

DAMGAARD

COLORADO STATE COLLEGE BULLETIN

111

GENERAL CATALOG
1965-1966 ISSUE



Greeley, Colorado

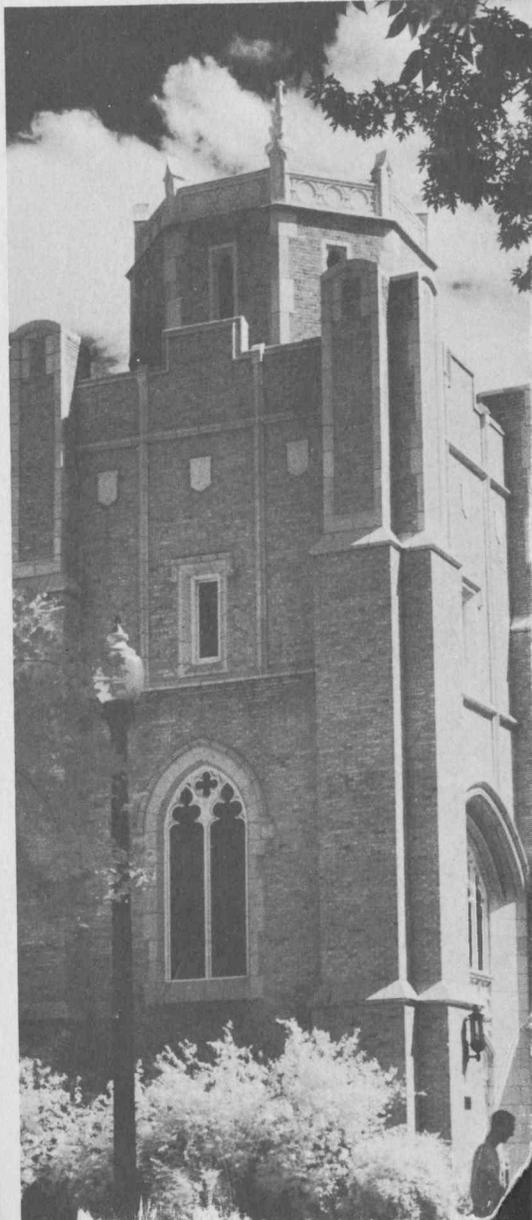


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Effective dates of this catalog—The effective dates of this catalog are from September 1, 1965 to August 31, 1966. This includes Fall, Winter, Spring and Summer Quarters, 1965-66. However, new course listings in the 1965 Summer Quarter class schedule are regulated by this catalog. Students enrolling for the first time at the college during these effective dates will follow the rules and regulations of this catalog until their graduation, if such graduation is within six years.

PLEASE NOTE

Students must retain until their graduation the copy of the catalog that they receive. Please bring this catalog with you when you register. Only one catalog will be given to a student.

N^o 9455



BULLETIN

Colorado State College
1965-66

GENERAL CATALOG

Greeley, Colorado

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Entered as second class matter at the post office at Greeley, Colorado, under the act of August 24, 1912. Published monthly

Freshman Admissions Timetable

Applications—Applications may be filed any time after the close of the first semester of the senior year in high school and not later than 30 days prior to registration day.

Test Scores—Either the College Entrance Examination Board, Scholastic Aptitude Test (SAT) or 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.

Financial Aid Applications—Applications for National Defense Student Loan Program should be filed with the Director of Financial Aid between April 1st and April 30th or until funds are unavailable.

Scholarship Applications—Applications for scholarships should be returned to the high school by February 15th and must be filed with the Director of Financial Aid no later than March 15th.

Transfer Student Admissions Timetable

Applications—All applications and official transcripts must be filed 30 days prior to the quarter for which the transfer students wish to enroll.

For details concerning admission, see Pages 46-50.

College Calendar

Fall Quarter—1965

September 22—New Students Report
 September 27-28—Returning and Graduate Students Report
 September 27-28—Registration
 September 29—Classes Begin

October 23—Homecoming
 October 28-29—CEA Convention

November 1-5—Mid-term Week
 November 25—Thanksgiving

December 15—Graduation
 December 15-16-17—Final Examinations

Winter Quarter—1966

January 3-4—Registration
 January 5—Classes Begin
 January 28-29—Mid-Year Education Conference

February 7-11—Mid-term Week

March 11—Graduation
 March 11-14-15—Final Examinations

Spring Quarter—1966

March 21-22—Registration
 March 23—Classes Begin

April 25-29—Mid-term Week

May 27—Insignia Day
 May 28—Senior Ceremonial
 May 29—Graduation
 May 30—Memorial Day

June 1-2-3—Final Examinations

Summer Quarter—1966

June 13-14—Registration
 June 15—Classes Begin

July 4—Holiday
 July 18-22—Mid-term Week

August 18—Graduation
 August 17-18-19—Final Examinations

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General Information

Functions of the College—The fundamental purpose of Colorado State College is to prepare teachers for many kinds of educational positions. The administration and faculty expect each student to maintain a high standard of scholarship and professional development, and to be thoroughly prepared at the time of his graduation. Six programs are offered—two undergraduate programs and four graduate programs.

Accreditation—Colorado State College is completely accredited by the North Central Association of Colleges and Secondary Schools as an institution conferring the Bachelor of Arts, the Bachelor of Science, the Master of Arts, the Specialist in Education, the Doctor of Education, and the Doctor of Philosophy degrees. Accreditation by the North Central Association of Colleges and Secondary Schools was first earned in 1916.

The college is accredited by the National Council for Accreditation of Teacher Education for the preparation of elementary teachers, secondary teachers, and school service personnel, with the doctorate degree as the highest degree approved.

The college is a member of the American Association of Colleges for Teacher Education, the American Council on Education, the Midwest Conference on Graduate Study and Research, and the Western Association of Graduate Schools.

History—The history of Colorado State College closely parallels much of the growth and development of the Greeley Union Colony. The Colony was organized in 1870 by Nathan C. Meeker, traveler and newspaper correspondent, and was named after Horace Greeley.

When the Colony was eighteen years old, a movement was started to establish a normal school to supply teachers for the community and state. The law creating the State Normal School was signed on April 1, 1889, and the cornerstone of the first building was laid on June 13, 1890. Classes were started October 6, 1890, with a staff of the principal, four instructors, and 96 students. Certificates were granted upon the completion of the two-year course.

In 1911 the name was changed to Colorado State Teachers College by the state legislature. The college was then offering four years of undergraduate work and granting the Bachelor of Arts degree. In 1935 the name of Colorado State College of Education was adopted to recognize the fully developed graduate program which was started in 1913. Early in 1957 the state legislature approved shortening the name to Colorado State College, effective October, 1957.

Government—The college is under the management of a Board of Trustees of seven members. All are appointed by the Gover-

nor of the State. Money for the maintenance of the college comes from special appropriations made by the legislature, and student tuition and fees.

Location—Colorado State College is in Greeley, a city of approximately 32,000. Greeley is 52 miles north of Denver and 52 miles south of Cheyenne, Wyoming. Estes Park is 51 miles west. The front range of the Rocky Mountains is 30 miles west of the campus. The elevation of Greeley is 4,648 feet, and the climate is invigorating and conducive to study.

Laboratory Schools—The college maintains a Laboratory School which includes Ernest Horn Elementary School with kindergarten and the first six grades, and College High School, with grades seven through twelve. For information on tuition and fees consult the Director of the Laboratory School.

The campus Special Education School, a cooperative project of School District No. 6 (Greeley, Evans and Ashton) and the college, is a laboratory school enrolling physically and mentally handicapped children. College students observe and do student teaching in this school. For information consult the director of Special Education.

A Nursery School is maintained under the direction of the Home Economics Department. Please consult the head of the department for further information.

Campus—The City campus, in a beautiful residential area of Greeley, has three parts—the Main campus, East campus and West campus. Most of the academic buildings, the Student Union, and the women's residence halls are on the Main campus. The East campus, two blocks from the Main campus, is the site of coeducational residence halls, baseball and football facilities of Jackson Field, and a portion of college housing for married students. Land for the new 148-acre West campus was acquired in 1956 and a \$2,025,000 Laboratory School was completed on this site in 1961. McCowen Hall, CSC's new coeducational residence hall designed to accommodate 500 students, was completed Fall Quarter, 1963. Presently under construction on West Campus are the Science Building and ultra-modern College Center. Funds have been allocated for the preliminary planning of a prototype of McCowen Hall. The physical plant of the City campus includes 36 buildings, exclusive of the college-owned fraternity and sorority houses. The Mountain campus, acquired in 1956, includes 80 acres of land nearly adjacent to Estes Park amid some of the most spectacular scenery in the Rockies. The Mountain campus is used as a base for field trips into the mountains by college classes.

Library Facilities—The college library in Carter Hall has 178,000 volumes, 750 microfilms and 950 periodicals, plus many government documents, pamphlets, and reference materials. Carter Hall is a modern building with many comfortable, well-lighted study areas. The book stacks are open to all students and other patrons.

Instructional Materials Center—Primarily a service unit of the college, the Instructional Materials Center has two major functions. It provides a library of some 1,700 films, 400 filmstrips and several hundred recordings. Services are available to the faculty and to the public schools and other organizations. The Center also provides services of an auditory and/or visual nature for the faculty. These services range from providing projector and projectionist for classroom instruction to the production of a variety of teaching materials.

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 Colorado State College 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 Services—Consulting services are provided to the college, individual faculty members, doctoral students and public schools. Services to individuals and organizations include aid in preparing statistical designs, proposals for grants, and manuscripts for publication. College and public school organizations are assisted in planning test programs, large-scale research projects, and program evaluation. A research journal is also published in cooperation with Alpha Mu chapter of Phi Delta Kappa and Office of Publications.

Economic Education Center—In cooperation with local, state, and national educational foundations, the Economic Education Center offers the following economic education programs: (1) summer workshops, institutes, conferences, and adult education programs for elementary and secondary school and college teachers; (2) follow-up services combined with experimental teaching projects; (3) public service programs through research and consultation; (4) dissemination of literature for greater economic understanding; and (5) a special teacher education program in economic education.

Insurance Institute—The function of the Insurance Institute is to formulate insurance courses and other insurance programs in cooperation with the Division of Education 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.

Public Services—Coordinated through the Department of Public Relations, the college provides several types of services for students, schools, and communities. The services include

off-campus classes and correspondence study, placement of graduates in professional positions, scheduling staff members and students for speaking engagements, and assisting schools and communities with their education problems.

Off-Campus Instruction—One of the many services the college provides for Colorado is an extensive program of off-campus instruction. Three types of programs are offered to help certify and upgrade teachers for the public schools. These three programs are (1) off-campus classes, (2) tele-lecture courses and (3) correspondence courses.

Off-campus classes are offered in various sections of the state primarily as in-service courses to the teachers and the school systems.

Tele-Lecture is a means of providing Off-Campus instruction simultaneously in a number of sites widely separated and distant from the campus. Through the use of tape recorded lectures the professor teaches classes in their communities. Visual materials and textbooks are used to supplement the taped lectures. Two-way communication is achieved through the use of amplified telephone conference calls which connect all class groups with the professor on the campus and with other class groups. The conference calls permit interaction between the individual student, other students, and the professor. All Tele-Lecture courses are offered for three quarter hours credit with approximately two hours per week devoted to taped lecture material and one hour per week to amplified telephone lecture and interaction with class groups.

The college provides correspondence courses for the convenience of students who want to earn college credit but cannot do so through classes on or off the campus. All off-campus classes and correspondence courses are taught by regular members of the Colorado State College faculty.

Complete information on off-campus classes, Tele-Lecture classes and correspondence study, may be obtained from the Off-Campus Study Office, Department of Public Relations.

Placement Services—The Placement Center of Colorado State College offers its services to present and former students who are seeking positions. It also offers its services to the principals, superintendents, and boards of education who are seeking employees for their school systems.

The purpose of the office is to bring students and the employment authorities together either by exchange of correspondence or by personal interview. The functions of the Placement Center are (1) to arrange for meetings of interested parties, (2) to furnish appropriate information to both parties, and (3) to give such assistance to both parties as is possible and ethical.

The only charge for this service is a small one to cover, in part, the cost of assembling data concerning the applicant. The fee is paid when the applicant enrolls. Please consult Expenses section for specific fee schedule.

Student Personnel Services

All out-of-class activities and services for students are administered by the Department of Student Personnel under the direction of the Dean of Students. These include pre-college counseling, application for admission, veterans counseling, matriculation and guidance examinations, registration for courses, record keeping, application for admission to the advanced teacher education program, application for graduation, certification, 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, student employment, and student loans and scholarships.

Counseling Services—Counseling services are available for all students of the college at the Counseling Center. These services provide an opportunity for students to receive help in determining and understanding their aptitudes and interests in order that they might select a course of study in keeping with their needs and desires. Help is also available for students who are having difficulty with course work or who present other types of problems which arise in college life, such as those of a personal nature involving social situations, physical and mental health, finances, or housing.

Student Employment—A large number of the students of the college have part-time employment on-campus to help defray their expenses. Other jobs are available in Greeley business places and homes. Each student employed on the college campus must maintain a satisfactory grade average. Inquiries concerning employment should be addressed to the Director of Financial Aid, Department of Student Personnel.

Health Services—The Student Health Service offers examination, treatment and limited dispensary facilities with registered nurses in attendance at all times during the college day, and with physicians available at specific office hours.

Students are given a health certificate with the names, addresses and telephone numbers of all physicians in Greeley. A student may go to the office of any Weld County physician, or he may call the physician to his residence. Fees and costs of certain operations are paid for from the student health fund.

Students who are on off-campus assignments doing supervised practice in student teaching, student nursing, and Special Education may use the health certificate in the community where they are assigned by special arrangement at the Accounting Office when the health certificate is issued.

Transcripts—Students may obtain official transcripts of their college records on payment of \$1.00 for each copy, payable in advance. Requests should be addressed to the Recorder, Department of Student Personnel.

Education of War Service Personnel—All ex-service personnel entering under the veterans' education and training program must present a Certificate of Eligibility valid for use at Colorado State College. This certificate must be presented at the time of registration. Further information concerning Veterans' Affairs may be obtained from the Director of Financial Aid, Department of Student Personnel.

Photographs—A college photographer will take pictures of all new students on registration day. These pictures are for official files and for the student's identification card.

Housing

Student Residence Halls—Room and board accommodations are available in college residence halls for undergraduate or graduate students on a contract basis for the full school year consisting of the fall, winter and spring quarters. No student is permitted to break this contract unless he or she is leaving the campus. Residence in these halls provides social, educational, and cultural advantages to the student. Each hall is under the supervision of a director chosen for his or her experience and interest in the personal and social growth of college-age students.

Residence Regulations—All women students are required to be in their places of residence not later than 11:00 p.m. on Sundays through Thursdays and by 1:00 a.m. on Friday and Saturday nights. Freshmen women are required to be in their places of residence by 10:00 p.m. on Sundays through Thursdays during their first quarter of enrollment. In subsequent quarters freshmen women who are maintaining satisfactory grades are permitted the 11:00 p.m. hours.

Desirable study conditions are to be maintained by all students at all times in residence halls, college-owned housing, and college-approved private homes.

Linen and Bedding—Students provide their own personal linens and towels. The college furnishes and launders college-owned bedding in the residence halls and college-owned houses.

Dining Rooms—Students living in the residence halls have their meals in the dining rooms maintained on the campus. Rates are established on a room-and-board basis. These rates may vary slightly depending upon location and size of the room as well as upon any marked fluctuations in food costs. Such changes are authorized by the Board of Trustees. Notification of changes in rates is given at least thirty days in advance of any school quarter.

Application for Rooms—Application blanks may be obtained from the Department of Student Personnel. The completed application for housing, with a \$25.00 deposit, must be returned

to the Director of Student Housing, Department of Student Personnel. If the applicant desires to cancel his application for Fall Quarter accommodations and notifies the Director of Student Housing on or before August 15th, \$10.00 of the deposit will be refunded. If the applicant attends Colorado State College, he or she may not cancel the contract for accommodations in the residence halls after August 15th. If the applicant does not attend Colorado State College and cancels after August 15th the college will retain the entire \$25.00 deposit. These same regulations apply to reservations for other quarters, except that the cancellation date is 20 days prior to the beginning of that quarter. If a student living in a residence hall should withdraw from the college in any quarter, he forfeits his room deposit of \$25, is charged for the room rent for the balance of the quarter, and is allowed a refund only on the dining hall charges on a pro-rated basis.

If all provisions of the contract have been complied with and no damage charges have been assessed, the \$25 deposit will be refunded at the end of the school year. If the resident elects to re-apply for a room in the residence halls for the following year, his deposit will not be refunded but will be transferred to the renewal application. Except for Greeley residents, first-year freshman students are required to live in the residence halls.

Off-Campus Housing—The Director of Student Housing has also examined and approved many Greeley homes near the campus, and will assist students who are not required to live in residence halls to obtain rooms in the private houses. Boarding places near the college are available for students living off-campus. All undergraduate students are required to live either in the college residence halls or in approved private residences.

Undergraduate students are required to live in approved off-campus housing with the following exceptions: (1) Students 21 years of age or over; (2) Students who have successfully completed more than 90 credit hours and have the permission of their parents to live where they choose; (3) Students whose parents or guardians live in the Greeley vicinity; (4) Married students.

Students living in approved off-campus housing must report their addresses and present parental approval to the Director of Housing within the first week of each quarter. Failure to report one's address or present written parental approval may result in disciplinary action.

Residents of approved off-campus housing must abide by the College regulations concerning conduct. Those students not living in approved housing are expected to conduct themselves in accordance with the standards of the College and community.

Jackson Field Housing Project—A limited number of temporary apartment units are available for students with families.

These furnished apartments are provided with heat, electricity, and water. The housing project is located on college-owned property, near the men's residence halls and the stadium, Jackson Field. Applications for rentals are made to the Director of Student Housing, Department of Student Personnel. A \$25 deposit must accompany an application for Jackson Field Housing.

Loan Funds

Loan funds available to students are administered by a Committee on Loans which determines from time to time the policies and regulations under which loans may be made to students and approves all loans. All applications for loan funds are to be addressed to the Director of Financial Aid.

National Defense Education Act Student Loan Program—Colorado State College has been approved as a participant in the Student Loan Program authorized by the Federal Government. Loans are available to outstanding high school seniors and college students in need of financial assistance to be able to attend college. Repayment provisions are especially favorable to graduates in teacher-education who enter the teaching profession. Address inquiries to the Director of Financial Aid, Colorado State College.

College Loan Funds—Sixteen college loan funds with aggregate resources of more than \$131,000 are available to help worthy students. Applications for loans may be made through the Director of Financial Aid.

All loans are completed on personal, unsecured notes bearing a low rate of interest. Over-all living costs, job prospects, potential earning power, and the credit experience of the student are carefully considered by the committee. More than six thousand students have utilized the loan funds since 1911.

The funds are: William Porter Herrick Memorial, Sarah Platt Decker Memorial, Rotary, WTK, Fortnightly Music Club, Kendel Music, Altrusa, Shyn, Sigma Upsilon Graduate, Panhellenic, High School Loan Fund, Merriman Memorial Fund, Andrew P. Bengtson and Gertrude Bengtson Memorial, Phi Delta Kappa, Associated Students, and Alfred L. and Carena L. Jex Fund.

United Student Aid Fund Loan Program—Colorado State College is collaborating with the United Student Aid Fund Loan Program whereby qualified students may obtain loans at cost from their local banks in most states. These loans are available to sophomores, juniors, seniors, and graduate students. Application forms are available at the Office of the Director of Financial Aid.

Scholarships and Awards

Several scholarships and awards have been established for students of the college. To keep scholarships in force, the recipient must maintain a minimum cumulative grade average as follows: freshmen, 3.5; and sophomores, juniors and seniors, 3.75. Unless otherwise noted, applications for scholarships should be made to the Director of Financial Aid, Department of Student Personnel, Colorado State College.

Colorado State College Awards—Colorado State College awards a limited number of scholarships and tuition waivers to graduates of Colorado high schools and junior colleges who deserve such recognition and are especially interested in becoming teachers. These scholarships cover the cost of tuition, but do not include the payment of college fees. Recipients must be residents of the State of Colorado.

To keep these scholarships and tuition waivers in force the recipient must maintain a grade average meeting the standards established by the Scholarship Committee and must uphold all requirements of good citizenship.

Applications for these awards must be received by the Director of Financial Aid not later than March 15.

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

The Eleanor S. and Alma J. Dickerson Scholarships—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 Colorado State College, 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.

The 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 Colorado State College and the director of intramural athletics. The Scholarship Committee of the college 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 college for at least one year.

The 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 Colorado State College. The Scholarship Committee selects annually a deserving upper-classman who has been enrolled in the college for at least a year. The award is to be used at Colorado State College and preference is given to a student majoring in business education.

The 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 Colorado State College, who is a resident of Weld County. The scholarship will be granted on an annual basis as income from the trust fund is available.

Joint Honor Scholarships—Cooperating with other state institutions of higher learning in Colorado, the college honors Joint Honor Scholarships which are awarded at high school commencements to outstanding Colorado students under a program arranged by the participating institutions. The Joint Honor Scholarship covers the cost of tuition. College and student services fees must be paid by the student. A Colorado high school senior is advised to inquire of the principal or superintendent of his school concerning the eligibility standards for such scholarships.

The Helen MacCracken Scholarship—A fund has been established by Mrs. Helen MacCracken, a former professor of science at Colorado State College, to provide financial aid to a meritorious student enrolled at Colorado State College studying Elementary Science Education. Inquiries should be made of the Chairman, Division of the Sciences, Colorado State College.

The 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 Colorado State College. A number of scholarships are awarded annually from this fund, and a recipient may qualify for each year she is attending college as a full-time undergraduate student. Normally, a scholarship is not awarded before the sophomore year. The scholarship generally provides a sum equal to tuition, student services fees, and books for the academic year.

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

The Emily C. Newman Scholarship Fund—This fund was established by the will of Emily C. Newman, pioneer home-

steader and teacher of northern Colorado. It provides financial assistance to well-qualified and deserving freshmen applicants from Weld and Morgan counties, Colorado.

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

The 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 Lamba Sigma Tau. The scholarship is tenable for one year.

The Soroptimist Club of Greeley Scholarship—An annual scholarship of \$150 has been established by the Soroptimist Club of Greeley to be awarded to a young woman enrolled at Colorado State College 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.

The John S. Welling Scholarship—A fund was established by his friends and family in memory of John S. Welling, former Professor of Social Studies at Colorado State College. The Scholarship Committee annually selects a deserving sophomore student who is majoring in social science. The award is to be used for college expenses at Colorado State College.

The Helene Zahnen Memorial Award—A fund was established as a memorial to Helene Zahnen, former professor of Foreign Languages and teacher in College High School for many years. The fund provides for some financial assistance to a deserving graduating senior of College High School who enters Colorado State College to study to become a teacher of foreign languages. Applications should be made to the Principal of College High School, Greeley, Colorado.

Student Activities

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

Eligibility for Student Activities and Athletics—Students who do not maintain acceptable grade averages will not be permitted to participate in varsity athletics, dramatics, debate and other extracurricular activities of the college 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 direction of the Department of Student Personnel. The Associated Students elect in the Spring quarter a student governing body, the Student Council. The Student Council serves in the succeeding school year.

Students registered for six or more quarter hours of credit on the campus are automatically members of the Associated Students and are entitled to all regular college 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. Two student publications, the *Mirror*, weekly newspaper, and the *Cache la Poudre*, annual year-book, are provided without charge to members. Facilities of the College Center are also available to members.

The student government does not function during the Summer Quarter, but comparable activities are provided to students under the direction of the Director of Summer Quarter and the Director of the College Center.

Associated Women Students—All women students are members of the Associated Women Students. This organization supports the many projects which further the growth and betterment of women's activities at the college. The organization is very active in assuring a friendly welcome to each new woman student.

Athletics—The athletic activities of the college are governed by a Board of Athletic Control on which both students and faculty are represented. Intercollegiate and intramural athletic programs are scheduled in football, basketball, baseball, field and track, wrestling, swimming, gymnastics, tennis, and golf. Gunter Hall, the large modern and thoroughly equipped gymnasium, and Jackson Field, athletic stadium, afford ample facilities for the major indoor and outdoor sports.

Colorado State College is a member of the Rocky Mountain Faculty Athletic Conference, and is bound by the rules of that body in governing eligibility of athletes and the conduct of students at or in connection with athletic events.

The Women's Athletic Association has charge of and encourages intramural participation in athletic sports suitable for women, including swimming, basketball, softball, volleyball, tennis, track and field, archery, and fencing.

Forensics—Students have an opportunity to participate in a comprehensive program of intercollegiate debate and public discussion. The college is a member of the Colorado-Wyoming Intercollegiate Forensic League 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 two campus publications owned and published by the students. The *Mirror* is a weekly newspaper, and the *Cache la Poudre* is the student annual.

Little Theatre of the Rockies—The Little Theatre of the Rockies presents several outstanding plays during the school year. Students may try out for parts in the plays or work as stage carpenters, electricians, property managers, etc.

Clubs and Honorary Fraternities—Each division of the college sponsors honorary fraternities and clubs of various types which are of special interest to students majoring or minoring in the division. 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 Phi Gamma, national journalism fraternity;
- Alpha Psi Omega, national drama fraternity;
- Delta Phi Delta, national art fraternity;
- Lambda Sigma Tau, national science fraternity;
- Orchesis, modern dance organization;
- 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.

The following honorary and service fraternities are for men:

- Alpha Phi Omega, national scouting 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;
- Intercollegiate Knights, national service organization.

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;
 Gold Key, senior women's honor society;
 Pi Lambda Theta, national education fraternity;
 Spur, national service fraternity;
 Tau Beta Sigma, national band fraternity.

Social Organizations—At Colorado State College there are eight national social sororities and six national social fraternities.

Sororities

Alpha Delta Pi
 Alpha Gamma Delta
 Alpha Phi
 Alpha Sigma Alpha
 Alpha Sigma Tau
 Delta Zeta
 Sigma Kappa
 Sigma Sigma Sigma

Fraternities

Acacia
 Alpha Kappa Lambda
 Sigma Chi
 Sigma Phi Epsilon
 Tau Kappa Epsilon
 Theta Xi

No student is eligible for pledging until he or she has been enrolled at Colorado State College for one quarter.

