American history with emphasis upon the content and materials for use in elementary schools. Not open to history majors or minors.

**\*HIST 210. INTELLECTUAL AND CULTURAL HISTORY OF MEDIEVAL EUROPE, 4TH-16TH CENTURIES.** *Three hours credit.*

A survey of history from the end of ancient times to the beginnings of Modern Europe. Open to sophomores.

**\*HIST 220. INTELLECTUAL AND CULTURAL HISTORY OF EARLY MODERN EUROPE, 1600 TO 1800.** *Three hours credit.*

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.

**\*HIST 230. INTELLECTUAL AND CULTURAL HISTORY OF MODERN EUROPE, 1800 TO THE PRESENT.** *Three hours credit.*

A survey of intellectual and cultural developments from the Romantic period to the present. Open to sophomores.

**\*HIST 240. THE FAR EAST.** *Four hours credit.*

A study of the historical background of the economic, social, educational, philosophical and political life of the major nations and regions of the Far East.

**\*HIST 250. GEOGRAPHIC INFLUENCES IN UNITED STATES HISTORY.** *Two hours credit.*

Relationship of geography to the discovery, exploration, settlement, and development of the United States.

**\*HIST 254. HISTORY OF THE EARLY WEST.** *Four hours credit.*

The westward movement 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.

**\*HIST 256. HISTORY OF COLORADO.** *Three hours credit.*

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.

**\*HIST 258. THE HISPANO IN THE AMERICAN SOUTHWEST.** *Three hours credit.*

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.

**\*HIST 265. AMERICAN SOCIAL AND INDUSTRIAL HISTORY.** *Four hours credit.*

A study of the major social, industrial, and cultural forces shaping American attitudes and values, especially those of the White Anglo-Saxon Protestant majority in regard to its relationships with Indians, Blacks, and Chicanos.

**\*HIST 277. HISTORY OF THE BLACK MAN IN AMERICA I.** *Three hours credit.*

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.

**\*HIST 278. HISTORY OF THE BLACK MAN IN AMERICA II.** *Three hours credit.*

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.

**\*HIST 279. HISTORY OF THE BLACK MAN IN AMERICA III.** *Three hours credit.*

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.

**\*HIST 285. AMERICAN MILITARY AND NAVAL POLICY: 1775-1970.** *Three hours credit.*

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.

**\*HIST 300. THE EARLY COLONIAL PERIOD: 1492-1689.** *Four hours credit.*

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.

**\*HIST 301. EIGHTEENTH CENTURY AMERICA: 1689-1763.** *Four hours credit.*

This course will investigate in depth the development of the North American British colonies in the 18th Century. Emphasis will be placed on the origin of the Empire and on the colonial economy, political structure, and society.

**\*HIST 302. EMERGENCE OF A NEW NATION: 1763-1789.** *Four hours credit.*

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 of the changing social, economic, and political patterns discernible in the Revolutionary generation.

**\*HIST 306. CONSTITUTIONAL HISTORY OF THE UNITED STATES TO 1865.** *Four hours credit.*

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.

**\*HIST 308. AMERICAN INTELLECTUAL HISTORY TO 1865.** *Four hours credit.*

The course deals with the individuals, works, and schools of thought in the history of ideas in American culture from the Puritanism of the colonial period to the Romanticism of ante-bellum America.

**\*HIST 310. GREAT MEN IN AMERICAN HISTORY.** *Three hours credit.*

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.

**\*HIST 316. HISTORY OF THE TRANS-MISSISSIPPI WEST: 1821-1890.** *Four hours credit.*

Examination of the Westward movement from the settlement of Texas to the end of the frontier period. Major topics stressed include frontier monetary problems, relation of Mormons to the move west, pre-emption and homestead acts, forty-niners and fifty-niners, transcontinental railroads, and the range-cattle industry.

**\*HIST 321. DIPLOMATIC HISTORY OF THE UNITED STATES TO 1889.** *Four hours credit.*

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.

**\*HIST 327. CULTURAL BACKGROUND OF WESTERN-SOVIET RUSSIAN RELATIONS.** *Fifteen hours credit.*

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.

**\*HIST 330. HISTORY OF LATIN AMERICA: COLONIAL PERIOD.** *Four hours credit.*

A survey of Spanish America and Brazil from their discovery, conquest and colonization through the Bourbon and Braganza reforms.

**\*HIST 331. HISTORY OF LATIN AMERICA: NATIONAL PERIOD.** *Four hours credit.*

A survey of the Latin American countries from their wars of independence through the Cuban Revolution.

**\*HIST 340. HISTORY OF AFRICA TO 1889.** *Five hours credit.*

A general history of the African continent from the early civilizations through the early European explorations and settlements to the British, French, Belgian, and other European colonizing activities of the nineteenth century.

**\*HIST 350. ANCIENT HISTORY.** *Four hours credit.*

The life and institutions of the Ancient Near East and Greece, cultural development, living conditions, and recent archaeological discoveries.

**\*HIST 358. HISTORY OF MEDIEVAL EUROPE.** *Four hours credit.*

This course is designed to provide the undergraduate with the basic political, social and economic facts and interpretations from the end of the Roman empire to the Renaissance.

**\*HIST 360. HISTORY OF MEDIEVAL THOUGHT.** *Four hours credit.*

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.

**\*HIST 363. THE OLD REGIME.** *Five hours credit.*

A study of the political, social, economic, intellectual, and cultural developments from the end of the Reformation to the French Revolution.

**\*HIST 370. CONSTITUTIONAL HISTORY OF MEDIEVAL ENGLAND.**  
*Four hours credit.*

The development of English legal, constitutional and administrative institutions from their Anglo-Saxon origins to 1485. Stress will be placed on the medieval antecedents of the modern English governmental departments as well as on the development of the common law, the jury system, and the rise of representative government. Emphasis will also be placed on the role of these institutions in the transition from a feudal to a national monarchy.

**\*HIST 371. EARLY ENGLISH HISTORY: TUDOR AND STUART ENGLAND, 1485-1688.** *Four hours credit.*

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.

**\*HIST 375. FOUNDATIONS OF THE 2ND REICH.** *Four hours credit.*

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.

**\*HIST 378. RUSSIAN HISTORY FROM THE BEGINNING TO ALEXANDER I, 860-1801.** *Four hours credit.*

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.

**\*HIST 379. IMPERIAL RUSSIA: 1801-1917.** *Four hours credit.*

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, 1469-1808.** *Four hours credit.*

A study of the emergence and decline of Spain and Portugal as European and world powers. Demographic, economic, and social developments will be emphasized.

**\*HIST 385. EUROPE: 1815-1870.** *Five hours credit.*

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.

**\*HIST 386. DIPLOMATIC HISTORY OF MODERN EUROPE: 1914-1939.**  
*Four hours credit.*

A specialized course in the study of European diplomacy, its methods and accomplishments, utilizing lectures and analyses of basic documents and treaties.

**\*HIST 390. HISTORY OF CHINA TO 1840.** *Four hours credit.*

The history of China to 1840 will be considered from the point of view of political and cultural development.

**\*HIST 394. HISTORY OF JAPAN TO 1868.** *Four hours credit.*

The history of Japan up to 1868 will be considered from a cultural and political aspect. Emphasis will also be placed upon social development.

**\*HIST 404. THE EARLY REPUBLIC, 1789-1815.** *Four hours credit.*

The study of the establishment of a new federal government, the administrations 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.

**\*HIST 405. NATIONALISM AND SECTIONALISM IN AMERICA, 1815-1848.** *Four hours credit.*

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.

**\*HIST 406. THE CIVIL WAR AND RECONSTRUCTION, 1848-1877.** *Four hours credit.*

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.

**\*HIST 407. THE GILDED AGE: 1868-1892.** *Four hours credit.*

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.

**\*HIST 408. ERA OF REFORM: 1892-1917.** *Four hours credit.*

A study of the reform movements that developed in 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.

**\*HIST 411. RECENT UNITED STATES HISTORY, FROM 1918 TO THE PRESENT.** *Four hours credit.*

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 recent developments as Black Power and other minority "power" movements and the social rebellion.

**\*HIST 415. DIPLOMATIC HISTORY OF THE UNITED STATES SINCE 1889.** *Four hours credit.*

A survey of American diplomatic history since 1889, emphasizing the problems of peace and war and the internationalist-isolationist conflict in the twentieth century.

**\*HIST 416. CONTEMPORARY AMERICAN FOREIGN POLICY.** *Three hours credit.*

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 four hours credit.*

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.

**\*HIST 423. CONSTITUTIONAL HISTORY OF THE UNITED STATES SINCE 1865. *Four hours credit.***

The development of Constitutional interpretation from the post Civil War era to the present. A study of Supreme Court decisions tracing changing interpretations during the Laissez Faire era, the Populist-Progressive through the New Deal to the present.

**\*HIST 425. AMERICAN INTELLECTUAL HISTORY SINCE 1865. *Four hours credit.***

The course deals with the individuals, works, and schools of thought in the history of ideas in American culture from the Naturalism of the post-Civil War period to the New Conservatism.

**\*HIST 427. HISTORY OF AMERICAN LABOR. *Four hours credit.***

A survey of the organized labor movement in the United States from colonial times to the present with emphasis on the period since the Civil War.

**\*HIST 430. HISTORY OF MEXICO, 1519 TO THE PRESENT. *Four hours credit.***

An in depth study of Mexico from the conquest of the Aztecs and the Mayas through the Revolution of 1910 and its aftermath.

**\*HIST 435. HISTORY OF ARGENTINA, BRAZIL AND CHILE, 1500 TO THE PRESENT. *Four hours credit.***

An in depth study of the ABC countries from the discovery of Brazil through the *justicialismo* of Peron, the *Estado Novo* of Vargas, and the flirtations with socialism in Chile. To be offered every other year.

**\*HIST 437. HISTORY OF THE ANDEAN REPUBLICS, 1532 TO THE PRESENT. *Four hours credit.***

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.

**\*HIST 440. HISTORY OF AFRICA FROM 1899. *Five hours credit.***

A survey of Africa prior to colonial rule, the impact of the colonialism and the independence movement, with emphasis on the development of the African states, their politics, economics and society.

**\*HIST 451. HISTORY OF GREECE. *Four hours credit.***

An advanced course in the history of Ancient Greece placed in the context of the river valley civilizations of the Near East. Emphasis will be placed on the various aspects of Hellenic and Hellenistic life and culture in the light of recent archaeological and historical discoveries.

**\*HIST 452. ROMAN HISTORY. *Five hours credit.***

An advanced study of Roman Civilization from the founding of the Republic to the decline of the Empire. Roman life, institutions and cultural heritage will be emphasized.

**\*HIST 458. HISTORY OF THE RENAISSANCE. *Four hours credit.***

A study of political, social, economic, religious and cultural development from 1300-1500.

**\*HIST 459. HISTORY OF THE REFORMATION. *Four hours credit.***

This course in Reformation history will provide the advanced undergraduate and graduate students with the basic political, religious, social and economic facts and interpretations from about 1517 to about 1648.

**\*HIST 460. RECENT ENGLISH HISTORY: 1689 TO THE PRESENT. *Four hours credit.***

The course will trace the developments in English constitutional, political, economic, and social life from the time of the great Revolution in 1688-89. Emphasis will be placed on the growth of political liberalism in England, and on the role which England has played in the modern world. The role of England as a world power since 1713 will be similarly studied.

**\*HIST 465. FRENCH REVOLUTION AND NAPOLEON.** *Five hours credit.*  
A study of the causes of the Revolution, its classical pattern, the rise of nationalism, and the significance of Napoleon in France and abroad.

**\*HIST 466. HISTORY OF MODERN FRANCE: 1815 TO THE PRESENT.**  
*Four hours credit.*

The course will examine in depth the important 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.

**\*HIST 470. HISTORY OF MODERN GERMANY.** *Four hours credit.*

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.

**\*HIST 478. HISTORY OF THE SOVIET UNION.** *Four hours credit.*

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.

**\*HIST 482. HISTORY OF SPAIN AND PORTUGAL, 1808 TO THE PRESENT.** *Four hours credit.*

A survey of the history of Spain and Portugal from 1808 to the present, with emphasis on those factors which resulted in the loss of empire, the fall of monarchy, the failure of democracy, the outbreak of Civil War, and the emergence of dictatorship.

**\*HIST 485. EUROPE: 1870-1914.** *Five hours credit.*

A study of the political, social, economic, intellectual, and diplomatic developments from the Franco-Prussian War to the beginning of World War I.

**\*HIST 486. CONTEMPORARY WORLD HISTORY.** *Five hours credit.*

An advanced study of world developments in recent times which will investigate the period from about 1900 to the present. The course will discuss the ideologies of communism, socialism, fascism, and democracy in their world setting.

**\*HIST 487. RECENT DIPLOMATIC HISTORY OF MODERN EUROPE: 1939 TO THE PRESENT.** *Four hours credit.*

A specialized course in the study of recent European diplomacy, its methods and accomplishments, utilizing lectures and analyses of basic documents and treaties.

**\*HIST 490. REVOLUTIONS IN MODERN TIMES.** *Four hours credit.*

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.

**\*HIST 492. HISTORY OF MODERN WORLD COMMUNISM.** *Four hours credit.*

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.

**\*HIST 494. WORLD POPULATION HISTORY, 1348 TO THE PRESENT.**  
*Four hours credit.*

A survey of world population movements from the eve of the Black Death through the latest censuses with emphasis on the interrelationships between demographic trends on the one hand and ecological and historical developments on the other.

**\*HIST 496. HISTORY OF MODERN CHINA AND JAPAN.** *Four hours credit.*

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.

**\*HIST 497. HISTORY OF INDIA AND PAKISTAN.** *Five hours credit.*

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.

**HIST 499. INTRODUCTION TO HISTORICAL RESEARCH.** *Three hours credit.*

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.

## HOME ECONOMICS

**HEC 108. THE HOME ECONOMICS PROFESSION.** *One hour credit.*

An introduction to the philosophy and purposes of the home economics profession with an overview of career opportunities and the educational preparation which is needed. Required of all majors, including transfer students without a comparable course. To be taken the first year a student is enrolled as a major in the Department of Home Economics. S-U grade.

**HEC 136. INTRODUCTION TO PRESCHOOL.** *Two hours credit.*

An introduction to preschool philosophy, current trends, present legislation on schools for young children, and the role of a qualified teacher.

**HEC 141. FOOD SELECTION AND PREPARATION I.** *Four hours credit.*  
(*Two hours lecture, four hours laboratory.*)

Prerequisite, CHEM 104. A study of the composition and nature of foods; the scientific principles underlying the selection, preparation and preservation of food products of standard quality. (A student may be exempt from this class by passing a challenge examination.)

**\*HEC 171. ART IN HOME LIVING.** *Two hours credit.*

A study designed to develop an appreciation and understanding of color and the other art elements of design with the application of art principles or guides to personal and home living. Students are encouraged to use creative ideas in solving art problems. Opportunities provided to improve aesthetic judgment in making everyday selections. (A student may be exempt from this class by passing a challenge examination.)

**HEC 181. TEXTILE FUNDAMENTALS.** *Five hours credit.* (*Three hours lecture, four hours laboratory.*)

A basic study of the fundamentals of fibers, yarns, fabric construction methods, and the selection, use and care of textiles.

**\*HEC 190. FASHION SEWING.** *Three hours credit.* (*One hour lecture, four hours laboratory.*)

Non-majors. A laboratory course designed for a student interested in clothing construction, emphasizing up-to-date techniques in the handling of new fabrics. Basic, intermediate or advanced projects may be selected according to the individual student's ability and needs.

**HEC 192. CREATIVE CLOTHING CONSTRUCTION.** *Five hours credit.*  
(*Two hours lecture, six hours laboratory.*)

Opportunities are provided for a student to learn and practice fundamental sewing skills with emphasis on the art principles as they relate to clothing.

**\*HEC 211. MANAGEMENT FOR TODAY'S FAMILY.** *Three hours credit.*  
A study of management in relation to successful home living. Family values, goals, decision making, managerial responsibilities, principles and techniques used in managing resources.

**\*HEC 221. FAMILY RELATIONSHIPS.** *Three hours credit.*  
Focuses attention on the total person, emphasizing the influence of attitudes, needs, beliefs, values and goals and how these affect personal and family living.

**HEC 242. PRINCIPLES OF FOOD PREPARATION II.** *Four hours credit.*  
*(Two hours lecture, four hours laboratory.)*

Prerequisites, CHEM 104 and HEC 141. Continuation of food preparation studies. Laboratory work is planned to show the relationship between scientific principles and food preparation processes.

**\*HEC 251. NUTRITION I.** *Three hours credit.*  
Prerequisite, CHEM 104 for majors only. Study of the essential nutrients and their function in promoting total well-being of the individual. Necessary food requirements are evaluated, and ways of satisfying these requirements are studied. Two sections will be taught—one for non-majors and one for Home Economics majors.

**\*HEC 271. THE HOME AND ITS FURNISHINGS.** *Four hours credit.* *(Three hours lecture, two hours laboratory.)*

Prerequisite, HEC 171. A study of principles and information needed for solving housing problems with considerations relating to family needs, procedures for renting, buying and financing, basic furniture design, and the selection and arrangement of furnishings.

**HEC 293. INTERMEDIATE CLOTHING CONSTRUCTION.** *Four hours credit.* *(Two hours lecture, four hours laboratory.)*

Prerequisites, HEC 181, 192. A garment of a special fabric is constructed using a method appropriate to the pattern and fabric.

**\*HEC 325. HOME NURSING.** *Two hours credit.*  
Principles of home nursing procedures are demonstrated and opportunities are provided for laboratory experience.

**\*HEC 331. DEVELOPMENT OF THE INFANT AND TODDLER.** *Three hours credit.*

Minimum of sophomore status required. A study of growth patterns from conception through infancy and the third year. Includes prenatal and postnatal factors influencing early development; guidance and provision for care, and the responsibilities of adults for providing a favorable home environment; the effect of these factors on later years.

**HEC 333. DEVELOPMENT AND GUIDANCE OF THE PRESCHOOL CHILD.** *Four hours credit.* *(Three hours lecture, two hours laboratory.)*

The physical, emotional, social, and intellectual growth processes as they apply in understanding the total development of the preschool years with appropriate guidance procedures emphasized. The functions, techniques and physical setting of the preschool are studied.

**HEC 334. PRESCHOOL CURRICULUM AND METHODS.** *Three hours credit.*

Taken in conjunction with HEC 335—Prerequisite, 333, PTE. 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.

**HEC 335. OBSERVATION AND PARTICIPATION IN PRESCHOOL.** *Three hours credit.* *(One hour conference, six hours laboratory.)*

Taken in conjunction with HEC 334—Prerequisite 333. Observation of specific methods and techniques relating to the teaching of Preschool. Practical laboratory observation and experience with preschool age children.

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**\*HEC 340. BASIC FOOD PREPARATION AND SERVICE.** *Four hours credit. (Two hours lecture, four hours laboratory.)*

A basic study in food selection and preparation for men and women students. Simple meals will be planned, prepared and served. Two sections will be taught—one for non-majors and one for Home Economics Preschool majors.

**HEC 343. MEAL PLANNING AND SERVICE.** *Four hours credit. (Two hours lecture, four hours laboratory.)*

Prerequisites, HEC 141, 242, CHEM 104. A study of individual planning, purchase and preparation of food for various income levels; service of gracious meals, including time and energy management; purchase and care of table appointments.

**HEC 353. DIET THERAPY.** *Three hours credit.*

Prerequisite, HEC 251. A study of the fundamental principles involved in the treatment of disease through diet. Emphasis is given to modification of normal diet.

**HEC 362. DEMONSTRATION TECHNIQUES.** *Two hours credit. (One hour lecture, three hours laboratory.)*

Prerequisites, HEC 141, 192. Theory and practice in conducting educational and commercial demonstrations of equipment and principles used in all areas of home economics.

**HEC 363. INTRODUCTION TO CURRICULUM IN HOME ECONOMICS EDUCATION.** *Three hours credit.*

A study of purpose, content, and organization of curriculum. An emphasis will be placed on social, psychological and economical influences on program development. Students will be involved in developing a topical outline.

**HEC 367. PRINCIPLES AND PRACTICES OF EVALUATION IN HOME ECONOMICS EDUCATION.** *Three hours credit.*

Prerequisites, EDFE 368, VE 452. Emphasis is upon the development of formal and informal evaluation devices for use in evaluating student growth and development in the home economics classroom. Each evaluation instrument is examined as to purpose and need within the educational setting. Consideration is also given to the interpretation of test scores.

**\*HEC 374. EQUIPMENT SELECTION AND MAINTENANCE.** *Four hours credit. (Three hours lecture, two hours laboratory.)*

Principles and techniques are developed in selection, use and care of household equipment.

**HEC 395. COSTUME DESIGN—FLAT PATTERN.** *Three hours credit. (One hour lecture, four hours laboratory.)*

Prerequisites, HEC 192, 293. An introduction to the principles of fashion design through the application of flat pattern methods. A personal master pattern will be developed by each student and used in creating an original design.

**\*HEC 415. CONSUMER EDUCATION.** *Three hours credit.*

This course is designed to give the student a background of practical information and procedures for analyzing and resolving consumer and financial problems of the family.

**HEC 419. HOME MANAGEMENT PRACTICUM.** *Three hours credit.*

Prerequisites, HEC 141, 211, 242, 343. Application must be made one quarter in advance. Opportunities are provided for students to make decisions in managing the resources of the group as they practice desirable standards of home living in the Home Management Residence.

**HEC 437. ADMINISTRATION OF PROGRAMS FOR YOUNG CHILDREN.** *Three hours credit.*

Taken in conjunction with HEC 438. Prerequisite, HEC 334. 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.

**HEC 438. PRACTICUM IN PRESCHOOL TEACHING.** *Three hours credit.*  
(*One hour conference, six hours laboratory.*)

Taken in conjunction with HEC 437. Prerequisites, HEC 333, 334, 335. The laboratory experience gives the students an introduction to student teaching through observation, demonstration and participation with preschool children under an experienced preschool teacher.

**\*HEC 439. PARENT EDUCATION.** *Three hours credit.*

This course deals with relationships between parents, children and teachers. Emphasis is on resources for meeting problems through cooperative interaction.

**HEC 445. EXPERIMENTAL FOOD STUDIES.** *Four hours credit.* (*Two hours lecture, four hours laboratory.*)

Prerequisites, HEC 141, 242, 251. An opportunity to determine the effects of temperature, time, and different manipulations on foods. Commercial products are tested and compared with home methods of preparation.

**HEC 446. FOOD SERVICE ADMINISTRATION.** *Three hours credit.*

Prerequisites, HEC 141, 142, 343. Principles of operation of food systems, emphasizing financial and production controls; menu planning and evaluation; recipe standardization and technical operations.

**HEC 447. QUANTITY FOOD PURCHASING AND PREPARATION.** *Four hours credit.* (*One hour lecture, six hours laboratory.*)

Prerequisite, HEC 446. Meal planning, techniques of food purchasing and application of food preparation principles to large quantity food service. The facilities of student dining halls, university center, and the school lunch program are used as practice laboratories.

**HEC 448. ORGANIZATION AND MANAGEMENT OF FOOD SERVICE.**  
*Three hours credit.*

Prerequisites, HEC 446, 447, BUS 180. Principles of organization, personnel management and financial control; layout, selection and design; equipment selection; use of work measurement and data processing. Field trips.

**HEC 453. NUTRITION II.** *Three hours credit.*

Prerequisite, HEC 251. An in-depth study of human and animal nutrition. Community resources will be utilized.

**\*HEC 456. INFANT AND CHILD NUTRITION.** *Three hours credit.*

Prerequisites, HEC 251, 331. A study of the principles in nutrition for maternal, infant, and child health.

**HEC 460. OCCUPATIONAL HOME ECONOMICS EDUCATION.** *Three hours credit.*

Prerequisites HEC 363, EDFE 368, VE 452. Designed to provide an overview of the occupational home economics program at the secondary, post secondary and college levels and to prepare a student for the role as teacher coordinator in home economics occupational programs.

**HEC 464. HOME ECONOMICS YOUTH ORGANIZATION.** *Two hours credit.*

This course is designed to provide knowledge and background for organizing and implementing a Future Homemakers of America Chapter as part of the home economics program.

**HEC 465. HOME ECONOMICS PROGRAMS FOR SPECIAL NEEDS.** *Three hours credit.*

Prerequisites, EDFE 368, VE 452. A study of the philosophy, procedures, and techniques used in organizing programs for teaching adults and students with special needs, including rehabilitation. Students participate in observation and teaching experiences.

**HEC 494. TAILORING.** *Four hours credit. (Two hours lecture, four hours laboratory.)*

Prerequisites HEC 192, 293. Opportunity for developing skill is presented in the construction of tailored fashions.

## **HUMANITIES (Administered by English Department)**

**\*HUM 201. INTRODUCTION. THE GREEK AND ROMAN PERIODS.** *Three hours credit.*

Selected studies in Western culture from its beginnings to the decline of Rome.

**\*HUM 202. THE MIDDLE AGES AND THE RENAISSANCE.** *Three hours credit.*

Selected studies in Western culture from the decline of Rome to the Seventeenth Century.

**\*HUM 203. THE EIGHTEENTH TO THE TWENTIETH CENTURY.** *Three hours credit.*

Selected studies in Western culture from the Seventeenth through the Nineteenth Century.

**\*HUM 204. LITERATURE AND THE ARTS IN THE TWENTIETH CENTURY.** *Three hours credit.*

Selected studies in Western culture during the Twentieth Century .

**\*HUM 205. THE LITERATURE AND ARTS OF THE FAR EAST.** *Three hours credit.*

Selected studies in the literature and some of the other arts of India, China, and Japan.

**\*HUM 210. THEMES OR PROBLEMS IN THE HUMANITIES.** *Three hours credit.*

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.

**\*HUM 301. THE ART OF THE FILM.** *Three hours credit.*

An introduction to the major creative film makers—Griffith, Welles, Bergman, Antonioni, etc.—and to their characteristic technical and thematic concerns.

**\*HUM 377. ORIGINS OF THE GOSPELS, I.** *Three hours credit.*

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.

**\*HUM 378. ORIGINS OF THE GOSPELS, II.** *Three hours credit.*

Prerequisite: HUM 377. Investigation into the reason for more than one Gospel and peculiarities of each Gospel and the similarities they share.

**\*HUM 411. ADVANCED COURSE IN THE HUMANITIES.** *Four hours credit.*

Prerequisite, nine hours chosen from HUM 201, 202, 203, 204, or 205. The study of a specific great literary work in its setting of history, philosophic concepts and contemporary arts.

## **INDUSTRIAL ARTS**

**\*IA 118. GENERAL PLASTICS (SYNTHETIC MATERIALS).** *Three hours credit.*

A general introduction to the field of plastics, emphasizing the study of materials and processes of the industry. Content includes the basic processes of casting, reinforcing, lamination, expandable materials, assembling and finishing.

**\*IA 141. GRAPHIC ARTS FUNDAMENTALS.** *Three hours credit.*

Experience with the fundamental operations used in school graphic arts shops. Information about tools, machines, and materials.

**\*IA 150. WOOD PROCESSING.** *Three hours credit.*

Development of basic skills and knowledge in planning and layout, lumber and lumbering, purchasing and measuring of wood materials, methods of fastening and adhering, basic upholstery, elementary finishing and joinery with hand and portable electric tools.

**\*IA 161. PRINCIPLES OF DRAFTING.** *Three hours credit.*

Lettering, freehand sketching, geometric construction, orthographic projection, sectional views, and dimensioning in drafting.

**\*IA 164. INDUSTRIAL DESIGN.** *Three hours credit.*

The principles of design as related to materials, construction techniques, and their application to industrial arts problems and areas.

**\*IA 170. GENERAL METALS.** *Three hours credit.*

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.

**\*IA 180. GENERAL ELECTRICITY.** *Three hours credit.*

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.

**\*IA 190. INTRODUCTION TO POWER.** *Two hours credit.*

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.** *Three hours credit.*

Development of basic skills in hand bookbinding applicable to elementary or junior high school arts programs.

**\*IA 216. GENERAL LEATHERCRAFT.** *Three hours credit.*

Development of designing, tooling, and carving skills in leathercraft, including the construction of tools and projects for industrial arts unit in general shop, and recreation and camp activities.

**IA 219. PLASTICS.** *Two hours credit.*

Emphasis on techniques, skills and design in the use of industrial plastics materials, includes the basic processes of molding, thermoforming, foaming materials and machining.

**\*IA 221. TECHNOLOGY: ITS IMPACT ON SOCIETY.** *Three hours credit.*

This course will deal with the impacts of industry and technology on our modern day society. Emphasis placed on invention, power and energy, transportation and communication, new materials, agriculture and construction, and socio-economic impacts. Implications to the environment, urban areas, psychology, sociology, politics and human beings will be discussed. An outlook will be presented to view technology as an intellectual discipline.

**IA 241. GRAPHIC ARTS.** *Two hours credit.*

The relationship of the processes used in school graphic arts shops to industry. Consumer information is developed and occupational opportunities are explored.

**\*IA 256. UPHOLSTERY.** *Two hours credit.*

Techniques and processes in the various types of upholstery for all grade levels.

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### **\*IA 257. WOODTURNING.** *Two hours credit.*

Basic skills and related techniques in faceplate and spindle woodturning.

### **IA 261. PICTORIAL DRAFTING.** *Two hours credit.*

Object description and pictorial drawing. Emphasis is on auxiliary views, isometric, and perspective drawings.

### **\*IA 272. GAS AND ELECTRIC WELDING.** *Three hours credit.*

An introductory course in the area of gas and electric welding, welding technology and non-destructive testing of welds.

### **IA 281. ELECTRO-MECHANICAL EQUIPMENT AND MEASURING INSTRUMENTS.** *Two hours credit.*

An introductory course in alternating current and applications of electromagnetic principles. Emphasis on AC-DC motors and generators, alternators, meter movements, operation/calibration of oscilloscopes, inductance, capacitance, resonance, wiring and illumination.

### **IA 291. INTERNAL COMBUSTION AND RECIPROCATING ENGINES.** *Three hours credit.*

A study of two-cycle and four-cycle reciprocating engines. Emphasis placed on principles of operation, systems of basic engines, such as ignition (spark and compression), cooling, fuel, lubricating, and electrical.

### **\*IA 299. UNDERSTANDING THE AUTOMOBILE, A COURSE FOR WOMEN.** *Three hours credit.*

An introductory study of the mechanical systems of the automobile. Emphasis is on explanation of operational problems and basic maintenance exercises. All presentations and exercises organized for those having little or no knowledge of the technical aspects of the automobile.

### **\*IA 315. GENERAL CRAFTS.** *Five hours credit.*

Basic techniques, construction and demonstration in industrial arts crafts with simple tools and inexpensive materials, including laboratory experiences in such areas as blockprinting, bookbinding, braiding, leather, metal crafts, mosaic, plastics, silk screening and woodcrafts.

### **IA 320. COURSE ORGANIZATION IN INDUSTRIAL ARTS.** *Three hours credit.*

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 330. METHODS OF TEACHING IN THE SECONDARY SCHOOL INDUSTRIAL ARTS.** *Three hours credit. PTE.*

Methods of teaching in the junior-senior high school. Includes curriculum and classroom organization, testing and evaluation, procedures and materials, relationship of the special area to the total secondary program. Teaching techniques are a point of emphasis. S-U final mark.

### **IA 335. HISTORY AND PHILOSOPHY OF INDUSTRIAL ARTS.** *Three hours credit.*

A basic understanding of the history of industrial arts, with emphasis on developing an individual philosophy. A study of the conflicts and relationship of philosophy to actual practice in a functional program of industrial arts.

### **IA 336. PRINCIPLES OF GENERAL SHOP ORGANIZATION.** *Five hours credit.*

Introduction to the concepts of organization and administration together with history, philosophy, and development of the general shop. Emphasis will be placed on objectives, program planning, equipment selection, and methods of teaching. Areas to be included are: bookbinding, leather, ceramics, and art metal.

### **\*IA 342. BASIC PHOTOGRAPHY.** *Three hours credit.*

Fundamentals of camera, lens, photographic materials, and processing. Photography as a means of communication through picture planning and practical photography.

**\*IA 345. PUBLICATION PRODUCTION.** *Five hours credit.*

A study of printing as it relates to the field of journalism. The basic areas covered will be news photography, layout and design, and production. Time will be spent on practical applications of each of the three areas.

**IA 350. WOODWORKING TECHNOLOGY.** *Five hours credit.*

The study of woods, materials, and equipment related to the woodworking area. Laboratory emphasis is on woodworking tools and machines.

**IA 353. FURNITURE AND CABINET MAKING.** *Three hours credit.*

Design and construction of period and modern furniture, study of production methods of industry, upholstery, and woodfinishing.

**IA 354. WOODFINISHING.** *Two hours credit.*

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 355. EQUIPMENT AND MAINTENANCE PROBLEMS IN WOOD.**  
*Three hours credit.*

Upkeep and repair of woodworking tools and machines. Selection and purchase of woodworking tools, machines and supplies for a school shop.

**IA 362. WORKING DRAWINGS.** *Three hours credit.*

Deals with detail drawings, assembly drawings, piping drawings, electronic drawings, welding drawings, and simple duplicating processes such as diazo, ozalid, blueprinting, and xerography.

**IA 363. GRAPHIC SOLUTIONS.** *Two hours credit.*

Orthographic projection principles applied to graphic representation, solution of problems in space and developments and intersections.

**\*IA 371. ART METAL AND METAL SPINNING.** *Three hours credit.*

Elementary course in art metal work including tooling, etching, forming, piercing, enameling and spinning.

**\*IA 373. JEWELRY DESIGN AND CONSTRUCTION.** *Three hours credit.*

An introduction to the basic processes in jewelry construction including soldering, casting, stone cutting, simple silversmithing, and use of appropriate equipment.

**IA 374. MACHINE TOOL OPERATION.** *Two hours credit.*

An introduction to machine tool operation including engine lathes, shapers, drill presses, surface grinders and precision measurement.

**IA 383. ELECTRONIC HARDWARE AND COMPONENTS.** *Two hours credit.*

A study of the manufacture, application and function of electronic hardware and components used in industry. Emphasis placed on introduction to electronics communications, semi-conductor theory, transistors, vacuum tubes, cathode ray tubes, crystal fabrication, uni-junction transistors, field-effect transistors, silicon controlled rectifiers, tunnel diodes and integrated circuits.

**IA 384. ELECTRONIC CIRCUITRY.** *Three hours credit.*

A study of the basic circuits, both semi-conductor and vacuum tube, used in industry. Emphasis placed on power supplies, amplifiers, oscillators, AM transmitters, AM receivers, transmission lines, antennas and printed circuits.

**IA 391. EXTERNAL COMBUSTION ENGINES AND NUCLEAR POWER.**  
*Three hours credit.*

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. REACTION ENGINES.** *Two hours credit.*

A study of the various continuous combustion engines. Study will include gas turbines, jets, and rocket engines. Emphasis will be placed on their principles of operation, design, and construction as well as their applications.

**IA 417. INDUSTRIAL PLASTICS.** *Three hours credit.*

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 433. INDUSTRIAL MATERIALS.** *Three hours credit.*

A study of the origin of the materials used in industrial arts classes and processes involved in the manufacture of each material. Ways of presenting the related information and consumer knowledge of each material are considered.

**\*IA 442. BLACK AND WHITE PHOTOGRAPHY.** *Five hours credit.*

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.** *Three hours credit.*

Includes copy preparation, camera and darkroom work, stripping and opaquing, plate making and offset press operation.

**IA 454. CONSTRUCTION ACTIVITIES IN THE ELEMENTARY CLASSROOM.** *Three hours credit.*

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 461. ARCHITECTURAL DRAWING.** *Three hours credit.*

Deals with the planning and drawing of a complete set of building plans with specifications. Emphasis placed on principles, practices, and techniques of house construction.

**IA 462. MACHINE DRAWING.** *Three hours credit.*

Principles of designing machines. Materials, processes and procedures will be discussed. Such areas as limit and tolerance dimensions, types of fits, screw threads and fasteners, and cam and gear drawing are included.

**IA 471. ADVANCED ART METAL.** *Three hours credit.*

An advanced study in art metal including experiences in metal tooling, etching, sinking, raising, enameling and spinning of aluminum, copper and brass.

**IA 473. ADVANCED JEWELRY AND LAPIDARY WORK.** *Three hours credit.*

Designed to give advanced work in jewelry construction and silversmithing. Student experiences include work in design, lapidary, fabrication, and casting as it applies to jewelry.

**IA 485. RADIO COMMUNICATIONS.** *Three hours credit.*

A basic study of radio communications. Emphasis placed on FM transmitters, FM receivers, amateur radio, radio teletype, basic television theory, single side-band and troubleshooting electronic equipment. Opportunity provided to study transistor ignition systems, basic computer circuits and industrial electronic control circuits.

**IA 493. DIRECT ENERGY CONVERSION.** *Two hours credit.*

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.** *Three hours credit.*

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.

*Note:* See Individual Studies and Interdisciplinary Courses for additional possible offerings in Industrial Arts.

## INDIVIDUAL STUDIES

**IS 422. INDIVIDUAL STUDIES.** *Maximum of four hours credit.*

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.

## INTERDISCIPLINARY COURSES NEW AND EXPERIMENTAL COURSES

**198-798 New and Experimental Courses**—Courses using department prefix or ID prefix numbered 198, 298, 398, 498, 598, 698, or 798 are new or experimental courses which have been approved through proper university procedures but in which action was not completed in time for publication in the current catalog. The course will be designated by title and a course description will be published in the subsequent catalog under the appropriate department with a different assigned number. Cross reference may be made by checking identical titles. Distinction of each course will be made by title as is the case for designating workshops.

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

**ID 100. INDIVIDUAL STUDY SKILLS SEMINAR.** *Two hours credit.*

Prerequisite, enrollment in the Special Needs Program. An individualized course designed to meet the specific needs, on any educational level, of each student in one or all of the following areas: reading efficiency, comprehension, writing, spelling, vocabulary, word-attack skills, skimming and scanning, listening techniques, note taking, general or specific content area study skills.

**ID 101. INDIVIDUAL STUDY SKILLS LEARNING LAB.** *Two hours credit.*

Prerequisite, ID 100, 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 an effective living program. General or specific content area study skills may be repeated.

**ID 110. INTRODUCTION TO ENVIRONMENTAL STUDIES.** *One hour credit.*

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.

**ID 350. RACE, POVERTY, AND CHANGE IN URBAN AMERICA.** *Three hours credit.*

This course is presented by the departments of Anthropology, Economics, Geography, Political Science, and Sociology introducing concepts relative to

urban spatial structure, its uses, economics, dynamics, and political organization, and the sociological and biological concepts of race.

**ID 375. HUMAN AND RACE RELATIONS.** *Four hours credit.*

This course is designed to contribute to the student's awareness of social and race relations in the United States. Emphasis is given to the social positions, values, and aspirations, and political organization of Blacks and Mexican Americans. An interdisciplinary approach is used and the course is team taught.

## **JOURNALISM**

**JOUR 100. INTRODUCTION TO JOURNALISM.** *Two hours credit.*

Orientation and analysis of the American mass media of newspapers, radio-television, magazines, and book publishing, as well as the related areas of advertising, public relations, communications research, and teaching.

**JOUR 101. BEGINNING PHOTOJOURNALISM.** *Three hours credit.*

A practical, non-technical study of photography including the mechanics of cameras, dark room equipment, how to tell a picture story, photograph techniques with an emphasis upon composition, and use of the camera for school publications.

**\*JOUR 105. NEWSWRITING.** *Four hours credit.*

Principles and practice in gathering, writing, and editing news and short feature articles; based both on commercial and educational news sources. Some typing experience is needed.

**\*JOUR 115. ADVANCED NEWSWRITING.** *Four hours credit.*

Prerequisite, JOUR 105. Principles and practice in writing and editing news from assignment and beats; writing editorials; use of both commercial and educational news sources.

**JOUR 200. JOURNALISM INTERNSHIP.** *One or two hours credit per quarter; twelve hours credit maximum.*

Practical experience in at least two of the following areas (prerequisites noted in parentheses): advertising (JOUR 284; newspaper (JOUR 105, 115, 250); news service (JOUR 105, 115); sports writing (JOUR 105, 115); radio (JOUR 105); publications (JOUR 250, 255); photography; sponsorship; yearbook; consumer affairs writing (JOUR 105, 115, and a background in economics, home economics, and business).

**JOUR 201. ADVANCED PHOTOJOURNALISM.** *Three hours credit.*

The use of the camera in various picture taking situations; techniques of developing and printing.

**\*JOUR 240. GETTING THE MOST OUT OF THE NEWS MEDIA.** *Three hours credit.*

Significant facets about newspapers, magazines, television, and radio that relate to the readers', viewers', and listeners' comprehension of their contents. Some attention to propaganda.

**JOUR 250. NEWS EDITING.** *Three hours credit.*

Principles and practice in editing copy and pictures, writing headlines; use of editorial judgment.

**JOUR 255. PUBLICATIONS LAYOUT.** *Three hours credit.*

Copy and picture layout for the printed media.

**JOUR 284. TECHNIQUES OF ADVERTISING.** *Three hours credit.*

Planning copy, layout of advertisements for printed media and radio; placement of advertising.

**\*JOUR 297. FEATURE AND DEPTH WRITING FOR NEWS MEDIA.** *Three hours credit.*

Analyzing, researching, and writing the longer feature and interpretive articles, with emphasis on current subjects usable in the local press.

**JOUR 300. JOURNALISM INTERNSHIP.** *One or two hours credit per quarter; twelve hours credit maximum.*

Practical experience in at least two of the following areas (prerequisites noted in parentheses): advertising (JOUR 284); newspaper (JOUR 105, 115, 250); news service (JOUR 105, 115); sports writing (JOUR 105, 115); radio (JOUR 105); publications (JOUR 250, 255); photography; sponsorship; yearbook; consumer affairs writing (JOUR 105, 115, and a background in economics, home economics, and business).

**JOUR 301. METHODS OF TEACHING JOURNALISM IN THE SECONDARY SCHOOL.** (PTE) *Three hours credit.*

Instruction in advising the preparation and publication of school newspapers and in teaching scholastic journalism.

**JOUR 305. CONSUMER AFFAIRS WRITING.** *Three hours credit.*

Prerequisites, JOUR 105, 115, and a background in economics, home economics, and business. Writing about current economics, product-buying, credit, public finance, municipal services, and related problems.

**JOUR 350. NEWSPAPER LAB I, II.** *Four hours credit.*

Prerequisites, JOUR 105, 115, 250, 255, 297, and permission of department. Writing, editing, layout, and production of articles about this university campus.

**JOUR 395. FUNDAMENTALS OF PUBLIC RELATIONS.** *Three hours credit.*

Develop understanding of basic concepts of human relationships in school and business communication and study skills for successful relationships.

**\*JOUR 397. MASTER JOURNALISTS AND THEIR TIMES.** *Three hours credit.*

A concentration on the great American and British journalists, emphasizing their writings, standards of journalism, and their contributions to journalism and to society.

**\*JOUR 399. THE PRESS AND CURRENT AFFAIRS.** *Three hours credit.*

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 400. JOURNALISM INTERNSHIP.** *One or two hours credit per quarter; twelve hours credit maximum.*

Practical experience in at least two of the following areas (prerequisites noted in parentheses): advertising (JOUR 284); newspaper (JOUR 105, 115, 250); news service (JOUR 105, 115); sports writing (JOUR 105, 115); photography; sponsorship; yearbook; consumer affairs writing (JOUR 105, 115), radio (JOUR 105); Publications (JOUR 250, 255); a background in economics, home economics, and business.

**JOUR 410. PRINT NEWSMEN'S WORKSHOP.** *Two hours credit.*

The purpose of this workshop is to provide students of journalism and other interested students an opportunity to hear lectures by professional newsmen. These newsmen who will be editors, editorial writers, copy editors, and reporters will discuss news as they handle it in their daily work.

**JOUR 445. BROADCAST JOURNALISM.** *Three hours credit.*

Prerequisites, JOUR 100, SP 140, or equivalent. To acquaint the student with the principles, techniques, and forms of Broadcast Journalism.

**JOUR 450. JOURNALISM INTERN.** *Fifteen hours credit.*

Prerequisites, JOUR 105, 115, 250, 284, 297, and 350. One quarter of full-time work off-campus with a news medium.

**\*JOUR 496. OPINION FORMATION, PROPAGANDA AND THE MEDIA.**

*Three hours credit.*

Analysis of opinion and propaganda and the relationship of the media to opinion formation.

**JOUR 497. ENRICHING INSTRUCTION THROUGH UNDERSTANDING AND USE OF NEWS MEDIA.** *Three hours credit.*

For teachers and prospective teachers to help them use the wealth of material in newspapers, magazines, radio and television, and to adapt it to their teaching. Applicable to teachers in most subject areas and grade levels.

**\*JOUR 498. ETHICS AND LIBEL.** *Three hours credit.*

Study of current ethical and legal problems of the printed and broadcast media; designed for the newsman, publisher-manager, school administrator, and journalism teacher.

## MATHEMATICS

**MATH 100. ELEMENTARY SLIDE RULE.** *One hour credit.*

Principles of operation of the slide rule and illustrations of its application to problem solving in the physical sciences are covered.

**\*MATH 110. MATHEMATICS AND THE LIBERAL ARTS.** *Three hours credit.*

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.

**\*MATH 115. ESSENTIALS OF MATHEMATICS I.** *Three hours credit.*

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 and simple trigonometry and analytic geometry. The course is not open to mathematics majors or minors.

**\*MATH 116. ESSENTIALS OF MATHEMATICS II.** *Three hours credit.*

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.

**\*MATH 123. INTERMEDIATE ALGEBRA.** *Five hours credit.*

Prerequisites, 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.

**\*MATH 124. COLLEGE ALGEBRA.** *Five hours credit.*

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.

**\*MATH 125. PLANE TRIGONOMETRY.** *Five hours credit.*

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.

**\*MATH 131. CALCULUS WITH ANALYTIC GEOMETRY I.** *Four hours credit.*

Prerequisite, MATH 125. A combined course in analytic geometry and calculus. Fundamental principles of beginning analytic geometry including different forms

of the equations of a straight line are developed. Elementary phases of both differential and integral calculus, along with various applications of these subjects are considered.

**\*MATH 132. CALCULUS WITH ANALYTIC GEOMETRY II.** *Four hours credit.*

Prerequisite, MATH 131. A continuation of MATH 131.

**\*MATH 133. CALCULUS WITH ANALYTIC GEOMETRY III.** *Four hours credit.*

Prerequisite, MATH 132. A continuation of MATH 132.

**\*MATH 180. COMPUTERS AND THEIR IMPACT UPON SOCIETY.** *Three hours credit.*

The study of computers and their influence 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.

**\*MATH 191. BASIC MATHEMATICS I.** *Three hours credit.*

The first of a two-course sequence which is particularly pertinent for the prospective teacher of arithmetic and presenting arithmetic and algebra from a modern approach. Topics include the natural numbers, integers, rational numbers, real numbers, relations, functions, and equations. Emphasis is placed under understanding mathematical structures.

**\*MATH 192. BASIC MATHEMATICS II.** *Three hours credit.*

Prerequisite, MATH 191. A continuation of MATH 191.

**\*MATH 193. INFORMAL GEOMETRY.** *Three hours credit.*

Basic concepts of plane and solid geometry including points, lines, angles, planes, solids, congruence, similarity, parallelism, areas, volumes, polygons, and circles.

**MATH 201. BASIC MATHEMATICAL LOGIC.** *Three hours credit.*

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 form of logic along with concepts of truth value. Statement calculus and treatment of proof discussed. The restricted predicate calculus is analyzed and applications to mathematics are discussed.

**MATH 202. THEORY OF SETS.** *Three hours credit.*

Prerequisite, 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 234. CALCULUS WITH ANALYTIC GEOMETRY IV.** *Four hours credit.*

Prerequisite, MATH 133. A continuation of MATH 133.

**MATH 250. ELEMENTARY PROBABILITY THEORY.** *Four hours credit.*

Prerequisite, MATH 133. Discrete and continuous probability, conditional probability, Bayes theorem; one dimensional random variables and the expected values of random variables; Bernoulli, binomial, Poisson, geometric, hypergeometric and multinomial probability laws; probability distributions of uniform, normal, exponential, Gamma and Chi-squared type random variables.

**\*MATH 305. MATHEMATICS OF FINANCE.** *Five hours credit.*

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. INTRODUCTION TO MODERN ALGEBRA I.** *Four hours credit.*

Prerequisite, MATH 132. This course provides an introduction to the topics and concepts of abstract algebra including basic notions of set theory, elementary mathematical logic, linear algebra and abstract or modern algebra.

**MATH 322. INTRODUCTION TO MODERN ALGEBRA II.** *Four hours credit.*

Prerequisite, MATH 321. A continuation of MATH 321.

**MATH 323. INTRODUCTION TO MODERN ALGEBRA III.** *Four hours credit.*

Prerequisite, MATH 322. A continuation of MATH 322.

**MATH 325. ELEMENTARY LINEAR ALGEBRA.** *Four hours credit.*

Prerequisite, MATH 321. This course presents an introduction to vector spaces and matrix theory including row operations, determinants, independence and linear transformations.

**MATH 341. INTRODUCTION TO MODERN GEOMETRY I.** *Four hours credit.*

Prerequisite, MATH 132. A course designed to prepare the prospective teacher of high school geometry in the way the subject matter will be covered in a modern course. The structure of geometry will be emphasized through the axiomatic approach. The basic ideas of points, lines and planes will be given along with primitive concepts and axioms needed to structure the geometry rigorously. Topics such as separation on curves and surfaces, congruence, measure, and parallelism will be covered.

**MATH 342. INTRODUCTION TO MODERN GEOMETRY II.** *Four hours credit.*

Prerequisite, MATH 341. A course which will give the prospective teacher of high school geometry an extension into the field of geometry beyond high school scope. Areas covered include constructions, use of loci in plane geometry and the theorems of Ceva, Menelaus, Stewart, Euler, and Ptolemy.

**\*MATH 351. INTRODUCTION TO STATISTICAL ANALYSIS.** *Three hours credit.*

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.

**\*MATH 380. COMPUTER PROGRAMMING.** *Four hours credit. (Three hours lecture, three hours 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.

**\*MATH 395. ACTIVITIES IN ELEMENTARY MATHEMATICS.** *Two hours credit.*

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.

**MATH 401. FOUNDATIONS OF ARITHMETIC.** *Three hours credit.*

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.** *Three hours credit.*

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 432. BASIC ANALYSIS I.** *Four hours credit.*

Prerequisite, MATH 234. The first course of a sequence of three courses which will extend the student of calculus and analysis into the mathematical rigor and logic of analysis. This course will cover the following topics: real numbers developed through the Dedekind cut definition, some introductory topological topics, limits, continuity, differentiability, and Riemann integral.

**MATH 433. BASIC ANALYSIS II.** *Four hours credit.*

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.** *Four hours credit.*

Prerequisite, MATH 433. The third course in a sequence of three courses. From the background built up in the first two courses, this course will consider certain special topics of application. Some of the topics to be considered will be chosen from the following: implicit functions; applications to geometry; the gamma and beta functions; line, surface, and space integrals; vector notation; Bessel functions; elliptic integrals.

**MATH 435. DIFFERENTIAL EQUATIONS I.** *Four hours credit.*

Prerequisite, MATH 234 or taken concurrently. A study of the theory and solution of differential equations. Ordinary and partial differential equations are treated along with numerous applications.

**MATH 436. DIFFERENTIAL EQUATIONS II.** *Four hours credit.*

Prerequisite, MATH 435. A continuation of MATH 435. Topics to be covered include series solutions of differential equations, systems of equations, partial differential equations, Fourier series and boundary value problems.

**MATH 464. INTRODUCTION TO THE HISTORY OF MATHEMATICS.**

*Three hours credit.*

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.** *Four hours credit. (Three hours lecture, three hours 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.** *Four hours credit. (Three hours lecture, three hours 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.** *Four hours credit. (Three hours lecture, three hours 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.

## MATHEMATICS EDUCATION

**MED 370. MATHEMATICAL INSTRUMENTS AND SURVEYING.** *Four hours credit.*

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 471. INSTRUCTIONAL MATERIALS IN SECONDARY SCHOOL MATHEMATICS.** *Three hours credit. (Two hours lecture, three hours 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.

## MEDICAL TECHNOLOGY

This major is administered by the Department of Chemistry.

These courses are open only to majors in Medical Technology.

**MTEC 450. URINALYSIS AND CLINICAL MICROSCOPY.** *Three hours credit.*

This is a fundamental course in urinalysis covering the characteristics of urine, qualitative tests for sugars, ketone (or acetone) bodies, and protein, quantitative tests for sugars and protein, and microscopic examination of urine. Kidney function tests, other chemical tests, pregnancy tests and tests on gastric and duodenal contents are included.

**MTEC 451. BASAL METABOLISM AND ELECTROCARDIOGRAPHY.** *One hour credit.*

This course covers the principles and techniques of determining the basal metabolic rate and the theory and technique of electrocardiography.

**MTEC 452. HEMATOLOGY.** *Nine hours credit.*

This course covers the methods of obtaining blood, determination of hemoglobin, red and white blood cell counts, hematocrit, study of blood smears, platelet count, reticulocyte count, coagulation, clot retraction, bleeding and prothrombin time, direct eosinophile count, fragility of erythrocytes, sedimentation rate of erythrocytes and bone marrow smears preparation and study.

**MTEC 453. PRETRANSFUSION TESTS AND BLOOD BANK PROCEDURES.** *Five hours credit.*

This course covers selection and pretesting of donors, copper sulphate method of determining minimum hemoglobin, bleeding of donors, basic theory of blood factors, ABO grouping tests, Rh factor and Rho, (D) typing, cross-matching tests, subgroups A, irregular agglutinins, cold agglutinins, transfusion reactions, emergency transfusions, Rh antibody tests, and Coombs' test.

**MTEC 454. CLINICAL CHEMISTRY.** *Thirteen hours credit.*

Urine, cerebrospinal fluid, feces and other biological materials are examined. Preparation of reagents and protein-free filtrates are studied. Colorimetry and photometry chemical tests include blood-sugar, nonprotein nitrogen, urea nitrogen, creatinine, creatine, uric acid, albumin, globulin, acid-base balance, carbon dioxide capacity, chloride, phosphorus, phosphatases, calcium, sodium, potassium, liver function.

**MTEC 455. SEROLOGY.** *Three hours credit.*

Principles of serology and immunology, the Kahn test, other flocculation and precipitation tests, colloidal gold and mastic tests, the complement fixation reaction, agglutination and opsonocytaphagic tests, cold agglutinins are studied.

**MTEC 456. MEDICAL MICROBIOLOGY.** *Twelve hours credit.*

Culture mediums, sterilization and disinfection, morphology and physiology of bacteria, stains, classification, relation of parasites to disease, techniques for parasitologic examinations, vaccines and filtrates, filtrable viruses, mycology techniques, the superficial fungi, and the deep mycotic infections are studied.

**MTEC 457. HISTOLOGIC TECHNIQUE.** *Two hours credit.*

Fixation and hardening of tissue, clearing of tissues, paraffin infiltration and blocking of tissue, sharpening of microtome knife, sectioning of tissue and preparation of sections for staining, routine staining technique, decalcification, frozen sections, special or differential staining methods, histochemistry, technique of exfoliative cytology are studied.

**METEOROLOGY**

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

**\*MET 100. GENERAL METEOROLOGY.** *Four hours credit. (Three hours lecture, two hours laboratory.)*

This is a basic course in meteorology for non-earth science majors. The course deals with general information on weather observation, circulation of the atmosphere, condensation and precipitation, and climate. It is designed to present an overview of the field of meteorology and its relationships to aviation, commerce, and health. The course will fulfill the general education requirement in earth science.

**\*MET 201. PRINCIPLES OF METEOROLOGY I.** *Four hours credit. (Three hours lecture, two hours laboratory.)*

Structure and composition of the atmosphere. Weather elements of pressure, temperature, humidity and atmospheric motion, both at surface and aloft. Radiation and processes of cloud formation. Instruments and observations, along with plotting and interpretation of weather charts. Students cannot receive credit for both MET 100 and 201.

**\*MET 202. PRINCIPLES OF METEOROLOGY II.** *Four hours credit. (Three hours lecture, two hours laboratory.)*

Prerequisite, MET 201. A continuation of the topics and principles developed in MET 201. The general and secondary circulations of the atmosphere, air masses and their modification, fronts, circulation in the tropics, hurricanes, tornadoes, and some applications of meteorology will be considered.

**\*MET 320. CLIMATOLOGY.** *Three hours credit.*

Prerequisites, MET 100 or 201. 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.

**MET 330. PHYSICAL METEOROLOGY.** *Three hours credit.*

Prerequisites, MET 100 or 201. Radiation processes in the atmosphere, meteorological optics, atmospheric effects on radar propagation, physical processes of cloud formation and atmospheric electricity. Weather modification.

**MET 440. SYNOPTIC METEOROLOGY.** *Four hours credit. (Two hours lecture, four hours laboratory.)*

Prerequisites, MET 201, 330. A study of the fundamental topics of synoptic meteorology, such as air mass development, fronts and frontogenesis, cyclones and anticyclones, long- and short-waves in the atmosphere, the jet stream, and the vertical structure of the atmosphere. Elementary analysis and forecasting exercises in the laboratory will apply these topics to actual weather situations. Maps and charts of the U.S. Weather Bureau will be considered.