Panhellenic Council, composed of two representatives from each sorority, and the Inter-Fraternity Council, composed of three representatives from 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 college emphasizes the value 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. The Religious Council, composed of student representatives of all religious groups on the campus, is the coordinating agency for campus religious activities. Several religious organizations have student centers near the campus.

Music Organizations—The music program is an important part of college life. Qualified students are eligible to participate in the choirs, the college bands, the college orchestra, and the Greeley Philharmonic Orchestra. During the school year, the Division of Music presents special programs.

Expenses

Quarterly Tuition and Fees

Tuition and Student Services Fees are assessed and collected during each registration period and are based on the number of quarter credit hour units for which the student enrolls. Charges are applicable to all enrollments whether arranged for credit or audit registration, or for partial or full study programs. Assessments are uniform for each quarter depending on the student's assigned residence status, in-state or out-of-state.

<i>On-Campus Instruction</i>	<i>Per Credit Hour of Enrollment</i>
FALL, WINTER OR SPRING QUARTERS	
Colorado Resident	
Tuition	\$4.50
Student Services Fee	<u>2.00</u>
	\$ 6.50
Non-Colorado (out-of-state) Resident	
Tuition	10.00
Student Services Fee	<u>2.00</u>
	12.00
Off-Campus Instruction* (Extension Services)	
Group Instruction	10.00
Correspondence Study	10.00
Doctoral Research Course Credit	
Tuition only in lieu of regular tuition and Student Services Fees.....	10.00

*Residence status is not determined for or applied to off-campus programs.

Tuition and Student Services Fee charges are computed by multiplying the number of course credit hours for which registered by the applicable charge quoted above. A typical registration for a complete program each quarter will occur for between 14 and 18 credit hours. Registrations from quarter to quarter may vary considerably. The course load elected is dependent on the adviser's recommendations, and is coordinated with the student's needs and interests.

Payment of Tuition and Student Services Fee charges will entitle the student to instruction and a number of campus services.

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

On campus or on student teaching assignment in the academic year, a student enrolled for six or more credit hours is entitled to all regular college services accorded to full-time students. In addition to those listed in the paragraph above, the services include the issuance of a validated identification card, contractual medical and hospitalization services provided under

the terms of a Student Health Certificate, admission to college athletic events, Little Theatre plays, and other public events specified from time to time. The college annual, *Cache la Poudre*, will be issued also each Spring Quarter to those students in residence who have been enrolled for six or more credit hours in each of the three quarters of the academic year.

During the Summer Quarter, college fee charges do not provide for contractual medical and hospitalization services but are used to expand a varied program of campus recreational, social and educational activities.

Recipients of scholarships or tuition waivers receive as a credit against all charges only the value of that portion of the credit hour charge which is represented by tuition. Certain tuition scholarships and waivers are issued to apply in the Fall, Winter and Spring quarters only; others, principally the Joint Honor Scholarships and the Colorado State College Awards, are validated for use during the Summer Quarter. Only that portion of the credit hour charge represented by tuition is waived. Holders of Student Teaching Reciprocity Waivers which were issued prior to July 1, 1965 are granted waivers for tuition plus student services fees only for the credit hours value of the waiver presented.

Residence status is determined by college officials solely for the purpose of assessing tuition. Rulings are made strictly to accord with all the provisions of a 1961 state statute (C.R.S. 1963, 124—18—1-5, inclusive; Vol. 6, pp. 611-613, inclusive) which applies uniformly to all registrants in the state institutions of higher education in Colorado. Administrative procedures which fix status before or at registration have received the approval of the Trustees of the State Colleges in Colorado and the Association of State Institutions of Higher Education in Colorado. If, in special circumstances, the resident status conferred on a student is questioned, an appeal from it may be made on a specified form and the case will be reviewed by the College Committee on Resident Status two weeks following a registration. The ruling of the committee following the review is final. A declaration by the student of intent to be or to become a resident of Colorado has no bearing on the determination of the residence status fixed for tuition payment purposes.

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

	<i>Status</i>	
	<i>In-State</i>	<i>Out- of-State</i>
Tuition and Student Services Fee (15 Credit Hours per Quarter).....	\$ 292.50	\$ 540.00
Books and Supplies (estimated).....	100.00	100.00
Board and Room (average).....	765.00	765.00
*Personal Expenses.....	250.00	265.00
Total Expenses Academic Year.....	\$1407.50	\$1670.00

*As amended by H. B. 1474, 1st Regular Session, Forty-fifth General Assembly.

SUMMER QUARTER, EXCLUSIVELY

	<i>Status</i>	
	<i>In-State</i>	<i>Out- of-State</i>
Tuition and Fees (full quarter of 10 weeks and 15 credit hours).....	\$ 97.50	\$ 180.00
Books and Supplies (estimated).....	35.00	35.00
Board and Room (2 to a room average).....	275.00	275.00
*Personal Expenses.....	100.00	100.00
Total, Full Quarter.....	\$ 507.50	\$ 590.00

*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 college expenses. Graduate fees, music fees and certain incidental fees listed below must also be added to the above estimates where applicable.

Incidental Extra Fees Applicable Under Specified Conditions

Late Registration: Assessed for an enrollment completed on the first day following the scheduled registration day.....	\$ 5.00
Assessed for each added day, during which late registration is permitted	2.00
Special Examination: Assessed when permission is granted to take an examination at a time other than regularly scheduled	2.00
Late Application for Graduation	2.00
Change of Program: Assessed for each separate change of program permitted	1.00
Extension of Credit: Assessed if and when a deferred payment program is concluded to be effective within a quarter	
Tuition and Student Services Fee Charges.....	1.00
Tuition, Fees and Board and Room Charges.....	2.50
Assessed charges are due and payable at registration in 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.	
Proficiency Examination	2.00
Official Transcript of College Records, per copy	1.00
Student Identification Card Replacement	1.00
Certified Statement of Issuance of Teaching Certificate and/or diploma	1.00
Reading Improvement Laboratory	
Registration, per quarter.....	10.00
General Education Development Tests	5.00
(May be used to qualify for a High School Equivalency Certificate from the Colorado State Department of Education)	
Special tests by the Counseling Service	5.00
Special Billing: Assessed when an itemized invoice of an account is requested by the student or a supporting agency.....	1.00
Placement Center Charges:	
(The Placement Year Begins October 1 and ends September 30)	
Initial Enrollment before December 1.....	\$ 10.00

Initial Enrollment after December 1.....	15.00
Re-enrollment before February 1.....	10.00
Re-enrollment after February 1.....	15.00
Six sets of credentials furnished with enrollment fee. Seventh and subsequent copies of credentials sent out, per copy.....	1.00
First and subsequent copies of credentials mailed when applicant has not re-enrolled, per copy.....	1.00
Telephone calls, telegrams, postage for air mail or special delivery billed at actual cost.	

Fees Added for Graduate Study

Doctoral Research Studies* (assessed to each doctoral applicant in successive quarters of enrollment up to six quarters) for a total (minimum-maximum) of \$300.00. This fee is assessed as follows:

First quarter	\$25.00
Second quarter	25.00
Third quarter	50.00
Fourth quarter	75.00
Fifth quarter	75.00
Sixth quarter	50.00
Doctoral Research Abstract Publication (assessed at time study is formally accepted and approved).....	30.00
Specialist in Education Research Studies* (assessed to each applicant in successive quarters of enrollment up to three quarters) for a total (minimum-maximum) of.....	75.00
Ed.S. Research Studies fee per quarter.....	25.00

*(Enrollees in the doctoral or the specialist program pay all tuition and fees applicable to each regularly registered student in each quarter of attendance plus the applicable studies fees listed above.)

Doctoral candidates, when requesting registration for research credit (usually during the quarter in which the study is formally accepted and approved) will pay \$10.00 tuition per quarter hour of research credit recorded in lieu of the tuition and Student Services Fee.

Any unclassified graduate student who possesses the Master of Arts degree and who subsequent to enrollment elects to enter the Specialist in Education degree program or the Doctor of Education degree program will be charged research studies fees commensurate with the amount of unclassified credit made applicable to the advanced degree program entered.

Binding and mailing Master's Thesis, Practicum or Doctoral Research Study (4 copies required).....	\$12.00
Comprehensive Examination Retesting Fee.....	5.00
Writing Laboratory for Graduate Students (required of a student assigned to the laboratory following tests).....	10.00
Advanced Test in Education and Psychology and Area Tests in Social Science, Natural Science, and Humanities (for doctoral and specialist students).....	10.00

Fees for Music Instruction

Individual music lessons, per quarter	
Music Majors	\$12.50
Other college students	15.00
Persons not enrolled in the college or affiliated schools.....	25.00
Individual music lessons, less than full quarters	
Violin, piano, organ, strings, each.....	\$ 3.00
Other instruments, each.....	2.50
Practice room per quarter (includes piano rental).....	5.00
Orchestra or band instrument rental per quarter.....	5.00
Organ rental per quarter.....	10.00

Policy on Refunds Due to Withdrawal

The following policy on refunds applies only to students withdrawing completely from college. **Adjustments in Charges Caused by Adding or Dropping Courses**—All additions to courses permitted under institutional policy will be charged at the appropriate rate (see page 20).

With the exception of complete withdrawals, refunds will be made only for courses dropped during the first week of the quarter.

To be eligible for a refund of any kind under the following regulations, the student must present a copy of a formal, approved withdrawal notice to the Business Office. Consult the Records Office and the Housing Office for information on the procedure required.

A partial refund of Tuition and Student Services Fees is made under Board of Trustees rulings in the following terms:

On partial programs of five hours or less, no refunds following the first week of classes; otherwise as provided hereunder.

On any course of two weeks or less in the summer quarter, no refunds following attendance at the first meeting of the class.

Within the first week following the scheduled registration day, all tuition and fees less a deduction of \$1.00 for each course for which registered.

Within the second week following registration, three-fourths of tuition and fees.

Within the third week following registration, one-half of tuition and fees.

Within the fourth week following registration, one-fourth tuition and fees; thereafter no refunds are made.

Room and board or apartment rental payments are refunded under the provisions of the Residence Halls Lease. Consult the Housing Office at withdrawal for information on the computations applied to partial deposit refunds and allowable credits on board and room payments.

Residence Halls Charges

The rates quoted are first applicable with the Fall Quarter of 1965.

	<i>Minimum</i>	<i>Maximum</i>
	<i>Per Week</i>	
Board and Room per person		
Partial Session in the Summer Quarter, one or more weeks for either Men's or Women's Residences		
Occupancy, two persons to a room.....	\$ 26.00	\$ 26.00
Occupancy, single person per room.....	32.00	32.00
Fall Quarter, 1965, and Winter and Spring Quarters, 1966		
	<i>Minimum</i>	<i>Maximum</i>
	<i>Quarterly</i>	
All Residence Halls,		
single student occupancy,		
two persons per room.....	\$255.00	\$275.00
Occupancy, single person per room (available in summer quarter only).....	290.00	290.00
Board Service Only		
14 meals per week, limited to students not occupying residence halls space, men or women's halls	145.00	145.00
Rooms Only		
College-Owned Fraternity or Sorority Houses (restricted to organization members, fall, winter and spring quarters) single persons.....	70.00	70.00
Married couples, rates for 2 persons (summer quarters only).....	155.00	155.00
Families (reserved for full summer quarter only)	230.00	230.00
Residence Halls, Families (summer quarter only)	225.00	225.00

	<i>Monthly</i>	
Apartments, Jackson Village (rentals restricted to student families).....	40.00	52.00

Students residing in dormitories and fraternity or sorority residences are expected to provide their own towels and personal linens. The college furnishes and launders college-owned sheets, pillow cases, mattress pads and blankets. Minimum furnishings are provided for student-family apartments.

Address the Housing Office, Department of Student Personnel, when applying for any type of campus housing. A deposit of \$25.00 must be advanced to confirm a reservation. When a reservation is canceled, \$10.00 will be refunded if notification thereof is given at least 30 days prior to the quarter for which accommodations have been reserved except for the fall quarter when notification must be received by August 15. The housing deposit of a student who enters a residence will be held during the fall term of residence and all consecutive, subsequent reservation periods. Penalties assessed for damages to property, when incurred, will be deducted from the housing deposit and any remaining balance returned after the student completes campus residence.

A housing contract may not be terminated unless the student is leaving the campus or is getting married. When a student withdraws from college and vacates a college residence prior to the end of a school quarter, he forfeits the room deposit and is charged full rent for the room. Board charges will be calculated for all days of residence and the balance of the quarter's payment as prorated will be refunded.

The Trustees of the State Colleges in Colorado, the governing body of the college, reserves the right to alter tuition, fees and housing charges on 30 days notice prior to the announced final day of registration for any college quarter.

Academic Information

Undergraduate Program—The Bachelor of Arts degree (B.A.) may be earned in either the teacher education or liberal arts programs. The teacher education program prepares for teacher certification at the elementary, junior high or secondary levels in Colorado and other states. The liberal arts program does not fulfill teacher certification requirements.

Undergraduate Course Load — The normal undergraduate course load for a quarter is 15 hours of academic credit. This does not include the physical education activity courses required in the freshman and sophomore years. Upon the approval of the Dean of Students, a maximum of 18 academic credit hours plus the required physical education activity may be taken by students who have a college scholastic average of "B" or better. Extra hours for other students who have good records, but below "B," will be considered individually. All requests for permission to carry more than the normal undergraduate course load must have the approval of the Dean of Students, the Dean of Men, or the Dean of Women. Graduation requirements and the academic standing of the student will be considered by the Dean of Students in making the decision.

Students are limited to a 16 hour maximum load when they are enrolled for 16 hours of student teaching.

Graduate Program—1. Master of Arts (A.M.) degree. This degree is offered in seven divisions of the college.

2. Specialist in Education (Ed.S.) degree. This degree is granted for one year of work beyond the Master of Arts.

3. Doctor of Education (Ed.D.) degree. This degree is based upon advanced study, successful experience, and research.

4. Doctor of Philosophy (Ph.D.) degree. This degree is based upon advanced study, successful experience, and research.

Graduate Study—Detailed information about the graduate program may be obtained from the graduate section in this catalog. Course work will be outlined by the student's major professor.

Effective Dates of this Catalog—The effective dates of this catalog are from September 1, 1965, to August 31, 1966. Students enrolling for the first time at the college during these effective dates will follow the rules and regulations in this catalog until their graduation, if such graduation is within six years.

Scholastic Average and Academic Status—Freshman students are required to maintain a minimum grade point average of 2.5 in each quarter and must attain a minimum cumulative grade point average of 2.75 for the freshman year. A freshman student achieving less than 2.75 in any quarter will be placed

on academic probation for the succeeding quarter. Any freshman student attaining less than 2.5 in any quarter or less than 2.75 for the year may be suspended.

Sophomore, junior, and senior students are required to maintain a minimum grade point average of 2.75 in each quarter. Sophomore students must attain a cumulative grade point average of 3.0 by the close of their sophomore year. Juniors and seniors must maintain a cumulative grade point average of 3.0 throughout the junior and senior years. A sophomore, junior or senior achieving less than 3.0 in any quarter will be placed on academic probation for the succeeding quarter. Any sophomore, junior or senior attaining less than 2.75 in any quarter, or less than 3.0 cumulatively at or after the close of the sophomore year, may be suspended.

A minimum cumulative grade point average of 3.0 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 an A.B. degree. A student must have a cumulative grade point average of 3.0 and a 3.0 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. Other marks used are: "Inc." incomplete; "W" approved withdrawal; "TF" unapproved withdrawal; "WF" failing at withdrawal; "IF" condition not removed. An "Inc." must be removed within the first four weeks of the succeeding quarter or it automatically becomes a grade of "IF."

No student grade can be changed after the first two weeks of the quarter following the receipt of the original grade by the Recorder.

Computing Grade Averages—Each of the letters of the marking system has a numerical value. The letter "A" has a value of five points; "B" a value of four points; "C" a value of three points; "D" a value of two points; and "F" a value of one point. If all the student's marks were "C's" they would have a numerical value of three. If one-half of his marks were "C's" and the other half "D's" the numerical value of his marks would be 2.5.

Quarter System—The school year is divided into four quarters: Fall, Winter, Spring and Summer.

Quarter Hour—All credit toward graduation is computed in “quarter hours.” The term “quarter hour” means a subject given one day a week through a quarter of approximately eleven weeks.

Program Planning—Programs outlining specific courses must be planned with the student’s adviser. The student is responsible for arranging the necessary meetings with his adviser and for getting course program approval from his adviser.

Majors and Minors—At the time of the first registration, a student must declare his major and minor fields of study and be assigned by the major division to a faculty adviser in his major division who helps him plan his program of studies. If a student wishes to change to another major or minor field at a later date, he must obtain the approval of all divisions concerned. Majors and minors which may be obtained at the college are listed at the beginning of each division’s section of this catalog. Specific courses required for the majors and minors are also listed in each division.

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.

Credit Offered—Courses offered during Fall, Winter, Spring and Summer quarters will carry the credit designated in the catalog.

Course Numbers—The course numbers are divided into five groups: (a) 1 to 99 are primarily for first and second-year students; (b) 100 to 199 are primarily for third and fourth-year students; (c) 200 to 299 are primarily for fourth-year and graduate students; (d) 300 to 399 are for graduate students; (e) 400 to 499 are primarily for candidates for the doctorate.

Course Descriptions—Courses offered in each division are listed and described. The course description gives the course number and title, the quarter hours of credit offered, and explanation of the content of the course, and other information needed for planning a program.

Schedule of Classes—The college 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. This regulation applies to new registrations and to students wishing to change programs.

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. Permission to register after the date for registration stated in the college catalog must be obtained from the Dean of Students for undergraduate students or the Dean of the Graduate Division for graduate students. The late registration fee will be charged all students who complete registration later than the stated catalog date.

If any student thinks that his late registration fee should be refunded, he should state his reasons either in writing or personally to the Committee on Waivers. (See Expenses section for late registration fee rate.)

Absences—Students must, except for illness, emergency or such other reasons as the individual instructor concerned considers acceptable, be present at all classes for which they are enrolled. No matter what the reason for the absence, the student is held responsible for doing the full work of the class. No unexcused absence may be made up.

Emergency absences must be cleared by the Dean of Students. Students are responsible for notifying their instructors when they are absent due to illness. The Health Service will notify instructors when students are ill during final examinations or in case of extended illness. The decision concerning whether or not a student should be excused because of illness is the responsibility of the instructor. Any other reasons necessitating absence must be explained to the instructor concerned, in advance of the proposed absence, and arrangements must be made at that time with the instructor for the work required of the student at the time of his absence. Any student who is absent one or more times during the last week of the quarter will receive an "Incomplete" for the course.

Any instructor who asks that students be excused for field trips or other out-of-class activities under his sponsorship or supervision must send the list of the students to the Dean of Students for his approval at least one week before the absence.

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 clear the withdrawal on the withdrawal form at the Records Office. No withdrawals from class are permitted during the last two weeks of a quarter.

Final Examinations—A final examination in each class is to be taken by the student on the dates officially announced. Students granted permission to take a final examination at times other than officially scheduled must pay a fee.

The schedule of final examinations will be posted on campus bulletin boards one week before the end of each quarter. Final examinations are usually scheduled during the last three days of the quarter.

Citizenship Standards—A student is expected to be a good citizen of his college community. When a student shows evidence of lacking any of the essential qualities of scholarship, health, and character, he may be suspended by the college.

Undergraduate Program

Undergraduate Curriculum—The undergraduate curriculum consists of the following areas totaling 180 academic quarter hours, plus six quarter hours of physical education activity courses: (Male students may substitute Air Force ROTC Leadership Training courses for physical education activity courses.)

- a. *General Education Program*—Humanities, Communications, Sciences, Social Science, General Psychology, Personal Living.
- b. *Advanced Teacher Education Program*—Educational Psychology, Basic Concepts of Education, Methods and Observation, Student Teaching, Philosophy of Education. (Teacher Education only.)
- c. *Broad Areas of Concentration*—A major of not less than 48 quarter hours and a minor of not less than 27 quarter hours.
- d. *Electives*—Sufficient free electives to complete the requirements for graduation.

Bachelor of Arts Degree (Teacher Education)—The Bachelor of Arts degree in preparation for teacher certification may be conferred in one of the following fields:

- Fine Arts
- Home Economics
- Dietetics
- Industrial Arts
- Business Education (Office Occupations or Distributive Education)
- Elementary Education
- Special Education
- Speech Correction
- Physical Education for Men
- Physical Education for Women
- English
- English and Speech (Junior High Level)
- Foreign Languages
- Speech
- Drama
- Music Education
- Science (Biological Science or Physical Science)
- Chemistry
- Physics
- Mathematics
- Mathematics (Junior High Level)
- History
- Social Science
- Social Studies (Junior High Level)

Bachelor of Arts Degree (Teacher Education) Major and Minor Plan—In this plan of study, a major is earned in a field of specialization. A minor and sufficient electives are required to provide a broad and thorough educational background. The program:

- a. General Education courses listed for the Bachelor of Arts degree in teacher education.
- b. Required major courses not less than 48 quarter hours.
- c. One or two minors with a minimum of not less than 27 quarter hours each. The number of minors depends upon the field in which the major is taken. Methods courses are not included in the requirements for the minor.
- d. Free electives to complete 180 quarter hours of academic credit.
- e. Six quarter hours of physical education activity courses. Whenever possible, these should be taken in the freshman and sophomore years. These hours do not apply toward 180 hours of academic credit. (Male students may substitute Air Force ROTC Leadership Training courses for physical education activity courses.)

Bachelor of Arts Degree (Teacher Education) Elementary Education Major—The Elementary Education Major prepares students to teach in the elementary school. Students who complete this major carry on a program of study in various subject matter fields as well as in the education courses required for this major. The program:

- a. General education courses listed for the Bachelor of Arts degree in teacher education.
- b. Major in a subject field of specialization or in a special major called Arts and Sciences.
- c. One minor. The minor must be Arts and Sciences if the major is in a subject field of specialization. The minor must be in a field of specialization if the major is Arts and Sciences.
- d. Elementary Education Major courses listed in the Division of Education (Professional Core and Elementary Teacher Education).
- e. Sufficient electives to complete 180 quarter hours of academic credit.
- f. Satisfy physical education requirements. These hours do not apply toward 180 hours of academic credit.

Bachelor of Arts Degree (Liberal Arts)—The curriculum leading to the Bachelor of Arts degree in Liberal Arts is similar to programs offered in Liberal Arts colleges. Courses in education are not required or allowed for the degree.

The Bachelor of Arts degree in Liberal Arts may be taken in one of the following fields:

Fine Arts
 Dietetics
 Home and Family Living
 Business
 English
 Speech
 Drama
 Foreign Languages

Biological Science
 Chemistry
 Physical Science
 Physics
 Mathematics
 Medical Technology
 History
 Social Science

The degree may not be taken in the fields of Music, Health, Physical Education and Recreation, Industrial Arts, and Education. However, certain courses in these fields may be elected with the approval of the adviser and the Registrar. The only courses listed in the Education Division section of the catalog which are open to candidates for a liberal arts degrees are PCG 20, General Psychology, and courses listed in the psychology, counseling and guidance minor.

This degree is offered only in a Major and Minor plan of study. The major is earned in a field of specialization. A minor outside of the field of specialization, and sufficient electives, are required to provide a broad and thorough educational background. The program:

- a. General Education program listed for the Bachelor of Arts degree in liberal arts.
- b. Major courses required in a field of specialization not less than 48 quarter hours.
- c. A minor with a minimum of not less than 27 quarter hours outside the major.
- d. Sufficient electives to complete 180 quarter hours of academic credit.
- e. Six quarter hours of physical education activity courses. Whenever possible, these should be taken in the freshman and sophomore years. These hours do not apply toward 180 hours of academic credit. (Male students may substitute Air Force ROTC Leadership Training courses for physical education activity courses.)

Bachelor of Arts Degree (With Major in Medical Technology)

—Colorado State College and the Weld County General Hospital offer a four-year program leading to the Bachelor of Arts degree with a major in Medical Technology. Nine quarters of this program are given on the campus of Colorado State College. The clinical pathology staff is in charge of the program at Weld County General Hospital. The student must earn a total of 180 quarter hours plus six quarter hours of physical education activity courses. Of this, 45 quarter hours will be earned in the Weld County General Hospital and 141 quarter hours at Colorado State College. Student programs will be planned with the major professor.

Bachelor of Science Degree (Nursing)—Please turn to page 206 through 209 for complete information.

Pre-Professional Courses—Courses in pre-law, pre-medicine, pre-dentistry, and pre-engineering are designed for students interested in beginning their course work at Colorado State College. 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 the Chairman of the Social Science Department. For guidance within the area of pre-medicine, pre-dentistry, and pre-engineering, students should contact the Chairman in the Science Department.

Admission Policy

Admission and Retention—Admission and retention policies at Colorado State College are based on the premise that academic ability and achievement, health and physical fitness, personal and social qualities, and speech skills are important factors in the preparation of teachers and students of liberal arts.

Academic Ability and Achievement—A high school graduate or a person holding a high school equivalency certificate of the State Department of Education may be admitted to Colorado State College for a teacher-education or a liberal arts program of studies 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.

The minimal entrance requirements for admission of Colorado residents 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 two-thirds of graduating class with high school recommendation.
4. All new in-state students are required to submit scores from either the College Entrance Examination Board's Scholastic Aptitude Test (SAT) or 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 or SAT examinations may be obtained from high school principals or counselors.

The minimal entrance requirements for admission of out-of-state students 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 graduating class with high school recommendation.

4. All new out-of-state students are required to submit scores from either the College Entrance Examination Board's Scholastic Aptitude Test (SAT) or 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 or SAT examinations may be obtained from high school principals or counselors.

A person 20 years of age or over who is not a high school graduate may be admitted to a teacher-education or a liberal arts program if the results of a series of entrance examinations 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 may be admitted if he has a satisfactory academic record and is in good standing at the college from which he is transferring. His application must be received one month prior to registration.

Health—Prior to admission and following a medical examination by a qualified medical practitioner, a student shall submit to the Health Service of the college a health report which is acceptable to the staff of the 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 Colorado State College is expected to possess personal and social qualities befitting the curriculum he wishes to study, in keeping with the objectives and traditions of the college, and desirable for the vocation he plans to enter. After admission to the college, 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.