**MET 450. SEVERE WEATHER PHENOMENA.** *Three hours credit.*

Prerequisite, MET 202. A study of the development and structure of thunderstorms, squall lines, tornadoes, and hurricanes.

## MEXICAN AMERICAN STUDIES

**MAS 101. INTRODUCTION OF MEXICAN AMERICAN STUDIES.** *Three hours credit.*

A general course designed to provide an understanding of Mexican American Studies. This course provides a background for more effective understanding of the other courses in the MAS department. This course also analyzes the relative position of the Mexican American community in the general Anglo American society.

**MAS 102. ORAL, READING, AND WRITTEN SPANISH COMMUNICATION: I.** *Three hours credit.*

Prerequisite, Comprehension of Spanish. A course in oral and written Spanish designed to treat the particular linguistic problems of the Mexican American student or the student who has mastered the basic skills in the language. Emphasis is on Southwestern culture. Grammar is treated inductively.

**MAS 103. ORAL, READING, AND WRITTEN SPANISH COMMUNICATION: II.** *Three hours credit.*

Prerequisite, MAS 102. A continuation of MAS 102. Oral and written expression and vocabulary building are intensified. Some grammar analysis is introduced, but emphasis is on usage.

**MAS 104. ORAL, READING, AND WRITTEN SPANISH COMMUNICATION: III.** *Three hours credit.*

Prerequisite, MAS 103. A continuation of MAS 103. Cultural selections are expanded to include Mexico and other hispanic countries along with current cultural problems of the Southwest. Much emphasis is placed on synonyms idioms, and expressions or a means of perfecting the speaking and writing skills of the student.

**MAS 105. THE CONTEMPORARY MEXICAN AMERICAN I.** *Three hours credit.*

This course studies the position of the Mexican American in the Anglo American economic, political and social system from 1920-1950.

**MAS 106. THE CONTEMPORARY MEXICAN AMERICAN II.** *Three hours credit.*

This course is designed to study and analyze the Mexican American social movement from 1950 to the present.

**MAS 270. HISTORY OF MEXICO I.** *Three hours credit.*

This course will cover the significant aspects of Mexican history and civilization from 1500 to 1810. Emphasis will be on the conquest of the Mexican nation by the Spaniards, the growth of New Spain, significant events of the colonial period and the reemergence of the Mexican Nation, which lead to independence.

**MAS 280. HISTORY OF MEXICO II.** *Three hours credit.*

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.** *Three hours credit.*

A continuation of MAS 104.

**MAS 300. ADVANCED ORAL, READING AND WRITTEN SPANISH COMMUNICATION.** *Three hours credit.*

This course stresses the use of fluent and functional Spanish-Mexican communication.

**MAS 302. SOCIAL STRATIFICATION IN THE MEXICAN AMERICAN COMMUNITY.** *Three hours credit.*

Designed to help the student understand the social, economic, political and reli-

gious 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.

**MAS 304. BICULTURAL SYSTEMS.** *Three hours credit.*

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.

**MAS 306. HISTORY OF THE CHICANO IN THE SOUTHWEST.** *Three hours credit.*

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.

**MAS 308. SURVEY OF MEXICAN LITERATURE.** *Three hours credit.*

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.

**MAS 410. SURVEY OF CONTEMPORARY CHICANO LITERATURE.** *Three hours credit.*

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.

**MAS 412. MEXICAN AMERICAN ART.** *Three hours credit.*

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.

**MAS 414. MEXICAN AMERICAN PHILOSOPHICAL THOUGHT.** *Three hours credit.*

A study of major philosophical views on problems and of ethics affecting the contemporary Mexican American thought.

**MAS 422. INDIVIDUAL STUDIES.** *Maximum of four hours credit.*

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 advisor. It is recommended that a student not enroll for more than three hours of MAS 422 per quarter.

**MAS 472. HISTORY AND PHILOSOPHY OF BILINGUAL EDUCATION.** (PTE) *Three hours credit.*

An introductory course into the history of bilingual education. A consideration of the major educational points of view considering the monolingual and bilingual approach to education. May also be taken as EDCI 472.

**MAS 474. TEACHING IN A SECOND LANGUAGE IN THE ELEMENTARY BILINGUAL AND BICULTURAL SCHOOL.** (PTE) *Three hours credit.*

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. EVALUATION AND SELECTION OF BILINGUAL AND BICULTURAL MATERIALS.** (PTE) *Two hours credit.*

The discussion of material selection principles. Evaluation of bilingual and bicultural materials for the elementary school. Course covers learning level and interests of bilingual bicultural children in the elementary school. May also be taken as EDCI 481.

## 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*.

### **MUS 101. SIGHT-SINGING AND THEORY I.** *Four hours credit.*

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.

### **MUS 102. SIGHT-SINGING AND THEORY II.** *Four hours credit.*

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.

### **MUS 103. SIGHT-SINGING AND THEORY III.** *Four hours credit.*

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.

### **\*MUS 130. STRING ENSEMBLE.** *One hour credit.*

### **\*MUS 131. BRASS ENSEMBLE.** *One hour credit.*

### **\*MUS 132. WOODWIND ENSEMBLE.** *One hour credit.*

### **\*MUS 133. PERCUSSION ENSEMBLE.** *One hour credit.*

### **\*MUS 134. PIANO ENSEMBLE.** *One hour credit.*

### **\*MUS 135. GUITAR ENSEMBLE.** *One hour credit.*

### **\*MUS 140. MUSIC APPRECIATION.** *Two hours credit.*

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.

### **\*MUS 141. MUSIC LITERATURE AND STYLES I.** *Two hours credit.*

The twofold purpose of this course is to foster an appreciation for the best in music and to provide the student with basic music information in the fields of media, terminology, chronology, biography, repertoire and stylistic analysis.

### **\*MUS 142. MUSIC LITERATURE AND STYLES II.** *Two hours credit.*

The twofold purpose of this course is to foster an appreciation for the best in music and to provide the student with basic music information in the fields of media, terminology, chronology, biography, repertoire and stylistic analysis.

### **\*MUS 143. MUSIC LITERATURE AND STYLES III.** *Two hours credit.*

The twofold purpose of this course is to foster an appreciation for the best in music and to provide the student with basic music information in the fields of media, terminology, chronology, biography, repertoire and stylistic analysis.

### **\*MUS 160. BEGINNING CLASS PIANO I.** *One hour credit.*

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.

### **\*MUS 161. BEGINNING CLASS PIANO II.** *One hour credit.*

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.

**\*MUS 162. BEGINNING CLASS PIANO III.** *One hour credit.*

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.

**MUS 163. BEGINNING STRING INSTRUCTION I.** *One hour credit.*

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 problems of string playing and their solution.

**MUS 164. BEGINNING STRING INSTRUCTION II.** *One hour credit.*

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.

**MUS 165. BEGINNING STRING INSTRUCTION III.** *One hour credit.*

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.

**\*MUS 169. INDIVIDUAL PERFORMANCE IN VOICE FOR NON-VOICE MUSIC MAJOR.** *One hour credit.*

Instruction will concentrate on the fundamental principals of voice production, such as proper breathing for singing, diction, resonance, etc. Development of rhythmic and melodic accuracy will receive primary consideration. Work on the fundamentals of good singing will be carried through the entire program.

**\*MUS 170. INDIVIDUAL PERFORMANCE IN VOICE.** *One-three hours credit.*

**\*MUS 171. INDIVIDUAL PERFORMANCE IN PIANO.** *One-three hours credit.*

**\*MUS 172. INDIVIDUAL PERFORMANCE IN ORGAN.** *One-three hours credit.*

**\*MUS 173. INDIVIDUAL PERFORMANCE IN STRINGS.** *One-three hours credit.*

**\*MUS 174. INDIVIDUAL PERFORMANCE IN WOODWINDS.** *One-three hours credit.*

**\*MUS 175. INDIVIDUAL PERFORMANCE IN BRASS.** *One-three hours credit.*

**\*MUS 176. INDIVIDUAL PERFORMANCE IN PERCUSSION.** *One-three hours credit.*

**\*MUS 177. INDIVIDUAL INSTRUCTION IN COMPOSITION.** *One-three hours credit.*

**\*MUS 178. INDIVIDUAL PERFORMANCE IN HARP.** *One-three hours credit.*

**\*MUS 179. INDIVIDUAL PERFORMANCE IN GUITAR.** *One-three hours credit.*

**\*MUS 180. MIXED CONCERT CHOIR.** *One hour credit.*

Membership in the concert choir is limited to approximately 60 singers. This organization performs a wide range of choral literature from the classics to the music of contemporary composers. The organization is recognized widely for its excellence as a choral performing group. It is in demand throughout the region for concert appearances.

**\*MUS 181. UNIVERSITY CHORUS.** *One hour credit.*

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.

**\*MUS 182. UNIVERSITY SINGERS.** *One hour credit.*

A select group of approximately 35 voices open by audition only. The repertoire for this group is extremely varied, ranging from motets of the Renaissance to contemporary songs to the Bach b-minor mass.

**\*MUS 183. WOMEN'S CONCERT CHOIR.** *One hour credit.*

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.

**\*MUS 184. VARSITY MEN'S GLEE CLUB.** *One hour credit.*

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.

**\*MUS 185. OPERA WORKSHOP.** *One to three hours credit.*

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.

**\*MUS 186. CHORUS AND ORCHESTRA WORKSHOP.** *One hour credit.*

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.

**\*MUS 190. SYMPHONIC WIND BAND.** *One hour credit.*

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.

**\*MUS 191. CONCERT BAND.** *One hour credit.*

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 192. MARCHING BAND.** *One hour credit.*

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 men in the instrumental music education program or in Symphonic Wind Band, Concert Band or Varsity Band.

**\*MUS 193. VARSITY BAND.** *One hour credit.*

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.

**\*MUS 194. JAZZ ENSEMBLE.** *One hour credit.*

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.

**\*MUS 195. UNIVERSITY BRASS CHOIR.** *One hour credit.*

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.

**\*MUS 196. UNIVERSITY SYMPHONY ORCHESTRA.** *One hour credit.*

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.

**\*MUS 197. CHAMBER ORCHESTRA.** *One hour credit.*

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 198. LABORATORY ORCHESTRA.** *One hour credit.*

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.

**MUS 201. ADVANCED SIGHT-SINGING AND THEORY I.** *Three hours credit.*

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.

**MUS 202. ADVANCED SIGHT-SINGING AND THEORY II.** *Three hours credit.*

Prerequisite, MUS 201. A continuation of Music 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.

**MUS 203. ADVANCED SIGHT-SINGING AND THEORY III.** *Three hours credit.*

Prerequisite, MUS 202. A continuation of Music 202 but primary emphasis in the written work will be placed upon studies of 20th century techniques, with student compositions performed and evaluated in class. Class meets three days a week plus one-half hour keyboard lab.

**\*MUS 204. MUSIC FUNDAMENTALS.** *Two hours credit.*

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.

**\*MUS 205. EXPERIENCING MUSIC FOR ELEMENTARY TEACHERS.** *One hour credit.*

Prerequisite, MUS 101 or MUS 204. Development of song repertoire and performance confidence through singing, conducting small ensembles and playing

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autoharp, recorder, bells, and rhythm instruments. Required for elementary education majors who should take MUS 204, 205, and 206 in sequence. Offered each quarter.

### **MUS 206. MUSIC METHODS AND MATERIALS FOR ELEMENTARY TEACHERS.** *Two hours credit.*

Prerequisite, 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. Required for elementary education major. Elementary education majors should arrange to take MUS 204, 205, and 206 in sequence. Offered each quarter.

### **MUS 210. INTRODUCTION TO MUSIC EDUCATION.** *Two hours credit.*

Prerequisite, MUS 103. An introduction course for prospective teachers of music covering the place of music in the school program, recent trends in school music, the qualifications of the music teacher, and a consideration of beginning instructional problems. For music majors only.

**\*MUS 230. STRING ENSEMBLE.** *One hour credit.*

**\*MUS 231. BRASS ENSEMBLE.** *One hour credit.*

**\*MUS 232. WOODWIND ENSEMBLE.** *One hour credit.*

**\*MUS 233. PERCUSSION ENSEMBLE.** *One hour credit.*

**\*MUS 234. PIANO ENSEMBLE.** *One hour credit.*

**\*MUS 235. GUITAR ENSEMBLE.** *One hour credit.*

### **MUS 240. HISTORY OF MUSIC I.** *Three hours credit.*

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.

### **MUS 241. HISTORY OF MUSIC II.** *Three hours credit.*

Prerequisite, MUS 240. A study of historical changes which took place in music in the Baroque period (1600-1750) and the Classic period (1750-1800) with emphasis on changes caused by the new monodic style found in opera, and the beginning of instrumental music.

### **MUS 242. HISTORY OF MUSIC III.** *Three hours credit.*

Prerequisite, MUS 241. A study of the musical changes caused by the Romantic, Post-Romantic and Impressionistic periods from 1800 to 1920.

**\*MUS 260. INTERMEDIATE CLASS PIANO I.** *One hour credit.*

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.

**\*MUS 261. INTERMEDIATE CLASS PIANO II.** *One hour credit.*

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.

**\*MUS 262. INTERMEDIATE CLASS PIANO III.** *One hour credit.*

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.

**MUS 269. INDIVIDUAL PERFORMANCE IN VOICE FOR NON-VOICE MUSIC MAJORS.** *One hour credit.*

Instruction will concentrate on the fundamental principals of voice production, such as proper breathing for singing, diction, resonance, etc. Development of rhythmic and melodic accuracy will receive primary consideration. Work on the fundamentals of good singing will be carried through the entire program.

\***MUS 270. INDIVIDUAL PERFORMANCE IN VOICE.** *One-three hours credit.*

\***MUS 271. INDIVIDUAL PERFORMANCE IN PIANO.** *One-three hours credit.*

\***MUS 272. INDIVIDUAL PERFORMANCE IN ORGAN.** *One-three hours credit.*

\***MUS 273. INDIVIDUAL PERFORMANCE IN STRINGS.** *One-three hours credit.*

\***MUS 274. INDIVIDUAL PERFORMANCE IN WOODWINDS.** *One-three hours credit.*

\***MUS 275. INDIVIDUAL PERFORMANCE IN BRASS.** *One-three hours credit.*

\***MUS 276. INDIVIDUAL PERFORMANCE IN PERCUSSION.** *One-three hours credit.*

\***MUS 277. INDIVIDUAL INSTRUCTION IN COMPOSITION.** *One-three hours credit.*

\***MUS 278. INDIVIDUAL PERFORMANCE IN HARP.** *One-three hours credit.*

\***MUS 279. INDIVIDUAL PERFORMANCE IN GUITAR.** *One-three hours credit.*

\***MUS 280. MIXED CONCERT CHOIR.** *One hour credit.*

Membership in the concert choir is limited to approximately 60 singers. This organization performs a wide range of choral literature from the classics to the music of contemporary composers. The organization is recognized widely for its excellence as a choral performing group. It is in demand throughout the region for concert appearances.

\***MUS 281. UNIVERSITY CHORUS.** *One hour credit.*

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.

\***MUS 282. UNIVERSITY SINGERS.** *One hour credit.*

A select group of approximately 35 voices open by audition only. The repertoire for this group is extremely varied, ranging from motets of the Renaissance to contemporary songs to the Bach b-minor mass.

\***MUS 283. WOMEN'S CONCERT CHOIR.** *One hour credit.*

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.

\***MUS 284. VARSITY MEN'S GLEE CLUB.** *One hour credit.*

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 divisions to participate in the great tradition of men's ensemble singing while performing a wide range of literature before university and community audiences.

**\*MUS 285. OPERA WORKSHOP.** *One to three hours credit.*

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.

**\*MUS 286. CHORUS AND ORCHESTRA WORKSHOP.** *One hour credit.*

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.

**\*MUS 290. SYMPHONIC WIND BAND.** *One hour credit.*

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.

**\*MUS 291. CONCERT BAND.** *One hour credit.*

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 292. MARCHING BAND.** *One hour credit.*

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 men in the instrumental music education program or in Symphonic Wind Band, Concert Band or Varsity Band.

**\*MUS 293. VARSITY BAND.** *One hour credit.*

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.

**\*MUS 294. JAZZ ENSEMBLE.** *One hour credit.*

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.

**\*MUS 295. UNIVERSITY BRASS CHOIR.** *One hour credit.*

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.

**\*MUS 296. UNIVERSITY SYMPHONY ORCHESTRA.** *One hour credit.*

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.

**\*MUS 297. CHAMBER ORCHESTRA.** *One hour credit.*

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 materials specifically designed for chamber orchestra.

**\*MUS 298. LABORATORY ORCHESTRA.** *One hour credit.*

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.

**MUS 301. COUNTERPOINT.** *Three hours credit.*

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.** *Three hours credit.*

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.** *Three hours credit.*

Prerequisite, MUS 203. A course planned to develop knowledge and skill in arranging and orchestrating for various combinations of instruments from a few instruments to a full symphony orchestra.

**MUS 310. TEACHING ELEMENTARY GENERAL MUSIC. (PTE)** *Two hours credit.*

Comprehensive study of the role of music with today's children (K-6).

**MUS 311. TEACHING JUNIOR HIGH SCHOOL GENERAL MUSIC. (PTE)** *Three hours credit.*

Comprehensive study of the role of music with today's students (middle and junior high school).

**MUS 312. SURVEY OF GENERAL MUSIC TEACHING. (PTE)** *Three hours credit.*

Overview, for instrumental majors, of the role of general music in the curriculum (K-12).

**MUS 313. TEACHING INSTRUMENTAL MUSIC. (PTE)** *Three hours credit.*

This course will endeavor (1) to present the various aspects of instrumental music in the public schools, both physical and musical; (2) to assist the student in making a systematic preparation for the task of developing a well-rounded instrumental music program.

**MUS 314. CHORAL CONDUCTING AND LITERATURE FOR THE HIGH SCHOOL.** *One hour credit.*

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.

**MUS 315. MUSIC AND RECREATION.** *Two hours credit.*

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 how to listen to music intelligently. For non-music majors.

**MUS 317. CHILDREN'S SONG LITERATURE.** *Three hours credit.*

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 319. MUSIC ACTIVITIES FOR CLASSROOM TEACHERS.** *Three hours credit.*

Broad range of innovative teaching ideas explored which nurture musicality in children.

**MUS 320. INSTRUMENTAL TECHNIQUES AND CONDUCTING I.** *One hour credit.*

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.

**MUS 321. INSTRUMENTAL TECHNIQUES AND CONDUCTING II.** *One hour credit.*

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.

**MUS 322. INSTRUMENTAL TECHNIQUES AND CONDUCTING III.** *One hour credit.*

Prerequisite, MUS 321. 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.

**MUS 323. CHORAL TECHNIQUES AND CONDUCTING I.** *One hour credit.*

Prerequisites, MUS 101, 102, 103, 141, 142, and 143. This course is designed to develop a basic conducting technique for the choral musician. 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.

**MUS 324. CHORAL TECHNIQUES AND CONDUCTING II.** *One hour credit.*

Prerequisite, MUS 323. This is a continuation of the work begun in 323. Stress is placed on the mastery of some of the larger, more complex scores. Irregular beat patterns, up-beat pickups and other advanced technical problems are studied and methods for solving them developed.

**MUS 325. TEACHING MUSIC LISTENING.** *Three hours credit.*

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.

**MUS 326. THE SCHOOL MUSIC PROGRAM FOR THE HANDICAPPED.** *Three hours credit.*

Prerequisite, MUS 206. A course designed to present a music program for the various handicapped children who are part of the public schools: the mentally retarded, the culturally handicapped, the blind, the hard of hearing, emotionally disturbed, and the physically handicapped.

**\*MUS 330. STRING ENSEMBLE.** *One hour credit.*

**\*MUS 331. BRASS ENSEMBLE.** *One hour credit.*

**\*MUS 332. WOODWIND ENSEMBLE.** *One hour credit.*

**\*MUS 333. PERCUSSION ENSEMBLE.** *One hour credit.*

**\*MUS 334. PIANO ENSEMBLE.** *One hour credit.*

**\*MUS 335. GUITAR ENSEMBLE.** *One hour credit.*

**\*MUS 340. SURVEY OF HISTORY AND LITERATURE OF JAZZ.** *Two hours credit.*

A survey of the history and literature of jazz music from its beginnings to the present. This course is open to all students.

**\*MUS 341. MUSIC AND THE RELATED ARTS.** *Two hours credit.*

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.

**MUS 343. MUSICAL CULTURES OF THE WORLD.** *Three hours credit.*

Prerequisite: One of the following-MUS 141, 142, 143 or 204 or consent of the instructor. A survey of selected musical cultures in various parts of the non-Western world (Southeast Asia, East Asia, Africa, Middle East, India). Musical instruments, theoretical systems, performance practices, the role of music in society, and the relationship of music to other arts will be covered.

**MUS 358. WOODWIND CLASS.** *One hour credit.*

This course is required of all music majors with vocal, piano, and general music emphasis (BA in Music Education). The fundamentals of woodwind instruments and training literature for woodwinds will be covered.

**MUS 359. GUITAR CLASS.** *One hour credit.*

This class is open to non-guitar majors for the purpose of studying the fundamentals and literature of the guitar.

**MUS 360. VOICE CLASS.** *One hour credit.*

For beginning voice students, particularly elementary majors and majors in instrumental music. Course includes fundamentals of singing, interpretation and solo repertoire.

**MUS 361. FLUTE AND SAXOPHONE CLASS.** *One hour credit.*

To develop a teaching knowledge of the flute and saxophone, their individual problems, their functions and their possibilities. To acquaint the prospective teacher with the pedagogic and concert literature, to develop an understanding of the problems of tone production and to acquire sufficient skill to demonstrate the instruments.

**MUS 362. CLARINET CLASS.** *One hour credit.*

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 to develop sufficient skill to demonstrate the instruments.

**MUS 363. DOUBLE REED CLASS.** *One hour credit.*

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.

**MUS 364. TRUMPET AND FRENCH HORN CLASS.** *One hour credit.*

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.

**MUS 365. LOW BRASS CLASS.** *One hour credit.*

To develop a teaching knowledge of trombone, baritone, and tuba. To acquire sufficient skill for purposes of demonstration.

**MUS 366. PERCUSSION CLASS.** *One hour credit.*

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.

**MUS 367. BRASS AND PERCUSSION CLASS.** *One hour credit.*

This course is required of all music majors with vocal, piano, and general music emphasis (BA in Music Education). The fundamentals of brass and percussion instruments and brass and percussion training literature will be covered.

**MUS 368. STRING CLASS.** *One hour credit.*

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 369. INDIVIDUAL PERFORMANCE IN VOICE FOR NON-VOICE MUSIC MAJORS.** *One hour credit.*

Instruction will concentrate on the fundamental principals of voice production, such as proper breathing for singing, diction, resonance, etc. Development of rhythmic and melodic accuracy will receive primary consideration. Work on the fundamentals of good singing will be carried through the entire program.

**\*MUS 370. INDIVIDUAL PERFORMANCE IN VOICE.** *One-three hours credit.*

**\*MUS 371. INDIVIDUAL PERFORMANCE IN PIANO.** *One-three hours credit.*

**\*MUS 372. INDIVIDUAL PERFORMANCE IN ORGAN.** *One-three hours credit.*

**\*MUS 373. INDIVIDUAL PERFORMANCE IN STRINGS.** *One-three hours credit.*

**\*MUS 374. INDIVIDUAL PERFORMANCE IN WOODWINDS.** *One-three hours credit.*

**\*MUS 375. INDIVIDUAL PERFORMANCE IN BRASS.** *One-three hours credit.*

**\*MUS 376. INDIVIDUAL PERFORMANCE IN PERCUSSION.** *One-three hours credit.*

**\*MUS 377. INDIVIDUAL INSTRUCTION IN COMPOSITION.** *One-three hours credit.*

**\*MUS 378. INDIVIDUAL PERFORMANCE IN HARP.** *One-three hours credit.*

**\*MUS 379. INDIVIDUAL PERFORMANCE IN GUITAR.** *One-three hours credit.*

**\*MUS 380. MIXED CONCERT CHOIR.** *One hour credit.*

Membership in the concert choir is limited to approximately 60 singers. This organization performs a wide range of choral literature from the classics to the music of contemporary composers. The organization is recognized widely for its excellence as a choral performing group. It is in demand throughout the region for concert appearances.

**\*MUS 381. UNIVERSITY CHORUS.** *One hour credit.*

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.

**\*MUS 382. UNIVERSITY SINGERS.** *One hour credit.*

A select group of approximately 35 voices open by audition only. The repertoire for this group is extremely varied, ranging from motets of the Renaissance to contemporary songs to the Bach b-minor mass.

**\*MUS 383. WOMEN'S CONCERT CHOIR.** *One hour credit.*

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.

**\*MUS 384. VARSITY MEN'S GLEE CLUB.** *One hour credit.*

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 divisions to participate in the great tradition of men's ensemble singing while performing a wide range of literature before university and community audiences.

**\*MUS 385. OPERA WORKSHOP.** *One to three hours credit.*

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.

**\*MUS 386. CHORUS AND ORCHESTRA WORKSHOP.** *One hour credit.*

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.

**\*MUS 390. SYMPHONIC WIND BAND.** *One hour credit.*

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.

**\*MUS 391. CONCERT BAND.** *One hour credit.*

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 392. MARCHING BAND.** *One hour credit.*

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 men in the instrumental music education program or in Symphonic Wind Band, Concert Band or Varsity Band.

**\*MUS 393. VARSITY BAND.** *One hour credit.*

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.

**\*MUS 394. JAZZ ENSEMBLE.** *One hour credit.*

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.

**\*MUS 395. UNIVERSITY BRASS CHOIR.** *One hour credit.*

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.

**\*MUS 396. UNIVERSITY SYMPHONY ORCHESTRA.** *One hour credit.*

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.

**\*MUS 397. CHAMBER ORCHESTRA.** *One hour credit.*

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 materials specifically designed for chamber orchestra.

**\*MUS 398. LABORATORY ORCHESTRA.** *One hour credit.*

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.

**MUS 401. IMPROVISATION.** *Two hours credit.*

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.** *Three hours credit.*

A study of the forms, techniques and literature of the 17th, 18th, and 19th century polyphonic music.

**MUS 403. ACOUSTICS OF MUSIC.** *Three hours credit.*

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.

**MUS 404. PIANO ACCOMPANYING.** *Two hours credit.*

Prerequisite, piano proficiency level II or above. The course is designed to develop proficiency in accompanying solo vocal and choral performance, solo instrumental performance, and accompanying instrumental ensembles and performing chamber music ensembles. Technical and interpretive problems relating to accompanying are discussed and explored. A weekly laboratory workshop provides opportunity for performance. Extensive familiarity with major repertoire is stressed.

**\*MUS 409. STAGE AND OPERA TECHNIQUES.** *One to three hours credit.*

Study of proper selection of opera and operetta; its organization and procedures for casting and tryouts. Rehearsal procedures, scenery, lighting, costuming and makeup; advertising, tickets and programs, and other basics necessary to production of a public performance.

**MUS 410. INTRODUCTION TO VOCAL PEDAGOGY.** *Two hours credit.*

The study of the problems related to establishing basic techniques for singing.

**MUS 411. METHODS AND MATERIALS FOR CLASS INSTRUMENTAL INSTRUCTION.** *Three hours credit.*

A course designed to give the student practical experience in the organization and teaching of heterogeneous wind instrument classes. The course will stress the improvement of teaching methods and the creation of original materials for class work.

**MUS 412. INSTRUMENT REPAIR AND CARE.** *Two hours credit.*

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.** *Three hours credit.*

An introduction to important philosophical and psychological thought which has influenced music education.

**MUS 422. INDIVIDUAL STUDIES IN MUSIC.** *One to four hours credit.*

For course description refer to page 213.

**MUS 423. PRACTICUM IN BAND CONDUCTING AND PERFORMANCE.** *Three hours credit.*

A laboratory course in advanced band conducting and performance. Supervised conducting experience under actual conditions is provided. Marching and football band performance will also be covered.

**MUS 424. PRACTICUM IN CHORAL CONDUCTING AND PERFORMANCE.** *Three hours credit.*

A workshop course in advanced choral conducting and performance. Provides opportunity for supervised conducting, analysis of choral materials, problems of choral organization, a study of the literature of choral conducting and practices.

**MUS 425. PRACTICUM IN ORCHESTRAL CONDUCTING AND PERFORMANCE.** *Three hours credit.*

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 430. STRING ENSEMBLE.** *One hour credit.*

\***MUS 431. BRASS ENSEMBLE.** *One hour credit.*

\***MUS 432. WOODWIND ENSEMBLE.** *One hour credit.*

\***MUS 433. PERCUSSION ENSEMBLE.** *One hour credit.*

\***MUS 434. PIANO ENSEMBLE.** *One hour credit.*

\***MUS 435. GUITAR ENSEMBLE.** *One hour credit.*

**MUS 437. PIANO LITERATURE I.** *Two hours credit.*

Prerequisite, piano performance level II or above. This course is designed to broaden the performer's knowledge of repertoire. Keyboard music from the English Virginal School through the Classic Period.