Speech Skills—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.

Matriculation Requirements—A new student, whether freshman or transfer, shall complete during the first quarter on campus a battery of matriculation tests, and the photographic and identification procedures. Guidance in the choice of major and minor fields, selection of courses, need for study skills, and need for counseling stems from the testing program. Matriculation requirements include (1) filing an acceptable application for admission, including high school and previous college record, (2) filing an acceptable health record, (3) completing the psychological and achievement tests, and (4) clearing the photographic and identification procedures.

Failure to Meet Admission or Retention Standards—A student who fails to meet any of the above standards may be denied admission to the college and/or his chosen curriculum, or if already admitted he may (1) be asked to change his curriculum, (2) be asked to withdraw, (3) be suspended, or (4) be dismissed.

Admissions Procedures

New Freshman Students

1. Get an Application for Admission form from your high school principal. Out-of-state students write to Registrar, Colorado State College.

2. Fill in Part I of the Application for Admission and have the high school office complete the form and send it to the Registrar. Applications may be filed any time after the close of the first semester of the senior year in high school and not later than 30 days prior to registration day.

3. Make arrangements to take either the College Entrance Examination Board's Scholastic Aptitude Test (SAT) or the American College Test (ACT).

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

5. Additional information regarding the freshman orientation program, health examination, etc., will be mailed prior to the opening of college in September.

Transfer Students

1. File with the Registrar, Colorado State College: a. An Application for Admission including high school record; b. An official transcript of all credits earned at other colleges or universities; c. An application for transfer of credit; d. A report of health examination.

In order to insure admission, these materials should be sent to the Registrar's Office 30 days in advance of the quarter for which the transfer student wishes to enroll. Necessary forms may be obtained from the Registrar and the letter of inquiry should state specifically that the student is a transfer student. *Graduate Students: (Please consult the Graduate Division section of this Catalog for details concerning graduate programs.)*

Minimum 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 division 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 Colorado State College Campus.

Transfer Credit—Students graduating from a junior college or transferring two years of college work may have to spend more than two years at Colorado State College 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 Colorado State College, 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. Not more than 45 quarter hours of credit may be transferred for one year's attendance at a junior college.

Colorado State College *does not* accept credit from other colleges and universities for courses in which "D's" have been earned.

Since 1949 Colorado State College 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 Colorado State College. College foreign language credit may be transferred provided a student has satisfactorily completed one full year in one language.

Credit and exemptions are allowed military veterans for USAFI courses and college level GED tests when satisfactorily completed.

After a veteran has enrolled at Colorado State College, he may present his separation or discharge papers and service school papers to the Registrar. Evaluation and review of these papers will be made by the college's Committee on Military Credit and credit is granted according to the recommendations of the American Council on Education.

Transfer Credit Deadline—Transcripts from other colleges and universities that contain credit necessary for completion of degree requirements at Colorado State College must be received by the Registrar 30 days prior to the date a student expects to graduate.

Advanced Placement

Colorado State College offers advanced placement and/or credit for graduating high school seniors who have participated in special college-level courses in the high school and who have satisfactorily passed the appropriate Advanced Placement Examinations conducted by the College Entrance Examination Board. Applications and advanced placement test results should be forwarded to the Dean of Students, Department of Student Personnel, Colorado State College, Greeley.

General Education

The courses listed here are required of all students who are studying for a Bachelor of Arts degree. These courses will be taken in the freshman and sophomore years.

Freshman Year

<i>Course Number</i>		<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
COM	1	— Elementary Composition I.....	3	3
COM	2	— Elementary Composition II.....	3	3
COM	3	— Principles of Speech	3	3
PCG	20	— General Psychology	3	3
HPER	61	— Personal Living and Community Health.....	3	3
SCI	3	— Physical Science	3	3
SCI	4	— Biological Science	3	3
SCI	5	— Earth Science	3	3

Sophomore Year

HUM	1	— Introduction—The Greek and Roman Periods	3	3
HUM	2	— The Middle Ages and the Renaissance.....	3	3
HUM	3	— The Eighteenth to the Twentieth Centuries....	3	3
SS	81	— The Individual and His Social Relations.....	3	3
SS	82	— American Life and Institutions.....	3	3
SS	83	— Contemporary World Cultures.....	3	3
		Electives**		3
				45
HPER		— Physical Education Activity courses*.....	6	6
		(1-60 only)		
				51

*Male students may substitute Air Force ROTC Leadership Training courses for physical education activity courses.

**To be sure that North Central Association accreditation standards are met, students must elect three additional quarter hours in any of the following fields: English, history, social science, science, mathematics, fine arts, languages, and psychology.

Advanced Teacher Education

The courses listed below are required of and open only to students who have been formally admitted to the Advanced Teacher Education Program.

PROFESSIONAL EDUCATION CORE

Junior Year

Course Number	Course Title	Hours	Credit
ED 101	— Basic Concepts of Education.....	5	5
PCG 140	— Educational Psychology	5	5

Senior Year

ED 251	— Student Teaching.....	16	3
ED 295	— Philosophy of Education.....	3	3
			29

These courses meet North Central Association requirements of 27 quarter hours of professional preparation. In addition to these courses, required of all students enrolled in the teacher education program, methods and observation courses required of all majors and minors are listed with other requirements in each division and are also professional education courses.

Admission—Immediately prior to the Junior year, written application must be made to the Committee on Admission to Advanced Teacher Education for permission to pursue the Advanced Teacher Education Program. Transfer students will receive an application form at the time they apply for admission to the college.

Students must declare their major and minor programs. Students who select a teacher education major and a liberal arts minor *must not expect to be recommended or endorsed for teaching* in the liberal arts minor.

Appeal by Students Who Have Been Denied Admission—Any student who has been denied admission to the Advanced Professional Education Program at Colorado State College may request a hearing for a review of his case. Such hearing shall be set up within 10 days after the filing of his request, except with mutual consent of the student and the committee members. The committee to conduct the hearing shall consist of the President of the College (or his representative), the Dean of the College, the Dean of Students, the chairman of the division or the head of the department in which the student is majoring, and the Dean of Men or the Dean of Women. The hearing will be conducted in the office of the Dean of the College, and the results of the meeting shall be transmitted in writing to the student within 24 hours.

Student Teaching

Student teaching assignments are made in cooperating public schools in the state and in the campus Laboratory Schools (Ernest Horn Elementary School, College High School, Special Education School). All assignments for student teaching are made with the approval of the Coordinator of Student Field Experiences upon the recommendation by the student's major department or division.

The minimum requirement for graduation with a teaching certificate is 16 quarter hours of student teaching.

College policy does not allow student teachers to be employed during the period of the student teaching assignment by the district in which the assignment is made.

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 teaching, he will be exempted from that requirement.

Prerequisites for Student Teaching—(1) Completion of at least two quarters as a full-time student on the college campus; (2) completion of the following courses, or their equivalent: PCG 140 and ED 101; (3) classification of junior, senior, or graduate student; (4) in the elementary school completion of ED 110, 112, and 139; in the secondary school completion of ED 140 and of 141 in the subject field or fields in which a student does his student teaching. Graduate or transfer students applying for student teaching will be held for the same prerequisite courses or their equivalent.

Before assignments are made, student must have (1) an average grade of "C" in their major and in their minor if they student teach in their minor and a cumulative average of 3.0. (Grades are figured on course work taken at Colorado State College only); (2) completed the prerequisite courses; (3) been admitted to the Advanced Teacher Education Program in the division or department where he will be doing student teaching.

Application for Student Teaching—Persons wishing to do student teaching must make application in the Student Teaching Office before registering for student teaching. They must apply within the first two weeks of the quarter prior to the quarter in which they wish to do student teaching.

Students making application for student teaching must secure the approval and signature of their adviser. Graduate students taking student teaching or advanced student teaching must be approved by the Graduate Office.

Off-Campus Instruction

Not more than 45 quarter hours of credit taken by correspondence or off-campus instruction may be applied toward a degree. This maximum of 45 hours of credit includes Colorado State College correspondence work, Colorado State College extension work taken prior to January 1, 1948 (the college no longer offers extension courses, only off-campus courses and tele-lecture courses taught by regular faculty members), and correspondence and extension work transferred from other colleges and universities. Colorado State College correspondence courses must be completed, graded and recorded 30 days before the end of the quarter in which the student expects to graduate.

A student pursuing an undergraduate degree program at Colorado State College 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 Colorado State College, 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 require the additional approval of the division involved.

Students should obtain a copy of the Correspondence Bulletin for complete information about correspondence courses. This bulletin, available from the CSC Off-Campus Study Office, explains all regulations and restrictions concerning correspondence courses.

Graduation Requirements

Procedure—In addition to meeting the common, professional major, minor, and physical education activity course requirements as specified below in this section of the catalog, each student expecting to graduate with a Bachelor of Arts degree or Bachelor of Science degree must:

1. Apply for graduation on completing 135 quarter hours of academic credit work. Total credits required for graduation are 180 academic quarter hours plus six quarter hours of physical education activity courses, numbered 1 to 60, to be earned in six quarters. (Male students may substitute Air Force ROTC Leadership Training courses for physical education activity courses.)

2. Have a minimum of 45 quarter hours credit earned in courses taken on the campus in Greeley.
3. Not apply toward the degree more than 45 quarter hours of credit earned in Colorado State College correspondence courses and/or correspondence and extension courses transferred from other colleges and universities.
4. Have a cumulative grade point average of 3.00 or higher.
5. Have completed the Colorado State College matriculation examinations.
6. Have met the college photograph requirements.
7. Have a health examination within 12 months of his or her graduation date, and have this report filed with the Student Health Service.
8. Keep the Registrar informed at all times in regard to any change in graduation plans.
9. Participate in commencement exercises unless formally excused.

Requirements for graduation are checked in accordance with the requirements in *one* college catalog. A student is not permitted to combine programs from different catalogs. Normally, students meet requirements of the catalog issued them during their first quarter on campus. However, a student may elect to accept the requirements of a later catalog, but he must meet all requirements of that catalog.

Application for Graduation—Upon completing 135 quarter hours of academic credit work, students must apply for graduation at the office of the Registrar. Failure to apply at the stated time will result in the assessment of a fee and possible delay of graduation by one quarter for a student. It is the student's obligation to keep the Registrar informed at all times in regard to graduation plans, such as any change in the proposed quarter of graduation after the application was filed.

Graduate Division

Program—Colorado State College offers advanced programs of professional work leading to the Master of Arts degree, Specialist in Education degree, Doctor of Education degree, and Doctor of Philosophy degree. Graduate study was first offered during the Summer Session of 1913, and the first master's degree was conferred in June, 1914. In 1929 the Board of Trustees authorized the college to provide a program leading to the doctor's degree, and in 1952 the Specialist in Education (Ed.S.) degree was approved.

Organization—The Graduate Council is the legislative body for graduate work. Each of the instructional divisions of the college offering a graduate program is represented on the Graduate Council.

Objective—Colorado State College is primarily an institution for the preparation of teachers, supervisors, and administrative personnel. In accord with this fundamental objective, the college grants the teaching degrees of Bachelor of Arts, Master of Arts, Specialist in Education, Doctor of Education, and Doctor of Philosophy.

Accreditation—Colorado State College has been awarded complete accreditation by the North Central Association of Colleges and Secondary Schools and by the National Council for Accreditation of Teacher Education in its academic program, bachelor through doctor degrees. The college is also a member of the American Association of Colleges for Teacher Education, the American Council on Education, the Midwest Conference on Graduate Study and Research, and the Western Association of Graduate Schools.

Admission—All candidates for the graduate degree must file with the Dean of the Graduate Division an application in triplicate and two copies of certified transcripts of all previous academic credits preferably *thirty days before registration*. Student failing to make formal application for admission prior to the date of registration should expect a delay of several hours in completing enrollment while IBM materials are being prepared.

All classified graduate students are required to take the English usage examination, consisting of an objective English usage test and an essay.

Students in the Master of Arts program scoring between the 80th and the 21st percentiles on the standardized English usage examination may be excused from the Writing Laboratory for Graduate Students requirement on the basis of creditable essay evaluation.

Students in the Specialist in Education, Doctor of Education and Doctor of Philosophy programs scoring between the

80th and the 40th percentiles are subject to the aforementioned consideration.*

Students scoring above the 80th percentile are excused from the Writing Laboratory requirement.

A non-credit Writing Laboratory for Graduate Students (0300) will be required of those students who fail to meet these minimum standards (See Expense section for lab fee). Students who are required to enroll in the Writing Laboratory will remain in the class until they can write acceptably according to standards set up by a committee composed of members of the Division of the Humanities.

Health—A student applying for admission to an advanced degree must file a medical examination. Prior to admission and following a medical examination by a qualified medical practitioner, a student shall submit to the Health Service of the college a health report which is acceptable to the staff of the 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.

Photograph—Each student is required to furnish two photographs, application size of 3 by 4 inches, for the official files of the college. These photographs are for identification purposes only and not a criterion for admission.

Courses for Seniors—Senior students may, in their last quarter of academic undergraduate study, register for graduate courses which are in excess of the requirements for the bachelor's degree when formal application for admission is filed and approved prior to the final quarter. Students will be held for final examinations in the courses taken for graduate credit.

Registration and Advisement—The Dean of the Graduate Division will request the division chairman to appoint an adviser for those students who have completed admission requirements. All degree programs will be planned with and approved by the student's adviser.

Students who enroll in a non-degree program in an unclassified status are limited to a maximum of ten weeks' residence, regardless of the total number of valid quarter hours credit, when they apply for admission to a degree program. Therefore, the minimum residence for any graduate student who has been unclassified in a non-degree program is 20 weeks.

*Master of Arts students continuing into the Doctor of Education or Specialist in Education degree program who scored above the 40th percentile on the standardized test and who were judged competent on the written essay examination, hence, exempted from the 0300 Writing Laboratory requirement will be excused from retaking the English usage examination.

Graduate students who are not candidates for advanced degrees will register as unclassified students. However, each student is urged to plan a degree program at the beginning of his graduate experience.

All registrations are subject to approval by the Dean of the Graduate Division.

Student Responsibility—The graduate student is expected to know the requirements for the degree he plans to earn. While the personnel of the Graduate Office and the student's adviser will endeavor to aid in every way possible, the responsibility for any error in his enrollment or in the interpretation of the rules rests with the student.

Doctor of Education, Doctor of Philosophy, and Specialist in Education degree candidates enrolled in evening and Saturday programs as part-time students who register at the time of class meeting rather than on day of registration must report to the Graduate Division Office to have registration materials processed prior to reporting to the Accounting Office for payment of tuition and fees.

Course Load, Credit, and Off-Campus Courses—The normal load for graduate credit applicable to a degree is fifteen hours per quarter.

Courses bearing catalog numbers of 200 or above carry graduate credit.*

Graduate credit is not given for any courses taken by correspondence.

A student may earn a maximum of eight quarter hours of credit applicable to the master's degree in off-campus courses or tele-lecture courses taught by regular full-time Colorado State College faculty members. No off-campus credit is applicable to the specialist or doctorate degrees.

Part-time Load—Students holding full-time teaching contracts may not carry more than five quarter hours during any quarter in which they are in full-time employment.

Grading System—Alphabetical grades are used: A, B, C, D, F. No graduate credit applicable to a degree will be allowed for courses with a grade below C. Other marks used are "Inc." incomplete; "W" approved withdrawal; "TF" unapproved withdrawal; "WF" failing at withdrawal. An "Inc." must be removed within the first four weeks of the succeeding quarter or it automatically becomes a grade of "IF".

Each of the letters of the grading system has a numerical value. The letter "A" has a value of 5 points per unit of credit; "B" a value of 4 points; "C" a value of 3 points; "D" a value of 2 points; and "F" a value of 1 point.

*With exception of ED 251, Student Teaching.

Scholastic Average—Candidates for the Master of Arts degree must maintain a minimum grade point average of 3.66 (B–) each quarter; candidates for the Specialist in Education of 3.8 (B–); Doctor of Education and Doctor of Philosophy degrees must maintain a minimum grade point average of 4.00 (B) each quarter.

Late Enrollment and Changes in Program—An assessment of a late registration fee is made by the Accounting Office for all students who complete registration later than the stated catalog date.

No student will be permitted to enroll or make changes in programs after the first week following the regular registration period.

Changes in programs will be permitted until four o'clock on the Friday following registration.

Withdrawal from Class—No withdrawals from classes are permitted during the last two weeks of a quarter. Withdrawals prior to the final two weeks must have the approval of the candidate's adviser. If a student discontinues class attendance he must withdraw *officially* from the course or a grade of TF (Technical Failure) will be recorded.

English Style-Form Standards—The student's written material must conform with "A Manual for Writers of Term Papers, Theses and Dissertations," by Kate L. Turabian. This manual is available for purchase in the College Bookstore.

Teacher Certification—A student must enroll at Colorado State College and complete an approved program in general education, advanced teacher education courses, and courses in the teaching area for which certification is desired. To be recommended for certification students must observe the following:

1. Present complete and official transcripts to the college for evaluation. The student first presents his transcript to the Dean of the Graduate Division for evaluation. The Graduate Division Office will evaluate the transcripts for the General Education and Advanced Teacher Education courses *only*. A report will be sent to the student of this evaluation and a copy of the report and the transcripts will be filed in the Graduate Office.

2. Satisfactorily complete a minimum of two quarters as a full-time student on the Colorado State College campus prior to a student teaching assignment.

3. The student must present his transcript (the file copy in the Graduate Office may be borrowed) to his Major Division or Department which the student has chosen as his teaching field. The Chairman of the Division will evaluate the transcript to determine deficiencies in the teaching area. If the student is *off-campus*, the Graduate Office (upon request) will forward the transcripts to the Division Chairman for evaluation.

4. The student must confer with the Graduate Division Office for instructions and procedures in regard to admission and registration at CSC in the Graduate Division. *The student must also complete the application for admission to the Advanced Teacher Education Program during the first two weeks of his first quarter on campus (applications are available in the Graduate Office).* The Screening Committee will evaluate the student at the end of his first quarter *on campus* to determine whether he will be encouraged or discouraged from continuing in the certification program. Health, personal characteristics, scholarship and professional attitudes essential for successful teaching are criteria considered by the committee.

5. During the first quarter on campus the student must satisfactorily complete an English usage examination which will consist of an objective English usage test and an essay. Students scoring between the 21st and 80th percentiles on the standardized examination may be excused from the Writing Laboratory for Graduate Students on the basis of creditable essay evaluation. Students scoring below the 21st percentile on the standardized examination will be held for the Writing Laboratory for Graduate Students. Students scoring above the 80th percentile are excused. Students are responsible for reading official notices in the college newspaper concerning time and place of the English usage examination.

Limitations on Enrollment—1. The first regular quarter in residence is a trial quarter.

2. Members of the faculty of Colorado State College above the rank of instructor are not permitted to enter any graduate degree program.

Residence and Time Requirement—Candidates for either the Master of Arts or the Specialist in Education degree must satisfactorily complete a minimum of 10 quarter hours of valid graduate credit in the campus program each of two quarters in order to satisfy minimum residence requirements. Ten quarter hours credit equal two-thirds of a regular load, and by definition enable the candidate to be technically classified as a full-time student. The remaining requirements may be satisfied by regular full or part-time attendance, or by a combination of part-time attendance and transfer credit. (See conditions of transfer.)

Minimum residence for the doctorate is three consecutive quarters comparable to one academic year. Candidates should, therefore, plan to carry a minimum of 10 quarter hours credit during each quarter in residence to earn full residence credit.

Master of Arts Degree

The degree of Master of Arts is offered in these seven instructional divisions of the college with majors in each division as follows:

DIVISION OF THE ARTS—Industrial Arts, Fine Arts, Home Economics;

DIVISION OF EDUCATION—Audio-Visual Education; Business Education; Educational Administration (Elementary¹, Junior High¹, or Secondary¹); Elementary Education (Content, Developmental Reading, or Remedial Reading); Junior High School Education; Secondary Education (Curriculum and Supervision or Instruction²); Psychology, Counseling and Guidance; Special Education (Audiology, Speech Correction, Teaching the Acoustically Handicapped, Teaching Mentally Retarded, Teaching Physically Handicapped or Teaching the Visually Handicapped); Vocational Rehabilitation Counseling;

Limited Emphasis—Outdoor Education (elective credit and thesis);

DIVISION OF HEALTH, PHYSICAL EDUCATION, AND RECREATION—Physical Education, Health Education, Supervision of Physical Education¹, Recreation, Dance Education, Outdoor Education;

DIVISION OF THE HUMANITIES—English, Speech and Drama;

DIVISION OF MUSIC—Music Education, Supervision of Music¹;

DIVISION OF THE SCIENCES—Biological Sciences, Botany*, Chemistry*, Mathematics, Physical Sciences, Physics*, Science Education, Zoology*;

DIVISION OF THE SOCIAL SCIENCES—History, Social Science.

Admission—Admission to graduate program applicable to the degree of Master of Arts, the student must hold a baccalaureate degree from an accredited college or university, and an over-all grade point average of C+ (3.5) in order to be admitted unconditionally. Applicants having a cumulative grade point average between 3.3 and 3.5 may be admitted on condition. The first 15 quarter hours of work completed will be used to establish eligibility for degree entry. On successful completion of this requirement the candidate will be invited to initiate the minimum 45 quarter hour degree program. The overall minimum requirement for a person elected to enter on conditional basis will be 60 quarter hours.

¹These majors require two years of actual teaching experience as a prerequisite.

²Combined program: education and content with emphasis on content for the classroom teacher.

*A master's thesis is required in these programs.

Transfer of Credit—A maximum of eight quarter hours of graduate credit in which grades of A and B are recorded may be transferred from institutions approved by a recognized accrediting agency to offer a graduate program leading to the master's degree. No transfer credit shall be counted that was earned more than five years prior to its transfer. This credit must be compatible with the student's field of concentration.

Such transfer of credit may reduce load, but it will not reduce the residence requirements. Graduate credit is not transferable if earned in off-campus classes or in courses classified as "extension." Transferred credit may not be used to make up "D" or "F" grades received in required courses.

Residence and Time Requirement—Candidates for the Master of Arts degree must satisfactorily complete a minimum of 10 quarter hours of valid graduate credit in the campus program each of two quarters in order to satisfy minimum residence requirements. Ten quarter hours credit equal two-thirds of a regular load, and by definition enable the candidate to be technically classified as a full-time student. The remaining requirements may be satisfied by regular full or part-time attendance, or by a combination of part-time attendance and transfer credit. (See conditions of transfer.)

The maximum time limit for completion of the graduate program for the master's degree is five calendar years.

Introduction to Graduate Study—In the first quarter in residence all graduate students working toward the Master of Arts degree are required to register for the "300" course, "Introduction to Graduate Study." In this course standards for graduate study, research methods, evaluation of printed research, bibliographical tools and other items will be emphasized. The candidate should take Introduction to Graduate Study and a course with his adviser during his first quarter.*

Minimum Requirements for the Major—For the degree of Master of Arts, the student must have a minimum of sixty-four quarter hours of graduate and undergraduate credit in the major field. At least 24 quarter hours of graduate credit for the degree of Master of Arts must be in the field of the major in the Colorado State College degree program.

Whenever possible within the framework of the above rules, the student whose undergraduate record shows a high specialization in a few areas at the expense of general cultural background in the liberal arts and sciences may be required to earn part of his graduate credit in these areas.

*Following course substitutions may be made in lieu of ID 300: Biology majors, Bio 357; Mathematics majors, Math Ed 372; Chemistry majors, at least 3 hours in Chem 346, Seminar; History majors, WHS 220 and WHS 399. The Graduate Office will be notified if there are other courses being offered by Divisions in lieu of ID 300.

Specific Requirements for Graduation—All general requirements for a master's degree must be met. In addition, the candidate shall:

1. Earn a minimum of 45 quarter hours of graduate credit and maintain a 3.66 average. One-half of this credit must be in courses open only to graduate students and taken in residence (courses numbered 300 and above).

Candidates electing to write theses should, 17 days before the end of the quarter in which they expect to graduate, present to the Graduate Division Office four copies of the thesis in final typed form, approved and signed by the adviser and ready for the approval and signature of the Dean of the Graduate Division. The thesis should be presented to the adviser for final reading by the beginning of the fourth week of the final quarter in residence. The thesis shall conform with "A Manual for Writers of Term Papers, Theses, and Dissertations," by Kate L. Turabian.

After being signed and bound, three copies of the thesis become the property of the college and one is sent to the student. The ribbon copy and the first carbon copy are filed in the college library; the third copy is delivered to the student's major adviser. A charge is made for binding and mailing the four copies.

The student must provide with each bound copy of the thesis an abstract of the study. In addition an extra copy of the abstract shall be filed with the student's record in the Graduate Division Office.

With the approval of the adviser and the Dean of the Graduate Division, a creative project in audio-visual education, fine arts, literature, or music may be undertaken as the equivalent of the thesis for the master's degree. Upon the completion of the project, the student shall submit a detailed written explanation of the problem's contribution to contemporary thought and life to be filed in the Graduate Office at least 17 days before the end of the quarter in which the candidate expects to graduate.

Eight quarter hours of credit are granted for the thesis or creative project.

2. Pass a written comprehensive examination in the major field. The student's examination paper, after being evaluated by the adviser, will be filed in the Graduate Division Office at least 17 days before the end of the last quarter in residence. The comprehensive examination may not be taken until the student has completed, or has in progress, the basic required program of his major, and has the approval of his major adviser.

In case of failure to pass the comprehensive examination or any part of it, the student may be permitted, upon written request of the adviser, to retake the test. One quarter must intervene before the examination may be retaken. A special examination fee will be charged for this additional test. Failure to pass the retest will eliminate the candidate from further work applicable to a degree.

3. Make a formal application for graduation not later than 30 days prior to the quarter in which the candidate expects to graduate. A late fee will be charged for failure to apply on time.

Specialist in Education Degree

The Specialist in Education degree program shall prepare one to be a specialist. It is not to be a program of more courses and more credits in the same divisional patterns as those usually found in the present master's and doctor's programs.

Each applicant for admission to the program will be considered as an individual case in terms of the area in which he wishes to specialize, his background and experience preparing him for such specialization, and the possibility of a program being provided to offer him the opportunity he desires. The applicant will be expected to have a very clear idea of his proposed area of specialization.

A candidate might wish to specialize in areas similar to the following:

- a. The Supervision of Student Teaching.
- b. The Supervision of Science Instruction.
- c. Conservation Education.
- d. Basic Programs in the Secondary School.
- e. Reading in the Elementary School.
- f. Guidance in the Elementary School.
- g. Guidance in the Secondary School.
- h. Testing in the Elementary School.
- i. Consultant in School Buildings.
- j. Teaching of Spelling and Grammar.
- k. Academic Records.
- l. Curriculum Specialization.
- m. Remedial Reading.
- n. Specialization in Academic Areas (Preparation to teach on the junior college level).
- o. Outdoor Education.

Several programs are partially or fully prescribed in areas where certification requirements so advise. Among the programs are:

- a. Counseling
- b. Educational Administration.
- c. School Psychology.
- d. Vocational Rehabilitation Counseling.

The college does not have the facilities, offerings, or staff to support all of the areas that might be suggested by the applicant. Please note that many of the programs cut across divisional lines.

Candidates who choose to continue work toward the Ed.D. degree upon completion of the Ed.S. degree may apply for admission to the doctoral program. If admitted to the doctoral program, courses which are ordinarily applicable to the doctorate degree will be considered transferable from the Ed.S. to the Ed.D. degree.

Admission—1. Although a master's degree from an accredited college or university is usually a prerequisite for admission, students may be admitted with a bachelor's degree and permitted to by-pass the Master of Arts degree requirements, depending upon the general nature of the specialist program which is requested.

2. The applicant must have an adequate academic background in the areas involved in his plan of specialization. If inadequate, the supervising committee will require course work in addition to the requirements of the Ed.S. degree.

3. The applicant must have an acceptable undergraduate and graduate scholastic average of 3.7 (B-) or better.

4. Two years of successful teaching experience is a prerequisite for admission to work for the Specialist in Education degree (exceptions: Vocational Rehabilitation Counseling, School Psychology).

5. Upon the receipt of the application for admission, the Dean of the Graduate Division will appoint a committee of at least two faculty members, one of whom shall act as chairman, to help the student plan his program.

6. In addition to the admission requirements, the applicant is required to take the Graduate Record Examination Battery consisting of the Advanced Test in Education, the Area Test in Social Sciences, Natural Sciences and Humanities, and the General Aptitude Test, as well as the English usage examination.

Transfer of Credit—A maximum of eight quarter hours of graduate credit in which grades of A and B are recorded may be transferred from institutions approved by a recognized accrediting agency to offer a graduate program leading to an advanced degree. No transfer credit shall be counted that was earned more than five years prior to its transfer. This credit must be compatible with the student's area of concentration. *Such transfer of credit may reduce load, but it will not reduce the residence requirements (30 weeks).* Graduate credit is not transferable if earned in off-campus classes or in courses classified as "extension." Transferred credit may not be used to make up "D" or "F" grades received in required courses.

Residence and Time Requirements—Candidates for the Specialist in Education degree must satisfactorily complete a minimum of 10 quarter hours of valid graduate credit in the campus program each of two quarters in order to satisfy minimum residence requirements. Ten quarter hours credit equal two-thirds of a regular load, and by definition enable the candidate to be technically classified as a full-time student. The remaining requirements may be satisfied by regular full or part-time attendance, or by a combination of part-time attendance and transfer credit. (See conditions of transfer.)

The maximum time limit for completion of the graduate program for the specialist's degree is six calendar years.

Specific Requirements for Graduation—All the general requirements for a specialist degree must be met. In addition the student shall:

1. Earn a minimum of 45 graduate quarter hours of credit in residence and maintain a 3.8 (B-) average. Twenty-four quarter hours of the graduate credit, which will include the credit for the required practicum, shall be earned in courses numbered 300 or above.

Specialized interests of the student for which no regularly scheduled courses are available will be cared for through Individual Studies (322), Practice in School Administration (345), Practicum (in areas other than administration) (301), and the required Practicum (401).*

2. Enroll for the course, "Introduction to Doctoral Research" (400), or its equivalent unless a comparable course on the graduate level has been completed and accepted by the adviser.

3. Present at least one practicum (401) representing his major interest and for which eight quarter hours of credit will be given. This required practicum shall be enrolled for in the second and third quarters in residence. A written plan for the required practicum shall be filed in the Graduate Division Office by the end of the eighth week of the second quarter in residence and must have been approved by the supervising committee.

At least 17 days before the end of the final quarter in residence, four typewritten copies of the report of the practicum which has been approved by the student's adviser and the supervisory committee shall be filed in the Office of the Graduate Division. The four copies will be bound. The original and first carbon copy will be placed in the library, the second carbon copy will be delivered to the faculty committee, and the third carbon copy will be sent to the student. A binding and mailing fee will be charged.

4. Pass a written comprehensive examination over his specialty and his practicum, and meet such other final requirements as his committee may prescribe. This written examination, when approved, shall be filed with the student's records in the Graduate Division Office at least 17 days before the

*Students in Vocational Rehabilitation Counseling, and School Psychology, will be required to complete supervised field experience in lieu of the required practicum. Students in Vocational Rehabilitation Counseling will register for SPED 394, Supervised Clinical Practice in Rehabilitation Counseling, 16 quarter hours; students in School Psychology will register for EPG 390, Internship in School Psychology, 16 quarter hours. Four copies of a formal written paper describing the field experience will be filed in the Graduate Office at least 17 days before the end of the final quarter in residence (two of the four copies will be bound and added to the library).

date of graduation. The adviser shall make all arrangements for final examination.

In case of failure to pass the comprehensive examination or any part of it, the student may be permitted, upon written request of his faculty committee, to retake the test. A special examination fee will be charged for this additional test. Failure to pass the retest will eliminate the student from further work applicable to the degree.

5. Make formal application for graduation not later than 30 days prior to the quarter in which he expects to graduate. A late fee will be charged for failure to apply on time.

Please consult expenses section of this bulletin for specific amount of various fees.

Doctor of Education and Doctor of Philosophy Degrees

The degree of Doctor of Education is offered in the following areas of concentration:

- Business Education**
- Botany**
- Chemistry**
- Educational Administration**
- Elementary Education**
- English Education**
- Health and Physical Education**
- Industrial Arts Education**
- Mathematics Education**
- Mathematics**
- Music Education**
- Physics**
- Psychology, Counseling and Guidance**
- Reading**
- Science Education**
- Secondary Education**
- Social Science**
- Special Education (Speech Pathology; Mental Retardation)**
- Vocational Rehabilitation Counseling**

In most instances a candidate will complete 48 or more hours in his area of concentration. This does not include credit for his research study. In addition to his area of concentration a student must take a minimum of 24 quarter hours in one or more supporting areas. Supporting areas include the following:

- Audio-Visual Education**
- Business Education**
- Curriculum**
- Educational Administration**
- Elementary Education**
- English Education**
- Health and Physical Education**
- Higher Education**
- History and Philosophy of Education**
- Industrial Arts Education**
- Mathematics Education**
- Mathematics**
- Music Education**
- Outdoor Education**
- Psychology, Counseling and Guidance**
- Reading**
- Secondary Education**
- Science**
- Social Science**
- Special Education**
- Statistics and Measurement**

The degree of Doctor of Philosophy is a three-year program beyond the baccalaureate. Two specialized programs are available: (1) College Student Personnel Work to prepare candidates for college placement as deans of students and in other related areas; and (2) Educational Measurements and Research designed to prepare candidates for college teaching assignments and/or researchers for curricular areas. Each candidate must demonstrate competency in two foreign languages, or competency in one foreign language and 15 quarter hours in statistics.

Admission—1. For admission to graduate courses applicable to the degree of Doctor of Education, the student must possess a master's degree from an accredited graduate school.¹ The applicant may be denied admission if his previous academic average has not been of high quality (B or better).

¹Candidates possessing the baccalaureate degree may be admitted to the Doctor of Philosophy program.

2. Sixty-four quarter hours in the fields of education and psychology¹ are prerequisites for admission to courses applicable to the doctor's degree in the following areas of concentration: Administration, Elementary Education, Educational Psychology and Guidance, Secondary Education, and Special Education.

Forty quarter hours of professional education courses are prerequisites for admission to courses applicable to the doctor's degree in the following areas of concentration: Business Education, English Education, Health and Physical Education, Industrial Arts Education, Mathematics Education, Music Education, and Science Education.

Thirty quarter hours of professional education are prerequisites for admission to courses applicable to the doctor's degree in Social Sciences.

3. In addition to the admission requirements, the applicant is required to take the Graduate Record Examination Battery consisting of the Advanced Test in Education, the Area Test in Social Sciences, Natural Sciences and Humanities, and the General Aptitude Test, as well as an English usage examination.

Limitations on Enrollment for the Doctorate—1. All candidates must realize that the Graduate Council is directed to continuously provide realistic evaluation of student progress, and to discourage any student from continuing whenever it seems advisable.

2. Two years of successful teaching experience is a prerequisite for admission to work for the doctor's degree.²

Course Program—In the first quarter in residence, students in the doctoral program must enroll for the course, "Introduction to Doctoral Research" (400), or in a substitute course

¹Exception: Vocational Rehabilitation Counseling.

²*Ibid.*

recommended by the major adviser.

Not later than the second quarter in residence, the candidate will work out a long range program of studies with his adviser. One copy of this proposed program will be placed in the student's folder in the Graduate Office; one copy will be presented to the adviser; one copy will be placed on file in the major department.

Fifty percent of course work applicable to the doctor's degree must be in courses numbered 300 or above. Only courses taught by members of the faculty with an earned doctor's degree will apply to the Ed.D. or Ph.D.

Candidates concentrating in Business Education, English Education, Health and Physical Education, Industrial Arts Education, Mathematics Education, Music Education, or Science Education must complete the basic foundational courses which are: ED 461, Philosophical Foundations of Education; ED 462, Psychological Foundations of Education; ED 463, Sociological Foundations of Education.

Research Studies—One research study is required for which the student may receive eighteen quarter hours of research credit. Upon the recommendation of the adviser, a candidate may write, in lieu of one research study, two studies for nine hours credit each. The student will pay a research fee in addition to the regular tuition fees.

The preliminary outline of the study* shall be under the supervision of the adviser and a research and examining committee. The committee will consist of four members representing the area of concentration, the supporting areas, and the faculty at large.

The committee will be appointed by the Dean of the Graduate Division.

Candidacy for the Degree—To be eligible for formal admission to candidacy for the degree of Doctor of Education or Doctor of Philosophy, the student shall have earned at least 36 hours beyond the Master's degree with a 4.00 (B) or better grade average, shall have passed satisfactorily the written and oral comprehensive examinations, shall have presented an approved outline for the research study, and shall have successfully completed all other classification requirements. No student will be graduated at the end of the quarter in which he is admitted to candidacy.

Time and Residence Requirements—The maximum time limit for earning the doctor's degree is *eight calendar years*. In the event of a manifest hardship delay which exceeds the time limit, the candidate may petition the Graduate Council for an extension which may be granted under such provisions as determined by the Graduate Council.

Minimum residence for the doctorate is three consecutive quarters comparable to one academic year. Candidates should, therefore, plan to carry a minimum of 10 quarter hours credit during each quarter in residence to earn full residence credit.

*Student is required to submit six copies of the research outline.

Transfer of Credit—Transfer of credit to the extent of twelve quarter hours in which grades of A and B are recorded may automatically be granted toward the doctorate, *but in no case will this transfer of credit reduce the residence requirements.* However, in some cases additional transfer credit may be recommended by the candidate's faculty committee after he has been encouraged to continue toward the doctoral objective by the Graduate Council Sub-Committee on Admission. He may apply for transfer up to a maximum of 35 quarter hours (including the original 12 quarter hours previously accepted). Transfer of credits will be subject to the following rules: (1) That it must be an integral part of the student's total plan; (2) must have been completed *on the campus of an accredited institution offering the doctor's degree*; (3) must have been completed within five years preceding the date of transfer.

The Graduate Council reserves the right to send doctoral students to another accredited institution which offers the doctorate to earn a maximum of 15 quarter hours in specific courses. Off-campus and extension classes are not acceptable.

Advisement—Upon receipt of a statement of the prospective student's field of interest, the Dean of the Graduate Division will assign him to a member of the faculty, who will act as the adviser for the first quarter and with whom the student will register. This assignment will become permanent automatically unless the adviser or the student can justify the need for a change of adviser to a committee appointed by the chairman of the division in which the student is majoring.

Research Adviser—At the request of the adviser a research adviser may be appointed to direct the research study.

Graduation—In addition to all the general requirements for a doctor's degree the student shall:

1. Be recommended for graduation by his committee.
2. Earn a minimum of 90 quarter hours of graduate credit beyond the master's degree and maintain a 4.00 (B) grade average. Of this credit 50 per cent must be in courses numbered 300 or above.
3. Demonstrate that he has a knowledge and understanding in the three areas of Science, Social Science, and Humanities. Candidates who fail to make satisfactory scores on the Graduate Record Examinations battery may be held for deficiency course work. These requirements will be imposed in addition to the minimum requirements of 90 quarter hours.
4. Demonstrate competency in two foreign languages, or competency in one foreign language and 15 quarter hours in statistics for the Doctor of Philosophy degree.
5. File in the Graduate Division at least seventeen days before graduation one or two fully approved research studies. A research fee is charged in addition to the regular tuition and fee charges.

6. Pass satisfactorily the following examination in addition to the usual course examinations:

(a) Comprehensive written and oral examinations covering course work. These examinations will take place normally after the student has successfully completed, with better than a 4.00 (B) grade average, 36 hours beyond the Master's degree. The written examination will be given before the oral examination and will be available to all members of the research and examining committee prior to the oral examination and finally shall be filed in the student's folder in the Graduate Division Office. The adviser who administers the written examination will be responsible for evaluating the examination. The members of the research and examining committee will evaluate the written and oral examinations as follows:

(1) Satisfactory.

(2) Unsatisfactory with the privilege of additional examinations for which a fee will be charged. One quarter must intervene before the examination may be given again. A second retest will not be permitted.

(3) Failure. In case of failure the student will have eliminated himself from further work applicable to the doctorate and may not present himself for further examinations.

(b) Oral examination in defense of the research study. Each doctoral candidate must present his doctoral research study in acceptable form (4 copies) to the Graduate Division three weeks prior to the scheduling of the defense examination. An examining date may not be established without this formal clearance. This date will allow a three week period before the final graduation deadline date. If it is impossible to meet this requirement, the examination date will be moved into the following quarter, subject to the same deadline conditions.

7. Pay for the publication of each research study. The research study is microfilmed and a 600 word abstract of the study is published in Dissertation Abstracts. For the purpose of publication the student files in the office of the Graduate Division two extra copies of the abstract of each study. This abstract cannot be more than 600 words.

8. Pay for the binding and mailing of research study. At least four copies of the research study, including an abstract, are required to be bound. After being bound, the ribbon copy and the first carbon copy are filed in the college library, one copy is delivered to the student's adviser and one copy is sent to the student.

9. File a vita to be included in the permanent record.

10. Make formal application for graduation not later than 30 days prior to the quarter in which the candidate expects to graduate. A late fee will be charged for failure to apply on time.

Interdivisional Courses

All divisions use these numbers with the prefix ID.

151. JUNIOR HONORS PROJECT. *One hour credit.*

In the junior year, each honor student enrolls in a Junior Honors Project in his major. 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 division concerned may assign the student to an individual professor or to a seminar group conducted by one or more professors. Each project is to be planned in three phases so that a grade can be given at the end of each quarter.

200. AMERICAN SPEECH FOR FOREIGN STUDENTS. *No hours credit.*

This course is designed for students who are using English as a secondary language. An evaluation will be made of each student's special needs. Emphasis will be centered on vocabulary pronunciation, articulation, intonation, and rhythm of American speech.

222. 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 chairman of the division.

251. SENIOR HONORS PROJECT. *One hour credit.*

In the senior year, each honor student enrolls in a Senior Honors Project under the direction of a professor of his own choosing. The professor is not responsible for more than one honor student at a time. The student and the professor will decide upon an individual subject or project for study, the result of which shall be an acceptable written report. Seniors shall be invited to read papers produced in the Senior Honors Project before meetings of students enrolled in Junior Honors Project. Sophomores honors students and any freshman students who show potential for the honors program are invited to attend such meetings. Each project is to be planned in three phases so that a grade can be given at the end of each quarter.

0300. WRITING LABORATORY FOR GRADUATE STUDENTS. *No credit.*

A required remedial writing laboratory for graduate students whose English usage ability is low and who need help. (Laboratory fee of \$10 is assessed.)

300. INTRODUCTION TO GRADUATE STUDY. *Three hours credit.*

An orientation to graduate study in general and the nature and methods of research in particular. Required of all first-year graduate students. Should be taken during the first quarter of graduate work.

301. PRACTICUM. *Four hours credit.*

Open only by invitation to resident graduate students. Supervised professional activity in the student's major field, approximately two hours per day. A written report is required.

322. INDIVIDUAL STUDIES. *Four hours credit.*

Qualified graduate 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 Graduate Division.

336. PRACTICUM IN PROGRAMMED LEARNING AND OTHER RELATED NEW MEDIA. *Fifteen hours credit maximum.*

Prerequisites, ED 295 or 395, EPG 340, or concurrently enrolled in ED 335. Under supervision by professional programmers and psychologists, the students will learn to program materials. Task analysis,

coordination with subject matter and curriculum experts, program validation and revision, techniques of frame writing, selection of student samples, and technology of program construction will be emphasized in the programming experience.

399. THESIS. *Fifteen hours credit maximum.*

400. INTRODUCTION TO DOCTORAL RESEARCH. *Four hours credit.*

An introduction to research and advanced study. Required if the student has not previously taken ID 300 or the equivalent.

401. SPECIALIST DEGREE PRACTICUM. *Eight hours credit.*

Prerequisite, master's degree. Project or supervised professional activity, required of all candidates for the Specialist in Education degree. A written report of the project or activity must be submitted.

423. DOCTORAL RESEARCH STUDY. *Eighteen hours credit maximum.*

Registration of hours will be during the quarter in which the research study is formally accepted.

Division of Aerospace Studies

Professor: Evans.

Assistant Professors: Downing, Ketchum, Schaffer.

History—Air Force ROTC was first established in 1946 in leading colleges and universities as a part of the Army's ROTC program. Formal control of its own ROTC program was assumed by the Air Force at college level on July 1, 1949, and introduced at Colorado State College in the Fall quarter of 1951. The ROTC Vitalization Act of 1964 now has broadened the program to enable junior college transfer students to compete for an Air Force Commission.

Purpose—The Air Force ROTC program is designed to provide education that will develop skills and attitudes vital to the career of a professional Air Force officer.

Objectives—1. To develop in selected cadets, through a sound education and training program, the initial motivation to serve as career officers in the United States Air Force.

2. To develop in cadets by precept, example, and participation, the attributes of character, personality, and attitudes essential for leadership.

3. To develop in the cadet an interest in the Air Force and an understanding of its mission, organization, operations, problems, and techniques.

4. To provide military education and training which will prepare cadets to discharge the duties and responsibilities required of them as Air Force officers.

5. To select and motivate cadets for career fields as specifically required by the United States Air Force.

General Information—The Air Force ROTC program is the primary source of junior officers for the United States Air Force. The Division of Aerospace Studies offers a program which prepares students to become flying and nonflying officers in the Air Force.

Physically qualified commissioned Air Force ROTC graduates are eligible to apply for pilot or navigator training in the grade of Second Lieutenant with all pay and allowances of that grade.

The prospective nonflying officer can expect to be commissioned in a specialty that closely resembles and utilizes his academic major.

AFROTC Program—The AFROTC program is integrated with the regular college academic degree requirements to permit the student to receive undergraduate credit for courses in Aerospace Studies. Upon successful completion of the AFROTC program and attainment of a degree, the student will be commissioned as a Second Lieutenant in the United States Air Force Reserve.

The Air Force ROTC program is divided into two 2-year programs: The lower division program is the General Military Education Program, and the upper division program is the Professional Officer Education Program. The first is composed of freshmen and sophomore students while the latter is composed of juniors, seniors and graduate students. Enrollment in AFROTC is elective; however, selection for the Professional Officer Education Program is highly selective and is subject to completing the General Military Education Program and to meeting the prescribed mental, moral, and physical standards.

The General Military Education Program requirements may be met by one of the following methods:

1. Participate in the two-year General Military Education Program on campus during the freshman and sophomore years.
2. Attend a six-week summer Field Training Program at an Air Force base between the sophomore and junior years.
3. Serve on active duty with any branch of the Armed Forces for a minimum of six months.

All Professional Officer Education Program students attend a four-week summer training course at a designated Air Force Base, usually between their junior and senior years. (Students that took the six-week Field Training Program instead of the two-year on campus program may elect to take this advanced summer training after graduation.) Senior students scheduled for flight training as officers are given 36½ hours of flight instruction with opportunity to obtain an FAA private pilot's license.

Military textbooks, a complete blue Air Force uniform and necessary equipment are furnished to AFROTC students by the Air Force.

Professional Officer Education Program students receive pay of \$40.00 per month during the school year while earning their commission. Pay during the summer training course is increased to \$120.00 per month plus compensation to cover travel, food and lodging.

General Military Education Program students may substitute all or part of the 6 quarter hours of AFROTC Leadership Training for the otherwise required 6 quarter hours of physical education activity courses.

Deferment—Military Deferment for students enrolled in the AFROTC program and in good standing is permitted by the National Selective Service Act. Students become eligible for deferment in the winter quarter of the freshman year. This is made possible by the need of the Air Force for college graduates for Air Force Commissioned Officers. This deferment, under present Department of Defense policies, will remain in effect should a national emergency arise.

To qualify for an AFROTC deferment a student must willingly assume the following obligations:

1. To enroll in, and satisfactorily complete, the AFROTC course of instruction (contingent upon remaining in school).

2. Upon graduation and completion of the AFROTC course, to accept a reserve commission in the United States Air Force. The commission must be retained in an active status for a period of six years by serving as a member of the regular or reserve component.

3. After graduation to serve on active duty for a period of not less than four years (five years if a pilot or navigator) if called by the Secretary of the Air Force.

Deferment of AFROTC students will be terminated if the student:

1. Fails to remain in good standing in either his military or academic courses.

2. Fails to demonstrate sufficient aptitude.

3. Fails to enroll in an AFROTC course during any quarter in which he normally is expected to be in attendance.

4. Fails to attend summer camp when ordered to do so.

General Military Education Program

The General Military Education Program is open to all incoming male freshmen provided they meet the following prerequisites:

1. Citizen of the United States.

2. Physically fit.

3. No record of previous convictions by military or civil court.

Veterans desiring to enroll in the AFROTC program will be excused from certain Basic Course requirements as deemed appropriate by the Professor of Aerospace Studies.

The General Military Education Program is of two years duration and includes Aerospace Studies (AS) 11, 13, 15, 20, 21, 23, 25, 56 and 58.

The freshman enrolls in the following courses:**

Fall Quarter

<i>Course Number</i>		<i>Courses Title</i>	<i>Hours</i>	<i>Credit</i>
AS	11	— Leadership Training I.....		1*

Winter Quarter

AS	13	— Leadership Training II.....		1*
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Spring Quarter

AS	15	— Leadership Training III.....		1*
AS	20	— World Military Systems I.....		1

The sophomore enrolls in the following courses:

Fall Quarter				
Course Number		Courses Title	Hours	Credit
AS	21	— Leadership Training IV.....	1	1*
AS	56	— World Military Systems II.....	1	1
Winter Quarter				
AS	23	— Leadership Training V.....	1	1*
AS	58	— World Military Systems III.....	1	1
Spring Quarter				
AS	25	— Leadership Training VI.....	1	1*

*All or part of the six quarter hours of AFROTC Leadership Training may be substituted for the otherwise required six quarter hours of physical education activity courses. These hours do not apply toward the required 180 hours of academic credit.

**All male college students who have two years of college remaining, undergraduate or graduate, may apply to take the new six-weeks Field Training Course in lieu of the two-year on campus General Military Education Program as listed above. While attending this six-weeks summer course the student will receive pay at the rate of \$78 per month plus travel pay to and from the Air Force base.

Professional Officer Education Program

The Professional Officer Education Program is a two-year course of instruction with emphasis on subjects that will develop in the cadet a high growth potential as an Air Force officer. The AFROTC curriculum has been up-dated and is totally new. All courses are student-centered and meet 3 hours per week for 3 hours credit. Pilot trainees in addition will be required to take 36½ hours of flight instruction.

Eligibility Requirements—To be eligible for enrollment in the Professional Officer Education Program the student must submit an application to the Professor of Aerospace Studies. This application will include:

1. Documentary evidence of completion of the General Military Education Program from any college or university with an ROTC detachment or successful completion of a six-week Field Training Program at an Air Force base prior to entering the Professional Officer Education Program. Veterans will submit a photostatic copy of discharge to support active service in lieu of the General Military Education Program.
2. Documentary evidence of age.
3. A statement that the student will attend an Air Force ROTC summer camp of four weeks' duration during his summer vacation between the junior and senior years.
4. A statement that, upon successful completion of the course and graduation, the student will accept a commission as a Second Lieutenant if tendered and complete his service obligation. Also, the student will serve a minimum of four or five years of active duty, if called by the Secretary of the Air Force.
5. Willingness to enlist in the Air Force Reserve (IRS) only for the purpose of being in the Professional Officer Education Program of the AFROTC.

6. A statement that the student will arrange his student teaching to permit his continued attendance of military classes on the campus.

7. A statement that the student has never been convicted by military or civil court. (A waiver can be requested for those students who have been found guilty of minor violation.)

8. Academic record and results of general survey and screening tests.

Selection for the Professional Officer Education Program—The college and the Professor of Aerospace Studies will select those applicants found to be the most highly qualified for enrollment.