**MUS 438. PIANO LITERATURE II.** *Two hours credit.*

Prerequisite, piano performance level II or above. This course is designed to broaden the teacher-performer's knowledge of keyboard music from Middle Beethoven through the Romantic Period.

**MUS 439. PIANO LITERATURE III.** *Two hours credit.*

Prerequisite, piano performance level II or above. This course is designed to broaden the teacher-performer's knowledge of the keyboard music from the Late Romantic and Impressionistic periods through the Twentieth Century and the resultant compositional devices reflected therein.

**MUS 441. CHORAL LITERATURE TO 1750.** *Three hours credit.*

A study of the stylistic trends, musical characteristics and performance practice of choral music written before 1750.

**MUS 442. CHORAL LITERATURE FROM 1750.** *Three hours credit.*

A study of the stylistic trends, musical characteristics and performance practice of choral music written after 1750.

**MUS 443. INSTRUMENTAL LITERATURE.** *Three hours credit.*

A study of instrumental literature for school groups. The high school band and orchestra, materials for class and individual instruction, and small instrumental ensembles.

**MUS 444. MARCHING BAND TECHNIQUES.** *Two hours credit.*

A workshop to provide materials and suggestions to band directors and prospective band directors. To assist with the planning of individual football shows and pageantry.

**MUS 445. VOCAL REPERTOIRE: GERMAN ART SONG.** *Two hours credit.*  
A course in performance of nineteenth and twentieth century German Art Song, with particular emphasis upon style and diction.

**MUS 446. VOCAL REPERTOIRE: FRENCH ART SONG.** *Two hours credit.*  
A course in performance of nineteenth and twentieth century French Art Song, with particular emphasis upon style and diction.

**MUS 447. VOCAL REPERTOIRE: ITALIAN SONG.** *Two hours credit.*  
A course in performance of songs and airs before the nineteenth century, with particular emphasis upon style and diction.

**MUS 448. COLLEGIUM MUSICUM.** *One hour credit.*  
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.

**MUS 449. HISTORY OF MUSICAL INSTRUMENTS.** *Three hours credit.*  
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 460. PRINCIPLES OF VIOLIN AND VIOLA TEACHING.** *Two hours credit.*  
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.** *Two hours credit.*  
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 approached through piano study. Basic keyboard techniques. Criteria for selecting teaching materials.

**MUS 462. PRINCIPLES OF PIANO TEACHING II.** *Two hours credit.*  
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.** *Two hours credit.*  
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 469. INDIVIDUAL PERFORMANCE IN VOICE FOR NON-VOICE MUSIC MAJOR.** *One hour credit.*

Instruction will concentrate on the fundamental principals of voice production, such as proper breathing for singing, diction, resonance, etc. Development of rhythmic and melodic accuracy will receive primary consideration. Work on the fundamentals of good singing will be carried through the entire program.

**\*MUS 470. INDIVIDUAL PERFORMANCE IN VOICE.** *One-three hours credit.*

**\*MUS 471. INDIVIDUAL PERFORMANCE IN PIANO.** *One-three hours credit.*

**\*MUS 472. INDIVIDUAL PERFORMANCE IN ORGAN.** *One-three hours credit.*

**\*MUS 473. INDIVIDUAL PERFORMANCE IN STRINGS.** *One-three hours credit.*

**\*MUS 474. INDIVIDUAL PERFORMANCE IN WOODWINDS.** *One-three hours credit.*

**\*MUS 475. INDIVIDUAL PERFORMANCE IN BRASS.** *One-three hours credit.*

**\*MUS 476. INDIVIDUAL PERFORMANCE IN PERCUSSION.** *One-three hours credit.*

**\*MUS 477. INDIVIDUAL INSTRUCTION IN COMPOSITION.** *One-three hours credit.*

**\*MUS 478. INDIVIDUAL PERFORMANCE IN HARP.** *One-three hours credit.*

**\*MUS 479. INDIVIDUAL PERFORMANCE IN GUITAR.** *One-three hours credit.*

**\*MUS 480. MIXED CONCERT CHOIR.** *One hour credit.*

Membership in the concert choir is limited to approximately 60 singers. This organization performs a wide range of choral literature from the classics to the music of contemporary composers. The organization is recognized widely for its excellence as a choral performing group. It is in demand throughout the region for concert appearances.

**\*MUS 481. UNIVERSITY CHORUS.** *One hour credit.*

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.

**\*MUS 482. UNIVERSITY SINGERS.** *One hour credit.*

A select group of approximately 35 voices open by audition only. The repertoire for this group is extremely varied, ranging from motets of the Renaissance to contemporary songs to the Bach b-minor mass.

**\*MUS 483. WOMEN'S CONCERT CHOIR.** *One hour credit.*

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.

**\*MUS 484. VARSITY MEN'S GLEE CLUB.** *One hour credit.*

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 divisions to participate in the great tradition of men's ensemble singing while performing a wide range of literature before university and community audiences.

**\*MUS 485. OPERA WORKSHOP.** *One to three hours credit.*

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.

**\*MUS 486. CHORUS AND ORCHESTRA WORKSHOP.** *One hour credit.*

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.

**\*MUS 490. SYMPHONIC WIND BAND.** *One hour credit.*

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.

**\*MUS 491. CONCERT BAND.** *One hour credit.*

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.** *One hour credit.*

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 men in the instrumental music education program or in Symphonic Wind Band, Concert Band or Varsity Band.

**\*MUS 493. VARSITY BAND.** *One hour credit.*

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.

**\*MUS 494. JAZZ ENSEMBLE.** *One hour credit.*

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.

**\*MUS 495. UNIVERSITY BRASS CHOIR.** *One hour credit.*

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.

**\*MUS 496. UNIVERSITY SYMPHONY ORCHESTRA.** *One hour credit.*

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.

**\*MUS 497. CHAMBER ORCHESTRA.** *One hour credit.*

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 materials specifically designed for chamber orchestra.

**\*MUS 498. LABORATORY ORCHESTRA.** *One hour credit.*

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.

\*May be used by non-music majors as part of the 60 hours of required General Education.

## **NURSING**

**NURS 100. ORIENTATION TO NURSING.** *Two hours credit.*

An introduction to the broad field of nursing. Explores historical and contemporary developments in nursing with emphasis on the present.

**NURS 208. NURSING WORKSHOP.** *One-three hours credit.*

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. Satisfactory-unsatisfactory grading system.

**NURS 300. BASIC PRINCIPLES OF NURSING.** *Ten hours credit. (Six hours lecture, twelve hours clinical laboratory.)*

Prerequisites, completion of all lower division requirements. An introduction to concepts basic to nursing care. The science and art of nursing is applied in varied patient care centers in the community.

**NURS 301. INTRODUCTION TO PHARMACOLOGY.** *Three hours credit.*

Prerequisites, completion of all lower division requirements. Introduces the student to the general principles of clinical pharmacology, administration of drugs and methods of computing dosages of drugs and solutions. General mathematical ability is a prerequisite, since accurate computation of drug dosages is required.

**NURS 302. MATERNITY NURSING.** *Ten hours credit. (Five hours lecture, fifteen hours clinical laboratory.)*

Prerequisites, NURS 300, 301. A study of nursing care of mothers and infants. A developmental and family-centered approach with emphasis on the normal aspects of the reproductive cycle. Physiological, psychological and socio-cultural concepts basic to maternal and infant health are considered. Guided practice includes nursing care during pregnancy and throughout the maternity experiences for mothers and infants.

**NURS 303. MEDICAL-SURGICAL NURSING.** *Ten hours credit. (Five hours lecture, fifteen hours clinical laboratory.)*

Prerequisites, NURS 300, 301. A study of concepts essential for effective nursing care of adults requiring medical or surgical intervention because of illness or accident. Includes nursing measures used in prevention, treatment and rehabilitation. Guided participation in the nursing care of adults in varied settings. Emphasis is on the application of appropriate knowledge and skills in identifying and meeting individual nursing needs.

**NURS 304. COMMUNITY MENTAL HEALTH NURSING.** *Ten hours credit. (Five hours lecture, fifteen hours clinical laboratory.)*

Prerequisites, NURS 300, 301. A study of psychiatric theory and application of nursing process to persons with behavior deviations. Content includes psycho-social development theories, inter-personal concepts, treatment modalities, and prevention of mental illness. Continues the study of emotional needs of persons, dynamics of human behavior, and interviewing skills. Major emphasis is on the therapeutic counselor role of the nurse in institutions and community settings. Supervised clinical experience is included.

**NURS 305. HUMAN RELATIONS IN NURSING.** *Three hours credit.*

A study of principles and concepts of communication, interpersonal relations, group processes and leadership skills basic to effective nursing.

**NURS 400. COMMUNITY NURSING.** *Ten hours credit. (Five hours lecture, fifteen hours clinical laboratory.)*

Prerequisites, NURS 302, 303, 304. An introduction to the philosophy and principles of Community Nursing. Responsibilities and activities of the nurse in a generalized Community Nursing program are studied. Emphasis is given to the role of the nurse in family and community health service. Guided Community Health Nursing field practice is provided in various community settings.

**NURS 401. PUBLIC HEALTH SCIENCES AND RESOURCES.** *Three hours credit.*

A general study of concepts derived from the field of Public Health which includes an introduction to Public Health Administration, environmental sanitation, biostatistics, and epidemiology. Concurrent with NURS 400.

**NURS 402. NURSING OF CHILDREN.** *Ten hours credit. (Five hours lecture, fifteen hours clinical laboratory.)*

Prerequisites, NURS 302, 303, 304. A study of the child as an individual and as a member of a family unit. Emphasis is placed upon normal growth and development and includes recognition of the effects of pathology on the child from infancy through adolescence. The concept of nursing process (assessment, planning, intervention, evaluation) is the theoretical framework utilized.

**NURS 403. ADVANCED MEDICAL-SURGICAL NURSING.** *Eleven hours credit. (Four hours lecture, twenty-one hours clinical laboratory.)*

Prerequisites, NURS 302, 303, 304. A study of nursing care of patients with complex medical and/or surgical disorders. Planning nursing care and patient management are emphasized. Concepts of team nursing are introduced. Participation in team nursing is included in the clinical practice.

**NURS 404. TRENDS IN NURSING.** *Three hours credit.*

Prerequisites, NURS 302, 303, 304 or permission of instructor. A study of trends, problems and issues in present-day nursing. Contemporary social forces are studied in relation to their influence on the development of nursing. Emphasis is on the responsibilities of the professional nurse in an increasingly complex system of health and medical care.

**NURS 405. EMERGENCY NURSING.** *Three hours credit.*

Prerequisites, NURS 300, 301, 302, 303, 304, 305. A comprehensive study of the essentials of emergency nursing care. Hypothetical situations will be used to assist the nursing student to make assessments, set priorities, and take action in emergency settings. Legal implications will be included. Open as an elective to senior nursing majors.

**NURS 408. NURSING WORKSHOP.** *Three hours credit.*

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. Satisfactory-unsatisfactory grading system.

## OCEANOGRAPHY

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

**\*OCN 100. GENERAL OCEANOGRAPHY.** *Three hours credit.*

A descriptive overview of the whole field of oceanology for non-science majors with consideration of the physical, biological, chemical, and geological aspects of the oceans and ocean basins. Recent technological developments, food and mineral resources, and ocean pollution are discussed also.

**\*OCN 201. PRINCIPLES OF OCEANOGRAPHY.** *Three hours credit.*

A descriptive treatment of the physical properties of sea water, the general character of water masses and ocean currents, waves, tsunamis, the sea as a biological environment, and some geological aspects of ocean basins. Students cannot receive credit for both OCN 100 and 201.

## PHILOSOPHY

**\*PHIL 100. INTRODUCTION TO PHILOSOPHY.** *Three hours credit.*

An in depth first course in philosophy. Using Plato's *Republic* as central focus, 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.

**\*PHIL 210. ETHICS AND VALUE THEORY.** *Three hours credit.*

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".

**\*PHIL 220. LOGIC IN PRACTICE.** *Three hours credit.*

A practical study of the uses of deductive and inductive logic, including consideration of the nature of concepts, propositions, and arguments as instruments of knowledge; the concept of superstition; development of *logos*.

**\*PHIL 311. HISTORY OF ANCIENT PHILOSOPHY.** *Three hours credit.* Ancient Philosophy from the Presocratics to Plotinus. The emergence of philosophical cosmology from mythopoeic cosmogony; the Socratic ethical turn; Plato; Aristotle; Hellenistic and Roman developments; Neoplatonism.

**\*PHIL 312. HISTORY OF MEDIEVAL PHILOSOPHY.** *Three hours credit.* Prerequisite, PHIL 311 or instructor's consent. A consideration of philosophy in the middle ages, include Greek and Roman influences and the confrontation with Christianity; Augustine; Anselm; the controversy over universals; the Neoplatonic, Nominalist and Aristotelian schools; Jewish and Islamic thought; German mysticism; late scholasticism; conflicts and attempted reconciliations of reason with revelation; Cusa and Bruno.

**\*PHIL 313. HISTORY OF MODERN PHILOSOPHY.** *Three hours credit.* 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 belief.

**\*PHIL 314. HISTORY OF RECENT PHILOSOPHY.** *Three hours credit.* Prerequisite, PHIL 313 or instructor's consent. Recent philosophy, including German Idealism, the Hegelian synthesis, and its break-down (Kierkegaard, Marx, Nietzsche), Bergson, American Philosophy (James, Royce).

**\*PHIL 315. EXISTENTIALISM.** *Three hours credit.* Prerequisite, three hours of philosophy or instructor's consent. 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.

**\*PHIL 330. AESTHETICS.** *Three hours credit.* Prerequisite, three hours of philosophy or instructor's consent. 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.

**\*PHIL 340. FORMAL LOGIC.** *Three hours credit.* 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 355. SOCIAL PHILOSOPHY.** *Three hours credit.* Prerequisite, three hours of philosophy or instructor's consent. 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.

**\*PHIL 360. PHILOSOPHY OF HISTORY.** *Three hours credit.* Prerequisite, three hours of philosophy or instructor's consent. Examination of speculative and critical philosophies of history, with emphasis on Augustine, Hegel, Marx, and critical issues of explanation, selection, causal attribution. Cyclic, theocentric and voluntaristic models; relation of data to interpretive scheme; historicism, design and the absurd.

**\*PHIL 370. PHILOSOPHY OF RELIGION.** *Three hours credit.* Prerequisite, PHIL 220 or 340. Philosophical investigation of religious language and religious experience. Emphasis is placed on such topics as: the source and dimension of the holy, what is "God" a name for, proofs for and against the existence of God, transcendence, immanence, hierophany, pantheism, mysticism. Classical and contemporary philosophical theories of religion will be examined.

**\*PHIL 380. PROBLEMS AND METHODS OF PHILOSOPHY.** *Three hours credit.*

Prerequisite, three hours of philosophy or instructors' consent. Variable content course which student may elect more than once. Such topics as scepticism, realism, phenomenology, free will, philosophy of mythology, inductive logic, concepts and reference, etc. The student becomes immersed in one philosophic problem and alternative methodologies for treatment.

**\*PHIL 401. PLATO.** *Three hours credit.*

Prerequisite, PHIL 311. Critical examination of the works of Plato, stressing the later dialogues. Consideration of such topics as Plato's theories of knowledge, love, the good, being, creation and government; the Platonic myths; relation of Plato to Greek culture; his immense influence on subsequent Western philosophic thought.

**PHIL 403. SEMINAR IN KANT AND HEGEL.** *Three hours credit.*

Prerequisite, PHIL 313 and 314. Intensive investigations into Kant's *Critique of Pure Reason* and Hegel's *Phenomenology of Spirit* stressed respectively in alternate years. Such topics as: transcendental vs. empirical investigations; synthetic judgments a priori; pure, practical and absolute reason; antinomies and dialectic; idealism, scepticism and historicism; reason, will and spirit; etc.

**\*PHIL 410. CONTEMPORARY PHILOSOPHICAL MOVEMENTS.** *Three hours credit.*

Prerequisite, PHIL 313 or instructor's consent. A consideration of philosophy in the twentieth century, including Phenomenology (Husserl, Heidegger), Existentialism (Sartre, Jaspers, Camus, Marcel), Analysis (Russell, Moore, Wittgenstein), Positivism (Carnap, Ayer).

**\*PHIL 415. AMERICAN PHILOSOPHY.** *Three hours credit.*

Prerequisite, PHIL 313 or 314 or instructor's consent. 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 of four hours credit.*

Prerequisite, instructor's consent. Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter on one problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with chairman of the department.

**\*PHIL 430. EPISTEMOLOGY.** *Three hours credit.*

Prerequisite, PHIL 220 or 340 and 311 or 313, or instructor's consent. Examination of classical and contemporary theories of the meaning and criteria of knowledge, truth, and reference. Such topics as truth and time; certitude, synthetic and analytic propositions, necessary and contingent truth, concepts and percepts, illusion and lies, constituting and constituted egos, etc.

**\*PHIL 440. METAPHYSICS.** *Three hours credit.*

Prerequisite, PHIL 311 and 313, or instructor's consent. Examination of such concepts as Being, substance, causation, reality, process, in the light of recent and contemporary thought, including the sceptical and positivist stances.

**PHIL 480. STUDIES IN 19th AND 20th CENTURY PHILOSOPHY.** *Three hours credit.*

Prerequisite, PHIL 311 or 313 or 314. Intensive analysis of selected figures, movements, and problems in recent and contemporary philosophy. Such topics as: Schopenhauer and Bergson, Nietzsche, Milland Bradley, Positivism, Later Heidegger, Wittgenstein, Marcel and Royce, Ethical Emotivism, Husserl and Russell, etc. Variable content course which student may elect more than once.

## PHYSICS

**\*PHYS 100. CONCEPTUAL PHYSICS.** *Three hours credit. (Two hours lecture, three hours 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. *Recommended as a substitute for SCI 103.*

**\*PHYS 150. PRINCIPLES OF PHYSICS.** *Five hours credit. (Four hours lecture, three hours 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. *Recommended as a substitute for SCI 103.*

**PHYS 160. PRINCIPLES OF MOTION.** *Three hours credit. (Two hours lecture, three hours 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.

**PHYS 255. ELEMENTS OF COMPUTER PROGRAMMING.** *Three hours credit. (Two hours lecture, three hours 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.*

**\*PHYS 260. INTRODUCTORY PHYSICS—MECHANICS.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, MATH 123 or consent of instructor. The first quarter of the introductory course treating classical and modern mechanics.

**\*PHYS 261. INTRODUCTORY PHYSICS—HEAT, SOUND, AND LIGHT.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, PHYS 260. The second quarter of the introductory course treating classical and modern heat, sound, and light.

**\*PHYS 262. INTRODUCTORY PHYSICS—ELECTRICITY AND MAGNETISM.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, PHYS 260. The third quarter of the introductory course treating classical and modern electricity and magnetism.

**PHYS 263. RADIATION PHYSICS.** *Three hours credit. (Two hours lecture, three hours laboratory.)*

Prerequisite, PHYS 150, or 262, or consent of instructor. A course in the detection and evaluation of the various atomic and nuclear radiations. Topics to be covered include elementary atomic and nuclear theory, types of radiation, detectors, error analysis, and detection systems.

**PHYS 265. GENERAL PHYSICS—MECHANICS.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, MATH 132 or taken concurrently. The first quarter of the general course in physics covering the laws, principles, and generalizations of mechanics.

**PHYS 266. GENERAL PHYSICS—ELECTRICITY.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisites, PHYS 265 and MATH 133. The second quarter of the general course in physics covering the principles, laws, and generalizations in electricity.

**PHYS 267. GENERAL PHYSICS—SOUND, LIGHT, AND HEAT.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisites, PHYS 265, MATH 133. The third quarter of the general course in physics treats the laws, principles, and generalizations concerning sound, light, and heat.

**PHYS 268. MODERN PHYSICS.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, PHYS 267. A general course of the concepts in physics formulated since 1900 including an elementary presentation of atomic and nuclear physics.

**PHYS 361. AC CIRCUITS.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisites, PHYS 267 and MATH 133. A study of Kirchhoff's Laws and their application, components of AC circuits, and the solution of AC circuits by use of the vector method and complex number method. An introduction to elementary electronics is included.

**\*PHYS 364. ELEMENTARY PHOTOGRAPHY.** *Three hours credit. (Two hours lecture, three hours laboratory.)*

An introductory course covering the basic elements of photography. Topics include developing, printing and enlarging and the use of photography in the teaching of science.

*Not recommended for students with previous photography laboratory experience.*

**PHYS 365. MECHANICS I.** *Four hours credit.*

Prerequisites, PHYS 267 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.

**PHYS 366. ELECTRICITY AND MAGNETISM I.** *Four hours credit.*

Prerequisites, PHYS 267 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.

**PHYS 367. OPTICS I.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, PHYS 267 and MATH 133. A study of geometric optics including the theory of thin lenses, thick lenses, spherical mirrors, lens aberrations, and a survey of optical instruments.

**PHYS 422. INDIVIDUAL STUDIES.** *Maximum of four hours credit.*

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.

**PHYS 460. SOUND.** *Three hours credit.*

A study of sound waves, their nature, propagation, and modes of combination. Includes supporting mathematical instruction and demonstration of basic instrumental measurements. *Not open to physics majors or minors.*

**PHYS 462. ELECTRONICS I.** *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, PHYS 361. A continuation of PHYS 361. Topics to be covered include simple diodes, triodes, power supplies, simple amplifiers, simple detectors, types of amplifiers, R. F. circuitry and an introduction to transistor theory.

**PHYS 465. MECHANICS II.** *Three hours credit.*

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 dimensions, central field motion, accelerated reference systems.

**PHYS 466. ELECTRICITY AND MAGNETISM II.** *Three hours credit.*  
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.

**PHYS 468. ATOMIC PHYSICS.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisites, PHYS 268, 365, MATH 234. A study of modern physics concepts including the electron and its properties, energy levels, quantum numbers, X-rays, and elementary aspects of relativity and quantum physics.

**PHYS 469. NUCLEAR PHYSICS I.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisites, PHYS 268, 365, MATH 234. A study of the nucleus of the atom including nuclear processes, decay schemes, sub-atomic particles and high energy reactions.

## POLITICAL SCIENCE

**\*PSCI 100. NATIONAL GOVERNMENT OF THE UNITED STATES.** *Five hours credit.*

Origin and adoption of the Constitution, basic principles of the American constitutional system, the machinery of popular control, and the structure of the national government. Not open to students taking PSCI 101 or PSCI 102.

**\*PSCI 101. UNITED STATES GOVERNMENT I.** *Three hours credit.*

An introduction to the foundations of the United States national political system. Democratic theory, majoritarianism and constitutionalism will be discussed. The roles of the electorate, interest groups, political parties, and civil liberties will be analyzed. Not open to students taking PSCI 100.

**\*PSCI 102. UNITED STATES GOVERNMENT II.** *Three hours credit.*

Prerequisite, PSCI 101. A study of the formal policy-making agencies of the United States government. The role and function of Congress, the Presidency and the Judiciary will be analyzed. The latter part of this course will focus on the making of United States foreign policy. Not open to students taking PSCI 100.

**\*PSCI 103. UNITED STATES GOVERNMENT III.** *Three hours credit.*

Prerequisite, PSCI 101 or permission of the instructor. In the first part of this course the national problems and government programs in the fields of business, labor, agriculture, the general economy, and social disorganization will be studied. Problems of Federalism will be studied. The second half of the course will focus on state and local government.

**\*PSCI 200. LEGISLATIVE PROCESSES.** *Three hours credit.*

Prerequisites, PSCI 100 or PSCI 101 and 102. A survey of American legislative systems and processes. The structure and organization of legislatures and the process of statute law-making.

**\*PSCI 201. STATE AND LOCAL GOVERNMENT.** *Five hours credit.*

Prerequisite, PSCI 100 or PSCI 101 and 102. The organization of state, county, and municipal governments.

**\*PSCI 202. LEGISLATIVE PROCESSES II.** *Three to fifteen hours credit.*

Prerequisites, PSCI 100, PSCI 200. Legislative Processes II offers a unique opportunity to combine a substantial amount of self-directed research on the part of a student under the supervision of the instructor with actual field experience as an observer and assistant to an elected member of the Colorado State Legislature.

**\*PSCI 205. CIVIL LIBERTIES IN THE UNITED STATES.** *Three hours credit.*

An analysis of judicial, executive and legislative actions which have threatened,

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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.

**\*PSCI 210. EUROPEAN POLITICAL SYSTEMS.** *Four hours credit.*

A comparative analysis of the political systems of selected European nations, including Great Britain, France, and West Germany.

**\*PSCI 220. INTERNATIONAL RELATIONS.** *Four hours credit.*

An introductory study of the basic principles and problems of the international political system.

**\*PSCI 250. INTRODUCTION TO RESEARCH IN POLITICAL SCIENCE.**  
*Three hours credit.*

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.

**\*PSCI 300. PUBLIC OPINION AND PRESSURE GROUPS.** *Four hours credit.*

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.

**\*PSCI 301. PROBLEMS IN UNITED STATES GOVERNMENT.** *Three hours credit.*

Prerequisites, PSCI 100 or PSCI 101, and 102. The constitutional and extra-constitutional factors affecting the legislative process, the conduct of administration, the budgetary and fiscal policies of the government, and the control of foreign relations.

**\*PSCI 302. THE PRESIDENT AND THE BUREAUCRACY.** *Three hours credit.*

An intensive examination of the role of the President and the Federal bureaucracy in the national political system. Emphasis is placed on the concepts and techniques of presidential leadership and the Executive branch's relationship with Congress, the Judiciary and the public. Sources of constitutional authority and power, and problems of contemporary Presidential policy making are examined.

**\*PSCI 320. AMERICAN FOREIGN POLICY.** *Four hours credit*

An analysis of the development of recent American foreign policy, especially since World War I.

**\*PSCI 330. POLITICAL BELIEF-SYSTEMS I.** *Three hours credit.*

The ethical study of politics constitutes a persistent strain in intellectual history. Answers to such questions as the nature of authority and obligation are extracted from a reading of the original sources. Greek, Roman and medieval thinkers will be read.

**\*PSCI 331. POLITICAL BELIEF-SYSTEMS II.** *Three hours credit.*

Prerequisite, PSCI 330 or permission of instructor. A continuation of Political Belief-Systems I. This course will focus on late medieval and early modern thinkers.

**\*PSCI 332. POLITICAL BELIEF-SYSTEMS III.** *Three hours credit.*

Prerequisites, PSCI 330 and 331 or permission of instructor. This quarter of Political Belief-Systems concentrates on modern thinkers. Democratic, socialist, fascist and communist answers as to what values ought to be pursued will be examined.

**\*PSCI 340. FIELD RESEARCH AND STUDY IN POLITICAL SCIENCE.**

*Three to fifteen hours credit.*

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.

**\*PSCI 400. POLITICAL PARTIES.** *Three hours credit.*

Prerequisites, PSCI 100 or PSCI 101 and 102. The organization and techniques of political parties in the United States, the voting behavior of the electorate and the problems relating to the machinery of representative democracy.

**\*PSCI 401. MINORITY POLITICS.** *Three hours credit.*

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.

**\*PSCI 410. GOVERNMENT AND POLITICS OF ASIA.** *Four hours credit.*

A comparative study of the major political system of Asia, including China, Japan, India, and Indochina.

**\*PSCI 411. GOVERNMENT AND POLITICS OF LATIN AMERICA.** *Four hours credit*

A comparative study of the political systems of Latin America.

**\*PSCI 412. THE POLITICS OF THE DEVELOPING AREAS.** *Four hours credit.*

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.

**\*PSCI 413. POLITICAL SYSTEMS OF SUB-SAHARAN AFRICA.** *Four hours credit.*

Analysis of major types of political systems in Sub-Saharan Africa with case studies of selected countries exemplifying each type. Special problems of multi-racial and multicultural societies.

**\*PSCI 414. GOVERNMENT AND POLITICS OF THE SOVIET UNION.** *Four hours credit.*

An intensive inquiry into the institutions and processes of the government of the Soviet Union.

**\*PSCI 420. FOUNDATIONS OF INTERNATIONAL POLITICS.** *Four hours credit.*

Prerequisite, PSCI 220. An intensive investigation into the factors of international politics, including foreign policy decision making, nationalism, geopolitics, international law, and ideologies.

**\*PSCI 421. THE UNITED NATIONS.** *Three hours credit.*

The background and organization of the United Nations. Includes a detailed study of the six organic bodies of the United Nations and its subsidiary agencies.

**\*PSCI 423. REGIONAL AND SUPRANATIONAL POLITICAL ORGANIZATIONS.** *Four hours credit.*

Prerequisite, PSCI 220. An analysis of some regional and supranational political organizations, such as the North Atlantic Treaty Organization and the European Economic Community, and an evaluation of the role and significance of these organizations in international politics.