Required Courses in the Professional Officer Education Program:

<i>Course Number</i>		<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
AS	101	— Leadership Training VII.....		0*
AS	103	— Leadership Training VIII.....		0*
AS	105	— Leadership Training IX.....		0*
AS	216	— Growth and Development of Aerospace Power I		3
AS	218	— Growth and Development of Aerospace Power II		3
AS	220	— Growth and Development of Aerospace Power III		3
AS	201	— Leadership Training X		0*
AS	203	— Leadership Training XI		0*
AS	205	— Leadership Training XII		0*
AS	256	— The Professional Officer I		3
AS	258	— The Professional Officer II		3
AS	260	— The Professional Officer III		3
AS	263	— Flight Instruction		3†

Benefits and Allowances for the Professional Officer Education Program—

1. Commission in either the Regular Air Force or the United States Air Force Reserve.
2. Deferment from induction under Selective Service.
3. Officer-type uniform furnished by the government.
4. Monetary allowances:
 - a. \$40 per month for students enrolled in the Professional Officer Education Program (maximum 20 months).
 - b. \$120 per month while attending the advanced four-weeks summer Field Training Course.
 - c. Travel allowance of six cents per mile to and from camp site.
5. Academic credit minimum of three hours each quarter.
6. AFROTC texts will be furnished on a loan basis.

*Students in the two-year program (who attended the six-week Field Training Course) are not required to take these courses.

†AS-263 (Flight Instruction) is required for all pilot trainees; however, enrollment for the ground school class is open to any interested student.

7. Opportunity for graduate training in civilian institutions after call to active duty. Such training is accomplished with full pay and allowances.

8. Thirty-six and one-half hours of flying time for all potential Air Force pilot trainees. (Flying time may be credited toward a private pilot's license.)

Staff and Equipment—Air Force personnel are detailed by Headquarters, United States Air Force, as instructors in the AFROTC unit. The Professor of Aerospace Studies, as well as his officers and airmen assistants, are highly qualified and are usually combat duty veterans.

Equipment for instruction is furnished by the Air Force, including many training aids, mock-ups, and visual training charts pertaining to the subjects taught.

Description of Courses

11, 13, 15. LEADERSHIP TRAINING I, II, III. *One hour credit per course.*

An introduction to the methods of Air Force organization at the squad and flight level. Opportunities are provided for the cadet to subject himself to personal and group discipline, to identify himself with a group, and to acquire the training, poise, and self-confidence needed to conduct himself in a military manner. Courses may be substituted for otherwise required physical education courses.

20. WORLD MILITARY SYSTEMS I. *One hour credit.*

An introductory course exploring the causes of the present world conflict, the role and relationship of military power to that conflict, and the responsibilities of an Air Force officer. It also begins a study of the world military systems through treatment of the U. S. Department of Defense and doctrine, mission and functions of the United States Air Force.

21, 23, 25. LEADERSHIP TRAINING IV, V, VI. *One hour credit per course.*

Practical training in elementary leadership activities involving small groups and an introduction to leadership methods and Cadet Corps organization at the squadron and group level. The cadet is provided the opportunities to test his leadership skill in situations dealing with small groups and to recognize and accept personal responsibility. Courses may be substituted for otherwise required physical education courses.

56. WORLD MILITARY SYSTEMS II. *One hour credit.*

A study of organization, doctrine, and functions of the U.S. Army and Navy. It includes the trends and implications of land and naval warfare and concludes with the study of western alliances (NATO, CENTO, SEATO) and their role in free world security.

58. WORLD MILITARY SYSTEMS III. *One hour credit.*

An investigation of the military forces of the USSR, the Soviet satellite armies and the Chinese Communist Army. The course concludes with an analysis of the trends and implications of world military power.

101, 103, 105. LEADERSHIP TRAINING VII, VIII, IX. *No credit.*

Prerequisite, Advanced AFROTC Standing. Development of leadership skills dealing with larger and more complex groups (i.e., squadrons and groups) and an introduction to command and staff principles and methods at all levels. The cadet is provided with an opportunity to assume full responsibility for significant parts of the Cadet Corps program.

- 201, 203, 205. LEADERSHIP TRAINING X, XI, XII. *No credit.***
Prerequisite, Advanced AFROTC Standing. Development of leadership and management understandings and skills at the command level. The cadet is given the opportunity to plan for the achievement of group objectives and supervise the implementation of cadet planning by coordination and control through cadet corps command and staff channels.
- 216. GROWTH AND DEVELOPMENT OF AEROSPACE POWER I. *Three hours credit.***
Prerequisite, Advanced AFROTC Standing. A survey course about the nature of war and development of airpower in the United States, including the beginnings, the formative years, problems of peace between world wars, and airpower during and after World War II. The development of communicative skill is a major goal of this course.
- 218. GROWTH AND DEVELOPMENT OF AEROSPACE POWER II. *Three hours credit.***
Prerequisite, Advanced AFROTC Standing. A study of the mission and organization of the Defense Department, and Air Force concepts, doctrine and employment. Also, an introduction to astronautics and space operations. The development of communicative skill is a major goal in this course.
- 220. GROWTH AND DEVELOPMENT OF AEROSPACE POWER III. *Three hours credit.***
Prerequisite, Advanced AFROTC Standing. Continuation of the study of astronautics and space operations, and the future development of aerospace power. Includes the United States space program, vehicles, systems, and problems in space exploration. The development of communicative skill is a major goal in this course.
- 256. THE PROFESSIONAL OFFICER I. *Three hours credit.***
Prerequisite, Advanced AFROTC Standing. A study of military professionalism and leadership. Includes the meaning of professionalism, professional responsibilities, the Military Justice System; leadership theory, functions and practices. A major goal is the strengthening of communication skills.
- 258. THE PROFESSIONAL OFFICER II. *Three hours credit.***
Prerequisite, Advanced AFROTC Standing. An examination of management problems, discipline, human relations and current Air Force personnel policies. Emphasis is on individual and group problem solving. A major goal is the strengthening of communication skills.
- 260. THE PROFESSIONAL OFFICER III. *Three hours credit.***
Prerequisite, Advanced AFROTC Standing. A study of management principles, functions, tools, practices, and controls. The course also includes material to help the cadet make a rapid and effective adjustment to active duty as an officer of the United States Air Force. A major goal is the strengthening of communication skills.
- 263. 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, aerial navigation, radio procedures, flight computer and flying safety practices.

Division of the Arts

The Division of the Arts includes the fields of Fine Arts, Home Economics and Industrial Arts. Degrees and majors and minors offered are:

BACHELOR OF ARTS DEGREE (Teacher Education)

Majors: Fine Arts, Home Economics, Dietetics, Industrial Arts.

Minors: Fine Arts, Home Economics, Industrial Arts.

BACHELOR OF ARTS DEGREE (Liberal Arts)

Majors: Fine Arts, Home and Family Living, Dietetics.

Minors: Fine Arts, Home and Family Living.

MASTER OF ARTS DEGREE (Teacher Education)

Majors: Fine Arts, Home Economics, Industrial Arts.

Minors: Fine Arts, Home Economics, Industrial Arts.

SPECIALIST IN EDUCATION DEGREE

Area of Specialization: To be selected.

DOCTOR OF EDUCATION DEGREE (Teacher Education)

Area of Concentration: Industrial Arts Education.

Supportina Area: Industrial Arts Education.

Fine Arts

Professor: Mariani.

Associate Professors: Ball, Leacock, Green.

Assistant Professors: Platter, Tryba.

Instructors: Blubaugh, Scammel, Schumacher.

FINE ARTS MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.

3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
FA 1	— Drawing	3
FA 11	— Introduction to Design	5
FA 13	— Lettering	2
FA 17	— Introduction to Pottery	3
FA 50	— Figure Construction	3
FA 51	— Introduction to Color	3
FA 52	— Composition	3
FA 101	— Philosophy of Art Education	2
FA 103	— Introduction to Watercolor Painting.....	2
FA 116	— Craft Processes and Design.....	5
FA 120	— Introduction to Oil Painting.....	3
FA 123	— Art Education for the Secondary School.....	3
FA 126	— Instructional Techniques in Art Education....	3

FA	221	—	Art History I	3
FA	222	—	Art History II	5
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4. One minor of 27 quarter hours outside of the departmental major.
5. Electives to complete requirements for graduation.

FINE ARTS MAJOR (Junior High School Level)

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.
3. The following required courses in the major.

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>		
FA 1	— Drawing	3		
FA 11	— Introduction to Design	5		
FA 13	— Lettering	2		
FA 17	— Introduction to Pottery	3		
FA 51	— Introduction to Color	3		
FA 52	— Composition	3		
FA 54	— Drawing and Painting Techniques	3		
FA 101	— Philosophy of Art Education	2		
FA 103	— Introduction to Watercolor Painting.....	2		
FA 104	— Commercial Design and Poster.....	2		
FA 120	— Introduction to Oil Painting.....	3		
FA 126	— Instructional Techniques in Art Education...	3		
FA 223	— Survey of Art	5		
FA 240	— Art in 7th, 8th, and 9th Grades.....	5		
FA 241	— Craft Processes in 7th, 8th, and 9th Grades...	4		
				48

4. One minor of 27 quarter hours outside the Division of the Arts.
5. Electives to complete requirements for graduation.

FINE ARTS MINOR

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>		
FA 1	— Drawing	3		
FA 11	— Introduction to Design	5		
FA 17	— Introduction to Pottery	3		
FA 51	— Introduction to Color	3		
FA 54	— Drawing and Painting Techniques	3		
FA 116	— Craft Processes and Design	5		
FA 223	— Survey of Art	5		
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Fine Arts Minor for Elementary Education

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
FA 3	— Elementary Drawing Techniques	3

FA	11	—	Introduction to Design	5
FA	12	—	Elementary Lettering	2
FA	17	—	Introduction to Pottery	3
FA	51	—	Introduction to Color	3
FA	54	—	Drawing and Painting Techniques	3
FA	127	—	Craft Techniques	3
FA	223	—	Survey of Art	5

Fine Arts Concentration for Elementary Education 27

Elect 7-15 hours credit from the following courses:

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
FA	1	— Drawing	3
FA	11	— Introduction to Design	5
FA	17	— Introduction to Pottery	3
FA	51	— Introduction to Color	3
FA	54	— Drawing and Painting Techniques	3
FA	103	— Introduction to Watercolor Painting	2
FA	116	— Craft Processes and Design	5
FA	117	— Pottery	3
FA	127	— Craft Techniques	3
FA	222	— Art History II	5
FA	223	— Survey of Art	5

**Fine Arts Minor for 7th, 8th, and 9th Grades
(Junior High School)**

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
FA	1	— Drawing	3
FA	11	— Introduction to Design	5
FA	13	— Lettering	2
FA	17	— Introduction to Pottery	3
FA	54	— Drawing and Painting Techniques.....	3
FA	104	— Commercial Design and Poster.....	2
FA	240	— Art Education in 7th, 8th, and 9th Grades.....	5
FA	241	— Craft Processes in 7th, 8th, and 9th Grades....	4

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FINE ARTS MAJOR

Bachelor of Arts Degree (Liberal Arts)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. One minor of 27 quarter hours outside the Division of Arts.
3. The following required courses in the major.

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
FA	1	— Drawing	3
FA	11	— Introduction to Design	5
FA	17	— Introduction to Pottery	3
FA	51	— Introduction to Color	3
FA	52	— Composition	3
FA	54	— Drawing and Painting Techniques.....	3
FA	116	— Craft Processes and Design	5

FA	120	—	Introduction to Oil Painting	3
FA	135	—	Life Drawing	2
FA	203	—	Watercolor Painting	5
FA	220	—	Oil Painting	5
FA	221	—	Art History I	3
FA	222	—	Art History II	5
				48

FINE ARTS MINOR (Liberal Arts)

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
FA 1	— Drawing	3
FA 11	— Introduction to Design	5
FA 51	— Introduction to Color	3
FA 54	— Drawing and Painting Techniques	3
FA 116	— Craft Processes and Design	5
FA 126	— Introduction to Oil Painting	3
FA 223	— Survey of Art	5
		27

Description of Courses

1. **DRAWING.** *Three hours credit.*
A foundation course open to anyone who wishes to learn to draw. Visual training, technical procedures, the essentials of perspective. Media: chiefly charcoal and pencil.

3. **ELEMENTARY DRAWING TECHNIQUES.** *Three hours credit.*
Fundamentals of beginning drawing.

11. **INTRODUCTION TO DESIGN.** *Five hours credit.*
A study of the basic elements of design and the techniques or organization. Creative projects in abstract and applied fields.

12. **ELEMENTARY LETTERING.** *Two hours credit.*
Study of letter forms, manuscript writing, poster lettering, blackboard writing, and holiday and unit displays.

13. **LETTERING.** *Two hours credit.*
The basic letter forms and useful variants. A study of layout and design. The course includes work in manuscript, showcard and poster.

17. **INTRODUCTION TO POTTERY.** *Three hours credit.*
A beginning course in the design and construction of handbuilt clay objects with emphasis on a fundamental knowledge of clay, glazes, and firing.

50. **FIGURE CONSTRUCTION.** *Three hours credit.*
Prerequisite, FA 1. The study of the human figure, its essential anatomy and construction. The figure as an important motif in design and composition. Study from life.

51. **INTRODUCTION TO COLOR.** *Three hours credit.*
Color study developed from various theories and its particular application in design and pictorial organization.

52. **COMPOSITION.** *Three hours credit.*
Prerequisite, FA 1. The technical problems of pictorial composition involving the organization of all the visual elements. The course is recommended to precede the courses in painting.

54. **DRAWING AND PAINTING TECHNIQUES.** *Three hours credit.*
Techniques in drawing and several areas of painting with a variety of media.

65. BEGINNING SCENE DESIGN. *Three hours credit.*

Prerequisite, SP 13. An introductory course in the fundamentals of scene design and stagecraft. The study includes the basic principles of design and color and their application to scenic design.

100. WEAVING. *Three hours credit.*

A study of the basic fundamentals of threading and weaving on two and four harness looms; emphasis on plain and pattern weaving.

101. PHILOSOPHY OF ART EDUCATION. *Two hours credit.*

The philosophy of art education in American schools and art as an integral part of the education of the citizens of a democracy.

103. INTRODUCTION TO WATERCOLOR PAINTING. *Two hours credit.*

Prerequisite, FA 1. A beginning course in watercolor painting.

104. COMMERCIAL DESIGN AND POSTER. *Two hours credit.*

A study of the commercial arts and their place in the art program in the high school. Emphasis will be directed toward the development of techniques in advertising layout, package design, poster design and illustration. Commercial processes of reproduction and printing will also be introduced.

105. COLOR THEORY. *Three hours credit.*

Prerequisite, FA 11. A study of color relationships and organizational principles pertinent to the color unit.

108. CLAY MODELING. *Two hours credit.*

The theory and techniques of modeling and casting.

116. CRAFT PROCESSES AND DESIGN. *Five hours credit.*

Prerequisite, FA 11. Creative expression with a variety of media in sculpture, textiles, carving, modeling, metals, and construction.

117. POTTERY. *Three hours credit.*

Prerequisite, FA 17. The study of glazes and firing with gas and electric kilns and beginning throwing on the potter's wheel.

120. INTRODUCTION TO OIL PAINTING. *Three hours credit.*

Prerequisite, FA 1. A beginning course in oil painting.

123. ART EDUCATION FOR THE SECONDARY SCHOOL. *Three hours credit.*

A study of the relationship of art activities to the school program of general education.

124. ELEMENTARY ART. *Three hours credit.*

Organization of art units at the various grade levels and practical creative experience in a wide variety of media. To be taken concurrently with FA 125.

125. METHODS OF TEACHING ART AT THE ELEMENTARY SCHOOL. *Two hours credit.*

Methods of teaching art at the elementary school level with emphasis on teaching techniques, procedures, materials and evaluation. To be taken concurrently with FA 124.

126. INSTRUCTIONAL TECHNIQUES IN ART EDUCATION. *Three hours credit.*

Orientation to problems of teaching and teacher preparation in art for the elementary school. This course is to give the prospective teacher the objectives, philosophy, psychology and methods necessary for the teaching of art at various grade levels.

127. CRAFT TECHNIQUES. *Three hours credit.*

Construction and basic techniques in a variety of craft processes; including puppets, paper mache, stitchery, silk screen, clay, weaving, soap sculpture, scrap craft.

- 135. LIFE DRAWING.** *Two hours credit.*
Prerequisite, FA 1. Opportunity to draw from the human figure.
- 200. TECHNIQUES OF CREATIVE WEAVING.** *Three hours credit.*
Prerequisite, FA 100. A study of the problems and various processes of weaving. Emphasis on original designing of patterns for color and texture.
- 202. ADVANCED COMPOSITION.** *Three hours credit.*
Prerequisite, FA 1 and 52. Advanced problems in pictorial and graphic composition.
- 203. WATERCOLOR PAINTING.** *Five hours credit.*
Prerequisite, FA 1, 52, and 103. This course seeks to develop individual expression in creative painting and technical mastery of the medium.
- 204. FIGURE AND COMPOSITION.** *Three hours credit.*
Prerequisite, FA 50 and 52. An advanced study of the human figure in composition. Creative work in a variety of media.
- 208. SCULPTURE.** *Three hours credit.*
The theory and techniques of sculpture, with a study of the processes. Creative work in a choice of plastic media.
- 209. PRINT MAKING.** *Three hours credit.*
A study of print processes: etching, dry-point, lithograph, stencil, woodcut and block printing. Experience is offered in the making of prints and the adaptation of print making to secondary school uses.
- 212. PROBLEMS IN DESIGN.** *Three hours credit.*
Prerequisite, FA 11. A study of the techniques of organization of the design variables. Opportunity for individual growth in solving design problems in areas of student's choice.
- 217. POTTERY: ADVANCED THROWING.** *Three hours credit.*
Prerequisite, FA 17, 117. Advanced throwing techniques on the potter's wheel. Individual competence and craftsmanship stressed in this phase of the potter's craft.
- 219. THE SILK SCREEN PRINTING PROCESS.** *Three hours credit.*
Various methods and techniques in the graphic processes of silk screening. Applied problems in all the processes with emphasis on blockout, paper stencil, film, touche, serigraphy, and textiles.
- 220. OIL PAINTING.** *Five hours credit.*
Prerequisite, FA 120. This course seeks to develop individual expression in creative painting and technical mastery of the medium.
- 221. ART HISTORY I.** *Three hours credit.*
A study of the development of art from prehistoric times to and including the Gothic Age.
- 222. ART HISTORY II.** *Five hours credit.*
A study of the development of art from the Renaissance to the present day.
- 223. SURVEY OF ART.** *Five hours credit.*
The important arts of the world studied toward understanding and appreciating the forms produced by man from the dawn of pre-history through all important eras of art development. Emphasis is placed on contemporary trends in the arts which dictate the appearance of the world around us today.
- 225. FIGURE PAINTING.** *Four hours credit.*
Prerequisite, FA 120. Painting in oils from the human figure.
- 228. SEMINAR IN SECONDARY ART.** *Two hours credit.*
A survey and demonstration of new ideas in art techniques and materials essential to a secondary school art program. Student participation in selected areas.

230. SEMINAR IN ELEMENTARY ART. *Two hours credit.*

This course is designed to give the graduate student a philosophy of art education; an understanding of and an opportunity to participate in the essential art activities for the elementary school; to develop his interest and enthusiasm for the teaching of art. Emphasis is given to the creative approach and the integration of the art activities with the entire school program.

232. ADVANCED SCENE DESIGN. *Three hours credit.*

Prerequisite, SP 113. A study of the techniques and problems of scenic design. The esthetic as well as the practical problems of the designer are presented. Settings, properties, costuming, and lighting are practiced within the theatre laboratory.

240. ART IN THE 7TH, 8TH, AND 9TH GRADES. *Five hours credit.*

A study of the problems and techniques in art at the junior high school level, with emphasis on objectives, philosophy, and the actual experiments in the areas of drawing, painting, design and graphic arts.

241. CRAFT PROCESSES IN 7TH, 8TH, AND 9TH GRADES. *Four hours credit.*

Creative experiences in the craft activities adapted to the interests and needs of the junior high school student.

301. SUPERVISION OF ART. *Three hours credit.*

An exploration of the expanding role of art education in the total school program and a critical study of the role of the art supervisor and supervisory techniques.

302. TRENDS IN ART EDUCATION. *Two hours credit.*

An appraisal of the various points of view in art education and a comprehensive study of the current literature dealing with methods, media and techniques.

303. ADVANCED WATERCOLOR PAINTING. *Two hours credit.*

Prerequisite, FA 203. A study of recent developments in watercolor painting with emphasis on new techniques and mixed media.

304. SEMINAR IN ART EDUCATION. *Two hours credit.*

This seminar will be directed toward problems of teaching and supervision of art education in the high school. The scope of the course will remain flexible to enable the student to pursue the areas of his greatest need.

305. ADVANCED COLOR THEORY. *Four hours credit.*

Prerequisite, FA 105. An intensive study of creative color composition.

315. CRAFT TRENDS IN THE SECONDARY SCHOOL. *Two hours credit.*

Research and creative expression in the new trends in craft processes for the secondary level. Emphasis on new construction materials and textile techniques.

316. CRAFTS FOR THE SECONDARY SCHOOLS. *Three hours credit.*

A study of design and crafts adapted to secondary school levels.

317. CERAMICS. *Three hours credit.*

Prerequisite, FA 17, 117, 217. Practical studio studies and experience on the graduate level in glazes, clay bodies, firing with gas and electric kilns, and related phases of pottery.

319. SERIGRAPHY. *Two hours credit.*

Prerequisite, FA 219 or 116. A study and production of the techniques of making original art prints through the silk screen process.

320. ADVANCED OIL PAINTING. *Two hours credit.*

An examination of the latest technical trends and philosophies in oil painting and exploratory and experimental projects in these fields.

324. CREATIVE ACTIVITIES IN THE ELEMENTARY SCHOOL. *Three hours credit.*

Research and creative experience in the various art activities of the elementary school art education program.

327. CRAFT ACTIVITIES FOR THE ELEMENTARY SCHOOL. *Three hours credit.*

Experimentation and exploration of the recent trends and techniques of craft work suited to the elementary school classroom.

328. THE CURRICULUM IN ART EDUCATION. *Three hours credit.*
A review of the best literature on the content and organization of the curriculum in general education, and the professional literature in art education. Analysis and evaluation of courses of study, the building of curriculums and significant units for teaching art.

335. ADVANCED LIFE DRAWING. *Two hours credit.*

Many types of drawing techniques and a variety of materials are used to further the student's basic skills and the development of visualization by drawing from the human figure.

336. ADVANCED DRAWING. *Three hours credit.*

Advanced problems and research in drawing, with emphasis on individual needs and enrichment. Course includes techniques in various media.

Home Economics

Associate Professors: Hall, Reitze.

Assistant Professor: Funderburk.

Instructors: Burns, Cadigan, Grable, Nye.

HOME ECONOMICS MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.
3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
HEC 70	— Clothes and Personality	2
HEC 71	— Textile Fundamentals	3
HEC 72	— Elementary Clothing Construction	3
HEC 73	— Intermediate Clothing Construction	4
HEC 77	— Family Meal Cookery and Service	4
HEC 81	— Art in Home Living	2
HEC 98	— Basic Nutrition	3
HEC 180	— Family Relationships	3
HEC 191	— Management in Family Living	3
HEC 192	— Home Management Residence	3
HEC 203	— Development and Guidance of the Young Child	3
HEC 219	— Infant and Child Care	4
HEC 268	— Family Housing	2
HEC 275	— Home Furnishings	3
HEC 284	— Demonstration Techniques	2
HEC 298	— Meal Planning and Service	4

4. The 29 quarter hours listed under the requirements for a credential to teach Vocational Homemaking in secondary schools in Colorado.

OR

One minor of 27 quarter hours selected in any Division.

5. It is required that at least 12 hours of elective courses be chosen from outside the Division of the Arts to strengthen the qualifications for vocational teaching.

6. Electives to complete 180 quarter hours of academic credit required for graduation. Recommended electives: HEC 183, 199, 261, 274, 295 and FA four hours.

Credential for Teaching Vocational Homemaking

In order to qualify for a Vocational Homemaking Credential under the State Board for Vocational Education, the following credits are required also. If these courses are successfully completed, a minor is not required for the Bachelor of Arts Degree in teacher education.

<i>Course Number</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
HEC 78	— Principles of Food Preparation	4	
HEC 188	— Costume Design	3	
HEC 293	— Adult Education in Homemaking	3	
BUS 54	— Consumer Economic Problems	3	
PCG 285	— Mental Hygiene and Emotional Adjustment..	3	
ED 249	— Principles of Vocational Education	3	
CHEM 40	— Principles of Chemistry I	5	
	Electives in the Science Division.....	5	
		<hr/>	29

Home Economics Minor

<i>Course Number</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
HEC 70	— Clothes and Personality	2	
HEC 72	— Elementary Clothing Construction	3	
HEC 94	— Elementary Cookery and Food Service	4	
HEC 98	— Basic Nutrition	3	
HEC 180	— Family Relationships	3	
HEC 191	— Management in Family Living	3	
HEC 275	— Home Furnishing	3	
	Electives in Home Economics	6	
		<hr/>	27

Recommended electives for Home Economics minors who want to teach homemaking in the secondary schools:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
HEC 219	— Infant and Child Care	4	
ED 141	— Methods of Teaching in the Secondary School	3	
	Electives in Home Economics	5	

Preschool Minor

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
HEC 81	— Art in Home Living	2
HEC 98	— Basic Nutrition	3
HEC 203	— Development and Guidance of the Young Child	3
HEC 219	— Infant and Child Care	4
HEC 261	— Participation in Preschool	3
HEC 264	— Workshop in Preschool	3
SPED 264	— Speech Correction in the Classroom.....	3
	Electives	6
		27

Recommended Electives for Preschool Minor

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
ED 227	— Kindergarten Education	3
HEC 240	— Parent Education	3
HEC 180	— Family Relationships	3
ID 202	— Field Experience in Community Service	3
SP 16	— Voice and Diction	4

HOME AND FAMILY LIVING MAJOR

Bachelor of Arts Degree (Liberal Arts)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. At least 48 quarter hours in Home Economics.
3. One minor of 27 quarter hours.
4. Electives to complete requirements for graduation.

Home and Family Living Minor

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
HEC 70	— Clothes and Personality	2
HEC 71	— Textile Fundamentals	3
HEC 72	— Elementary Clothing Construction.....	3
HEC 94	— Elementary Cookery and Food Service.....	4
HEC 98	— Basic Nutrition	3
HEC 191	— Management in Family Living.....	3
	Electives in Home Economics.....	9
		27

DIETETICS MAJOR

Bachelor of Arts Degree (Liberal Arts)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. At least 48 quarter hours in Dietetics.

3. One minor of 27 quarter hours preferably in the Division of the Sciences to include BOT 122, General Bacteriology (five hours); CHEM 40, Principles of Chemistry I (five hours); CHEM 41, Principles of Chemistry II (five hours); CHEM 42, Introductory Organic Chemistry (five hours); CHEM 247, Biochemistry (five hours).

4. Electives to complete requirements for graduation.

DIETETICS MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. Professional Education Program, 29 hours, plus ED 140, two hours credit and ED 141, three hours credit.

3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
HEC 70	— Clothes and Personality	2
HEC 71	— Textile Fundamentals	3
HEC 72	— Elementary Clothing Construction	3
HEC 73	— Intermediate Clothing Construction	4
HEC 77	— Family Meal Cookery and Service.....	4
HEC 98	— Basic Nutrition	3
HEC 180	— Family Relationships	3
HEC 203	— Development and Guidance of the Young Child	3
HEC 219	— Infant and Child Care	4
HEC 278	— Dietetics	3
HEC 275	— Home Furnishing	3
HEC 282	— Nutrition in Disease	3
HEC 284	— Demonstration Techniques	2
HEC 285	— Experimental Cookery	3
HEC 287	— Institutional Management	5

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4. One minor of 27 quarter hours preferably in the Division of Sciences to include BOT 122, General Bacteriology (five hours); CHEM 40, Principles of Chemistry I (five hours); CHEM 41, Principles of Chemistry II (five hours); CHEM 42, Introductory Organic Chemistry (five hours); CHEM 247, Biochemistry (five hours).

5. Twenty-four to 32 quarter hours of free electives to complete 180 quarter hours of academic credit required for graduation.

American Dietetics Association Internship Requirements

In order to qualify for an internship approved by the American Dietetics Association, the following credits are required also:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
HEC 78	— Principles of Food Preparation	4	4
HEC 199	— Preservation of Food	2	2
HEC 274	— Equipment Selection and Maintenance.....	4	4
HEC 286	— Quantity Cookery	4	4
HEC 298	— Meal Planning and Service	4	4
BUS 20	— Principles of Accounting I	4	4
ZOO 217	— Human Physiology	5	5
		<hr/>	27

Description of Courses

- 70. CLOTHES AND PERSONALITY.** *Two hours credit.*
 A study of the factors which influence one's personality: posture, grooming, the application of art principles to clothing selection for figure and facial types, appropriate accessories and care of clothing. Opportunities are given to practice acceptable behavior in social situations.
- 71. TEXTILE FUNDAMENTALS.** *Three hours credit.*
 A basic study of natural and man-made fibers, with their properties and uses. Yarn construction and modern methods of texturizing yarns are included, with emphasis on the newer finishes for old and new fabrics.
- 72. ELEMENTARY CLOTHING CONSTRUCTION.** *Three hours credit. (One hour lecture, four hours laboratory.)*
 Basic principles used in garment construction applied through actual construction of garments. Common fitting problems are studied.
- 73. INTERMEDIATE CLOTHING CONSTRUCTION.** *Four hours credit. (Two hours lecture, four hours laboratory.)*
 Prerequisite, HEC 72. A continuation of HEC 72, using more difficult fabrics and construction techniques.
- 77. FAMILY MEAL COOKERY AND SERVICE.** *Four hours credit. (Two hours lecture, four hours laboratory.)*
 A study of the fundamental processes of cookery. Basic principles of nutrition and meal planning are used in the preparation and serving of family meals.
- 78. PRINCIPLES OF FOOD PREPARATION.** *Four hours credit. (Two hours lecture, four hours laboratory.)*
 Prerequisite, HEC 77. Emphasis is given to principles of cooking involved in more difficult food preparation. Laboratory work is planned to show the relationship between scientific principles and cookery processes. Food products are evaluated.
- 81. ART IN HOME LIVING.** *Two hours credit.*
 Course is 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.
- 94. ELEMENTARY COOKERY AND FOOD SERVICE.** *Four hours credit. (Two hours lecture, four hours laboratory.)*
 Non-majors. This is a non-technical course in food preparation planned for men or women students desiring more knowledge of the fundamental processes of cookery and food marketing. Simple meals and party refreshments will be planned, prepared and served.

98. BASIC NUTRITION. *Three hours credit.*

Enables students to select food suited to their needs in the light of the newer knowledge of nutrition and individual physical fitness. A study of the use of food nutrients in the body.

180. FAMILY RELATIONSHIPS. *Three hours credit.*

The relationship of the individual to his human contacts and the establishment of the successful American home are studied.

183. HOME NURSING. *Two hours credit.*

The chief purpose of this course is to develop the ability to give a simple type of nursing care to a member of the family who is ill, injured, or helpless because of age or infirmity. The principles involved in nursing procedures are stressed, the procedures demonstrated and the students are required to practice on each other.

188. COSTUME DESIGN. *Three hours credit. (One hour lecture, four hours laboratory.)*

Prerequisite, HEC 72, 73. Some basic problems are presented in flat pattern making. A personal master pattern is developed for each student. Creative problems are planned to develop skill in the application of art principles to costume.

191. MANAGEMENT IN FAMILY LIVING. *Three hours credit.*

A study of management in relation to successful home living. Family goals, managerial responsibilities, principles and techniques used in managing time, energy and money are stressed. Methods used in the care of the house are studied.

192. HOME MANAGEMENT RESIDENCE. *Three hours credit.*

Prerequisite, HEC 77, 78, 191. Students live in the Margaret Roudebush Home Management House where they put into practice desirable standards of home living.

199. PRESERVATION OF FOOD. *Two hours credit. (One hour lecture, two hours laboratory.)*

Prerequisite, HEC 77, 78. Discussions and laboratory practice in home methods of food preservation by the waterbath, pressure cooker, and quick freeze techniques. Jellies, jams, and relishes are prepared. Observations of commercial methods of food preservation.

203. DEVELOPMENT AND GUIDANCE OF THE YOUNG CHILD. *Three hours credit. (Two hours lecture, two hours laboratory per week.)*

The physical, emotional and social growth processes as they apply in understanding the total development of the pre-school years with appropriate guidance procedures emphasized. The functions, techniques and physical setting of the pre-school are studied.

209. NEW TRENDS IN NUTRITION. *Three hours credit.*

A detailed study of the value of carbohydrates, fats, proteins, minerals and vitamins in human nutrition. A comprehensive study of nutrition problems in health education. Food as an aid to positive health is stressed. A study of the food needs of growing children in the elementary and secondary school is made.

219. INFANT AND CHILD CARE. *Four hours credit. (Three hours lecture, two hours laboratory per week.)*

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. Observation of infants and children.

222. PROBLEMS IN HOME ECONOMICS. *Three hours credit.*

A study of current trends and problems in selected areas: Nutrition and family meals; management of family resources; child development; and housing the family. Consideration of present conditions and corresponding problems in managing the family resources.

240. PARENT EDUCATION. *Three hours credit.*

This course deals with problems of starting and continuing programs of parent education in the public schools. The selection of sponsoring organizations, organizing parent education groups, meeting the educational interests and needs in child study, home education, and home-school cooperation are emphasized.

243. ART IN CONTEMPORARY LIVING. *Three hours credit.*

A consideration of art principles in the selection of well designed clothing for the individual man or woman, selection and arrangement of well designed furnishings suitable to the modest home, selection of attractive food dishes and center pieces.

244. PERSONAL IMPROVEMENT FOR THE TEACHER. *Three hours credit.*

A workshop in the personal improvement of the teacher. Emphasis will be given to the problems of the individual. Techniques for the development of positive mental health, expressive personality traits and attractive personal appearance will be stressed.

261. PARTICIPATION IN PRE-SCHOOL. *Three hours credit. (One hour lecture, six hours laboratory per week.)*

Prerequisite, HEC 203. Experience with children in the pre-school situation supplemented by readings, films and discussions. Emphasis on child growth through children's interests and activities.

264. WORKSHOP IN PRE-SCHOOL. *Three hours credit. (One hour lecture, six hours laboratory per week.)*

Prerequisite, HEC 203. Sources and uses of play equipment for large and fine coordinations, for dramatic play and for the materials used in musical and creative development in the pre-school are studied. The laboratory sessions give students practical application of these uses as they apply to the child's needs.

265. THE FAMILY. *Three hours credit.*

A study of the family in present day America. Considers functions of the family and forces affecting it; variations in family values and practices; roles, adjustments, relations and problems of adult and child members. Designed for teachers of adolescents and adults.

267. IMPROVEMENT OF INSTRUCTION IN HOME ECONOMICS. *Four hours credit.*

The course is planned for students who wish to further develop criteria in teaching home economics in the junior and senior high school program.

268. FAMILY HOUSING. *Two hours credit.*

A study of housing as it relates to family living. Students learn basic principles and acquire information needed for solving housing problems of typical family groups. Students consider the financing of housing, family needs, and procedures in buying, renting, and building. Plans are made for building and remodeling family housing units.

274. EQUIPMENT SELECTION AND MAINTENANCE. *Four hours credit. (Three hours lecture, two hours laboratory.)*

Through individual reports, projects, field trips, demonstrations, and classroom discussions, a body of knowledge and criteria are developed by which equipment and utensils may be evaluated. Basic scientific principles of heat, mechanics, electricity, and light are studied.

275. HOME FURNISHING. *Three hours credit.*

A study of the application of art principles to the selection of furnishings for homes of various types. Emphasis is given to the importance of considering the needs and resources of the family for intelligent choice, arrangement and care of furnishings.

277. NUTRITION AND THE SCHOOL LUNCH PROGRAM. *Three hours credit.*

A study of the school lunch program, its organization and management, its effect on the food habits and nutritional state of the elementary and secondary school pupil, and its place as an integral part of the total school program. A review of the nutrition needs of the growing child will be made.

278. DIETETICS. *Three hours credit.*

Prerequisite, HEC 98. A review of the fundamentals of human nutrition is made. Emphasis given to recent developments in human nutrition. Diets for average American families of various income levels planned. The diet of the young child in relation to the diet of the family is studied.

279. PRESERVATION OF FOOD I. *Two hours credit. (One hour lecture, two hours laboratory.)*

Deep freeze, jellies, jams, relishes. The principles of making jellies, jams, pickles and relishes are studied. Products are made. Problems of deep freezing foods are discussed. The purchase and care of the home freezer are included.

280. PRESERVATION OF FOOD II. *Two hours credit. (One hour lecture, two hours laboratory.)*

Open kettle, water bath, pressure cooker, quick freeze methods of food preservation are discussed and home methods of these types of food preservation are practiced in the laboratory.

282. NUTRITION IN DISEASE. *Three hours credit.*

Prerequisite, HEC 98. A study of the fundamental principles involved in the treatment of disease through diet. Emphasis is given to modification of normal diet.

284. DEMONSTRATION TECHNIQUES. *Two hours credit.*

Prerequisite, HEC 72, 77. Practice in the techniques of demonstrating before audiences. All phases of the Home Economics field will be used to furnish types of demonstrations.

285. EXPERIMENTAL COOKERY. *Three hours credit. (Two hours lecture, two hours laboratory.)*

Prerequisite, HEC 77, 78. 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.

286. QUANTITY COOKERY. *Four hours credit. (Three hours lecture, two hours laboratory.)*

Prerequisite, HEC 77, 78, 98. Meal planning, techniques of food buying and application of cookery principles to large quantity food service. The facilities of student dining halls and the school lunch program are used as practice laboratories.

287. INSTITUTIONAL MANAGEMENT. *Five hours credit. (Four hours lecture, two hours laboratory.)*

The organization and management of various types of institutions. Specific emphasis is given to problems of personnel, the physical plant, and efficient work schedules. The food-service areas of various types of institutions are selected for study.

288. CREATIVE PROBLEMS IN DRESS DESIGN. *Four hours credit. (Two hours lecture, four hours laboratory.)*

Prerequisite, HEC 70, 72, 73. Basic problems in draping on dress forms and in the drafting of flat patterns. Opportunity is provided for creating designs for different figure types in a variety of textured fabrics. Some consideration is given also to the design of simple decorative details and appropriate accessories.

290. APPLIED HOME FURNISHINGS. *Three hours credit. (One hour lecture, four hours laboratory.)*

This course includes various projects which will give students experience in the application of art principles to interior decorations. Individual and/or class projects such as the construction of draperies, bedspreads and slipcovers.

291. MANAGING FAMILY RESOURCES. *Maximum of four hours credit.*

A study of the management of human and material resources in achieving family goals. Techniques used in managing the family's resources to achieve desired ends are stressed. Work simplification, efficient planning and management of family finances are studied in detail.

293. ADULT EDUCATION IN HOMEMAKING. *Three hours credit.*
A study of the philosophy of adult education, procedures used in promoting and organizing adult programs, and techniques used in teaching adults.

294. INSTRUCTIONAL AIDS IN HOME ECONOMICS. *Maximum of four hours credit.*

Students develop and use criteria in evaluating teaching materials and aids. Selecting, organizing, and storing of aids is included. Visual aids and devices used in teaching various phases of homemaking are planned and prepared. Printed materials are evaluated.

295. TAILORING. *Four hours credit. (Two hours lecture, four hours laboratory.)*

Prerequisite, HEC 72, 73, 188. Opportunity for developing skill is presented in the construction of lined suits and coats.

298. MEAL PLANNING AND SERVICE. *Four hours credit. (Two hours lecture, four hours laboratory.)*

Prerequisite, HEC 77, 78. This course provides further practice in more difficult food preparation. It emphasizes individual and group planning, preparing, and serving meals. Opportunities are given to solve some of the problems of the hostess in serving food on various occasions in the modern American home.

301. SUPERVISION OF STUDENT TEACHING IN HOME ECONOMICS. *Maximum of four hours credit.*

The qualifications, objectives and responsibilities of the supervising teacher are analyzed. Supervision techniques and the evaluation of the development of the student teacher are stressed.

302. TEACHING PROBLEMS IN HOMEMAKING. *Maximum of four hours credit.*

Modern trends in homemaking education will be evaluated. Problems of the individual teacher are studied and assistance is given her in working out practical solutions. Common problems are considered by the entire group.

303. CURRICULUM IN HOMEMAKING. *Four hours credit.*

This course helps teachers improve their ability to plan functional programs in homemaking and to solve other curriculum problems. Implications of social and economic conditions, research findings, trends in education and current issues are determined. Modern developments of program planning are studied. Students have experience in curriculum planning.

304. EVALUATION IN HOMEMAKING EDUCATION. *Four hours credit.*

A study of principles and procedures in appraising student achievement of educational goals. Emphasis on evaluation as an integral part of the teaching and learning process. Experience provided in developing procedures and instruments for use in teaching situations.

306. HISTORY OF COSTUME. *Three hours credit.*

A study of the development of the costume through the ages and its influence on the designs of present day clothing. The development of costumes in the couturier houses of Europe and America is considered.

307. CLOTHING ECONOMICS. *Three hours credit.*

A study of family and individual clothing problems: standardization, labeling, consumer protection, recent textile developments, consumer purchasing surveys, custom and wholesale production comparisons. The relation of fashion to manufacturing and consumption of clothing.

371. ADVANCED TEXTILES. *Three hours credit.*

Prerequisite, HEC 71. A study of recent textile developments. Problems of individual interest are considered. A study of Oriental, European, English and American textiles, the synthetic fibers and recent developments in textiles.

372. TECHNIQUES OF TEXTILE RESEARCH. *Three hours credit.*

This course affords the student the opportunity of carrying out some visual and manual experiments that will correlate the fundamental facts and concepts of textile fibers with their behavior in use and care, and to assist her in applying this knowledge to herself as a teacher and as a consumer.

376. PROBLEMS IN CLOTHING CONSTRUCTION. *Three hours credit. (Two hours lecture, two hours laboratory.)*

Prerequisite, HEC 72, 73. This course is planned for graduate students with a background of knowledge of the fundamentals of clothing construction. Opportunity will be presented to develop greater skill in construction processes, fitting techniques, and alteration of ready-to-wear.

385. RESEARCH IN FOODS. *Four hours credit. (Two hours lecture, four hours laboratory.)*

Prerequisite HEC 77, 78. A study of the recent findings in food research. Opportunity is given for individual investigation in various problems of food preparation. Valid techniques of experimentation are stressed.

386. PRINCIPLES AND TECHNIQUES OF COOKERY. *Four hours credit. (Three hours lecture, two hours laboratory.)*

A study of the scientific principles which are basic to protein, fat and carbohydrate cookery. The principles involved in hydration, crystallization, leavening, emulsions and other cookery problems will be included. The relationships between techniques of food preparation and principles involved will be stressed.

387. FOOD ECONOMICS. *Four hours credit.*

A study of family and world food problems: The influence of food on world conditions, work of the Food and Agriculture Organization of the United Nations (FAO), problems of food production, marketing, consumer practices and consumer protection in the United States, the cost of meeting nutrition needs of the American family.

389. ADVANCED CLOTHING CONSTRUCTION. *Two hours credit. (One hour lecture, two hours laboratory.)*

Prerequisite, HEC 72, 73, 188. Individual patterns designed from the basic block made in HEC 188 or HEC 288 are used in constructing garments. Fitting problems and construction techniques of the entire class will be used to provide a breadth of learning experiences. This will provide the student opportunities to develop more knowledge and skills in these areas of clothing construction.

396. DRESS DESIGN IN DRAPING. *Four hours credit. (Two hours lecture, four hours laboratory.)*

Prerequisite, HEC 188. Problems to develop original discrimination and techniques in costume design, developed with the means of draping fabrics. A problem is selected and done on the student's own initiative.

398. FAMILY MEAL MANAGEMENT. *Four hours credit. (Two hours lecture, four hours laboratory.)*

This course is planned to give the graduate student further opportunity to develop her skill in the preparation and service of meals. Individual responsibility is stressed and homelike occasions are duplicated as nearly as possible in the laboratory situation.

Industrial Arts

Professors: Erwin, F. M. Johnson, Perry.

Associate Professors: Lubbers, J. Olson.

Assistant Professors: Collins, Jelden.

Instructor: Gleb.

INDUSTRIAL ARTS MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.
3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
IA 6	— Freehand Drafting and Design	3
IA 34	— Introduction to Industrial Arts	1
IA 41	— Graphic Arts Fundamentals	3
IA 50	— Bench Woodwork	3
IA 61	— Principles of Drafting	3
IA 70	— Introduction to General Metal	3
IA 71	— Art Metal and Metal Spinning	3
IA 72	— Gas and Electric Welding	2
IA 80	— General Electricity	3
IA 90	— Power Fundamentals	2
IA 115	— General Crafts	5
IA 141	— Graphic Arts	2
IA 150	— Woodworking Technology	5
IA 161	— Pictorial Drafting	2
IA 181	— Electrical Machinery	2
IA 220	— Course Organization in Industrial Arts.....	3
IA 235	— History and Philosophy of Industrial Arts.....	3

4. One minor of 27 quarter hours outside of the departmental major.

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

INDUSTRIAL ARTS MINOR

<i>Course Number</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
IA 50	— Bench Woodwork	3	
IA 61	— Principles of Drafting	3	
IA 70	— Introduction to General Metal	3	
IA 71	— Art Metal and Metal Spinning	3	
IA 72	— Gas and Electric Welding	2	
IA 150	— Woodworking Technology	5	
IA 161	— Pictorial Drafting	2	
IA 162	— Working Drawings	3	
IA 220	— Course Organization in Industrial Arts.....	3	
			27

An alternate minor to meet requirements for teaching in a general shop or a craft emphasis may be elected.

Industrial Arts Minor

Required courses in this minor:

IA 61	— Principles of Drafting	3
IA 161	— Pictorial Drafting	2
IA 162	— Working Drawings	3
IA 220	— Course Organization in Industrial Arts.....	3

Select any two areas of eight quarter hours each to complete 27 quarter hours required for a minor:

Crafts

FA 17	— Introduction to Pottery	3
IA 115	— General Crafts	5
	and/or	
IA 116	— General Leathercraft	3
IA 118	— General Plastics	3
IA 173	— Jewelry Design and Construction	2

Electricity and Electronics

IA 80	— General Electricity	3
IA 182	— Electronic Components and Hardware	2
IA 183	— Electronic Circuitry	3

Graphic Arts

IA 41	— Graphic Arts Fundamentals	3
IA 141	— Graphic Arts	2
IA 142	— Graphic Arts Technology	3

Metal

IA 70	— Introduction to General Metal	3
IA 71	— Art Metal and Metal Spinning	3
IA 72	— Gas and Electric Welding	2

Wood

IA 50	— Bench Woodwork	3
IA 150	— Woodworking Technology	5

Description of Courses

6. FREEHAND DRAFTING AND DESIGN. *Three hours credit.*
The principles of design and freehand drawing as related to materials, construction techniques, and their application to industrial arts problems.

- 34. INTRODUCTION TO INDUSTRIAL ARTS.** *One hour credit.*
The basis for the development of a modern philosophy of industrial arts. Orientation to problems of teaching and teacher preparation.
- 41. GRAPHIC ARTS FUNDAMENTALS.** *Three hours credit.*
Experience with the fundamental operations used in school graphic arts shops; information about tools, machines, and materials.
- 50. BENCH WOODWORK.** *Three hours credit.*
Development of basic skills in the use of hand tools and materials for the wood shop. Emphasis is on the study of wood characteristics, orderly procedures, safe working practices, and care of hand tools.
- 61. PRINCIPLES OF DRAFTING.** *Three hours credit.*
Lettering, freehand sketching, geometric construction, orthographic projection, sectional views, and dimensioning in drafting.
- 70. INTRODUCTION TO GENERAL METAL.** *Three hours credit.*
Basic shop procedures, objectives, and relationship to other types of work in metal. Emphasis on elementary bench metal, sheet metal, and forge practice.
- 71. ART METAL AND METAL SPINNING.** *Three hours credit.*
Elementary course in art metal work including bowl and tray construction, etching, pierce work, soft and hard soldering, planishing and finishing of copper and aluminum.
- 72. GAS AND ELECTRIC WELDING.** *Two hours credit.*
An introductory course in the field of gas and electric welding. Fabrication of projects to apply these processes.
- 80. GENERAL ELECTRICITY.** *Three hours credit.*
Elementary principles of electricity that are applicable to projects in the junior and senior high schools. Emphasis placed on magnetism, production of electricity, transformers, induction, capacitance, and resonant circuits.
- 90. POWER FUNDAMENTALS.** *Two hours credit.*
A study of energy sources and the machines that convert energy into useful work. Emphasis on internal combustion as represented by the small gasoline engine.
- 110. GENERAL BOOKBINDING.** *Three hours credit.*
Development of basic skills in hand bookbinding applicable to elementary or junior high school arts programs.
- 111. BOOKBINDING.** *Two hours credit.*
Hand binding with limited home-made equipment. Types of bindings and bookcrafts for unit or general industrial arts shops.
- 112. ADVANCED BOOKBINDING.** *Three hours credit.*
Magazine binding in heavy buckram or leather, including appropriate sewing in terms of the use of books.
- 115. GENERAL CRAFTS.** *Five hours credit.*
Design, construction, and demonstration in crafts with simple tools and inexpensive materials, including experiences in block printing, bookbinding, braiding and weaving, chip carving, copper enameling, leather, metal tooling, mosaic, plastics, silk screening, and woodcrafts.
- 116. GENERAL LEATHERCRAFT.** *Three hours credit.*
Development of design, tooling and carving skills for application in the unit or general shop.
- 117. LEATHERCRAFT.** *Two hours credit.*
Design and development of tools, leather projects, techniques for industrial arts programs, camp activities, and recreation programs.

118. GENERAL PLASTICS. *Three hours credit.*
Introduction to the use of synthetics for the unit or general shop programs in junior or senior high schools.

119. PLASTICS. *Two hours credit.*
Design and construction techniques in fiberglass and laminated plastics for the industrial arts unit or general shop.

141. 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.

142. GRAPHIC ARTS TECHNOLOGY. *Three hours credit.*
Advanced course in the printing processes including hand and machine operations. Planning the printed piece and the producing of continuous tone materials.

143. NEWS PHOTOGRAPHY. *Two hours credit.*
This course prepares students to compose pictures, learn about and how to do depth reporting with pictures, evaluation of pictures as news and the psychology of photography. Study is made of types and uses of cameras. Some dark room procedures are included.

144. SCHOOL PUBLICATIONS—ANALYSIS, DESIGN AND LAYOUT. *Four hours credit.*
Instruction in basic philosophy, analysis and procedures of design and layout for all types of school publications including newspapers, annuals, magazines, and direct mail brochures.

145. PRODUCTION OF SCHOOL PUBLICATIONS. *Three hours credit.*
Prerequisite, IA 144. Experience with the basic printing processes used in producing all kinds of publications, newspapers, annuals, magazines, and direct mailing pieces. This includes fundamental instruction in relief, lithographic, intaglio and screen printing as well as plate making techniques.

150. WOODWORKING TECHNOLOGY. *Five hours credit.*
The study of woods, materials, and equipment related to the wood-working area. Laboratory emphasis is on woodworking tools and machines.

153. FURNITURE AND CABINET MAKING. *Three hours credit.*
Design and construction of period and modern furniture, study of production methods of industry, upholstery, and woodfinishing.

154. WOODFINISHING. *Two hours credit.*
Prerequisite, IA 150. 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.

155. EQUIPMENT AND MAINTENANCE PROBLEMS IN WOOD. *Three hours credit.*
Prerequisite, IA 150. Upkeep and repair of woodworking tools and machines. Selection and purchase of woodworking tools, machines and supplies for a school shop.

156. UPHOLSTERY. *Two hours credit.*
Techniques and processes in the various types of upholstery for all grade levels.

157. WOODTURNING. *Two hours credit.*
Basic skills and related techniques in faceplate and spindle woodturning.

161. PICTORIAL DRAFTING. *Two hours credit.*
Object description and pictorial drawing. Emphasis is on inking, auxiliary views, isometric, dimetric, trimetric, oblique, cabinet, and perspective drawings.