**\*PSCI 425. SOVIET UNION POLICY.** *Four hours credit.*

An analysis of recent and contemporary problems in the relations of the Soviet Union with Western, neutralist, and other communist nations.

**\*PSCI 430. AMERICAN POLITICAL BELIEF-SYSTEMS.** *Three hours credit.*

Prerequisites, five quarter hours in United States national government and a course in political philosophy or permission of instructor. An analysis of the United States contribution to thought on such subjects as authority and obliga-

tion in civil society. Special attention will be paid to the themes of majoritarianism, constitutionalism and civil disobedience.

**\*PSCI 435. PROBLEMS IN POLITICAL PHILOSOPHY.** *Three hours credit.* Prerequisites, two of PSCI 330, 331, 332, 430. Selected problems or philosophies will receive close and lengthy attention. Familiarization with a considerable literature and a substantial paper will be required.

## PSYCHOLOGY

**\*PSY 120. GENERAL PSYCHOLOGY.** *Three hours credit. Taught every quarter.*

A basic course in which psychological principles, methods, theories and research findings are studied. Attention is given to perception, cognition, maturation, motivation, learning, individual differences, mental health and their physiological correlates. Practical applications are made to give each student opportunities to modify his behavior.

**\*PSY 121. GENERAL PSYCHOLOGY AND HUMAN PERFORMANCE.** *Three hours credit. Taught every quarter.*

Prerequisite, PSY 120. A foundation course in psychology designed to extend the understanding of human behavior through application of psychological theories, constructs, principles, and research findings to situational settings involving groups such as individual and group differences, vocational and occupational profiles, industrial relations, group motivation, syndromes of abnormality.

**PSY 122. EXPLORATION SEMINAR IN PSYCHOLOGY I.** *Two hours credit up to a maximum of four. (To be taken once in the freshman year and once in the sophomore year.) Taught every quarter.*

Prerequisite, majors only. A seminar required for all psychology majors. Areas of personal concern to the students as they relate course work and other experiences in psychology will be discussed.

**\*PSY 131. HUMAN GROWTH AND DEVELOPMENT.** *Five hours credit. Spring.*

Prerequisite, PSY 120. An introduction to basic concepts of growth and development. The course considers the individual from conception to senescence. Emphasis is placed on developmental tasks, both physiological and psychological, which are identified throughout the lifetime of an individual.

**\*PSY 161. GROUP PROCESS AND HUMAN RELATIONS.** *Three hours credit. Fall, Winter, Spring.*

Prerequisite, majors only. A required 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 is an important aspect of the course.

**PSY 201. PRINCIPLES AND PHILOSOPHIES OF GUIDANCE.** *Three hours credit. Taught every quarter.*

A general introduction to guidance; a study of the guidance activities, and their use in industry, business, the classroom, and the professions.

**PSY 230. CHILD AND ADOLESCENT PSYCHOLOGY.** *Three hours credit. Taught every quarter.*

A course designed to assist prospective teachers to understand and guide the physical, mental, social, and emotional development of children and youth. Total psychological development from infancy to maturity is emphasized.

**\*PSY 255. MENTAL HYGIENE AND EMOTIONAL ADJUSTMENT.** *Three hours credit. Taught every quarter.*

Psychological principles, theories, and practices are examined and applied to individual, school, family, and community mental health problems.

**PSY 266. INDUSTRIAL PSYCHOLOGY.** *Three hours credit. Winter, Summer.*

Students will study the basic methods used by psychologists in selection, placement, training, and motivation of industrial personnel. They will examine the psychological factors involving inter-personal relations influencing morale, production, job satisfaction, etc.

**PSY 270. INTRODUCTION TO MEASUREMENT AND EVALUATION.** *Three hours credit. Taught every quarter.*

Prerequisite, majors only. A course designed to develop understanding of the essential concepts of measurement and evaluation. Emphases are placed on constructing, interpreting, and using teacher-made and standardized tests with attention to determination, meaning, and application of fundamental statistical concepts to problems dealing with measurement and evaluation. Provision is made for guided study of available instruments in student's major field.

**PSY 271. INTRODUCTION TO MEASUREMENT AND EVALUATION.** *Three hours credit. Taught every quarter.*

A course designed to develop understanding of the essential concepts of measurement and evaluation. Emphases are placed on constructing, interpreting, and using teacher-made and standardized tests with attention to determination, meaning, and application of fundamental statistical concepts to problems dealing with measurement and evaluation. Provision is made for guided study of available instruments in student's major field.

**PSY 275. INTRODUCTION TO EXPERIMENTATION IN PSYCHOLOGY.** *Five hours credit. Fall, Winter, Spring.*

Prerequisites, PSY 270 or 271, majors only. This is a course designed to introduce the student to experimental and other psychological research. It is concerned with the basic principles and concepts involved in conducting effective experimentation and research, and provides practical experience in reviewing, conducting and reporting psychological research.

**PSY 301. HUMAN GROWTH AND DEVELOPMENT—PRESCHOOL.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module is devoted to the preschool child (roughly 2½ to 6 years of age). Discussions of the physical, cognitive, affective, and social growth and development of preschool children will make up the core of the course. The development of language, symbolic play, fears and nutrition are suggested topics as well.

**PSY 302. HUMAN GROWTH AND DEVELOPMENT—ELEMENTARY.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module will be devoted to an overview of the child from 6 to 11 years of age. Cognitive, affective, psychomotor and social development will be discussed. The class will treat the development of the peer group, sex roles, sex education and the developing morality and values of elementary age school children.

**PSY 303. HUMAN GROWTH AND DEVELOPMENT—ADOLESCENCE.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module will give special consideration to the following topics: transition from childhood to adolescence, physiological changes in adolescence, the role of educational institutions in adolescent development, and the adolescent in the work world.

**PSY 304. SELF CONCEPT AND SCHOOL ACHIEVEMENT.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module is designed to present a brief history of theories of the Self, characteristics of the Self and the relationship of Self Concept and school achievement. Several methods, techniques and instruments used to measure Self Concept will be introduced and discussed.

**PSY 305. DISCIPLINE.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module examines the behaviors considered by

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teachers as deviant, possible reasons for the misbehavior, the use of rules for behavior and the characteristics and types of control techniques available to teachers.

### **PSY 306. PSYCHOLOGICAL EFFECT OF POVERTY ON LEARNING.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module deals with the consequences of deprivation, equality, individuality, the abilities of man and compensatory programs. Special emphasis will be given to the Black child and to the Mexican-American child as they relate to the educational institution.

### **PSY 307. BEHAVIOR MODIFICATION.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module presents the basic concepts of operant and respondent conditioning including reinforcement, punishment, extinction, schedules of reinforcement, shaping and relates these principles to the learning of emotional and social responses. The intent is to indicate that consequences of a person's behavior have considerable effect in determining how he behaves.

### **PSY 308. EVALUATION AND GRADING.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module will explain the reasons for evaluation and grades as well as the detrimental consequences of grading as it is presently constituted. Alternatives to traditional evaluation and grading systems will be considered (pass-fail, credit no credit, no evaluation, variable credit, self-evaluation, contract systems, criterion or performance based evaluation, mastery.)

### **PSY 309. PIAGET.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module is a short course in the cognitive development theory of Jean Piaget. Piaget's stages of development will be covered with examples of Piaget's work given for each stage. The implications of Piaget's work for education will be discussed.

### **PSY 310. THE TEACHER'S ROLE IN COUNSELING.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module is an exploration and examination of assorted practices and conditions which facilitate inter-personal communication and healthy growth. Discussion of the facilitative effects of empathy, congruence, positive regard and self disclosure will be included. Implications of modeling and professional "role playing" will be examined.

### **PSY 311. TEACHER EFFECTIVENESS.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module provides an exploration of psychological evidence that has implications for the development of teaching effectiveness. Focus will be on the appropriateness of particular procedures for particular learning processes. The assumption will be made that different conceptions of teaching may be more or less effective in a given situation.

### **PSY 312. PRINCIPLES OF MOTIVATION IN THE CLASSROOM.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module will approach motivation from a focus on the child. The major theoretical approaches will be given and their applications to the classroom explored.

### **PSY 313. PROBLEM SITUATIONS IN THE CLASSROOM.** (PTE). *One hour credit.*

Prerequisite PSY 120. This module will be devoted to a discussion of problem situations that can commonly occur in classroom teaching. Situations suggested by the students plus those suggested by the instructor will be discussed and possible solutions sought.

### **PSY 314. ISSUES IN EDUCATIONAL PSYCHOLOGY.** (PTE). *One hour credit.*

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.

**PSY 315. INTELLIGENCE AND ABILITY. (PTE). *One hour credit.***

Prerequisite PSY 120. This module looks at various definitions of intelligence and how it is measured so that the teacher may gain enough understanding of the concept to see where IQ tests may both benefit and harm some children. Consideration will be given to the controversy over the role of heredity and environment.

**PSY 316. TESTS CONSTRUCTION AND OTHER CLASSROOM EVALUATION INSTRUMENTS—BEHAVIORAL OBJECTIVES. (PTE). *One hour credit.***

Prerequisite PSY 120. This module will provide opportunities for the students to obtain the following skills: construction of specific, non-trivial, behavioral objectives for a particular topic and level including all three domains of the objective taxonomy (cognitive, affective, and psychomotor); construction of multiple choice, true-false, short answer, matching and essay tests.

**PSY 317. SYSTEMATIC OBSERVATION. (PTE). *One hour credit.***

Prerequisite PSY 120. This module will be an introduction to the use of varied instruments for systematic observation of classroom processes. Each will be shown to provide a valid and unique, though incomplete (or partial) perspective of the teaching-learning process. Uses of such instruments for the improvement of teaching effectiveness will be explored.

**PSY 318. IMPLICATIONS FOR EDUCATION OF MAJOR ORIENTATIONS IN PSYCHOLOGY. (PTE). *One hour credit.***

Prerequisite PSY 120. This module will be an examination of the contributions of major frames of reference in psychology to a comprehensive understanding of educational possibilities. The adequacy of particular theories for helping us deal with particular problems in the teaching-learning process will constitute a major portion of the course.

**PSY 319. THE PSYCHOLOGY OF BECOMING A TEACHER. (PTE). *One hour credit.***

Prerequisite PSY 120. This module will focus on the residues of past relationships with parents and teachers which may influence a teacher's present relationships with others—especially children, and his/her choice of a particular teaching situation. Emphasis on the significance of self-knowledge as a factor affecting one's ability to teach.

**PSY 320. TEACHER COMPETENCIES AND STRATEGIES. (PTE). *One hour credit.***

Prerequisite PSY 120. This module is designed to provide opportunity for development of some or all of the following teacher competencies: devising specific tasks, judging the worth of specific instructional objectives, question skills designed to get the most out of an instructional encounter, the sequencing of instruction.

**PSY 321. SOCIAL PSYCHOLOGY IN THE CLASSROOM. (PTE). *One hour credit.***

Prerequisite PSY 120. This module has as its focus the many and varied problems the teacher and student encounter from a social psychology viewpoint. Such topics as attitude and belief change of teachers and students, interpersonal processes, group interaction and personality theories and trends will be covered.

**PSY 322. EXPLORATION SEMINAR IN PSYCHOLOGY II. *Two hours credit. Taught every quarter.***

Prerequisites, majors only. A junior seminar required for all psychology majors. Areas of personal concern to the students as they relate to course work and other experiences in psychology will be discussed.

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**PSY 323. INSTRUCTION AND INDIVIDUAL DIFFERENCES. (PTE). *One hour credit.***

Prerequisite PSY 120. This module explores the challenge to teachers of the use of traditional teaching methods and materials in the face of new discoveries in the field of human learning and behavior. Topics: early attempts to provide for individual differences, meeting individual needs for various subjects, innovations affecting the teacher-learner situation.

**PSY 324. EXCEPTIONAL CHILDREN. (PTE). *One hour credit.***

Prerequisite PSY 120. This module deals with the exceptional child for students who wish an overview. It is not intended for students majoring in Special Education. Topics will be: the gifted child, the EMH and TMH child, the physically handicapped child, and the deviant child. The emphasis will be on the psychological effects of exceptionality.

**PSY 325. TEACHING FOR CREATIVITY. (PTE). *One hour credit.***

Prerequisite PSY 120. This two-week module will discuss the following topics: development of creativity in the classroom, defining creativity, creative children and testing patterns, and creative dramatics.

**PSY 326. EDUCATIONAL TECHNOLOGY. (PTE). *One hour credit.***

Prerequisite PSY 120. This module discusses the advantages and disadvantages of hardware and software presently used in the schools and some projected for the future. Teaching machines, the responsive environment and other individually guided education projects are topics.

**PSY 340. PSYCHOLOGY OF PERCEPTION AND LEARNING. *Five hours credit. Taught every quarter.***

Considers basic theoretical and research evidence concerning learning and perception. Attitudes and understandings are developed concerning the application of psychological principles to the educative process. The relationship between human learning and perceptual-cognitive processes is explored.

**PSY 341. EDUCATIONAL PSYCHOLOGY, (PTE). *Five hours credit. Taught every quarter.***

Prerequisite 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.

**PSY 342. TEACHING LEARNING PROCESS. *Three hours credit. Fall, Winter, Spring.***

An introduction to basic concepts of teaching and learning. Considers opportunities for teaching in nursing. Emphasis is on teaching health and self-care measures to individuals, families and groups.

**\*PSY 350. PSYCHOLOGY OF THE HEALTHY PERSONALITY. *Three hours credit. Taught every quarter.***

Modern humanistic and existentially oriented psychological research and commentary regarding positive mental health and healthy personality development will be studied. Concepts such as self-actualization, self-realization, self-fulfillment, the fully-functioning self, personal adequacy, becoming, and the human potential for freedom and growth explored by approaching the basic question of *What Can Man Become?*

**PSY 363. SOCIODRAMA. *Two hours credit. Winter, Summer.***

How to use sociodrama. The topics studied are producing a sociodrama, purposes of the sociodrama, types and use of the sociodrama.

**PSY 364. SOCIOMETRY. *Two hours credit. Spring, Summer.***

The measurement of interpersonal relations in small groups; measurement of social status, social adjustment, leadership and morals. Sociometric organization of elementary and secondary school classrooms.

**PSY 365. PSYCHOLOGY OF PREJUDICE.** *Three hours credit. Taught every quarter.*

A course designed to assist students to understand in depth the basic causes of prejudice and the learning of prejudicial behavior. Experiences are provided for greater understanding of people and the processes for diminishing the degree of prejudice by the individual.

**PSY 422. INDIVIDUAL STUDIES.** *Maximum of four hours credit. Taught every quarter.*

Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

**PSY 424. PSYCHOLOGY: FIELD EXPERIENCE.** *Five to fifteen hours credit. Taught every quarter.*

Prerequisite, Advanced standing and permission of instructor, majors only. Either full time experience for one quarter or part-time experience for extended quarters working with professionals in any one or more of the field offices of the many helping professions where field experience programs have been contracted.

**PSY 425. SEMINAR: PSYCHOLOGICAL ISSUES.** *Three hours credit. Taught every quarter.*

This is one of the culminating experiences in the major or minor. Students will study, report, and discuss psychological issues and problems which they identify in their class observation and study experiences. They will also review and discuss research findings and conduct small research projects of their own.

**PSY 442. EXPERIMENTAL ANALYSIS OF BEHAVIOR.** *Three hours credit. Winter, Summer.*

Prerequisite, 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 458. ABNORMAL PSYCHOLOGY.** *Three hours credit. Fall, Spring, Summer.*

Prerequisites, PSY 350 or 255. The course is designed to give an understanding of abnormal behavior, its causes, symptoms, characteristics, classifications and prevention.

**PSY 475. EXPERIMENTATION IN PSYCHOLOGY.** *Three hours credit.*

This is a course designed to introduce the student to experimental and other psychological research. It is concerned with the basic principles and concepts involved in conducting effective experimentation and research, and provides practical experience in reviewing, conducting, and reporting psychological research.

## RESEARCH AND STATISTICAL METHODOLOGY

**RSM 403. INTRODUCTORY STATISTICAL METHODS.** *Three hours credit. (Not equivalent to RSM 504.)*

Basic statistical concepts and techniques; comprehension of research and literature in education and the other behavioral sciences using elementary statistical methods.

**RSM 423. INTRODUCTION TO COMPUTERS FOR TEACHERS.** *Three hours credit.*

Introduces the computer, its nature, use, and impact on education. Involves actual computer experience but is non-technical in nature.

## SCHOOL OF EDUCATIONAL CHANGE AND DEVELOPMENT

**SECD 102. PROFESSIONAL DEVELOPMENT EXPERIENCES.** *One to fifteen hours credit.*

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 200. CINEMA APPRECIATION AND CRITIQUE.** *Two hours credit.*

The course is to enhance appreciation of films through a general knowledge of ways in which technical aspects coalesce toward a film statement. To exchange ideas about the theme and purpose of each film during discussion in class.

**SECD 202. PROFESSIONAL DEVELOPMENT EXPERIENCE.** *One to fifteen hours credit.*

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 227. PHILOSOPHY OF HUMAN RIGHTS.** *Three hours credit.*

Students and teacher discuss the fundamental doctrine of human rights in the philosophies of pragmatism, idealism, existentialism, utilitarianism, and naturalism. Discussion ultimately revolves around two questions: (1) Is there a logic of human rights that binds every one alike? (2) What, if any, are the ultimate criteria of right and wrong in judging human needs and behavior?

**SECD 228. LEARNING THEORY FOR TEACHERS.** *Three hours credit.*

This course is designed to introduce teachers to learning principles. It is concerned with bridging the gap between theoretical and practical classroom experiences. The major thrust will focus upon application of these principles as they relate to learning, motivation and teaching.

**SECD 232. FIELD EXPERIENCE.** *Three hours credit.*

One section will devote most of its time to simulated teacher experiences and will emphasize the application of good communication skills to classroom situations. The second section shall be involved in and carrying out an education psychological research project involving the assessment of students according to Piaget's cognitive levels.

**SECD 302. PROFESSIONAL DEVELOPMENT EXPERIENCES.** *One to fifteen hours credit.*

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 320. INSTRUCTIONAL PORTFOLIO DEVELOPMENT.** *Six hours credit.*

This is the first of a three course sequence. The emphasis will be upon course development featuring the utilization of performance objectives and the establishment of criterion measures that may be used to evaluate the objectives.

**SECD 402. PROFESSIONAL DEVELOPMENT EXPERIENCES.** *One to fifteen hours credit.*

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.

**SECD 422. INDIVIDUAL STUDIES.** *Four hours credit.*

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 Dean of the School of Educational Change and Development.

**SCIENCE**

These courses are taught by the appropriate departments.

**\*SCI 103. PHYSICAL SCIENCE.** *Three hours credit.*

The study of physical science principles of atomic structure, nuclear energy, the source, relationship, and use of the electromagnetic radiations and their social implication in modern civilization.

**\*SCI 104. BIOLOGICAL SCIENCE.** *Three hours credit.*

This is a course designed to acquaint beginning students with the modern day concepts of the cell and protoplasm; animal and plant reproduction; and genetic transmission of hereditary traits.

**\*SCI 105. EARTH SCIENCE.** *Three hours credit.*

Units of study are organized to help students develop a better understanding and appreciation of their environment. Basic concepts are developed concerning the Universe, the Earth, its materials and landscapes, and the weather.

**SCI 300. HISTORY OF BIOLOGY.** *Three hours credit.*

The study of the development of the biological sciences from Byzantium and Egyptian period to modern day. The study of the evaluation of biological thought and scientific methodology serve as a basis for gathering insights into men's modern cultural heritage.

**SCI 301. HISTORY OF THE PHYSICAL SCIENCES.** *Three hours credit.*

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.

**\*SCI 303. ELEMENTARY BIOLOGICAL SCIENCE.** *Three hours credit.*  
*(Two hours lecture, three hours 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.

**\*SCI 309. SCIENCE FOR ELEMENTARY TEACHERS.** *Three hours credit.*  
*(Two hours lecture, three hours 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.

**SCIENCE EDUCATION****SCED 151. INTRODUCTORY SCIENCE FIELD EXPERIENCES.** *Two hours credit.* *(Maximum six hours credit.)*

A course which provides prospective science teachers with practical experiences in the classroom and community during their freshman, sophomore, and junior years.

**SCED 276. TESTING AND EVALUATION IN K-12 SCIENCE.** *Three hours credit.*

This course will provide students with a survey, analysis, design and trial use of evaluation and measurement devices appropriate for use in assessing the achieve-

ment 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, sociometric techniques, anecdotal records, stereographic reports and sound tape recordings.

**SCED 350. OBSERVATION AND PARTICIPATION IN ELEMENTARY SCHOOL SCIENCE.** *Three hours credit.*

A concentrated experience in elementary science. The student actively participates in the classes in which he observes, and studies classroom teaching procedures and methods. One hour of conference required.

**SCED 441. METHODS OF TEACHING IN THE SECONDARY SCHOOL—PHYSICAL AND EARTH SCIENCES.** *Three hours credit.*

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.

**SCED 442. METHODS OF TEACHING IN THE SECONDARY SCHOOL—BIOLOGICAL SCIENCES.** *Three hours credit.*

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.

**SCED 470. TEACHING SCIENCE IN THE ELEMENTARY SCHOOL.** (PTE) *Three hours credit. (Two hours lecture, three hours 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.

## SOCIAL STUDIES EDUCATION

**SSED 431. INSTRUCTIONAL MATERIALS FOR THE SOCIAL STUDIES IN THE JUNIOR HIGH SCHOOL.** (PTE) *Two hours credit.*

Study of instructional materials for junior high school social studies. Attention will be given to collateral, supplementary, and source materials, historical literature, audio-visual aids, graphic materials, community resources, current news media, music, creative activities, and techniques of evaluation.

**SSED 445. SECONDARY SCHOOL SOCIAL STUDIES CURRICULUM WORKSHOP.** (PTE) *Two hours credit.*

A workshop designed for secondary school teachers of the social studies who desire a knowledge of social studies curriculum research, theory and practice.

## SOCIOLOGY

**\*SOC 100. PRINCIPLES OF SOCIOLOGY.** *Five hours credit.*

A study of social organization, culture, socialization, social stratification, associations, collective behavior, population and ecology with detailed applications to the functioning of society in the United States today.

*All of the following Sociology courses have as a prerequisite SOC 100 or equivalent.*

**\*SOC 120. MARRIAGE AND THE FAMILY.** *Four hours credit.*

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.

**\*SOC 145. SOCIAL PROBLEMS.** *Three hours credit.*

Designed to help the student understand some of the complex problems of our society from a sociological frame of reference. The student will look at such things as poverty, slums, wars, alcoholism, mental illness, drug addiction and prostitution, in the context of American society.

**\*SOC 210. SOCIAL MOVEMENTS.** *Three hours credit.*

A study of the nature of those deviant groups concerned with major social problems. Explores the reasons for people joining, remaining in, and defecting from various unconventional political, economic, religious, and cultist organizations and the effect of these movements on society's processes, goals, and values.

**\*SOC 221. THE AMERICAN WOMAN.** *Three hours credit.*

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.

**\*SOC 223. SOCIOLOGY OF RELIGION.** *Three hours credit.*

A comparative study of the world's major religions, their origins and historical development, their doctrines, literature, customs, and relations to society.

**\*SOC 230. WORLD POPULATION PROBLEMS.** *Four hours credit.*

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.

**\*SOC 232. THE COMMUNITY.** *Three hours credit.*

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.

**\*SOC 240. CRIMINOLOGY.** *Four hours credit.*

A general survey of criminal behavior including theories of causation, types of crime, extent of crime, law enforcement, criminal justice, punishment and treatment.

**\*SOC 245. PROBLEMS OF INTERGROUP RELATIONS.** *Four hours credit.*

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.

**\*SOC 310. SOCIAL PSYCHOLOGY.** *Three hours credit.*

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.

**\*SOC 321. POLITICAL SOCIOLOGY.** *Three hours credit.*

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.

**\*SOC 325. SOCIOLOGY OF MEDICINE.** *Three hours credit.*

A systematic attempt to relate sociological concepts to the fields of physical health and illness. An overview of socio-cultural aspects of the institution we know as "Medicine." The community and medical care, which will include medical education, the hospital as a social institution, concepts of medical practice.

**\*SOC 333. SOCIAL STRATIFICATION.** *Three hours credit.*

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.

**\*SOC 337. SOVIET SOCIETY TODAY.** *Four hours credit.*

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.

**\*SOC 340. JUVENILE DELINQUENCY.** *Four hours credit.*

Prerequisite, SOC 240. 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.

**\*SOC 345. ETHICS, MORALITY, AND RACISM.** *Three hours credit.*

A course devoted to the study of ethics, morality, and racism. It is intended that the material be approached on the basis of dialogue and confrontation in an attempt to deal with the burgeoning racist attitudes on the part of all people.

**\*SOC 433. FORMAL ORGANIZATIONS.** *Three hours credit.*

A sociological approach to the study of formal organizations. Course includes the theories of formal organizations, nature and types of organizations, the social structure of work groups, and the processes of communication within organizations.

**\*SOC 435. SOCIO-CULTURAL CHANGE.** *Three hours credit.*

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.

**\*SOC 437. RURAL SOCIOLOGY.** *Three hours credit.*

Rural-urban relationships; the role of the rural community in society; origin, composition, distribution, and change of the rural population; the impact of industrialization on the rural sector.

**\*SOC 438. URBAN SOCIOLOGY.** *Three hours credit.*

Population, spatial, and social patterns characteristic of modern urban communities. Trends and problems in urban communities such as out-migration and urban blight.

**\*SOC 439. HUMAN ECOLOGY.** *Three hours credit.*

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.

**\*SOC 445. SOCIAL CONFLICT.** *Four hours credit.*

Analysis of the nature of social conflict, its origins, functions, dysfunctions, and how conflict is resolved or accommodations made to it.

**\*SOC 447. SOCIAL DEVIANCE.** *Four hours credit.*

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.

**\*SOC 450. HISTORY OF SOCIAL THOUGHT.** *Four hours credit.*

A systematic and historical development of social thought from primitive folk thinking to contemporary theories of society and social relations.

**\*SOC 451. MODERN SOCIAL THEORY.** *Four hours credit.*

Prerequisite, SOC 450. 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.

**\*SOC 452. CONTEMPORARY SOCIOLOGICAL THEORIES.** *Four hours credit.*

Prerequisite, SOC 451. 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.

**\*SOC 460. SOCIAL RESEARCH I.** *Four hours credit.*

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.

**\*SOC 461. SOCIAL RESEARCH II.** *Four hours credit.*

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.

## SPECIAL EDUCATION AND REHABILITATION

**EDSE 100. EDUCATION OF EXCEPTIONAL CHILDREN.** *Three hours credit.*

A survey of the characteristics and educational needs of impaired and gifted children. Designed as an overview of the field for undergraduate students in special education, general education, nursing, counseling and other related personnel.

**EDSE 101. WORKSHOP IN SPECIAL EDUCATION.** *Maximum of four hours credit.*

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 102. SPECIAL EDUCATION FOR GENERAL EDUCATORS.** *Three hours credit.*

An introductory course for students in general education, nursing, counseling, and other related personnel (non-special education majors).

**EDSE 150. THE STRUCTURE OF LANGUAGE.** *Three hours credit.*

A syntactical and morphological approach to language. Stress will be placed on the understanding of the structure of the English language. An introduction to some of the approaches used in teaching language to children will be included.

**EDSE 160. INTRODUCTION TO SPEECH CORRECTION.** *Three hours credit.*

A survey of identifying characteristics, causes, diagnosis and treatment pertaining to the common speech disorders.

**EDSE 260. INTRODUCTION TO PHONETICS.** *Three hours credit.*

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 265. ACOUSTICS OF SPEECH.** *Three hours credit.*

Physics of sound, the physical characteristics of speech sounds and their relation to the speech mechanism.

## 262 / COURSE DESCRIPTION

### **EDSE 266. SPEECH AND LANGUAGE DEVELOPMENT.** *Three hours credit.*

Normal language development (articulation development emphasized) together with aspects of genetic and linguistic bases of speech.

### **EDSE 267. THE AUDITORY AND SPEECH MECHANISMS.** *Four hours credit.*

The speech and hearing mechanisms in terms of development, structure and physiology.

### **EDSE 269. AMERICAN SPEECH FOR FOREIGN STUDENTS.** *Two hours credit.*

**\$10 fee.** This course is designed for students to whom English is a second language. An evaluation will be made of each student's special needs. Emphasis will be centered on vocabulary, pronunciation, articulation, and rhythm of American speech.

### **EDSE 270. PATHOLOGIES OF THE AUDITORY MECHANISM.** *Three hours credit.*

**Prerequisite:** EDSE 267. Concentrated study of abnormalities and diseases of the auditory mechanism including the outer ear, middle ear, inner ear and central auditory system. Special lectures by medical personnel will be included.

### **EDSE 290. ORIENTATION TO REHABILITATION AND RELATED SERVICES.** *Three hours credit.*

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 302. COUNSELING PARENTS OF EXCEPTIONAL CHILDREN.** *Three hours credit.*

This course is designed to present the techniques of working with parents of special education, general education, nursing, counseling and other related personnel.

### **EDSE 304. INTRODUCTION TO MEASUREMENT OF THE HANDICAPPED.** *Three hours credit.*

This course is designed to develop an understanding of the results of educational tests. Emphasis is on understanding problems encountered in testing children who are visually, acoustically, orthopedically, mentally handicapped or speech defective, and interpretation of test results in light of the various handicaps.

### **EDSE 305. EDUCATIONAL PRESCRIPTION AND PROGRAMMING FOR EXCEPTIONAL CHILDREN.** *Four hours credit.*

**Prerequisite,** EDSE 304. 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.** *Three hours credit.*

Course designed to introduce the student to the learning disabilities of early childhood which are highly resistant to modification by conventional remedial techniques.

### **EDSE 309. INTRODUCTION TO SPECIAL EDUCATION STUDENT TEACHING.** (PTE) *Two hours credit.*

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.

### **EDSE 310. INTRODUCTION TO MENTAL RETARDATION.** *Four hours credit.*

**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.** *Four hours credit.*

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 320. INTRODUCTION TO THE EDUCATION OF SOCIALLY AND EMOTIONALLY DISTURBED CHILDREN.** *Three hours credit.*

An introduction to concepts, practices, and trends in education for emotionally disturbed and socially maladjusted children, an orientation to the dynamics, personality characteristics and needs of emotionally handicapped and socially maladjusted children is provided.

**EDSE 326. INTRODUCTION TO TEACHING LEARNING DISABLED CHILDREN.** *Three hours credit.*

Overview of the field of learning disabilities including concepts, practices, and trends.

**EDSE 330. CARE AND PATHOLOGY OF THE PHYSICALLY HANDICAPPED.** *Three hours credit.*

Prerequisite EDSE 100 or 602. A course designed for teachers in special education. Medical and educational problems in the areas of the crippled (cerebral palsy, muscular dystrophy, etc.) and other health impaired (cardiac, epileptic, etc.) will be discussed. Observation hours are required.

**EDSE 331. PROBLEMS OF TEACHING THE PHYSICALLY HANDICAPPED.** *Three hours credit.*

Methods of teaching physically handicapped children; evaluation of techniques and teaching procedures with the various types of physically handicapped children; study of available material, curriculum planning with adaptations, and aids used in the education of the physically handicapped child.

**EDSE 350. PATHOLOGY AND INTRODUCTION TO THE HEARING IMPAIRED.** *Three hours credit.*

History and philosophy of education of the deaf. Structure of the ear and causes of deafness. Problems in organization, support and maintenance of programs for deaf and hard of hearing children. Presentation of types of instruction given in various schools, the oral method, the combined method, the Rochester method and the acoustic method.

**EDSE 356. LABORATORY IN BASIC MANUAL COMMUNICATIONS SKILLS.** *Two hours credit.*

Course includes introduction and training for use of manual alphabet and basic sign language.

**EDSE 357. SPEECH READING.** *Three hours credit.*

Speech reading theory and practice. Some educational problems of the speech reading teacher. Methods used for the instruction of children and adults. Correlation with auditory training, reading, and speech correction. Different approaches used with hard-of-hearing children and the deaf.

**EDSE 358. AUDITORY TRAINING AND HEARING AIDS.** *Three hours credit.*

Prerequisites: EDSE 370. Emphasis is placed on methods of developing auditory discrimination in hearing impaired children through various techniques aimed to support the speech development program; in addition, a study of individual and group amplification instruments for utilizing all residual hearing will be undertaken.

**EDSE 360. ARTICULATION DISORDERS I.** *Four hours credit.*

Prerequisites: EDSE 160, 260 or consent of instructor. Causation, diagnosis and treatment of individuals with problems of articulation and delayed speech.

**EDSE 361. VOICE DISORDERS I.** *Three hours credit.*

Prerequisite: EDSE 160 or consent of instructor. Causation, diagnosis and treatment of voice disorders, particularly those of children.

**EDSE 362. STUTTERING I.** *Three hours credit.*

Prerequisite: EDSE 160 or consent of instructor. Causation, diagnosis and treatment of stuttering, especially stuttering in children.

**EDSE 363. INTRODUCTION TO ORGANIC DISORDERS.** *Three hours credit.*

Prerequisite: EDSE 160 or consent of instructor. Causation, diagnosis and treatment for the speech disorders associated with cleft palate, cerebral palsy and aphasia in children and adults.

**EDSE 364. CLINICAL PRINCIPLES.** *Three hours credit customarily one hour of credit being earned for each of three consecutive quarters.*

Prerequisite: EDSE 160. Clinical principles, procedures, clinical forms and clinical rules. Observation and participation in diagnosis and treatment arranged.

**EDSE 365. LANGUAGE DISORDERS IN CHILDREN I.** *Three hours credit.*

Prerequisites: EDSE 160 and 266. Analyses of developmental language disorders and the relationship of language development to other developmental phenomena, as well as an introduction to the evaluation and assessment of language disorders.

**EDSE 369. NEUROLOGICAL BASES FOR SPEECH AND HEARING.** *Four hours credit.*

Prerequisite: consent of instructor. Anatomy and physiology of the nervous systems controlling the speech and hearing mechanisms, together with theories of control.

**EDSE 370. BASIC AUDIOLOGY.** *Three hours credit.*

Prerequisite: EDSE 265. Measurement of hearing with pure tone techniques and interpretation of test results in terms of physical, social, and educational handicap.

**EDSE 371. SPEECH AUDIOMETRY I.** *Three hours credit.*

Prerequisite EDSE 370. Materials and techniques employed in standard speech audiometry and hearing aid evaluations.

**EDSE 372. ADVANCED AUDIOMETRY.** *Three hours credit.*

Prerequisite: EDSE 371. Theory and practice of advanced pure tone and speech testing. A consideration of the instrumentation necessary for such testing, the interpretation of audiometric findings with special emphasis on the effects of hearing loss on communication.

**EDSE 391. SEMINAR: PROBLEMS IN SOCIAL AND REHABILITATION SERVICES.** *Three hours credit.*

An approach to the major social problems involved in rehabilitating the handicapped and/or disadvantaged individual in our society. The role of the community as it attempts to solve these problems is considered.

**EDSE 394. PRACTICUM IN SOCIAL AND REHABILITATION SERVICES.** *Up to eight hours credit.*

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.

**EDSE 412. CURRICULUM DEVELOPMENT AND METHODOLOGY FOR MENTALLY RETARDED: ELEMENTARY LEVEL.** *Four hours credit.*

Prerequisites, EDSE 100 or 602, 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.** *Four hours credit.*

Prerequisites, EDSE 100 or 602. 310. Emphasis is placed on content, methods and materials appropriate for teaching junior and senior high school classes for mentally retarded youngsters.

**EDSE 414. PROBLEMS IN TEACHING TRAINABLE MENTALLY RETARDED CHILDREN.** *Four hours credit.*

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 421. BEHAVIOR MANAGEMENT IN THE CLASSROOM.** *Three hours credit.*

A study of the various approaches in behavior management. Emphasis will center on behavior modification techniques as they apply to exceptional children.

**EDSE 422. INDIVIDUAL STUDIES.** *Maximum of four hours credit.*

Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

**EDSE 451. SPEECH DEVELOPMENT FOR THE HEARING IMPAIRED.** *Maximum of six hours credit.*

Prerequisites: EDSE 260, 267, 350, and EDEM 310, EDSE 452. Presentation of various methods commonly used in speech development of intelligible speech. Integration of speech with other language arts. Importance of preschool programs and parent education.

**EDSE 452. LANGUAGE DEVELOPMENT FOR THE HEARING IMPAIRED.** *Maximum of six hours credit.*

Prerequisites: EDSE 150, 350, and EDEM 310, EDSE 453. Development of language comprehension through speechreading and reading. Systems of teaching language to the deaf. Principles of grammar essential to the use of any system of language instruction. Development of functional language usage both oral and written forms. The meaning and importance of an integrated language arts program.

**EDSE 453. METHODS OF TEACHING CONTENT SUBJECTS TO THE DEAF.** *Three hours credit.*

Prerequisites: EDSE 350, and EDEM 310. The use of the communication skills as applied in all content subject areas will be explored. Special techniques, developmental as well as corrective, will be demonstrated. Wherever possible, special multi-media approaches will be used.

**EDSE 455. METHODS OF TEACHING READING TO THE HEARING IMPAIRED.** *Three hours credit.*

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. LABORATORY IN INTERMEDIATE MANUAL COMMUNICATION SKILLS.** *Two hours credit.*

Prerequisites: EDSE 356, or permission of instructor. Training in the use of sign language for those teaching the acoustically handicapped.

**EDSE 459. UNDERGRADUATE SEMINAR IN EDUCATION OF THE HEARING IMPAIRED.** *Three hours credit.*

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 PATHOLOGY.** *Three hours credit.*  
Prerequisite: EDSE 364 or consent of instructor. Organizational procedures, use of clinical materials, and administrative policies relevant to speech correction programs in public school settings.

**EDSE 464. CLINICAL PRACTICES IN SPEECH PATHOLOGY.** *Maximum of twelve hours credit with two credit hours customarily earned per quarter.*

Prerequisite: EDSE 364 or consent of instructor. Observation and performance of supervised diagnosis and therapy.

**EDSE 467. DIAGNOSIS IN SPEECH PATHOLOGY.** *Three hours credit.*

Prerequisite: EDSE 364. Techniques of clinical diagnosis and evaluation of persons with speech and language disorders.

**EDSE 474. CLINICAL PRACTICES IN AUDIOLOGY.** *Maximum of twelve hours credit.*

Prerequisite: EDSE 372 or consent of instructor. Observation and performance of supervised diagnosis and therapy.

**EDSE 480. WORKSHOP: OUTDOOR EDUCATION FOR THE HANDICAPPED.** *Three hours credit.*

This course will provide undergraduate and graduate students preparing for leadership positions with the handicapped opportunities to become acquainted with this approach to instruction. Field experiences following the interdisciplinary approach will give special consideration to the needs of the handicapped.

**EDSE 490. INTRODUCTION TO VOCATIONAL REHABILITATION COUNSELING.** *Three hours credit.*

An orientation to the rehabilitation process including a survey of history, principles, philosophy and legal aspects of rehabilitation and related fields. Rehabilitation as a concept of integrated service is stressed and an understanding of the objectives and the organizational basis of rehabilitation programs is provided.

**EDSE 491. INTERVIEWING TECHNIQUES IN SOCIAL AND REHABILITATION SERVICES.** *Three hours credit.*

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.** *Three hours credit.*

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 REHABILITATION AND RELATED SERVICES.** *Fifteen hours credit.*

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 student can become totally involved in providing services to persons seeking help from various agencies.

## **SPEECH COMMUNICATION**

**\*SP 110. SPEECH COMMUNICATION.** *Three hours credit.*

A lecture and performance course to assist students in becoming aware of the

processes of intrapersonal communication, interpersonal communication, and public speaking.

**\*SP 120. SURVEY OF SPEECH COMMUNICATION.** *Three hours credit.*

A systematic survey of all major areas in the field of speech communication with attention to the interdisciplinary nature of this branch of learning. This course is designed primarily for Speech Communication majors and minors.

**\*SP 130. VOICE AND SPEECH IMPROVEMENT.** *Three hours credit.*

A study of the speech mechanism and an analysis of ways to obtain vocal variety. There are frequent instructor and peer evaluations of class readings. The International Phonetic Alphabet is taught as a tool for recording speech sounds.

**\*SP 140. PRINCIPLES OF MASS COMMUNICATION.** *Three hours credit.*

An introductory study of the techniques and theories of mass communication, including printed and electronic media, and its significance in contemporary society. This course is designed primarily for Speech Communication majors and minors.

**\*SP 150. PUBLIC SPEAKING.** *Three hours credit.*

The course emphasizes the preparation, organization, and presentation of various types of speeches.

**\*SP 170. ORAL INTERPRETATION.** *Three hours credit. (Two hours lecture, two hours laboratory.)*

The student is given an opportunity to read aloud in various forms of literature and is aided in gaining skill in an artistic presentation.

**\*SP 210. LABORATORY FORENSICS.** *Maximum of three hours credit.*

Students registering for more than one hour of credit must have permission of director of forensics and must devote at least fifteen hours a week to the program. No student may earn more than a total of eight hours in Speech 210.

**\*SP 212. ARGUMENTATION THEORY.** *Three hours credit.*

A systematic study of argumentation theory during which both informal and formal applications of theory and logical discourse will be discussed.

**\*SP 240. RADIO PRODUCTION AND PRACTICES.** *Three hours credit. (Two hours lecture, two hours laboratory.)*

This course is designed to survey all basic radio production processes. Considerable practical laboratory experience in the studios of a broadcast station.

**\*SP 300. PARLIAMENTARY LEADERSHIP TRAINING.** *Two hours credit.*

Simulated business meetings provide an opportunity for the student to apply the parliamentary rules which govern procedure in organized groups. Emphasis is on common sense application of the rules to expedite business rather than the use of rules to obstruct business.

**\*SP 302. SMALL GROUP COMMUNICATION.** *Four hours credit.*

Principles and practice in organizing, conducting, and participating in all forms of discussion. Emphasis is placed on basic small group concepts such as leadership, roles, norms, task functions.

**\*SP 312. PRACTICAL DEBATE.** *Three hours credit.*

Prerequisite, SP 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.

**\*SP 340. INTRODUCTION TO TELEVISION PRODUCTION.** *Four hours credit. (Two hours lecture, four hours laboratory.)*

Prerequisite, SP 240. An introductory study of the basic principles, procedures, and techniques of television production, including practical laboratory experience with production equipment and facilities.

**SP 341. METHODS OF TEACHING IN THE SECONDARY SCHOOL—  
SPEECH COMMUNICATION.** *Three hours credit.*

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.

**\*SP 350. SPEECH COMPOSITION.** *Three hours credit.*

The course consists of the study of the elements which make up a speech. Persuasive speeches written by college students are used as models. One ten minute speech is written and either read from manuscript or given from memory.

**\*SP 370. CHORAL READING.** *Three hours credit.*

An oral interpretation workshop course concentrating upon the choral reading of poetic literature.

**\*SP 375. ORAL INTERPRETATION OF CHILDREN'S LITERATURE.**  
*Three hours credit. (Two hours lecture, two hours laboratory.)*

Theory and practice in the oral interpretation of children's literature, especially poetry and prose.

**\*SP 400. THEORIES OF GROUP PROCESS.** *Three hours credit.*

Prerequisite, SP 302. A systematic overview of current theory and knowledge of discussion as derived and synthesized from significant empirical investigation.

**\*SP 420. GENERAL SEMANTICS.** *Four hours credit.*

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.

**\*SP 421. SEMINAR IN SPEECH COMMUNICATION.** *Three hours credit.  
Maximum nine hours credit.*

A seminar designed to involve students in issues of current concern. Subject matter would vary according to faculty expertise and student needs and interests. The course would be repeated for credit under different subtitles, for example: Free Speech, Rhetoric of the Cold War, Problems in Family Communication, etc.

**SP 441. ADVANCED TELEVISION PRODUCTION.** *Four hours credit. (Two hours lecture, four hours laboratory.)*

Prerequisite, SP 340. A further study of television production techniques with emphasis upon refinement of communicative styles and development of advanced directorial skills.

**\*SP 452. AMERICAN PUBLIC ADDRESS TO 1865.** *Three hours credit.*

An historical and critical study of representative American speakers and speeches of the period.

**\*SP 453. AMERICAN PUBLIC ADDRESS 1865-1945.** *Three hours credit.*

An historical and critical study of representative American speakers and speeches of the period.

**\*SP 454. AMERICAN PUBLIC ADDRESS 1945 TO PRESENT.** *Three hours credit.*

An historical and critical study of representative American speakers and speeches of the period.

**\*SP 456. THE RHETORIC OF SOCIAL PROTEST.** *Three hours credit. (Two hours lecture, two hours activity.)*

An analytical and critical study of the rhetoric of social protest in America with special emphasis on racial agitation.

**\*SP 460. PERSUASION.** *Three hours credit.*

A study of advocacy with special emphasis on the techniques used in communication and the implications for the listener and reader.

**SP 490. WORKSHOP IN SPEECH COMMUNICATION.** *Three hours credit.*  
An opportunity to study cooperatively the problems involved in teaching speech communication. The area or areas to be covered in any one workshop will be determined by the interests and needs of the group or by previous announcement.

## THEATRE ARTS

**\*THEA 100, 101, 102. INDIVIDUAL PERFORMANCE IN THEATRE.**  
*One hour credit each.*

Open to all students who desire to participate in production activities of the theatre. A minimum of ten credits is required of Theatre Arts majors. Two credits are required of Theatre Arts minors.

**\*THEA 110. INTRODUCTION TO STAGECRAFT.** *Three hours credit.*  
A study of the arts of stagecraft, the vocabulary and materials of the scene. The student is expected to participate in production activities.

**\*THEA 160. ACTING I (INTERNAL).** *Three hours credit. (Six contact hours per week.)*

The beginning course in the basic principles of acting and dramatic production. The emphasis of the course is on the primary needs of acting: concentration, motivation, and believability.

**THEA 170, 171, 172. STAGE MOVEMENT I, II, III.** *One hour credit each.*  
A laboratory course in the development of the actor's basic tools, his body and his voice. Emphasis is placed upon skills needed to communicate various realistic modes of movements; strength, agility, and control.

**\*THEA 200, 201, 202. INDIVIDUAL PERFORMANCE IN THEATRE.**  
*One hour credit each.*

Open to all students who desire to participate in productive activities of the theatre. A minimum of ten credits is required of Theatre Arts majors. Two credits are required of Theatre Arts minors.

**\*THEA 210. STAGECRAFT.** *Three hours credit. (Two hours lecture, two hours laboratory. Lab card required.)*

Prerequisite: THEA 110. This course deals specifically with the problems, methods, and materials used in staging the play, with particular emphasis on stage construction and painting techniques.

**\*THEA 220. BEGINNING STAGE COSTUMING.** *Three hours credit. (Two hours lecture, two hours 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.

**\*THEA 230. INTRODUCTION TO THE THEATRE.** *Three hours credit.*  
An introductory course to the theatre which gives a comprehensive outline of the living stage, its players and craftsmen, and its place in society from primitive theatre to contemporary American and European theatres.

**\*THEA 240. BEGINNING PLAY DIRECTION.** *Three hours credit. (Six contact hours per week.)*

Prerequisite: THEA 110 and THEA 160. A basic course in the principles of directing a play. The major focus of the course is on contemporary theories and practices of play direction.

**\*THEA 260. ACTING II (EXTERNAL).** *Three hours credit. (Six contact hours per week.)*

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.

## 270 / COURSE DESCRIPTION

**\*THEA 261. STAGE MAKE-UP.** *Two hours credit. (One hour lecture, two hours laboratory. Lab card required.)*

A basic course designed to acquaint the student with the principles of the art of stage make-up.

**THEA 270, 271, 272. RHYTHMIC AND DRAMATIC MOVEMENT I, II, III.** *One hour credit each.*

Prerequisite: THEA 170, 171, 172. A laboratory course in the continued preparation of the actor's skills in movement. Emphasis is upon the rhythmic demands of various styles in acting, period movement, and stage fighting.

**\*THEA 280. CREATIVE DRAMATICS.** *Three hours credit. (Laboratory arranged. Lab card required.)*

A discussion-laboratory course in improvisational drama for young people which studies why and how creative dramatics is used in the educational, recreational and dramatic development of children. The laboratory allows students to guide school children (K-8 grades) in creative dramatic activities.

**\*THEA 300, 301, 302. INDIVIDUAL PERFORMANCE IN THEATRE.** *One hour credit each.*

Open to all students who desire to participate in production activities of the theatre. A minimum of ten credits is required of Theatre Arts majors. Two credits are required of Theatre Arts minors.

**\*THEA 310. BEGINNING SCENE DESIGN.** *Three hours credit. (Two hours lecture, two hours laboratory. Lab card required.)*

Prerequisite: THEA 110, 210. An introductory course in the fundamentals of scene design. The study includes the basic principles of design and color and their application to scenic design.

**\*THEA 320. HISTORY OF STAGE COSTUMING.** *Four hours credit.*

Prerequisite: THEA 220, or permission of instructor. A study of costume design for the theatre. Emphasis is given to the survey of historical styles of costumes used in the theatre from the primitive times to the present.

**\*THEA 340. DIRECTING EXPERIMENTAL PLAYS.** *Three hours credit. (one hour lecture, four hours 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.

**\*THEA 341. DIRECTING PERIOD PLAYS.** *Three hours credit. (One hour lecture, four hours 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.

**\*THEA 350, 351, 352. SUMMER THEATRE WORKSHOP I, II, III.** *Five hours credit each.*

Prerequisite: acceptance by the Theatre Arts Staff. Workshop in techniques of acting and technical work as observed and practiced in the daily rehearsal periods of The Little Theatre of the Rockies. Students must spend six to eight hours per day in rehearsals, either as actors or technical assistants. May be used by Theatre Arts majors in lieu of THEA 210 or THEA 260 in the major sequence.

**\*THEA 353. THEATRE PRODUCTION.** *Two hours credit. (Four hours laboratory.)*

Prerequisite: acceptance by the Theatre Arts staff director. A laboratory class in the production and presentation of touring theatre before live audiences. Double period, two days a week.

**\*THEA 380. CHILDREN'S THEATRE PRODUCTION.** *Three hours credit. (Laboratory arranged. Lab card required.)*

Prerequisite: THEA 280, or permission of instructor. A basic production course in the methods and procedures of producing good theatre for children. Study of the literature in the field, technical problems, and the educational values of theatre for children will be emphasized.

**\*THEA 390. READERS THEATRE.** *Three hours credit. (Six contact hours per week.)*

Prerequisite: SP 170, or permission of instructor. A course designed to acquaint the student with the principles and production techniques of Readers Theatre.

**\*THEA 400, 401, 402. INDIVIDUAL PERFORMANCE IN THEATRE.**  
*One hour credit each.*

Open to all students who desire to participate in production activities of the theatre. A minimum of ten credits is required of Theatre Arts majors. Two credits are required of Theatre Arts minors.

**\*THEA 410. ADVANCED SCENE DESIGN.** *Three hours credit. (Six contact hours per week.)*

Prerequisite: THEA 210 and THEA 310, or permission of instructor. A study of the techniques and problems of scenic design. The esthetic as well as the practical problems of the designer are presented.

**\*THEA 411. STAGE LIGHTING.** *Two hours credit. (One hour lecture, two hours laboratory. Lab card required.)*

Prerequisite: THEA 310. An introduction to lighting theory and lighting design applicable to staging practices.

**\*THEA 412. ADVANCED STAGING TECHNIQUES.** *Four hours credit. (Eight contact hours per week.)*

Prerequisite: THEA 210 and THEA 310. The study and practice of the latest trends and developments in scenic design, staging methods, and techniques. Special attention is directed toward stage management, care and maintenance of equipment, and materials.

**\*THEA 420. STAGE COSTUME DESIGN.** *Four hours credit. (Two hours lecture, four hours laboratory. Lab card required.)*

Prerequisite, THEA 320. An introduction to costume design with consideration of the media in which costumes can be designed for stage use.

**THEA 422. INDIVIDUAL STUDIES.** *Maximum of four hours credit.*

Qualified undergraduate students outline and spend a minimum of 25 clock hours per quarter hour on a problem relating to their major field under staff supervision. Two copies of a well-written paper must be filed before credit is given, one with the instructor and one with the chairman of the department.

**\*THEA 430. HISTORY OF THE THEATRE I.** *Three hours credit.*

A seminar 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.

**\*THEA 431. HISTORY OF THE THEATRE II.** *Three hours credit.*

A seminar study of European theatre and its development from the Italian Renaissance until the close of the 18th century.

**\*THEA 432. HISTORY OF THE THEATRE III.** *Three hours credit.*

A seminar study of American and European theatre and its development from the beginning of the 19th century to the present.

**\*THEA 440. DIRECTING THE ONE-ACT PLAY.** *Two hours credit.*

Prerequisites: THEA 240, 340, 341. A practicum in play direction giving the student the opportunity to produce a one-act play under staff supervision. Two copies of a well-written paper, defending the purpose and success of the production, and one promptbook will be required.

**\*THEA 460. SERIOUS STYLES OF ACTING.** *Two hours credit. (Four 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.

**\*THEA 461. COMIC STYLES OF ACTING.** *Two hours credit. (Four 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.

**\*THEA 462. PROBLEMS IN ACTING CONVENTIONS.** *Two hours credit. (Four contact hours per week.)*

**Prerequisite:** THEA 260. An advanced laboratory course in acting, concentrating on stage dialects and the conventions needed to act such modern dramatic forms as naturalism, expressionism, impressionism, symbolism, "theatre of the absurd," "theatre of cruelty," happenings, and other modern experimental forms.

## VOCATIONAL TEACHER EDUCATION

**VE 210. CAREER OPPORTUNITIES SEMINAR.** *One hour credit.*

This seminar has two intents: (1) to identify career opportunities in vocational-technical education, and (2) to become aware of related career opportunities outside of education. Students will have an opportunity to meet and discuss career roles with educators and representatives from business, industry, and governmental agencies. The seminar will focus on eight career clusters: Agriculture 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. For additional information and/or assistance in career planning see the Field Service Coordinator in the Department of Vocational Education, McKee Hall, Room 318. S-U final mark.

**VE 290. DIRECTED OCCUPATIONAL EXPERIENCES.** *Eight hours maximum credit.*

**Prerequisite,** Prospective vocational education teacher. Approved work experience is required for vocational credentials. Credit may be received for approved and/or supervised occupational experience *related* to the student's major area. The related work experience should be planned carefully during the freshman or sophomore year with the Field Service Coordinator in order to meet the State Vocational credential requirements before graduation.

**VE 296. DIRECTED OCCUPATIONAL INTERNSHIP.** *Twelve hours maximum credit.*

**Prerequisite,** Prospective vocational education teacher. This course will provide undergraduate students the opportunity to acquire paid work experience through an off-campus internship related to their specific area of vocational education. The internship must be approved by the student's major adviser and planned cooperatively with the Field Service Coordinator. Arrangement for occupational internships must be completed one quarter prior to the off-campus experiences.

**VE 310. FOUNDATIONS OF VOCATIONAL AND TECHNICAL EDUCATION.** *Two hours credit.*

This required course is to be taken concurrently with VE 311 and is a study of vocational education, legislation, state policies, programs, and recent developments in the total field of occupational education. This course is required for a State Vocational Credential.

**VE 311. HISTORY OF VOCATIONAL EDUCATION—A LABORATORY APPROACH.** *One hour credit.*

This is the laboratory experience for students enrolled in VE 310: The student schedules his time in the Center for Career Development utilizing the multimedia material prepared by the Department of Vocational Education on the historical development of vocational education. Students are assisted and evaluated by the instructor on an individual basis. The course content covers the basic philosophy and principles of vocational education and the major historical milestones in vocational education. Off-campus enrollees may take this course by multimedia correspondence packets.

**VE 412. COOPERATIVE EDUCATION AND COORDINATION TECHNIQUES.** *Three hours credit.*

Prerequisites, VE 310 and VE 311. This is a required course for many vocational teachers and 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 elucidated.

**VE 414. VOCATIONAL YOUTH ORGANIZATIONS.** *Three hours credit.*  
This is a course which provides both in-class study of the organization and maintenance of a successful vocational youth organization and the actual participation in a Colorado vocational youth organization. The State Plan requires the local vocational program to have a youth organization available to vocational students, therefore, this course will give the enrollee an opportunity to understand the purpose and function of such organizations as VICA, DECA, FHA, FBLA, OEA, etc.

**VE 416. ADULT VOCATIONAL EDUCATION.** *Three hours credit.*

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.

**VE 422. INDIVIDUAL STUDIES IN VOCATIONAL EDUCATION.** *Maximum of six hours credit.*

A qualified student spends a minimum of 25 clock hours per quarter hour on a problem which is not included under the regular vocational 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.

**VE 430. VOCATIONAL EDUCATION FOR LEARNERS WITH SPECIAL NEEDS.** *Three hours credit.*

Emphasis is placed on the understanding of the characteristics and unique needs of learners often classified as the "disadvantaged" or as described by the Vocational Education Acts of 1963 and 1968 as "persons with special needs." These are students who have academic, socio-economic, or other handicaps that prevent them from succeeding in vocational education programs. The rationale for and the development of special vocational education programs and field experiences are important aspects of this course.

**VE 450. PREPARATION FOR TEACHING VOCATIONAL DISTRIBUTIVE EDUCATION—**"Taken prior to student teaching." *Three hours credit.*

Prerequisite, PTE Approval. This course substitutes for EDCI 341 and is required of students seeking a state vocational teaching credential. The course **MUST** be taken the quarter prior to student teaching in distributive education. The student will be placed with a state-approved distributive education teacher. The course will cover such topics as: The DE Program in Colorado; Preparation for Student Teaching; Terminology; Instructional Content and Learning Experiences; Review of the Project and Cooperative Methods; Media Available from the Center; Teaching Strategies; Evaluation; Professional Involvement; DECA Review. Following the student teaching experience, the student will be involved in VE 480—a teaching improvement seminar and job placement activities.