162. WORKING DRAWINGS. *Three hours credit.*

Course deals with revolutions, detail drawings, assembly drawings, piping drawings, electronic drawings, welding drawings, and simple duplicating processes such as diazo, ozalid, blueprinting, and zerography.

163. SHEET METAL DRAFTING. *Two hours credit.*

Intersections and development of flat surfaces to three-dimensional objects. Emphasis placed on intersections of planes and surfaces and layout techniques.

173. JEWELRY DESIGN AND CONSTRUCTION. *Two hours credit.*

An introduction to the basic processes of jewelry construction including silver soldering, sawing, filing, ring construction, simple silversmithing and setting stones.

174. MACHINE LATHE OPERATION. *Two hours credit.*

An introductory unit concerned with the basic operations performed on a machine lathe including straight and taper turning, thread cutting, and other operations.

181. ELECTRICAL MECHANICAL EQUIPMENT. *Two hours credit.*

Prerequisite, IA 80. Advanced principles of electricity that are applicable to projects in the junior and senior high schools and construction of such projects. Emphasis placed on motors, generators, electrical wiring, and electrical measuring devices.

182. ELECTRONIC HARDWARE AND COMPONENTS. *Two hours credit.*

Prerequisite, IA 80. A study of the manufacture, application and function of electronic hardware and components used in industry. Vacuum tubes, transistors, coils, and capacitors are discussed.

183. ELECTRONIC CIRCUITRY. *Three hours credit.*

Prerequisite, IA 182. A study of the basic electronic circuits used in industry and some common applications of each. Such circuits as power supplies, amplifiers, oscillators, transmitters and receivers are considered.

211. PROBLEMS IN BINDERY ORGANIZATION. *Three hours credit.*

Organization of a bindery relating to the library, classroom, and as a general shop unit. Development of courses to meet individual needs.

216. DESIGN PROBLEMS IN LEATHER. *Two hours credit.*

Techniques in the designing and construction of leather-craft projects for the junior and senior high school unit or general shop.

217. ADVANCED LEATHERCRAFT. *Three hours credit.*

Prerequisite, IA 216. Organization, teaching problems, and advanced techniques in leathercraft. Development of course material suitable to a unit or general shop.

218. DESIGN PROBLEMS IN SYNTHETIC MATERIALS. *Two hours credit.*

Design and techniques of construction in the area of synthetic craft materials. Development of course units suitable to a unit or general shop on the junior or senior high school level.

219. ADVANCED PLASTICS. *Three hours credit.*

Prerequisite, IA 217. Advanced work in the field of plastics. Fabrication of projects for a unit or general shop with information for organizing such work. Development of a course suitable for a general shop.

220. 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.

- 230. HISTORY OF INDUSTRIAL ARTS.** *Four hours credit.*
A study of the origin, movements, and leaders responsible for theories and philosophies of industrial arts.
- 232. IMPROVEMENT OF INSTRUCTION IN THE ARTS.** *Three hours credit.*
An analysis of current difficulties and weaknesses in teaching the arts. Curriculum problems, objectives, methods and administration and community pressures are studied.
- 233. MATERIALS OF INDUSTRY.** *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 area are considered.
- 234. TEACHING THE INDUSTRIAL ARTS.** *Three hours credit.*
Problems in planning industrial arts courses. Philosophy, objectives, evaluation, and school shop organization are considered.
- 235. 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.
- 236. PRINCIPLES OF GENERAL SHOP ORGANIZATION.** *Three hours credit.*
The purposes and philosophy underlying the organization of general shops.
- 237. DEVELOPMENT OF INSTRUCTIONAL AIDS IN INDUSTRIAL ARTS.** *Three hours credit.*
Visual aids, instruction sheets, charts, graphs, and other instructional devices are planned and developed. The student will select, plan, and construct, where appropriate, various instructional aids.
- 238. CURRENT THEORY AND PRACTICE IN THE ARTS.** *Three hours credit.*
Current controversial issues which confront the teacher of the arts. Problems of standardization, laboratory organization, administrative and community attitudes, and correlation with other departments.
- 239. ORGANIZATION AND ADMINISTRATION OF INDUSTRIAL EDUCATION.** *Three hours credit.*
A study of the purposes and programs of industrial education in secondary schools, including industrial arts and vocational-industrial education. Special emphasis on the program of vocational-industrial education as provided through the Smith-Hughes Act, the George-Dean Act, and other pieces of federal legislation.
- 240. GRAPHIC ARTS DESIGN AND LAYOUT.** *Three hours credit.*
A study of the origin, development and application of the principles of design in the field of typography. Special emphasis is on the selection and use of type and illustrations for printing layout.
- 241. COPY PREPARATION AND CAMERA PROCEDURES.** *Three hours credit.*
Copy preparation for all the printing processes. Use of hot, cold, and photo type. Paste up procedures, camera techniques, and press production.
- 242. COLOR SEPARATION FOR PHOTOMECHANICAL REPRODUCTION.** *Three hours credit.*
Fundamentals of subtractive color theory as used in separating color copy. Handling of transparent and reflection copy. Special proofing, platemaking and press operation.

- 243. THEORY AND PRACTICE IN OFFSET LITHOGRAPHY.** *Three hours credit.*
This course will include copy preparation, camera and darkroom work, stripping and opaquing, plate making and offset press operation.
- 250. CONTEMPORARY FURNITURE DESIGN AND FABRICATION.** *Three hours credit.*
A brief introduction of recognized periods of furniture design leading to the present concept of functionalism and the techniques of applying contemporary design.
- 254. SEMINAR IN ELEMENTARY SCHOOL INDUSTRIAL ARTS.** *Three hours credit.*
Development of basic skills through elementary work in wood, metals, and other materials. Adaptation of work to classroom or small shops with limited equipment.
- 256. ADVANCED UPHOLSTERY.** *Two hours credit.*
The use of special techniques and materials relating to upholstery. The study of upholstery and its place in the public school shop.
- 257. CONSTRUCTION PROBLEMS IN WOOD.** *Three hours credit.*
A course for advanced woodworking students with special emphasis on construction problems relating to the building trades.
- 261. ARCHITECTURAL DRAWING.** *Three hours credit.*
Course 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.
- 262. 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.
- 264. INDUSTRIAL ARTS DESIGN.** *Three hours credit.*
Principles of design as they apply to the several areas of industrial arts.
- 270. ADVANCED GENERAL METALWORK.** *Three hours credit.*
An advanced course in bench metalwork, sheet metal work, forge and foundry work.
- 271. ADVANCED ART METAL.** *Three hours credit.*
An advanced course in art metal and metal spinning including work in extreme raising, repousse, chasing, use of sectional chucks and others.
- 272. ADVANCED GAS AND ELECTRIC WELDING.** *Three hours credit.*
Advanced course in oxyacetylene and electric welding which includes flat, horizontal, vertical, and overhead welding, cast iron welding, and the use of low temperature alloy rods. Consideration is given to principles of teaching, course content, welding supplies and the equipment suitable for the teaching of welding at the junior and senior high school level.
- 273. ADVANCED JEWELRY AND LAPIDARY WORK.** *Three hours credit.*
This course is designed to give advanced work in jewelry construction and silversmithing with the student cutting and polishing his own setting as an introduction to lapidary work.
- 274. ADVANCED MACHINE TOOL OPERATION.** *Two hours credit.*
An advanced course in machine tool operation concerned with the basic operations performed on the engine lathe, shaper, milling machine, surface grinder and cylindrical grinder. Consideration is given to instructional techniques at the junior and senior high school levels.

275. ADVANCED MACHINE SHOP PRACTICE. *Three hours credit.*
Advanced course organization and practice for the secondary and junior college levels in machine tool operation, maintenance, construction specifications and machine shop theory.

281. PROBLEMS IN TEACHING GENERAL SHOP ELECTRICITY. *Three hours credit.*

An opportunity for teachers of industrial arts who have to include a "doing" course in electricity in their general shop program to develop such a unit. Selection of content and the development of projects to meet the objectives of the work. Laboratory organization and equipment problems are also considered.

282. MOTORS, GENERATORS, AND ELECTRICAL WIRING. *Two hours credit.*

Prerequisite, IA 281. A study of the fundamental types of DC and AC generators and motors used in electricity. Deals with construction, repair, and maintenance problems common to AC-DC motors and generators. Also discusses electrical wiring and devices used to measure electrical energy.

290. POWER AND TRANSPORTATION. *Three hours credit.*

Advanced study of power application in the form of stationary and mobile engines. Emphasis on the automobile, its engine and power transmission.

330. ORGANIZATION AND ADMINISTRATION IN INDUSTRIAL ARTS. *Three hours credit.*

A course designed for teachers, supervisors and administrators of industrial arts. Emphasis placed on shop planning, teacher and school liability, shop organization and operation, accounting procedures, maintenance problems and purchase and replacement of equipment and supplies.

331. A CRITIQUE OF MODERN INDUSTRIAL ARTS. *Three hours credit.*

A course in which several instructors participate. Men of divergent points of view present and defend ideas of common interest to today's industrial arts teacher.

332. SEMINAR IN INDUSTRIAL ARTS. *Three hours credit.*

An opportunity for students doing independent research to report and receive criticism.

335. PHILOSOPHY OF INDUSTRIAL ARTS. *Three hours credit.*

A study of the many factors which influence the development of a sound philosophy. Method and subject matter, terminology, development of aims, and the place of the arts in the history of man.

336. CRITIQUE FOR GENERAL SHOP ORGANIZATION. *Three hours credit.*

Philosophy of the program, objectives, techniques of teaching and organization of general shops. Special problems of instruction and administration are also considered.

338. CURRICULUM DEVELOPMENT IN INDUSTRIAL ARTS. *Three hours credit.*

Designed for industrial arts teachers, supervisors and administrators who need an understanding of content, objectives, and equipment to conduct classes of industrial arts in the public schools and colleges. Emphasis placed on objectives, methods of selecting course content, equipment, and research completed in this area.

339. EVALUATION IN INDUSTRIAL ARTS. *Three hours credit.*

Problems in measuring industrial arts achievement. A study of the purposes of evaluation and the kind and types of instruments used. Interpretation of data leading to the improvement of instruction.

343. ORGANIZATION OF THE GRAPHIC ARTS SHOP. *Three hours credit.*

The techniques and objectives of the graphic arts; their historical development and place in our cultural background; art in printing; shop planning, equipment and management; course content and organization.

344. PROBLEMS OF DESIGN IN THE GRAPHIC ARTS. *Three hours credit.*

Course is centered around graphic arts problems found in individual projects, with emphasis upon teaching students to recognize, appreciate and use the principles of design on the printed page.

351. ORGANIZATION OF THE WOOD SHOP. *Three hours credit.*

Critical study of current practices. A "refresher" course for teachers who have been away from the field. Includes techniques in both bench and machine work.

352. PROBLEMS IN WOODWORKING. *Three hours credit.*

A study of the problems the specialized teacher of woodworking in secondary schools must meet.

362. PROBLEMS IN DRAFTING AND PLANNING. *Three hours credit.*

Objectives, course content, and teaching procedures of all units in drafting. Courses are set up in terms of individual needs.

371. ADVANCED METAL CRAFT TECHNIQUES. *Three hours credit.*

Advanced metal tooling, etching, engraving, wire crafts, copper jewelry, forming, raising and spinning. Problems of organization and teaching techniques.

373. ADVANCED LAPIDARY AND SILVER CRAFTS. *Three hours credit.*

Advanced techniques in silver with emphasis on the lost wax process, enameling, lapidary, plating and jewelry.

374. ORGANIZATION OF THE METAL SHOP. *Three hours credit.*

This course shall include objectives, course content, shop organization, evaluation and problems of teaching the various phases of metalwork.

375. PROBLEMS OF THE METAL SHOP. *Three hours credit.*

Prerequisite, IA 374. Advanced course in the organization of both unit and general metal shops and shop practice handled on the seminar basis, giving the graduate students an opportunity to work on problems of the field.

380. ELECTRONICS. *Five hours credit.*

Problems in the teaching of electronics in industrial arts departments of the public schools. Course organization, presentation techniques and laboratory equipment problems are considered.

381. INDUSTRIAL ELECTRONICS. *Two hours credit.*

Prerequisite, IA 380. A study of selected materials, components and circuits involved in electronic devices in industry. Special emphasis will be given to basic theory of operation and possible applications of electronic equipment. Deals with fuel cells, solar cells, facsimile reproduction, photo-electrical devices, computers, radar, high frequency, heating, motor controls, electronic counters and timers, resistance welding and electroluminescence lighting.

430. RESEARCH IN INDUSTRIAL ARTS. *Maximum of nine hours credit.*

Provides an opportunity for students to present and defend proposed studies. Members of class report and evaluate recent research in the field.

Division of Education

The Division of Education includes the fields of Business, Business Education, Curriculum, Educational Administration, Psychology, Counseling and Guidance, Elementary Education, Higher Education, Junior High School Education, Library Science, Secondary Education, Special Education and Outdoor Education. Degrees and majors and minors offered are:

BACHELOR OF ARTS DEGREE (Teacher Education)

Majors: Business Education (Office Occupations or Distributive Education); Elementary Education; Special Education (Audiology; Mental Retardation; Speech Correction or Teaching the Acoustically Handicapped).

Minors: Business Education; Library Science; Psychology; Special Education (Mental Retardation or Speech Correction).

Emphasis: Outdoor Education.

BACHELOR OF ARTS DEGREE (Liberal Arts)

Major: Business.

Minors: Business; Psychology.

MASTER OF ARTS DEGREE (Teacher Education)

Majors: Audio-Visual Education; Business Education; Educational Administration (Elementary; Junior High School; or Secondary); Psychology, Counseling and Guidance, Elementary Education (Content; Developmental Reading; Remedial Reading), Junior High School Education, Secondary Education (Curriculum and Supervision or Instruction); Special Education (Speech Correction; Teaching the Acoustically Handicapped; Teaching Mentally Retarded Children; Teaching Physically Handicapped Children; or Teaching the Visually Handicapped).

SPECIALIST IN EDUCATION DEGREE

Area of Specialization: Available in all fields within the division.

DOCTOR OF EDUCATION DEGREE (Teacher Education)

Areas of Concentration: Business Education, Educational Administration, Psychology, Counseling and Guidance, Elementary Education, Reading, Secondary Education, Special Education (Mental Retardation, or Speech Pathology), Vocational Rehabilitation.

Supporting Areas: Business Education, Educational Administration, Psychology, Counseling and Guidance, Elementary Education, Reading, Secondary Education, Special Education, Curriculum, Higher Education, History, Philosophy of Education, Outdoor Education, and Statistics and Measurements.

See graduate section of this catalog for a listing of areas of concentration and supporting areas other than those offered by the Division of Education, applicable to the Doctor of Education degree.

DOCTOR OF PHILOSOPHY DEGREE

The degree of Doctor of Philosophy is a three-year program beyond the baccalaureate. Two specialized programs are available: (1) College Student Personnel Work to prepare candidates for college placement as deans of students and in other related areas; and (2) Educational Measurements and Research designed to prepare candidates for college teaching assignments and/or researchers for curricular areas. Each candidate must demonstrate competency in two foreign languages, or competency in one foreign language and 15 quarter hours in statistics.

Education

Professors: Bothell, Chaloupka, Findley, Sam Gates, Harkness, Hause, Hillway, Edward Kelly, Kerns, Morrison, Mosbo.

Associate Professors: Bowman, Claybaugh, Dunwell, Gagon, Hogan, Lewis, Lowry, Nimnicht, Ninemires, Partridge, Sanderson, Stoffler, Tangeman, Van Maanen.

Assistant Professors: Barnhart, Curtis, Fielder, Hunn, Jacobson, Luketich, Moss, Reichert.

Instructors: Benson, Bruce, Gunning, G. Miller, Mower, Trigg.

ELEMENTARY EDUCATION CERTIFICATION

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. Prescribed General Education Courses totaling 42-43 academic quarter hours, plus physical education requirement.

2. Major in a subject field of specialization or in Arts and Sciences. The following are requirements for an Arts and Sciences Major. (All courses are in addition to general education requirements.)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
FA	124	— Elementary Art		3
		Electives in fine art (not art education).....		2-3
		Electives in humanities, English, and speech (not English education or speech education).....		6
MUS	48	— Music Appreciation		2
MUS	49	— Music Fundamentals I		2
		Electives in music (not music education).....		2
MATH	1	— Basic Mathematics I		3
MATH	2	— Basic Mathematics II		3
		Electives in science (not science education).....		5
GEOG	10	— World Geography		
		<i>or</i>		
GEOG	48	— Anglo-America		5
USH	75	— Unit Survey of United States History.....		5
PSCI	40	— National Government of the United States....		5
		Electives in history and social science (not social studies education)		4-5

3. Minor in a subject field of specialization or in a special minor called Arts and Sciences. The minor must be Arts and Sciences if the major is in a subject field of specialization. The minor must be in a subject field of specialization if the major is Arts and Sciences.

The following are requirements for a minor in Arts and Sciences. (All courses are in addition to general education requirements.)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
FA	124	— Elementary Art	3
		Electives in humanities, English, and speech (not English education or speech education)	2-3
MUS	49	— Music Fundamentals I	2
MATH	1	— Basic Mathematics I	3
MATH	2	— Basic Mathematics II	3
		Electives in science (not science education)	3-4
GEOG	10	— World Geography	
		or	
GEOG	48	— Anglo-America	5
USH	75	— Unit Survey of United States History.....	5
			Minimum — 27

4. The following requirements in the Elementary Education Major.

Professional Core

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
ED	101	— Basic Concepts in Education.....	5
PCG	140	— Educational Psychology	5
*ED	251	— Student Teaching	16
ED	295	— Philosophy of Education	3
			29

Elementary Teacher Education

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
ED	109	— Teaching Handwriting and Spelling in the Elementary School	2
ED	110	— Improvement of Instruction in Reading in the Elementary School	3
ED	111	— Improvement of Instruction in English in the Elementary School	3
ED	112	— Improvement of Instruction in Mathematics in the Elementary School	3
ED	113	— Improvement of Instruction in Social Studies in the Elementary School	3
ED	115	— Literature in the Elementary School.....	2
ED	139	— Introduction to Student Teaching in the Elementary School	2
ED	222	— Reading in the Primary Grades	
		or	
ED	223	— Reading in the Intermediate Grades.....	3
(a)FA	125	— Methods of Teaching Art in the Elementary School	2
(b)HPER	88	— Physical Education Activities for the Elementary School	2
(b)HPER	101	— Health Education in the Elementary School..	2
(c)MUS	249	— Music Methods and Materials for Elementary Teachers	2
SCED	270	— Teaching Science in the Elementary School..	3
			32

*A minimum of eight of the sixteen quarter hours of student teaching must be in kindergarten or in grades one through six.

- (a) Not required if a Fine Arts major in teacher education.
- (b) Not required if a Physical Education major or minor at elementary level.
- (c) Not required if a Music major or if a Music minor at elementary level.

5. Ed 109, 111, 112, 113, 222, and 223 taken at Colorado State College.

6. Completion of ED 101, 110, 112, 139, and PCG 140 before student teaching.

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

Outdoor Education

An emphasis on outdoor education affords students the opportunity to become better acquainted with the potential the out-of-doors has as a laboratory for teaching. Course offerings which have significance for this broad area are offered in every division of the college. All students, regardless of their major, should be encouraged to elect courses which are pertinent to this emphasis in education. Listed below are two specific courses which are the introductory courses in this area. Additional courses may be selected through a conference with the person in charge of outdoor education.

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
ED 80	— Introduction to Outdoor Education.....	3
ED 380	— Philosophy and Principles of Outdoor Education	3

Description of Courses

80. INTRODUCTION TO OUTDOOR EDUCATION. *Three hours credit.*

An introductory course to orient students with the concepts of outdoor education. Emphasis will be on the use of the out-of-doors as a laboratory for teaching. Short field trips and one overnight excursion will be conducted. When feasible, instructors from other divisions will participate.

101. BASIC CONCEPTS OF EDUCATION. *Five hours credit.*

A unified course designed to familiarize students with the fundamentals of the history of American education, educational sociology, the professional role of the teacher, school administration as it pertains directly to the classroom teacher, and key knowledge unique to the elementary school, the junior high or senior high schools.

109. TEACHING HANDWRITING AND SPELLING IN THE ELEMENTARY SCHOOL. *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.

110. IMPROVEMENT OF INSTRUCTION IN READING IN THE ELEMENTARY SCHOOL. *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.

111. IMPROVEMENT OF INSTRUCTION IN ENGLISH IN THE ELEMENTARY SCHOOL. *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.

112. IMPROVEMENT OF INSTRUCTION IN MATHEMATICS IN THE ELEMENTARY SCHOOL. *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.

113. IMPROVEMENT OF INSTRUCTION IN SOCIAL STUDIES IN THE ELEMENTARY SCHOOL. *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.

115. LITERATURE IN THE ELEMENTARY SCHOOL. *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.

139. INTRODUCTION TO STUDENT TEACHING IN THE ELEMENTARY SCHOOL. *Two hours credit.*

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.

140. INTRODUCTION TO STUDENT TEACHING IN THE SECONDARY SCHOOL. *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.

141. METHODS OF TEACHING IN THE SECONDARY SCHOOL. *Three hours credit.*

Methods of teaching in the junior-senior high school. 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.

200. EDUCATION WORKSHOP. *Three hours credit.*

This course is concerned with the instructional problems of the participants; however, the problems attacked would vary from time to time according to the experts conducting the workshop. The nature of the workshop might cover such areas as Administration, Reading, Kindergarten, Curriculum, etc. Each workshop will have a sub-title and no sub-title may be repeated.

206. AUDIO-VISUAL MATERIALS IN EDUCATION. *Four hours credit.*

Introduces students to most audio-visual materials and devices available for improving instruction; each type 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.

207. AUDIO-VISUAL ADMINISTRATION WORKSHOP. *Three hours credit.*

Prerequisite, ED 206. A workshop for administrators and teachers, on administration and use of audio-visual devices. Classroom layout, budgeting, purchasing, evaluation and distribution of materials are treated as well as personnel and training problems. Research methods and application of materials are also covered.

208. LOCAL PRODUCTION OF AUDIO-VISUAL INSTRUCTIONAL MATERIALS. *Three hours credit.*

Prerequisite, ED 206. Provides experience in the production of audio-visual 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.

222. READING IN THE PRIMARY GRADES. *Three hours credit.*

Prerequisite, ED 110, 251. The nature of reading, the pertinent research in the field, the curriculum in reading from the preparatory period through the primary grades, the selection of effective materials of teaching, methods and techniques of teaching, and the use of various types of tests will be studied.

223. READING IN THE INTERMEDIATE GRADES. *Three hours credit.*

Prerequisite, ED 110, 251. The purpose of this course is to emphasize the specific reading skills taught in the intermediate grades. These skills are identified and discussed in terms of instructional materials, methods, and evaluation procedures. The management of the reading program in the intermediate grades also receives attention in this course.

227. KINDERGARTEN EDUCATION. *Three hours credit.*

A course covering the research, theory, and best practices for the education in kindergartens of four and five-year-old children. Organization, housing, and equipping of new kindergartens, the readiness program for first grade, and parent education will have pertinent handlings within the course.

237. COMPARATIVE EDUCATION. *Three hours credit.*

The philosophy and practices of education in foreign countries, usually including education in Germany, France, Russia, Norway, Great Britain, China, Australia, Canada, Mexico and certain South American countries.

243. SCHOOL LAW I. *Three hours credit.*

An examination of the legal responsibilities, rights, and liabilities of classroom teachers and the legal relationships of teachers to students, administrators, school boards, and the public.

244. SCHOOL AND COMMUNITY RELATIONS. *Three hours credit.*

This course considers the problems of human and professional relationships for teachers. It examines the factors which create and influence public and personal opinion. It shows how skills and techniques may be developed and utilized in a sound school and community relations program.

249. PRINCIPLES OF VOCATIONAL EDUCATION. *Three hours credit.*

A study of the philosophy and development of vocational education, legislation, state policies, school programs, and non-school agencies and programs.

251. STUDENT TEACHING. *Sixteen hours credit.*

A course which provides a practical application of the principles of learning and the techniques of instruction in the classroom. Opportunity is provided for the student to progressively assume the responsibilities related to teaching. Twelve weeks of full-time activity is normally required.

252. INTERNSHIP IN ADVANCED STUDENT TEACHING. *Eight hours credit.*

Prerequisite, ED 251. An invitational program for individuals showing professional promise. Provides advanced laboratory experience in teaching and dealing with educational problems.

289. PROGRAMMING MATERIALS FOR INSTRUCTION. *Three hours credit.*

Examines the theoretical framework within which teaching machines and programmed learning are currently organized, assesses the current state of research, and provides the student with some basic principles for programming learning materials. Practice in programming materials is also given.

295. PHILOSOPHY OF EDUCATION. *Three hours credit.*

Prerequisite, ED 101. 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.

296. 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.

299. NDEA READING INSTITUTE. *Twelve hours credit.*

A general reading institute co-sponsored by the U.S. Office of Education for teachers of reading with minimum backgrounds in reading. Course content includes consideration of word perception, comprehension, reading in the content field, reading study skills and the various basal, phonic, Kinesthetic Linguistic and individual approaches to reading.

302. SEMINAR IN EVALUATING AND IMPROVING JUNIOR HIGH SCHOOL INSTRUCTIONAL PROGRAMS. *Three hours credit.*

A course designed to acquaint administrative personnel with an overview of the problems involved in organizing, administering, and supervising junior high school music, the arts, social studies, science, mathematics, English language, health and physical education, foreign language, and business education programs.

308. PRODUCTION OF PHOTOGRAPHIC TEACHING MATERIALS. *Three hours credit.*

Prerequisite, ED 208, PHY 167. Provides experience in the more complex production techniques. The course will emphasize three major aspects of production: (1) scripting a production, (2) filmstrip and slide set techniques, and (3) motion picture production techniques. Actual production experience will be gained through laboratory experiences and required individual projects.

309. SUPERVISION OF HANDWRITING AND SPELLING IN THE ELEMENTARY SCHOOL. *Two hours credit.*

A comprehensive consideration of content, methods and materials, and evaluation in teaching handwriting and spelling. Research data in handwriting and spelling are reviewed.