**VE 451. PREPARATION FOR TEACHING VOCATIONAL BUSINESS AND OFFICE EDUCATION—**"Taken prior to student teaching." *Three hours credit.*

Prerequisite, PTE Approval. This course substitutes for EDCI 341 and is required for students seeking a state vocational teaching credential. The course **MUST** be taken the quarter prior to student teaching in business and office education. The student will be placed with a state-approved business education (office education) teacher. 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 VE 481—a teaching improvement seminar and job placement activities.

**VE 452. PREPARATION FOR TEACHING VOCATIONAL HOME ECONOMICS**—“Taken prior to student teaching.” *Three hours credit.*

Prerequisite, PTE Approval. This course substitutes for EDCI 341 and is required for students seeking a state vocational teaching credential. The course MUST be taken the quarter prior to student teaching in vocational home economics. The student will be placed with a state-approved vocational Home Economics teacher. The course will cover such topics as: The secondary vocational home economics curricula in Colorado; Preparation for Student Teaching; Terminology; Instructional Content and Learning Experiences; Review of Methods, Media, Teaching Strategies; Evaluation; Professional Involvement; FHA Review. Following the student teaching experience, the student will be involved in VE 482—a teaching improvement seminar and job placement activities.

**VE 480. TEACHING IMPROVEMENT SEMINAR IN VOCATIONAL DISTRIBUTIVE EDUCATION.** *Two hours credit.*

Prerequisite, EDFE 470. This seminar follows the student teaching experience and is required of all DE students planning to obtain a vocational credential and assistance from the department in obtaining employment. The seminar is designed to provide group and individual instruction. The topics covered are: (a) Evaluation of Student Teaching Experience and Work Experience; (b) Diagnosis of Knowledge/Skill Competencies for teaching distributive education; (c) Prescriptive Learning Experiences—assignments within the Center for Career Development; (d) Completion of forms for department endorsement; (e) Preparation of UNC Placement forms; (f) Employment Procedures and Techniques; (g) Actual job interviews through the placement bureau at UNC and with Vocational Directors in Colorado; (h) the Department's In-Service Program and Services. PLEASE NOTE—STUDENTS SHOULD NOT PLAN TO DO THEIR STUDENT TEACHING THE LAST QUARTER ON CAMPUS.

**VE 481. TEACHING IMPROVEMENT SEMINAR IN VOCATIONAL BUSINESS AND OFFICE EDUCATION.** *Two hours credit.*

Prerequisite, EDFE 470. This seminar follows the student teaching experience and is required of all vocational business education students planning to obtain a vocational credential and assistance from the department in obtaining employment. The seminar is designed to provide group and individual instruction. The topics covered are: (a) Evaluation of student teaching experience and work experience; (b) Diagnosis of knowledge/skill competencies for teaching Business Education; (c) Prescriptive Learning experiences—assignments within the Center for Career Development; (d) Completion of forms for department endorsement; (e) Preparation of UNC Placement forms; (f) Employment procedures and techniques; (g) Actual job interviews through the placement bureau at UNC and with Vocational Directors in Colorado; (h) the Department's In-Service Program and Services. PLEASE NOTE—STUDENTS SHOULD NOT PLAN TO DO THEIR STUDENT TEACHING THE LAST QUARTER ON CAMPUS.

**VE 482. TEACHING IMPROVEMENT SEMINAR IN VOCATIONAL HOME ECONOMICS.** *Two hours credit.*

Prerequisite, EDFE 470. This seminar follows the student teaching experience and is required of all vocational home economics students planning to obtain a vocational credential and assistance from the department in obtaining employment. The seminar is designed to provide group and individual instruction. The topics covered are: (a) Evaluation of student teaching experience and work experience; (b) Diagnosis of knowledge/skill competencies for teaching vocational home economics; (c) Prescriptive Learning Experiences—assignments within the Center for Career Development; (d) Completion of forms for de-

partment endorsement; (e) Preparation of UNC Placement forms; (f) Employment procedures and techniques; (g) Actual job interviews through the placement bureau at UNC and with Vocational Directors in Colorado; (h) the Department's In-Service Program and Services. PLEASE NOTE—STUDENTS SHOULD NOT PLAN TO DO THEIR STUDENT TEACHING THE LAST QUARTER ON CAMPUS.

**VE 485. LABORATORY EXPERIENCES IN VOCATIONAL EDUCATION.** *Twelve hours maximum credit.*

Prerequisite, Instructor's permission. This course is a laboratory experience to improve the student's technical skills and knowledge in a specific occupational field. This experience will aid the individual in his development as a vocational educator. The program is designed for the individual.

**VE 488. SEMINARS IN VOCATIONAL EDUCATION.** *Six hours maximum credit.*

Prerequisites, VE 310 and VE 311. The vocational education seminars are designed for small group participation and focus on specific topics. Special off-campus guest instructors are asked to share their experiences with the group. S-U final mark.

## ZOOLOGY

Courses in zoology are administered by the Department of Biological Sciences.

**\*ZOO 105. GENERAL ZOOLOGY.** *Five hours credit. (Three hours lecture, four hours laboratory.)*

An introduction to animal biology through the use of selected topics chosen for their contemporary interest and utility as basic material in zoology. Relevance to man of the subjects covered is stressed. Will substitute for SCI 104. Credit not allowed for biology majors.

**\*ZOO 121. MAMMALIAN ANATOMY.** *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisite, ZOO 105. A study of injected laboratory mammals in which techniques of dissection and laboratory procedures are emphasized. Skeletal structure, musculature, and the morphology of organs of respiration, circulation and digestion are considered.

**\*ZOO 156. ELEMENTS OF HUMAN PHYSIOLOGY-ANATOMY.** *Five hours credit. (Three hours lecture, four hours 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 biology majors.

**\*ZOO 250. HUMAN PHYSIOLOGY.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, ZOO 105 or BIO 101, 103, recommended ZOO 121 and CHEM 281. 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.

**\*ZOO 304. ORNITHOLOGY.** *Three hours credit.*

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.

**ZOO 316. ENTOMOLOGY.** *Five hours credit. (Three hours lecture, four hours 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.

**ZOO 325. COMPARATIVE MORPHOGENESIS OF THE VERTEBRATES I.**

*Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, BIO 101, 102, 103. A study of the comparative developmental processes and fundamental principles of vertebrate embryology as they relate to the development and ultimate structure of the vertebrate organ systems. Developmental anatomy and adult morphology of the sharks through mammals are considered for laboratory study.

**ZOO 326. COMPARATIVE MORPHOGENESIS OF THE VERTEBRATES II.**

*Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, BIO 101, 102, 103, ZOO 325. A study of the comparative developmental processes and fundamental principles of vertebrate embryology as they relate to the development and ultimate structure of the vertebrate organ systems. Developmental anatomy and adult morphology of the sharks through mammals are considered for laboratory study.

**ZOO 340. ANIMAL ECOLOGY.** *Five hours credit. (Three hours lecture, six hours 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.

**ZOO 412. GENERAL PARASITOLOGY.** *Five hours credit. (Three hours lecture, four hours 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.

**ZOO 441. FAUNISTICS.** *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisites, BIO 101, 103. An advanced taxonomy and ecological survey of the local fauna of Colorado with special emphasis on amphibians, reptiles, and mammals. This will include field trips, collection, and classification of the local fauna, and a study of the habits, habitats, and life histories of the local species under the ecological conditions that govern their distribution. Collecting permits are needed.

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## BOARD OF TRUSTEES 1973-74

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PHILLIP M. LORTON, Alamosa (1961, 1973)\*

*President*

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*Vice President*

ROBERT W. BARTLEY, Pueblo (1961, 1973)

L. RICHARD BRATTON, Gunnison (1963, 1975)

GERALD A. CAPLAN, Boulder (1971, 1977)

CAROL GOSSARD, Craig (1972, 1975)

BETTY NAUGLE, Denver (1963, 1977)

\*The first figure in parentheses shows the date of the first appointment,  
the second figure the date when the present term expires.

GERALD A. CAPLAN, *Liaison Officer for University of Northern Colorado*

SAMUEL G. GATES, *Executive Director*

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## GENERAL ADMINISTRATION

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President .....	Richard R. Bond
Assistant to the President .....	Jerald B. Johnson
Vice President for Academic Affairs .....	Frank P. Lakin
Assistant Vice President .....	Barbara H. Mickey
Director, Academic Research .....	Duane E. Henderson
Provost .....	Donald G. Decker
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Dean, School of the Arts .....	William R. Erwin, Jr.
Dean, College of Arts and Sciences .....	Robert O. Schulze
Associate Dean .....	John A. Beel
Associate Dean .....	Thomas E. Boyle
Dean, College of Education .....	Bruce W. Broderius
Associate Dean .....	Richard L. Bear
Director of Laboratory School .....	Kenneth G. Frisbie
Director, Bureau of Research .....	Donald W. Chaloupka
Coordinator, Teacher Certification .....	George F. Sanderson
Dean, School of Special Education and Rehabilitation .....	Daniel C. McAlees
Dean, School of Business .....	Ramon P. Heimerl
Dean, School of Educational Change and Development .....	Donald G. Decker
Dean, School of Health, Physical Education and Recreation .....	L. C. Butler
Dean, School of Music .....	James E. Miller
Dean, School of Nursing .....	L. Elaine McMinn
Chairman, Division of Aerospace Studies .....	John C. Brown
Dean, Graduate School .....	Arthur R. Reynolds
Dean of Students .....	Theodore M. Nelson
Assistant Dean .....	James K. Bowen
Assistant Dean .....	Dallas Martin
Assistant Dean for Special Services .....	Carlos Leal
Assistant Dean for Student Affairs .....	Carolyn J. Kostelecky
Assistant Dean for Student Affairs .....	Brangwyn Foote
Assistant Dean for Student Affairs .....	Gerald Tanner

Registrar .....	Charles Selden
Director of Admissions .....	Gary E. Miller
Director of Placement .....	Warren E. Best
Director of Financial Aids .....	Harry E. Collins
Coordinator of Health Services .....	Wayne H. Ericson
Dean of Psychological Services .....	Bernard C. Kinnick
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Director of Housing .....	Wayne T. Kuncl
Associate Dean, Honors Program .....	Eugene D. Koplitz
Director of International Education .....	George H. Brooks
Director of Library Services .....	Thomas C. Harris
Director, Computer and Data Processing Center .....	Donald L. Meyers
Director of Special Studies and Continuing Education .....	Robert O. Singer
Academic Director, University Without Walls .....	Robert J. Powers
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Director, Business Administration .....	Quintus C. Fuller
Personnel Officer .....	Eileen Hill
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Director, Intercollegiate Athletics .....	Virgil Y. Lindahl
Director, University News Service .....	Eric Lundberg
Director, Publications .....	Lois Stearns
Director, Special Programs .....	Helen Hein
Director, Sports Information .....	Gary Morgan

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## Faculty 1972-73

---

WALLACE AAS, B.S., Moorhead State Teachers College; M.A., University of Northern Colorado.

*Associate Professor of Physics;  
Chairman, Department of Physics*

DONALD K. ADAMS, B.S., Colorado State University; M.A., Ed.D., University of Northern Colorado.

*Assistant Professor of Education*

WILLIAM T. AGAN, B.A., M.A., San Francisco State College.

*Assistant Professor of English*

FRANK W. ANDERS, B.S., University of California, Berkeley; M.S., U.S. Naval Post Graduate School.

*Assistant Professor of Mathematics*

DAN ANDERSON, B.S., Ph.M., University of Utah.

*Assistant Professor of Special Education*

DARRELL E. ANDERSON, A.B., York College; Ph.D., University of Nebraska.

*Professor of Psychology; Chairman, Department of Psychology, Counseling and Guidance*

HUGO A. ANDERSON, JR., A.B., University of Chicago; M.S., Colorado State University.

*Associate Professor of Business;  
Acting Chairman, Department of Finance and Insurance  
On Leave Summer Quarter, 1973.*

JAMES F. ANDERSON, Ph.B., University of Wisconsin; M.A., Ph.D., University of Colorado.

*Assistant Professor of Economics*

MARGARET A. ANDERSON, B.A. University of Northern Colorado.

*Instructor in Laboratory School*

RACHEL F. ANDERSON, A.B., M.A.,  
University of Northern Colorado.  
*Associate Professor of Business;*  
*Chairman, Department of General*  
*Business and Business Teacher*  
*Education*

VIOLETA S. ANDERSON, B.A., York  
College; M.A., University of Northern  
Colorado.  
*Instructor in College Student*  
*Personnel Work*

PATRICIA A. APPLGATE, B.A., State  
College at Iowa; M.A., Colorado State  
University.  
*Assistant Professor of English*

DEAN A. ARNOLD, B.A., Eastern Illi-  
nois University; M.A., Stanford Uni-  
versity; Ph.D., University of Chicago.  
*Professor of History*  
On Leave Summer Quarter, 1973.

WILLIAM RAMON ARNOLD, B.S., Ore-  
gon College of Education; M.Ed.,  
Ed.D., University of Oregon.  
*Associate Professor of Elementary*  
*Education*  
On Leave Summer Quarter, 1973.

KAREN S. BABICH, B.S., University of  
Washington; M.S., Rutgers University  
*Assistant Professor of Mental Health*  
*Nursing*

ELMER V. BACHENBERG, B.A., Nebras-  
ka State College; M.S., University of  
Illinois.  
*Assistant Professor of Library*  
*Science; Head, Special Collection*  
*Services*

GUNTHER F. A. BAER, B.Ed., Uni-  
versity of Cape Town; M.A., M.Ed.,  
University of Witwatersrand; Dr.  
utriusque iuris, University of Heidel-  
berg.  
*Assistant Professor of German*

CECILE C. BAKER, B.S., Northwestern  
State University; M.S., Florida State  
University.  
*Instructor in Home Economics*

EDWIN D. BAKER, B.M., M.M., Indi-  
ana University.  
*Associate Professor of Music;*  
*Chairman, Department of Brass and*  
*Percussion*

MARSHA K. BAKER, A.B., University of  
Northern Colorado.  
*Instructor in the Laboratory School*

RICHARD F. BALL, B.S., State Teachers  
College, Pennsylvania; M.A., Univer-  
sity of Northern Colorado.  
*Professor of Art*

RICHARD P. BARASCH, B.A., M.A.,  
University of California at Los An-  
geles.  
*Instructor in Sociology*

JERRY N. BARHAM, B.S., University of  
Arkansas at Monticello; M.S. Ed.D.,  
Louisiana State University.  
*Professor of Physical Education*

WILLIAM A. BARNARD, B.A., M.A.,  
Western Washington State College.  
*Instructor in Psychology, Counsel-*  
*ing and Guidance*

ALVIN E. BARNHART, B.S., Southern  
Oregon College; M.Ed., University of  
Oregon; Ed.D., University of Northern  
Colorado.  
*Professor of Educational Administra-*  
*tion*

LOREN W. BARTLETT, B.A. in Ed.,  
B.A. in Mus., Eastern Washington State  
College; M.M.Ed., Oberlin College;  
Ph.D., University of Iowa.  
*Associate Professor of Music;*  
*Chairman, Department of*  
*Woodwinds*

JAMES HENRY BARTON, B.S., Tennessee  
Technological University; M.S., Mem-  
phis State University.  
*Instructor in Geography*

PAOLO G. BARRUCCHIERI, B.A., Liceo  
Academia of the Republica de Italia;  
M.A., University of Northern Colo-  
rado; M.A., University of Wisconsin.  
*Assistant Professor of Fine Arts*

BILL D. BASSORE, B.S., Southwest Mis-  
souri State University; M.S., Univer-  
sity of Missouri; Ed.D., George Pea-  
body College.  
*Associate Professor of Education*

RICHARD LEO BEAR, B.S., Huntington  
College; M.A., Ball State University;  
Ed.D., Indiana University.  
*Associate Professor of Psychology,*  
*Counseling and Guidance*

JOHN ADDIS BEEL, B.S., Montana State  
College; Ph.D., Iowa State University.  
*Professor of Chemistry*

MARY A. BEHLING, B.S., Illinois State Normal University; M.A., University of Northern Colorado; Ph.D., Florida State University.

*Professor of Physical Education*

THOMAS R. BENICH, B.A., M.A., University of Denver.

*Assistant Professor of Physical Education*

LOIS W. BENNETT, A.B., Wichita State University; M.A., University of Northern Colorado.

*Assistant Professor of Vocational Education*

WARREN P. BEST, B.S., Nebraska State Teachers College; M.A., University of Northern Colorado.

*Associate Professor of College Student Personnel Work*

AGNES M. BIEGEL, B.S.N., Loyola University; M.S.N., Catholic University of America.

*Assistant Professor of Medical-Surgical Nursing*

JAMES A. BITTER, B.A., Marquette University; M.S., University of Wisconsin; Ed.D., University of Northern Colorado.

*Associate Professor of Special Education*

MARGARET T. BLAKE, B.S., University of Oklahoma; M.S., Ph.D., Iowa State University.

*Associate Professor of Psychology, Counseling and Guidance*  
On Leave Fall Quarter, 1973.

HOWARD LAWRENCE BLANCHARD, B.A., University of Northern Iowa; M.S., Drake University; Ed.D., University of Northern Colorado.

*Professor of Psychology, Counseling and Guidance*

ROBERT L. BLASI, B.S., Colorado State University; M.A., University of Northern Colorado.

*Associate Professor of Physical Education*

ROBERT L. BLILER, B.A., Millikin University; M.S., University of Tennessee.

*Instructor in Special Education*

CHARLES T. BLUBAUGH, B.F.A., M.A., University of Colorado.

*Assistant Professor of Art*

GEORGE A. BOECK, B.A., Iowa State Teachers College; M.A., Ph.D., State University of Iowa.

*Professor of History*

PAUL E. BOHRER, B.S., B.A., M.S., University of North Dakota. C.P.A.

*Assistant Professor of Business Accounting*

SANDRA K. BOLAND, A.B., Eastern Montana College; M.A., Ed.D., University of Northern Colorado.

*Assistant Professor of Special Education*

RICHARD R. BOND, B.S., Salem College; M.A., West Virginia University; Ph.D., University of Wisconsin.

*Professor of Zoology; President of the University*

JOHN TURNER BOOKMAN, B.A., Ph.D., University of Cincinnati.

*Associate Professor of Political Science*

WILLIAM W. BOSCH, B.S., M.S., North Dakota State University; Ph.D., University of Nebraska.

*Assistant Professor of Mathematics*

ADAH GERALDINE BOSSART, B.S., M.S., University of Colorado.

*Assistant Professor of Public Health Nursing*

RICHARD NEIL BOURASSA, B.M., University of Idaho; M.A., University of Denver.

*Instructor in Music*

JACK ARTHUR BOWEN, A.B., Brigham Young University; B.S., Eastern Oregon College; M.A., Ph.D., University of Utah.

*Associate Professor of Special Education*

On Leave Summer Quarter, 1973.

JAMES K. BOWEN, B.S., M.S. in Ed., Kansas State Teachers College; Ed.D., University of Wyoming.

*Associate Professor of Psychology, Counseling and Guidance*

FRANK BOWLES, A.B., Wesleyan University; M.A., University of Northern Colorado.

*Instructor in English*

D. HAROLD BOWMAN, B.S., McPherson College; M.Ed., Ed.D., Wayne State University.

*Professor of Education; Chairman, Department of Educational Media*

EUGENE O. BOWSER, B.S., Kansas State Teachers College; M.A., Brandeis University.

*Instructor in History*

THOMAS E. BOYLE, A.B., University of Richmond; M.A., Ph.D., University of Illinois.

*Professor of English*

JOHN M. BRAND III, A.B., Austin College; B.D., Austin Presbyterian Seminary; Ph.D., Texas Christian University.

*Assistant Professor of English*

DOROTHY BRENGARTH-JONES, B.S., University of Missouri; M.A., Sacramento State College.

*Instructor in Sociology*

WANDA E. BREWER, B.F.A., University of Denver; M.A., Ed.D., University of Northern Colorado.

*Assistant Professor of English*

BRUCE W. BRODERIUS, B.S., St. Cloud State College; M.A., George Washington University; Ed.D., University of Northern Colorado.

*Professor of Education*

GEORGE H. BROOKS, B.A., Sterling College, Kansas; M.Ed., University of Kansas; Ed.D., University of Northern Colorado.

*Assistant Professor of Social Studies*

GEORGE E. BROUGHTON, B.A., M.A., University of Northern Colorado.

*Instructor in Industrial Arts*

DON A. BROWN, B.S., M.Ed., Ed.D., University of Oregon.

*Professor of Education*

GLENDA J. BROWN, B.A., University of Oregon; M.A., University of Illinois.

*Assistant Professor of French*

JOHN COWAN BROWN, JR., Lt. Col., U.S. Air Force; B.S., University of Washington; M.S., University of Michigan.

*Professor of Aerospace Studies*

JOHN D. BROWN, B.A., M.Ed., Colorado State University, C.L.U.

*Instructor in Business*

LOIS N. BROWN, A.B., University of Northern Colorado; M.A., University of Denver.

*Associate Professor of Library Science; Assistant Reference Librarian*

MARILYN H. BROWNE, B.S., University of Iowa; M.S., University of Colorado.

*Instructor in Nursing of Children*

GERALD NEIL BURNS, B.A., M.A., University of Northern Colorado; Ed.D., University of Denver.

*Assistant Professor of Education*

MARILYN M. BURNS, B.S., University of Colorado; M.A., University of Northern Colorado.

*Associate Professor of Home Economics*

ARNOLD H. BURRON, B.S., Concordia Teachers College; M.A., Ed.D., Ball State University.

*Assistant Professor of Elementary Education*

WARREN R. BUSS, B.S., M.S., Brigham Young University; Ph.D., Iowa State University.

*Associate Professor of Botany*

LONIS C. BUTLER, B.A., M.A., University of Northern Colorado; Ed.D., New York University.

*Professor of Physical Education*

GREGORY R. BUTTON, A.B., M.A., University of Northern Colorado.

*Instructor in Laboratory School*

BENJAMIN F. BYERLY, B.S., Kansas State University; M.A., Ph.D., University of Illinois.

*Professor of History*  
On Leave Fall Quarter, 1973.

CINDA ANN CAINE, A.B., Colorado College.

*Instructor in Laboratory School*

COLLEEN A. CALLAHAN, A.B., University of Northern Colorado.

*Instructor in Laboratory School*

RONALD S. CAMP, B.A., M.A., University of Missouri.

*Assistant Professor of Television (Speech)*

ROBERT F. CAMPAIN, B.S., Northern Michigan University; M.S., Western Michigan University; Ph.D., University of Denver.

*Assistant Professor of Special Education*

CYNTHIA CARLISLE, A.B., University of Northern Iowa; M.A., Southwestern State College.

*Instructor in Physical Education*

**SHIRLEY M. CARRIAR, B.Ed.**, Superior State College; **M.A.**, University of Wisconsin; **Ed.D.**, University of Northern Colorado.

*Professor of English*

**ANTONIO L. CARVAJAL, B.S.**, Sul Ross State University; **M.S.**, East Texas State University.

*Assistant Professor of Special Education*

**LEOPOLD CASADOS, A.B.**, University of Northern Colorado.

*Temporary Instructor in Special Education and Rehabilitation*

**TIMOTHY D. CAVANAGH, B.A., M.A.**, Sacramento State College; **Ph.D.**, Ohio State University.

*Associate Professor of Mathematics*

**DONALD W. CHALOUPKA, B.S.**, University of Nebraska; **M.A.**, **Ed.D.**, University of Northern Colorado.

*Professor of Education*

**HARALD P. CHRISTENSEN, B.A., M.A., Ph.D.**, State University of Iowa.

*Professor of Political Science*

**LINDA ANN CISSNA, A.B.**, Humboldt State College; **M.S.**, Southern Illinois University.

*Instructor in Speech Communication*

**DOROTHE T. CLARK, B.Ed.**, Chicago Teachers College; **M.S.T.**, University of Chicago.

*Assistant Professor of Black Studies; Coordinator of Black Studies Program*

**JAMES R. CLARK, Major, U.S. Air Force; B.S., M.S.**, University of Texas.

*Assistant Professor of Aerospace Studies*

**AMOS L. CLAYBAUGH, B.E.**, Wisconsin State College; **M.S.**, University of Wisconsin; **Ed.D.**, University of Northern Colorado.

*Professor of Elementary Education*

**FORD W. CLEERE, B.A., M.A.**, Los Angeles State College; **Ph.D.**, University of Colorado.

*Assistant Professor of Sociology*

**SUSAN JEANNETTE CLEVINGER, A.B.**, Ball State Teachers College; **A.M.**, San Francisco State College; **Ed.D.**, Stanford University.

*Professor of Psychology, Counseling and Guidance*

**JOSEPH B. CLITHERO, B.S., M.S.**, Colorado State University.

*Associate Professor of Business; Chairman, Department of Marketing*

**L. GLEN COBB, B.A.**, Louisiana State University; **M.S., Ph.D.**, Texas A & M University.

*Assistant Professor of Meteorology*

**MARY BARBARA COBERLY, A.B., M.A.**, Stanford University.

*Instructor in Anthropology*

**LADD L. COCHRANE, A.B.**, Hastings College; **M.A.**, Western Michigan State University; **Ph.D.**, Arizona State University.

*Assistant Professor of Education*

**CAROLYN ANN CODY, B.S.**, North Texas State University; **M.A.**, University of Northern Colorado.

*Assistant Professor of Physical Education*

**CHARLES O. COLLINS, B.A., M.A.**, University of Northern Colorado.

*Assistant Professor of Geography*

**HARRY EDMON COLLINS, A.B., M.A., Ed.S.**, University of Northern Colorado.

*Associate Professor of College Student Personnel Work*

**WILLIAM E. CONNETT, B.A., M.S., Ph.D.**, Southern Illinois University.

*Assistant Professor of Research and Statistical Methodology*

**BRYAN E. M. COOKE, B.A.**, Aligarh Muslim University; **M.S., Ph.D.**, University of Illinois.

*Associate Professor of Health Education; Chairman, Department of Health and Safety*

*On Leave Fall, Winter and Spring, 1973-74.*

**ROBERT E. COPLEY, B.M.**, Denver University; **M.M., Ph.D.**, Michigan State University.

*Associate Professor of Music*

**CHARMAINE COPPOM, B.M.**, Hastings College; **M.A.**, University of Missouri.

*Instructor in Music*

**FRANKLIN D. CORDELL, B.A., M.A., Ph.D.**, Michigan State University.

*Associate Professor of Education; Chairman, Department of Foundations of Education*

WILLIAM S. CORDINER, B.A., M.A.,  
University of Wyoming.  
*Assistant Professor of Fine Arts*

ALFRED EMILE CORNEBISE, A.B., Way-  
land College; M.A., Texas Technologi-  
cal College; Ph.D., University of North  
Carolina.  
*Professor of History*  
On Leave Summer Quarter, 1973.

VIRGINIA G. COSTELLO, A.B., Uni-  
versity of Nebraska; B.S. in Library  
Science, Columbia University; M.A.,  
University of Northern Colorado.  
*Professor of Library Science;*  
*Assistant Director of University*  
*Library, Collections Development*

RICHARD J. CRAWFORD, B.S., M.A.,  
Southern Illinois University; Ph.D.,  
University of Oklahoma.  
*Professor of Speech Communication*  
On Leave Summer Quarter, 1973.

GEORGE L. CROCKETT, B.S., Utah State  
University; M.S., Oregon State Uni-  
versity; Ed.D., Utah State University.  
*Associate Professor of*  
*Science Education; Chairman, De-*  
*partment of Science Education*

JOHN HENRY CRONIN, B.A., Nebraska  
State Teachers College; M.A., Ed.D.,  
University of Northern Colorado.  
*Assistant Professor of Special*  
*Education*

NEAL M. CROSS, B.A., M.A., Uni-  
versity of Northern Colorado; Ed.D.,  
Stanford University.  
*Professor of English*  
On Leave Summer, Fall, Winter,  
and Spring, 1973-74.

ROBERT J. CROUSE, B.S., M.A., West-  
ern Michigan University.  
*Instructor in Special Education*

VINCENT A. CYPHERS, B.S., Pacific  
University; M.A., Ed.D., University of  
Northern Colorado.  
*Professor of Physical Education*

JOHN A. DAMGAARD, JR., B.A., Colo-  
rado College; M.B.A., University of  
Michigan; Ed.D., University of Utah.  
*Professor of Business; Coordinator*  
*Graduate Studies*  
On Leave Summer Quarter, 1973.

THELMA L. DAMGAARD, B.S., Uni-  
versity of Minnesota; B.M., M.A., Uni-  
versity of Wisconsin; Ed.D., Stanford  
University.  
*Associate Professor of Education*

RAYMOND L. DEBOER, B.A., Augustana  
College; M.A., Ed.D., University of  
Denver.  
*Professor of Speech Communication*

WANDA A. DEBOER, A.B., Friends Uni-  
versity; M.A., University of Northern  
Colorado.  
*Instructor in Business*

DONALD GILMORE DECKER, B.S., Mich-  
igan State Normal; M.A., University  
of Northern Colorado; Ph.D., Colum-  
bia University.  
*Professor of Science Education*

NELLIE M. DENNING, B.A., M.A.,  
University of Northern Colorado.  
*Instructor in Anthropology*

CAROLL J. DIERKS, A.B., University  
of Denver; M.Bus.Ed., University of  
Colorado.  
*Assistant Professor of Vocational*  
*Education*

JOHN L. DIETZ, B.S., University of  
Nebraska; M.A., University of North-  
ern Colorado; Ph.D., Syracuse Uni-  
versity.  
*Assistant Professor of Geography*

RICHARD D. DIETZ, B.S., California  
Institute of Technology; Ph.D., Uni-  
versity of Colorado.  
*Assistant Professor of Astronomy*

TERRY R. DIXON, B.S., M.S., Kansas  
State College.  
*Assistant Professor of Recreation*

HELEN R. DOBELL, A.B., University of  
New Mexico; M.S., Illinois State Uni-  
versity.  
*Instructor in Physical Education*

JAMES FRANCIS DOYLE, A.B., Uni-  
versity of Wisconsin; M.F.A., University  
of Iowa.  
*Assistant Professor of English*

WILLIAM L. DUFF, B.A., San Francis-  
co State College; M.S., University of  
Stockholm; Ph.D., University of Cali-  
fornia.  
*Associate Professor of Business—*  
*Statistics*

PAMELA A. DURR, B.A., State Uni-  
versity of Iowa; M.A., Arizona State Uni-  
versity.  
*Instructor in Fine Arts*  
On Leave Summer Quarter, 1973.

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- DALE DYKINS, B.M., M.M., College of Music, Cincinnati.  
*Professor of Music; Chairman Department of Theory and Composition*
- NORMA E. EGENESS, B.S., Stout Institute; M.A., University of Northern Colorado.  
*Assistant Professor of Home Economics*
- ROBERT EHLE, B.M., Eastman School of Music; M.M., Ph.D., North Texas State University.  
*Assistant Professor of Music*
- LARRY G. EHRLICH, A.B., M.A., University of Kansas; Ph.D., Northwestern University.  
*Assistant Professor of Speech Communication*
- GARTH M. ELDREDGE, B.A., M.A., Ph.D., University of Utah.  
*Associate Professor of Special Education*
- JAMES G. ELLINGSON, B.S., M.S., University of Nebraska; M.S., University of Colorado; Ph.D., University of Wyoming.  
*Assistant Professor of Physics*
- DONALD D. ELLIOTT, B.S. in Chem., B.S. in Bus., M.S., Ph.D., University of Colorado.  
*Assistant Professor of Mathematics; Chairman, Department of Mathematics*
- KATHLEEN Y. ENSZ, A.B., Pomona College; M.A., University of California, Berkeley.  
*Instructor in French*
- CARL OSCAR ERICKSON, A.B., M.A., University of Northern Colorado; Ed.D., Illinois State University.  
*Assistant Professor of Education*
- CHARLES S. ERWIN, Capt., U.S. Air Force; B.A., Kent State University; M.A., University of Denver.  
*Assistant Professor of Aerospace Studies*
- WILLIAM RENTZ ERWIN, JR., B.S., M.S., North Texas State University; Ed.D., University of Houston.  
*Professor of Industrial Arts*
- KENNETH G. EVANS, B.A., M.A., University of Northern Colorado; M.F.A., Ph.D., State University of Iowa.  
*Associate Professor of Music*  
On Leave Summer Quarter, 1973.
- MARGARET ELIZABETH EVERETT, B.S., University of Wisconsin; M.A., Ph.D., State University of Iowa.  
*Professor of Physical Education; Chairman, Department of Physical Education for Women*
- WILLARD L. FADNER, B.S., Purdue University; M.S., University of Wisconsin; Ph.D., University of Colorado.  
*Assistant Professor of Physics*
- GEORGE E. FAY, B.A., University of Missouri; M.A., University of Michigan; Ph.D., Interamerican University.  
*Associate Professor of Anthropology*
- GEORGE N. FEBINGER, B.A., M.A., University of Denver; Ed.D., University of Colorado.  
*Assistant Professor of Education*
- EDGAR E. FIELDER, B.A., Northwestern State College; M.A., Phillips University; Ed.D., University of Northern Colorado.  
*Associate Professor of Education*
- CLARK LEROY FIELDS, B.A., Pasadena College; M.S., Ph.D., State University of Iowa.  
*Associate Professor of Chemistry*
- MARY F. FINNEGAN, B.A., Loretto Heights; M.A., University of Colorado; Ph.D., University of Denver.  
*Assistant Professor of English*
- FOREST N. FISCH, B.A., M.A., University of Northern Colorado.  
*Professor of Mathematics*
- MICHAEL W. FLANNIGAN, B.A., University of San Diego; M.S., Illinois State University; Ed.D., University of Northern Colorado.  
*Assistant Professor of Psychology, Counseling and Guidance*
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*Professor of Higher Education*
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*Assistant Professor of Philosophy*
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*Instructor in Speech Communication*

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*Temporary Instructor in Education*

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*Instructor in Recreation*

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Education*

L ELAINE MCMINN, B.S., University of Tulsa; M.S., Western Reserve University.

*Professor of Nursing*

CHARLES R. MCNERNEY, B.A., M.A., University of Northern Colorado; Ph.D., Ohio State University.

*Assistant Professor of Mathematics*

JUDY MACKEY, B.A., M.A., North Texas State College.

*Instructor in English*

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*Assistant Professor of Economics*

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*Associate Professor of Health and Physical Education*

RAYMOND MANJRA, A.B., University of California at Los Angeles; M.A., San Jose State College; Ph.D., University of Wyoming.

*Assistant Professor of Zoology*

JOHN I. MARIANI, B.A., University of Nevada; B.F.A., Chicago Art Institute; M.A., University of Northern Colorado.

*Professor of Art*

DALLAS A. MARTIN, JR., A.B., Ed.S., Ph.D., University of Northern Colorado.

*Assistant Professor of College Student Personnel Work*

STEVEN SCOTT MASSIN, B.J., University of Missouri; J.D., University of Nebraska.

*Instructor in Business*

VINCENT MATTHEWS III, B.S., M.S., University of Georgia.

*Assistant Professor of Geology*

RICHARD L. MAUGHAN, B.S., M.S., Utah State University; Ph.D., Oregon State University.

*Assistant Professor of Health Education*

STEVE J. MAZURANA, B.A., University of Miami; M.A., Indiana University.

*Assistant Professor of Political Science*

MARCUS K. MEILAHN, B.S., Lakeland College; Ph.D., Arizona State University.

*Associate Professor of Chemistry*

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*Instructor in Medical-Surgical Nursing*

CHARLES A. MEYER, B.A., Wagner College; M.A., University of Arizona.

*Assistant Professor of English*

HOWARD M. MICKENS, B.S., Bowling Green State University; M.M., Northwestern University.

*Associate Professor of Music; Chairman, Department of Strings*

NELDA M. MICKENS, B.M.E., Northwestern University; M.A., University of Northern Colorado.

*Guest Faculty in Laboratory School*

BARBARA H. MICKEY, B.A., M.A., Ph.D., Indiana University.

*Associate Professor of Anthropology*

JOHN R. MICKEY, B.S., Kansas State Teachers College, Emporia.

*Associate Professor of Anthropology; Chairman, Department of Anthropology*

DELIA PAULINE MIKKELSON, A.B., M.A., University of Arizona.

*Instructor in Theatre Arts*

GARY EVAN MILLER, B.A., M.A., University of Northern Colorado.

*Assistant Professor of Education*

JAMES E. MILLER, B.M., Michigan State College; M.A., University of Northern Colorado; M.F.A., Ph.D., State University of Iowa.

*Professor of Instrumental Music*

KURT R. MILLER, A.B., M.A., Northern Arizona State University; D.M.A., University of Southern California.

*Associate Professor of Music*

JOHN MILLS, B.S., M.D., University of Nebraska.

*Assistant Professor of Medical Technology; Pathologist, Weld County General Hospital*

WILBUR G. MILLSLADGLE, B.S., Black Hills State College; M.A., Ed.D., University of Northern Colorado.

*Assistant Professor of Special Education*

SANDRA L. MINTON, A.B., M.A., University of California at Los Angeles.  
*Instructor in Women's Physical Education*

MARIE A. MOINAT, B.S., Colorado State University; M.S., University of Northern Colorado.  
*Instructor in the Laboratory School*

DONALD B. MONTGOMERY, B.A., Pepperdine College; M.A., Ohio University; Ed.D., University of Northern Colorado.  
*Assistant Professor of Education*

LOLA J. MONTGOMERY, B.A., University of Kansas; M.A., University of Northern Colorado; Ed.D., Teachers College, Columbia University.  
*Associate Professor of Psychology, Counseling and Guidance*  
On Leave Fall Quarter, 1973.

ROBERT A. MONTGOMERY, B.A., Pepperdine College; M.S., University of Southern California; Ed.D., University of Northern Colorado.  
*Professor of Physical Education*

G. JOSEPH MOODY, B.F.A., University of Illinois; M.F.A., University of Iowa; Ed.D., Ball State University.  
*Associate Professor of Fine Arts*  
On Leave Summer Quarter, 1974.

FRANK A. MORELLI, A.B., Manhattan College; M.A., Boston University.  
*Assistant Professor of Philosophy;*  
*Director of Philosophy Offerings*

DENNIS MORIMOTO, B.A., M.A., University of Northern Colorado.  
*Instructor in Industrial Arts*

GRANT L. MORRIS, B.A., University of South Florida; M.S., Washington State University.  
*Assistant Professor of Psychology, Counseling and Guidance*

GAYLORD D. MORRISON, B.S., Northwest Missouri State College; M.A., University of Nebraska; Ed.D., University of Missouri.  
*Professor of Education*

ALVIN O. MOSBO, B.A., Luther College; M.A., State University of Iowa; Ed.D., University of Northern Colorado.  
*Professor of Elementary Education;*  
*Chairman, Department of Elementary Education and Reading*

L. CAROL MOSSER, B.S., East Stroudsburg State College; M.A., University of Northern Colorado.  
*Assistant Professor of Physical Education*

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*Instructor in Business*

PATRICIA L. MURPHY, B.S., University of San Francisco; M.A., University of Alberta.  
*Assistant Professor of Sociology*

ROBERT MURRAY, B.M., M.M., American Conservatory; D.M.A., Indiana University.  
*Assistant Professor of Music*

DONALD L. MYERS, B.A., Washburn University; M.A., Kansas State University.  
*Assistant Professor of Education*

DORIS E. MYERS, B.S.E., Arkansas State Teachers College; M.A., Ohio University; Ph.D., University of Nebraska.  
*Associate Professor of English*  
On Leave Spring Quarter, 1974.

FREDRIC L. MYERS, B.V.A., Auburn University; M.F.A., University of Oklahoma.  
*Assistant Professor of Fine Arts*  
On Leave Summer Quarter, 1973.

GRACE D. NAPIER, B.A., Douglass College; M.A., New York University; Ed.D., Temple University.  
*Associate Professor of Special Education*

MICHAEL NAUMER, A.B., New Mexico Highlands University; M.A., University of California at Los Angeles.  
*Instructor in Fine Arts*

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*Professor of Elementary Education*

THEODORE M. NELSON, B.S., M.A., Ph.D., University of Minnesota.  
*Professor of Psychology*

JOE NICHOLS, B.S., M.S., Pittsburg State College; Ed.D., University of Colorado.  
*Associate Professor of Education;*  
*Chairman, Department of Curriculum and Instruction*

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*Instructor in Laboratory School*

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*Associate Professor of Music; Chairman, Department of Music Education*

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*Assistant Professor of Drama*

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*Instructor in Library Science; Head Reference Services*

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*Assistant Professor of Psychology, Counseling and Guidance*

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*Professor of Industrial Arts  
On Leave Summer Quarter, 1973.*

KENNETH V. OLSON, B.A., Augsburg College; M.A., Ph.D., University of Minnesota.

*Professor of Science Education*

NORMAN T. OPPELT, B.S., Colorado State University; M.A., University of Northern Colorado; Ph.D., Michigan State University.

*Professor of Psychology*

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*Instructor in Home Economics  
On Leave Summer Quarter, 1973.*

JOHN F. OTTO, B.S., B.A., M.S., University of North Dakota. C.P.A.

*Instructor in Business Accounting*

IWAN OWECHKO, Diploma, Pedagogic University of Voroshilovgrad; Ph.D., Ukrainian Free University, Munich.

*Assistant Professor of Russian*

KAYE D. OWENS, B.A., Idaho State University; M.A., Ed.D., University of Northern Colorado.

*Associate Professor of Special Education  
On Leave Fall Quarter, 1973.*

HERBERT R. PADZENSKY, A.B., University of Colorado; M.A., Ph.D., University of Denver.

*Senior Research Associate, Colorado Department of Instruction; Affiliate Professor of Special Education and Rehabilitation*

G. DEAN PALMER, A.B., M.A., University of Northern Colorado; Ed.D., Montana State University.

*Associate Professor of Business*

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*Assistant Professor of Psychology, Counseling and Guidance*

WILLIAM GEORGE PARKOS, B.S., Mankato State College; M.S., Ph.D., University of Minnesota.

*Assistant Professor of Health and Safety*

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*Instructor in Vocational Education*

ARTHUR R. PARTRIDGE, B.A., M.S., University of Kansas; Ed.D., Stanford University.

*Professor of Education; Chairman, Department of Educational Administration*

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*Assistant Professor of Special Education*

RITA J. PAYTON, B.S., St. Mary's College, Indiana; M.S., Indiana University.

*Assistant Professor of Nursing of Children*

NORMAN LEE PEERCY, B.A., M.A., University of Northern Colorado.

*Instructor in English*

- ELEANOR M. PEIFFER, B.S., Douglass College, Rutgers University; M.A., Rutgers University.  
*Assistant Professor of Vocational Education*
- RICHARD A. PERCHLIK, B.S. in Bus.; B.S., in Ed., M.A., Ohio State University; Ph.D., University of Colorado.  
*Professor of Social Science; Chairman, Department of Political Science*
- PATRICIA D. PERRY, B.S., M.S., Boston University.  
*Instructor in Medical-Surgical Nursing*
- RICHARD A. PETERSON, A.B., M.A., San Diego State College; Ph.D., University of Wisconsin.  
*Assistant Professor of Physical Education*
- THOMAS A. PETROFF, B.S., M.A., Michigan State University.  
*Assistant Professor of Physical Education*
- WILLIAM A. PFUND, B.M., Youngstown University; M.M., New England Conservatory.  
*Assistant Professor of Music*
- D. ALLEN PHILLIPS, B.S., M.A., University of Idaho; Ed.D., University of Oregon.  
*Associate Professor of Physical Education*  
On Leave Summer Quarter, 1973.
- DAVID PICCA, A.B., Instituto Magistrale, Benevento; M.A.L.S., Immaculate Heart College; Ph.D., Instituto Universitatio Orientale.  
*Assistant Professor of Library Science; Assistant Director of Libraries*
- ROBERT L. PING, A.B., Indiana University; M.A., University of Northern Colorado.  
*Instructor in Sociology*
- RONALD KEITH PLAKKE, B.A., University of Northern Colorado; Ph.D., University of Montana.  
*Associate Professor of Zoology*
- WILLIAM D. POPEJOY, B.S., M.A., Illinois State Normal University; Ed.D., University of Northern Colorado.  
*Professor of Mathematics*
- CHARLES S. L. POSTON, B.A., Lynchburg College; M.S., Auburn University.  
*Assistant Professor of Psychology, Counseling and Guidance*
- STEPHEN T. POWERS, B.S., U.S. Naval Academy; M.A., Rice University; Ph.D., University of Notre Dame.  
*Associate Professor of History*  
On Leave Spring Quarter, 1974.
- JUDITH A. PAUL, B.S., Western Illinois University; M.S., Ed.D., Indiana University.  
*Associate Professor of Psychology, Counseling and Guidance*
- WALTER F. PRINCIC, B.A., Baldwin-Wallace College; M.A., University of Illinois.  
*Assistant Professor of English*
- DAVID L. PRINGLE, B.S., Wayne State University; M.S., Ph.D., Iowa State University.  
*Associate Professor of Chemistry*  
On Leave Summer Quarter, 1973.
- FRANCIS R. QUAMMEN, B.A., M.A., University of Northern Colorado.  
*Associate Professor of Sociology*
- ELIZABETH J. RAVE, B.S., Illinois State University; M.A., University of Colorado; Ph.D., University of Southern California.  
*Assistant Professor of Psychology, Counseling and Guidance*  
On Leave Fall Quarter, 1973.
- PAUL WESLEY REA, A.B., Eastern Michigan University; M.A., Wayne State University; Ph.D., Ohio State University.  
*Assistant Professor of English*
- VICKI REED, B.S., Northwestern University; M.A., University of Denver.  
*Instructor in Special Education*
- MARILYN L. REEVES, B.S., Colorado State University; M.S., Oregon State University.  
*Assistant Professor of Home Economics*
- HENRY R. REINERT, B.S., Fort Hays Kansas State College; M.A., Ed.D., University of Northern Colorado.  
*Associate Professor of Special Education; Chairman, Department of Special Learning Problems*  
On Leave Fall Quarter, 1973.
- NORMAN H. RESNICK, B.A., American International; M.A., Ph.D., University of Connecticut.  
*Assistant Professor of Special Education*

ARTHUR R. REYNOLDS, B.A., Nebraska State Teachers College; M.A., Ph.D., University of Minnesota.  
*Professor of History*

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*Associate Professor of Zoology*

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*Assistant Professor of Mathematics*

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*Associate Professor of Education; Director, Educational Field Experiences*  
On Leave Summer Quarter, 1973.

WINNIFRED S. RICHARDSON, B.A., M.A., University of Denver.  
*Assistant Professor of Library Science; Reserve Librarian*

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*Assistant Professor of Library Science; Assistant Catalog Librarian*

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*Associate Professor of Education*

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*Instructor in Economics*

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*Associate Professor of Education*  
On Leave Summer Quarter, 1973.

GRACE A. ROBINS, B.S., Central State Teachers College; M.E., University of Oklahoma.  
*Assistant Professor of Business*

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*Assistant Professor of Music.*

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*Instructor in Physical Education*

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*Instructor in Physical Education*

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*Assistant Professor of Education*

ROBERT F. ROSS, B.S., University of Nebraska; M.A., University of Northern Colorado.  
*Instructor in Speech Communication*

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*Associate Professor of Physical Education*

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*Associate Professor of History; Chairman, Department of History*

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*Assistant Professor of History*

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*Associate Professor of Industrial Arts*

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*Assistant Professor of Mathematics*  
On Leave Summer Quarter, 1973

- GRETCHEN SAAM, B.A., University of Iowa; M.A., M.B.A., Michigan State University.  
*Assistant Professor of Business*
- THOMAS F. SAFFELL, B.S. in Ed., M.Ed., Ph.D., University of Kansas.  
*Associate Professor of Education*
- GLENN H. ST. AUBYN, B.S., Colorado University.  
*Instructor in Economics*
- GEORGE H. SAGE, B.A., M.A., University of Northern Colorado; Ed.D., University of California, Los Angeles.  
*Professor of Physical Education; Chairman, Department of Physical Education for Men*
- GEORGE F. SANDERSON, B.A., M.A., University of Northern Colorado.  
*Associate Professor of Education*
- ARSENIO SANDOVAL, M.A., University of New Mexico.  
*Assistant Professor of American Mexican Studies*
- LYNN A. SANDSTEDT, A.B., University of Northern Colorado; M.A., University of Colorado.  
*Assistant Professor of Spanish*
- JOHN J. SANSONE, A.B., Bloomsburg State College; M.S., University of Omaha.  
*Instructor in Special Education*
- NORMAN I. SAVIG, B.A., M.S., University of Denver.  
*Assistant Professor of Library Science; Music Librarian*
- GORDON H. SAWATZKY, B.A., Bethel College; M.N., Yale University; M.S., University of Colorado.  
*Associate Professor of Psychiatric Nursing*
- ANNE W. SCHENKMAN, A.B., M.S., Ed.D., Indiana University.  
*Associate Professor of Psychology, Counseling and Guidance*  
On Leave Summer Quarter, 1973.
- WALTER A. SCHENKMAN, B.A., Harvard University; M.M., Yale Music School; Diploma d'Etudes, Paris Conservatory; D.Mus., Indiana University.  
*Professor of Music*
- PHYLLIS J. SCHMALJOHN, A.B., Boise State College.  
*Instructor in Laboratory School*
- JOHN SCHMID, B.S., M.S., Ph.D., University of Wisconsin.  
*Professor of Education*
- DONALD L. SCHMIDT, B.A., Bethel College; M.S., Ph.D., Iowa State University.  
*Professor of Mathematics*
- GERALD D. SCHMIDT, B.A., University of Northern Colorado; M.S., Ph.D., Colorado State University.  
*Professor of Zoology*
- THOMAS V. SCHMIDT, JR., B.A., M.A., University of Northern Colorado.  
*Instructor in Special Education*
- CLAUDE M. SCHMITZ, B.A., M.A., University of Northern Colorado.  
*Professor of Music; Chairman, Department of Voice*
- GARY B. SCHNEIDER, A.B., San Diego College; M.A., University of Northern Colorado.  
*Instructor in Psychology, Counseling and Guidance*
- JOHN E. SCHNEIDER, A.B., M.A., University of Southern California; Ed.D., Ohio State University.  
*Assistant Professor of Special Education*
- JAMES O. SCHRECK, B.A., University of St. Thomas; M.S., Ph.D., Texas A & M University.  
*Assistant Professor of Chemistry*
- GLENN B. SCHROEDER, B.S., Oregon College of Education; M.Ed., University of Oregon; Ph.D., University of New Mexico.  
*Associate Professor of Education*
- ROBERT O. SCHULZE, A.B., University of Michigan; M.A., Columbia University; Ph.D., University of Michigan.  
*Professor of Sociology*
- SUZANNE S. SCHULZE, A.B., University of Michigan; M.A., University of Rhode Island.  
*Instructor in Library Science; Head, Documents Service*
- HERBERT C. SCHUMACHER, B.F.A., M.F.A., University of Kansas.  
*Associate Professor of Fine Arts; Chairman, Department of Fine Arts*
- REX R. SCHWEERS, JR., B.A., M.A., University of Northern Colorado.  
*Assistant Professor of Mathematics*

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*Instructor in Geography*

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*Assistant Professor of Education*  
On Leave Fall Quarter, 1973.

HERBERT H. SEVERSON, B.S., Wisconsin State University; M.S., Ph.D., University of Wisconsin.

*Assistant Professor of Psychology, Counseling and Guidance*

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*Professor of College Student Personnel Work*

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*Professor of Recreation Education; Chairman, Department of Recreation*

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*Professor of Science*

KENNETH L. SHROPSHIRE, B.A., Miami University.

*Assistant Professor of Geology; Chairman, Department of Earth Sciences*

On Leave Fall Quarter, 1973.

ROBERT O. SINGER, A.B., M.A., University of Northern Colorado.

*Instructor in Education; Director of Special Studies and Continuing Education*

RAMLAYKHA SINGH, B.S., Mankato State College; M.A., Ed.D., University of Northern Colorado.

*Temporary Instructor in Education*

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*Professor of Music*

DAVID W. SMART, A.B., Brigham Young University; M.A., Ph.D., University of Utah.

*Assistant Professor of Student Personnel*

JAMES G. SMITH, B.S., Kansas State University; M.A., University of Northern Colorado.

*Instructor in Laboratory School*

RICHARD J. SMITH, B.A., M.A., Eastern Michigan University.

*Assistant Professor of Speech Communication*

On Leave Winter Quarter, 1974.

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*Instructor in Music*

SUE A. SOMMERS, A.B., M.A., University of Northern Colorado.

*Temporary Instructor in Laboratory School*

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*Instructor in Education*
- VALERIE L. SORENSEN, B.S., M.Ed., Colorado State University.  
*Assistant Professor of Home Economics*
- KENDRICK L. SPOONER, B.S., Michigan State University; M.A., Ohio State University.  
*Assistant Professor of Vocational Education*
- BEVERLY SPRINGER, A.B., M.A., Ohio State University; Ed.D., University of Colorado.  
*Temporary Instructor in Political Science*
- CAROL L. STAAB, B.S., Western Illinois University.  
*Instructor in Laboratory School*
- KATHLEEN M. STALLINGS, B.A., Reed College; M.A., University of New Mexico.  
*Instructor in English*  
On Leave Fall Quarter, 1973.
- MAYNARD N. STAMPER, B.S., Eastern Kentucky State College; M.A., University of Northern Colorado; Ph.D., Ohio State University.  
*Professor of Biological Sciences*
- WENDELL R. STARR, B.A., Ottawa University; M.A., University of Colorado; Ph.D., University of Minnesota.  
*Professor of English*
- DORIS C. STEFFY, B.A., Iowa State Teachers College; M.A., State University of Iowa.  
*Professor of Physical Education*
- CONNIE K. STELLJES, B.S., University of Kansas; M.A., University of Colorado.  
*Instructor in Spanish*
- WALTER H. STEWART, B.J., B.A., B.S., M.A., University of Missouri; Ph.D., Southern Illinois University.  
*Associate Professor of Journalism*
- JAMES A. STOFFLER, B.S., Southern Illinois University; M.Ed., Marquette University; Ed.D., Southern Illinois University.  
*Professor of Education*
- NATALIE STROH, B.S., M.S., University of Colorado.  
*Assistant Professor of Community Health—Nursing*
- CHRISTINE A. STURGES, A.B., College of William & Mary; M.A., Ph.D., Northwestern University.  
*Assistant Professor of Theatre Arts*
- DOUGLAS L. STUTLER, B.A., M.A., University of Northern Colorado.  
*Assistant Professor of Education*
- JAMES E. SULLIVAN, A.B., University of Northern Colorado.  
*Instructor in Laboratory School*
- ROBERT B. SUND, B.A., Reed College; M.S., Oregon State College; M.A., Ed.D., Stanford University.  
*Professor of Science Education*
- JOHN H. SWAIM, B.S.E., M.S., Kansas State Teachers College.  
*Instructor in Social Studies in the Laboratory School*
- MARIAN A. SWINGLE, B.S., University of Vermont; M.S., Boston University.  
*Assistant Professor of Psychological Nursing*
- ELVIRA SZIGETI, B.S.N., University of Virginia; M.N., Emory University.  
*Assistant Professor of Medical-Surgical Nursing*
- GERALD E. TANNER, B.A., M.A., University of Northern Colorado.  
*Assistant Professor of Psychology, Counseling and Guidance*
- JO ANN TAYLOR, B.S., Northwest Missouri State College; M.A., University of Northern Colorado.  
*Assistant Professor of Home Economics*  
On Leave Summer Quarter, 1973.
- STEVE TEGLOVIC, Jr., B.S.B.A., M.B.A., University of Denver; Ph.D., University of Northern Colorado.  
*Professor of Business; Chairman, Department of Management*  
On Leave Summer Quarter, 1973.
- BERT O. THOMAS, B.S., M.S., Colorado State University; Ph.D., University of Minnesota.  
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## GUIDE TO CAMPUS OFFICES

*Post Office Address:* University of Northern Colorado  
Greeley, Colorado 80639

*Telephone:* (Area Code 303) 351-1890

### *Admissions*

Admissions Office, 108 Frasier Hall (Ext. 2823)

### *Affirmative Action*

Affirmative Action Office, 110 Kepner Hall (Ext. 2516)

### *Bulletins and Catalogs*

Publications Office, 401 Carter Hall (Ext. 2772)

### *Counseling Services*

Counseling and Testing Center, 103 Gray Hall (Ext. 2483)

### *Fee Payments*

Accounting Office, 11 Frasier Hall (Ext. 2201)

### *Financial Assistance and Student Employment*

Financial Aids Office, 101 Frasier Hall (Ext. 2156)

### *Graduate Program Information*

Graduate Office, 1410-20th Street (Ext. 3401)

### *Housing*

Housing Office, 209 Carter Hall (Ext. 2502)

### *Off-Campus and Correspondence Courses*

Dept. of Special Studies & Continuing Ed., 209 Carter Hall (Ext. 2758)

### *Registration*

Registrar and Records Office, 123 Frasier Hall (Ext. 3701)

### *Scholarships*

Financial Aids Office, 101 Frasier Hall (Ext. 2156)

### *Summer Study*

Admissions Office, 108 Frasier Hall (Ext. 2823)