310. SUPERVISION OF INSTRUCTION IN READING IN THE ELEMENTARY SCHOOL. *Three hours credit.*

A detailed consideration of the supervisory problems concerned with selection of what to teach, the grade placement of content, methods and materials of teaching and means of evaluating achievement in reading.

311. SUPERVISION OF INSTRUCTION IN ENGLISH IN THE ELEMENTARY SCHOOL. *Three hours credit.*

A detailed consideration of the supervisory problems concerned with selection of what to teach, the grade placement of content, methods and materials of teaching, and means of evaluating achievement in English.

312. SUPERVISION OF INSTRUCTION IN MATHEMATICS IN THE ELEMENTARY SCHOOL. *Three hours credit.*

A detailed consideration of the supervisory problems concerned with selection of what to teach, the grade placement of content, methods and materials of teaching, and means of evaluating achievement in mathematics.

313. SUPERVISION OF INSTRUCTION IN SOCIAL STUDIES IN THE ELEMENTARY SCHOOL. *Three hours credit.*

A detailed consideration of the supervisory problems concerned with selection of what to teach, the grade placement of content, methods and materials of teachings, and means of evaluating achievement in social studies.

314. THE ELEMENTARY SCHOOL CURRICULUM. *Three hours credit.*

Surveys and appraises the various types of curriculum organization applicable to the elementary school. Also considers basic curriculum problems in selected subject matter areas.

315. SUPERVISION OF INSTRUCTION IN CHILDREN'S LITERATURE. *Two hours credit.*

Consideration will be given to locating and evaluating children's books and to the methods of organizing, teaching and evaluating a literature program.

316. SECONDARY EDUCATION. *Three hours credit.*

An advanced course in secondary education concerned with specific problems in the areas of: the evolution of secondary education; the committees and commissions; recent trends, advanced practices, and movements; administration and supervision of student activities, curriculum; guidance; marking; measurement; reporting; and evaluation.

319. CURRICULUM IN THE JUNIOR HIGH SCHOOL. *Three hours credit.*

Traditional and recent curriculum organization in the junior high school will be surveyed and evaluated with reference to the needs of the young adolescent and the special requirements of the school. Opportunity for intensive concentration in a specific area of curriculum will be provided.

320. ANALYSIS OF READING METHODS. *Three hours credit.*

Prerequisite, ED 110 or 310. Evaluative criteria are examined and applied to the various approaches to reading including the basal readers, language experience, individualized, programmed, linguistic, phonic, spelling, audio-visual, and kinesthetic approaches. Emphasis is given to beginning reading instruction.

321. SEMINAR IN ELEMENTARY SCHOOL ENGLISH. *Three hours credit.*

Prerequisite, ED 111 or 311. This seminar course considers a few of the problems in the teaching and supervision of English and varies somewhat in content from year to year according to the interests of students.

322. SEMINAR IN ELEMENTARY SCHOOL MATHEMATICS. *Three hours credit.*

Prerequisite, ED 112 or 312. This seminar covers important problems in the teaching and supervision of mathematics in the elementary school. Course content may vary from year to year according to the needs of the students enrolled.

323. SEMINAR IN ELEMENTARY SCHOOL SOCIAL STUDIES. *Three hours credit.*

Prerequisite, ED 113 or 313. This seminar covers important problems in the teaching and supervision of social studies in the elementary school.

Problems pertaining to content, unit procedures, problem solving activities, pupil-teacher planning, and evaluation are considered. Course content may vary from year to year according to the needs of the students enrolled.

324. REMEDIAL READING IN THE ELEMENTARY SCHOOL (THEORY). *Two hours credit.*

This course is designed to give the classroom teacher, administrator, or reading specialist insight concerning the problems of the educationally retarded reader in the elementary school. Causes of failures are investigated. Diagnostic and teaching techniques are presented.

325. REMEDIAL READING CASE STUDY. *Three hours credit.*

Prerequisite, ED 324. This course consists of tutoring an individual remedial reader for four hours per week. The fifth hour per week is spent in a seminar reviewing case studies and diagnostic and remedial techniques. Observations of tutoring are followed by individual and group conferences with the students.

326. REMEDIAL READING INTERNSHIP. *Three hours credit.*

Prerequisite, ED 324. This course consists of serving as intern with a remedial reading teacher working with a small group of remedial reading students four hours weekly. Close supervision is given to diagnostic and remedial procedures by the remedial teacher and college staff. Observations of teaching are followed by individual and group conferences.

327. READING CLINIC INTERNSHIP. *Three hours credit.*

Prerequisite, ED 324. This course involves working in the college clinic in making reading diagnoses, supervision of clinicians, developing remedial reading material or working with a severely retarded reader. Close supervision is given by the director of the reading clinic.

330. FOUNDATIONS FOR CURRICULUM DEVELOPMENT. *Three hours credit.*

An appraisal of theories and practices of curriculum making; presentation of a modern, functional philosophy of curriculum making; and survey of this functional theory to the major areas of living. This course also includes the principles of subject matter and content selection and placement influenced by psychology of learning, social changes, educational philosophy, and growth and development.

331. ADVANCED CURRICULUM CONSTRUCTION. *Three hours credit.*

This course discusses what to teach in the major areas of living including communication, health, economic life, home and family life, citizenship, leisure, religious-moral experience and personality development. Emphasis is placed on the application of the above to a typical educational program.

332. PROBLEMS IN CURRICULUM DEVELOPMENT. *Three hours credit.*

A course designed to present changes in curriculum building, to demonstrate organization for curriculum development in in-service programs, to show the impact of administration, supervision, and guidance on curriculum construction, and to present current criticisms of present-day curricula.

335. PROGRAMMED LEARNING AND RELATED NEW MEDIA. *Five hours credit.*

A course designed to introduce school personnel to programmed learning, teaching machines, and related new media. Theoretical bases, current experimentation, and programmed materials will be evaluated. Programmed learning's role in education will be analyzed, and participants will construct a plan for integrating programmed materials into their school district's instructional program.

341. PHILOSOPHY AND TECHNIQUES OF PUBLIC RELATIONS. *Three hours credit.*

This course is designed primarily for central office personnel to help

them: (a) develop a philosophy of public relations, (b) learn how to establish a functional program involving citizens and educators, and (c) become acquainted with skills and techniques essential to school and community understanding.

342. SCHOOL ADMINISTRATION—FEDERAL, STATE, LOCAL. *Three hours credit.*

Introduces the student to administrative problems, and provides an overview of our educational system at federal, state, and local levels. The purpose of the course is to relate the key issues at each level to the role of the superintendent.

343. SCHOOL FINANCE. *Three hours credit.*

Prerequisite, ED 342. This course deals with the financial implications of the educational program. Budgeting, management of funds, fiscal policies, and the business management function in the school are included in this course.

344. SCHOOL PLANT PLANNING. *Three hours credit.*

Prerequisite, ED 342. Covers preliminary studies, or surveys, on population, population projections, and location of school sites. A thorough study of the approaches and procedures in relating the instructional program to proposed buildings—developing educational specifications—is a major task of this course. Financial aspects of planning will also be discussed.

345. PRACTICE IN SCHOOL ADMINISTRATION. *Maximum of six hours credit.*

Selected graduate students may study in a public school system under the joint supervision of the college and the superintendent of the school. Written reports of experiences are required.

348. SCHOOL LAW II. *Three hours credit.*

This course stresses the principles of common law which underlie the relationship of the courts to the schools and focuses on legal problems in education. In addition, the course affords students the opportunity to study intensively the school laws of their respective states.

351. SUPERVISION OF STUDENT TEACHERS. *Three hours credit.*

Problems considered are: (1) introduction to and basic philosophy of student teaching; (2) varying state college and university practices and policies; (3) the role of the cooperating teacher, principal, and college supervisor in student teaching; and (4) selection, induction, ratings, evaluation and compensations.

352. STUDENT SUPERVISION. *Maximum of eight hours credit.*

A laboratory course to give practical experience, under close supervision, in directing the work of the student teachers. Open to those students who are preparing for supervisory positions and show promise from student teaching or public school experience of undertaking such positions.

355. ORGANIZATION, ADMINISTRATION, AND SUPERVISION OF THE ELEMENTARY SCHOOL. *Four hours credit.*

Designed to meet the needs of those who desire acquaintance with major responsibilities of leadership in the elementary school. The areas of elementary school organization and administrative relationships, supervision skills and techniques, administering pupil personnel, administering special services, and the management of school building supplies and equipment.

365. SECONDARY SCHOOL ORGANIZATION, ADMINISTRATION, AND SUPERVISION. *Four hours credit.*

Designed to assist secondary school administrators and supervisors to acquire information about acceptable solutions to some of the major problems in the secondary school. Consideration is given to the duties and responsibilities of the principal, the nature and role of supervision in the educational program and other pertinent topics.

387. RECONSTRUCTING SECONDARY EDUCATION. *Three hours credit.*

An educational experience designed to study current problems confronting teachers relative to curriculum and instruction. Emphasis will be given to actual problems taken from in-service situations. These problems will be the basis for cooperative committee study and development of recommendations for improved practices.

389. EXPERIMENTATION IN EDUCATION. *Three hours credit.*

An analysis of school organization, curriculum, and instructional practices in the light of current research.

390. PHILOSOPHY AND PRINCIPLES OF OUTDOOR EDUCATION. *Three hours credit.*

Designed to acquaint teachers in any area with the scope, breadth and depth of the out-of-doors as a laboratory for the extension of education experiences. When feasible, instructors and specialists from various fields will be used. Short field trips will be conducted.

391. HIGHER EDUCATION IN THE UNITED STATES. *Three hours credit.*

An overview of the history, philosophies, curricula, organization and administration of American colleges and universities with emphasis on their present status and problems.

393. THE JUNIOR AND COMMUNITY COLLEGE. *Three hours credit.*

The history, functions, present status, and problems of the junior college and the community college.

395. PHILOSOPHY OF EDUCATION. *Three hours credit.*

Educational aims, values and criteria, democracy and education, different systems of educational philosophy, the nature of thinking, method and subject matter are considered.

396. HISTORICAL FOUNDATIONS OF EDUCATION. *Three hours credit.*

This course is designed to study important historical and philosophical backgrounds for the integration of present day educational issues.

398. CURRENT EDUCATIONAL TRENDS AND ISSUES. *Three hours credit.*

This course appraises the current studies in such areas as objectives, experimentation, evaluation, administration, levels of education, non-governmental controls, program of education, teacher education and welfare.

410. SEMINAR IN ELEMENTARY SCHOOL READING. *Three hours credit.*

Prerequisite, ED 320 and APST 376. This seminar considers the trends and issues in teaching reading through an analysis of historical and current research in reading. Topics covered will vary from year to year according to the interests of the students.

420. SEMINAR IN RESEARCH. *No credit.*

Designed for doctoral candidates who are in the process of planning their research. Individuals will present their tentative research proposals and receive criticism from the class and the staff.

430. EXPERIMENTAL PROGRAM IN SCHOOL ADMINISTRATION. *Maximum of twenty-four hours credit.*

Areas of concern will include: Communications, curriculum, finance, organization and staffing, role perception and role expectation, problem solving, and decision making. Seminars will include extended readings, class sessions, and field investigations. A series of six seminars designated as I, II, III, IV, V, and VI, will be offered for four hours credit each.

443. SEMINAR IN ADMINISTRATION. *Maximum of nine hours credit.*

This is a three-quarter sequence of work for doctoral students in general school administration. It will deal systematically with the following areas: (1) Small group communications; (2) Large group communications; (3) Leadership in the instructional program. The general approach will be one of bringing disciplines, other than education, to bear on educational problems.

444. ADVANCED SEMINAR IN ADMINISTRATION. *Maximum of nine hours credit.*

Prerequisite, ED 443. This sequence of seminar work will deal with the means and approaches to evaluating the entire school program and with a case study approach to a variety of administrative problems and situations. Knowledge, skill, and technical ability which the student has developed in other course work or through experience will be used to study the administrative role in our public school systems.

461. PHILOSOPHICAL FOUNDATIONS OF EDUCATION. *Three hours credit.*

A study of the educational aims and values of various cultures which have given direction to peoples in different societies. An integration of classical philosophies with educational philosophies culminating in a statement of practical educational aims and objectives.

462. PSYCHOLOGICAL FOUNDATIONS OF EDUCATION. *Three hours credit.*

The psychological foundations of education are concerned with basic concepts pertinent to understanding human behavior. Cognition, perception, maturation, motivation, learning, emotions, personal and social adjustment areas are emphasized.

463. SOCIOLOGICAL FOUNDATIONS OF EDUCATION. *Three hours credit.*

A study of education in relation to the sociological realities of American and world societies, contemporary and primitive.

492. THE COLLEGE TEACHER. *Three hours credit.*

Presents college teaching as a profession including selection and preparation of instructors and the status, services and rewards of the profession. Also concerned with the application of psychology to college teaching, problems in improving college instruction, and the research function of the college instructor.

493. THE COLLEGE AND UNIVERSITY CURRICULUM. *Three hours credit.*

Outlines the major curricular offerings of American colleges and universities including general education, liberal arts education, vocational and professional education including teacher preparation and the academic administration involved in building and improving a curriculum.

494. COLLEGE ADMINISTRATION. *Three hours credit.*

Describes the organization and administration of American higher education. Includes administrative problems concerned with faculty policy, finance, student personnel, publications, and instruction. Takes up government and administration at all levels from the departmental offices to the board of trustees.

Business and Business Education

Professors: Heimerl, Turner, Waterman.

Assistant Professors: Chrismer, Damgaard, Forkner, Kennedy, Will, Yetka.

Instructors: Hansen, Ratliff, Wertz.

BUSINESS EDUCATION MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 45 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Teacher Education Program courses as listed on page , plus BUED 140 and three hours credit selected from BUED 141, 142, 143, 144, 146. (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 or business education electives for a total of 80 quarter hours.
4. Twenty-one hours of free electives to complete the 180 quarter hours of academic credit required for graduation.

Business Core

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
BUS 1	— Typewriting I	0
BUS 2	— Typewriting II	2
BUS 20	— Principles of Accounting I.....	4
BUS 21	— Principles of Accounting II.....	4
BUS 40	— The American Business System.....	5
BUS 115	— Business Communications	3
BUS 125	— Business Finance	3
BUS 130	— Business Law I.....	3
BUS 150	— Business Statistics I.....	3
BUS 156	— Principles of Management.....	5
BUS 285	— Systems and Procedures.....	3
ECON 30	— Introductory Economics	5
ECON 102	— Contemporary Economic Problems.....	3
ED 249	— Principles of Vocational Education.....	3

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SPECIALIZATION IN ACCOUNTING

(Note: Business Education majors electing this specialization must complete both BUED 141, Methods and Materials of Teaching Typewriting, one hour credit, and BUED 143, Methods and Materials of Teaching Bookkeeping, one hour credit, in partial fulfillment of requirement two listed above. Approved business experience of at least 2,000 hours is required. A notarized affidavit must be filed with your advisor.)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BUS	3	— Typewriting III	2
BUS	4	— Advanced Typewriting and Office Practice....	4
BUS	22	— Principles of Accounting III.....	4
BUS	120	— Accounting Problems I.....	5
BUS	121	— Accounting Problems II.....	5
BUS	286	— Business Data Processing-Unit Record.....	3
BUS	287	— Electronic Data Processing.....	3
			26
Electives in Business or Business Education....			8
			34

SPECIALIZATION IN BASIC BUSINESS AND ECONOMICS

(Note: Business Education majors electing this specialization must complete both BUED 141, Methods and Materials of Teaching Typewriting, one hour credit, and BUED 144, Methods and Materials of Teaching Basic Business Subjects, one hour credit, in partial fulfillment of requirement two listed above.)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BUS	3	— Typewriting III	2
BUS	4	— Advanced Typewriting and Office Practice....	4
BUS	132	— Business Law II.....	5
BUS	240	— Principles of Insurance.....	3
BUS	254	— Investments	3
BUED	230	— Economic Education Seminar.....	3
ECON	210	— History of Economic Systems.....	5
ECON	277	— Government and Business.....	3
			28
Electives in Business or Business Education....			6
			34

SPECIALIZATION IN DISTRIBUTIVE EDUCATION

(Note: Business Education majors electing this specialization must complete BUED 146, Methods and Materials of Teaching Distributive Classes, two hours credit, in partial fulfillment of requirement two listed above. Approved business experience of at least 4,000 hours is required. A notarized affidavit must be filed with your advisor.)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BUS	72	— Salesmanship	3
BUS	76	— Display	2
BUS	158	— Advertising	3
BUS	164	— Marketing	3
BUS	171	— Retailing	3
BUS	261	— Retail Management	2
BUS	275	— Job Analysis	2
BUED	145	— Distributive Education Programs.....	3
BUED	147	— Coordination Techniques	2
BUED	277	— Adult Programs in Business Education.....	3
			27
Electives in Business or Business Education....			7
			34

SPECIALIZATION IN SECRETARIAL

(Note: Business Education majors electing this specialization must complete both BUED 141, Methods and Materials of Teaching Typewriting, one hour credit, and BUED 142, Methods and Materials of Teaching Shorthand, one hour credit. Approved business experience of at least 2,000 hours is required. A notarized affidavit must be filed with your advisor.)

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
BUS 3	— Typewriting III	2
BUS 4	— Advanced Typewriting and Office Practice.....	4
BUS 10	— Beginning Gregg Shorthand..... (5)	
BUS 11	— Intermediate Gregg Shorthand..... (4)	
	<i>or</i>	
BUS 18	— Shorthand Review	(4) 4-9
BUS 19	— Shorthand Transcription	4
BUS 110	— Secretarial Practice I	
	<i>or</i>	
BUS 111	— Secretarial Practice II	
	<i>or</i>	
BUS 112	— Secretarial Practice III	5
BUS 252	— Office Management	3
		22-27
	Electives in Business or Business Education	12-7

Business Education Minor

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<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
BUS 1	— Typewriting I	0
BUS 10, 11, 19**	— Beginning Intermediate Gregg Shorthand and Transcription	
<i>or</i>		
BUS 20, 21	— Principles of Accounting I, II.....	8-13
BUED 140	— Introduction to Business Education.....	2
BUED 141	— Methods and Materials of Teaching Typewriting	1
BUED 142	— Methods and Materials of Teaching Shorthand	
	<i>or</i>	
BUED 143	— Methods and Materials of Teaching Bookkeeping	1
BUS	Electives	2-7

**BUS 18 should be substituted for BUS 10 and BUS 11 by students with previous experience in shorthand.

Minor in Economic Education

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
BUS 54	— Consumer Economic Problems	3
BUED 230	— Economic Education Seminar	3
BUS 40	— The American Economic System.....	5
ECON 102	— Contemporary Economic Problems	3
	Electives	13

The electives must be planned in cooperation with the minor advisor. Elective courses may be chosen from the following list: ECON 200, Labor Management Relations, five hours credit; 202, Money and Banking, five hours credit; 205, Russia's Soviet Economy, three hours credit; 210, History of Economic Systems: Socialism, Communism, Capitalism, Fascism, five hours credit; 212, International Economics, three hours credit; 241, Public Finance, five hours credit; 277, Government and Business, three hours credit; GEOG 203, World Resources and Industries, five hours credit; BUS 164, Marketing, three hours credit; 158, Advertising, three hours credit; 125, Business Finance, three hours credit; 253, Personnel Management, three hours credit; 254, Investments, three hours credit; 256, Business Policies and Management, three hours credit; 240, Principles of Insurance, three hours credit; 290, The Consumer in Our Economy, three hours credit; HEC 191, Management in Family Living, three hours credit.

BUSINESS MAJOR

Bachelor of Arts Degree (Liberal Arts)

The following program is required:

1. General Education totaling 45 academic hours, plus six hours of physical education activity.
2. The required courses listed in the Business Core plus the required courses in one of the areas of specialization plus business electives for a total of 80 quarter hours.
3. Fifty-five hours of free electives to complete the 180 quarter hours of academic credit required for graduation.

BUSINESS CORE

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BUS	1	— Typewriting I	0
BUS	2	— Typewriting II	2
BUS	20	— Principles of Accounting I	4
BUS	21	— Principles of Accounting II	4
BUS	40	— The American Business System	5
BUS	115	— Business Communications	3
BUS	125	— Business Finance	3
BUS	130	— Business Law I	3
BUS	150	— Business Statistics I	3
BUS	156	— Principles of Management	5
BUS	285	— Systems and Procedures	3
ECON	30	— Introductory Economics	5
ECON	102	— Contemporary Economic Problems	3
			43

Specialization in Accounting

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BUS	22	— Principles of Accounting III	4
BUS	120	— Accounting Problems I	5
BUS	121	— Accounting Problems II	5
BUS	122	— Cost Accounting	5
BUS	228	— Federal Income Tax Accounting	3
BUS	286	— Business Data Processing—Unit Record	3
BUS	287	— Electronic Data Processing	3
			28
Electives in Business			9
			37

Specialization in Marketing

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BUS	22	— Principles of Accounting III	4
BUS	72	— Salesmanship	3
BUS	76	— Display	2
BUS	158	— Advertising	3
BUS	164	— Marketing	3
BUS	171	— Retailing	3
BUS	261	— Retail Management	3
BUS	278	— Sales Management	3
			24
Electives in Business			13
			37

Specialization in Management

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BUS	22	— Principles of Accounting III.....	4
BUS	122	— Cost Accounting	5
BUS	151	— Business Statistics II	3
BUS	250	— Financial Management	3
BUS	253	— Personnel Management	5
BUS	256	— Business Policies and Management	3
ECON	277	— Government and Business	3
			26
		Electives in Business	11
			37

Business Minor

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BUS	20	— Principles of Accounting I	4
BUS	21	— Principles of Accounting II	4
BUS	115	— Business Communications	3
BUS	130	— Business Law I	3
BUS	252	— Office Management	
		<i>or</i>	
BUS	256	— Principles of Management	
		<i>or</i>	
BUS	261	— Retail Management	3-5
ECON	30	— Introductory Economics	5
		Electives in Business or Economics.....	3-5
			27

SECRETARIAL MAJOR (Two-Year Non-Degree Program)

The following program is required:

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BUS	2	— Typewriting II	2
BUS	3	— Typewriting III	2
BUS	4	— Advanced Typewriting and Office Practice....	4
BUS	10	— Beginning Gregg Shorthand	
		<i>and</i>	
BUS	11	— Intermediate Gregg Shorthand	
		<i>or</i>	
BUS	18	— Shorthand Review	4 or 9
BUS	19	— Shorthand Transcription	4
BUS	20	— Principles of Accounting I	4
BUS	21	— Principles of Accounting II	4
BUS	40	— The American Business System	5
BUS	60	— Office Practice: Calculating Machines	2
BUS	164	— Marketing	3
BUS	110	— Secretarial Practice I	5
BUS	111	— Secretarial Practice II	5
BUS	112	— Secretarial Practice III	5
BUS	115	— Business Communications	3
BUS	130	— Business Law I	2
BUS	150	— Business Statistics	3
BUS	228	— Federal Income Tax for Individuals	3
COM	1	— Elementary Composition I	3
COM	2	— Elementary Composition II	3
COM	3	— Principles of Speech	3
PCG	20	— General Psychology	3
ECON	30	— Introductory Economics	5
		Electives	7-12
			90

Description of Courses

BUSINESS

1. TYPEWRITING I. *No credit.*

A beginning course in typewriting. Emphasis will be given to both personal and vocational use. (A fee equal to the fee charged for a two hour credit course will be assessed.)

2. TYPEWRITING II. *Two hours credit.*

Prerequisite, BUS 1, with a grade of "C" or better. 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 cannot take this course for credit.

3. TYPEWRITING III. *Two hours credit.*

Prerequisite, BUS 2, with a grade of "C" or better. The third course in typewriting. Emphasis will be on speed and accuracy building and advanced production procedures.

4. ADVANCED TYPEWRITING AND OFFICE PRACTICE. *Four hours credit.*

Prerequisite, BUS 3, with a grade of "C" or better. A review of typewriting principles and their application to actual office work such as letters, forms, manuscripts, etc. Practice in the use of duplicating and dictating machines of various kinds. Stencils and masters for duplication are cut and proofed. Office procedures are studied and put into practice.

10. BEGINNING GREGG SHORTHAND. *Five hours credit.*

Prerequisite, BUS 2. Course comprises complete theory of Gregg Shorthand. Students who have had one year of high school shorthand or the equivalent cannot take this course for credit, but should take BUS 18.

11. INTERMEDIATE GREGG SHORTHAND. *Four hours credit.*

Prerequisite, BUS 10, with a grade of "C" or better. Course comprises intensive review of Gregg shorthand theory. Students who have had one year of high school shorthand or the equivalent cannot take this course for credit.

18. SHORTHAND REVIEW. *Four hours credit.*

Prerequisite, BUS 2 and the ability to take dictation of at least 60 wpm. This course is devoted primarily to dictation and transcription. Students who have taken BUS 10 and 11 cannot take BUS 18 for credit.

19. SHORTHAND TRANSCRIPTION. *Three hours credit.*

Prerequisite, BUS 3; BUS 11 or 18. Emphasis is upon rapid and accurate transcription, speed dictation, punctuation, and other office skills.

20. PRINCIPLES OF ACCOUNTING I. *Four hours credit.*

A beginning course in accounting. Students who have previously studied bookkeeping or accounting may be exempted from this course by passing a qualifying examination. 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.

21. PRINCIPLES OF ACCOUNTING II. *Four hours credit.*

Prerequisite, BUS 20. 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.

22. PRINCIPLES OF ACCOUNTING III. *Four hours credit.*
Prerequisite, BUS 21. The emphasis in this course is on the accumulation and analysis of financial data for management purposes.

40. 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 preparation for future business courses.

60. OFFICE PRACTICE: CALCULATING MACHINES. *Two hours credit.*

A beginning course in the operation and use of 10-key and full bank adding-listing machines and rotary calculators.

72. SALESMANSHIP. *Three hours credit.*

Principles and practices of retail selling. Primary emphasis upon store selling.

76. DISPLAY. *Two hours credit.*

This course introduces the student to techniques of display and lettering. Emphasis is placed on "salable" card copy and display. Actual displays are "dressed."

110. SECRETARIAL PRACTICE I. *Five hours credit.*

Prerequisite, BUS 4 and 19. Advanced instruction in and practical application of the skills and knowledge needed to be a secretary. Class meets five hours a week plus five hours of work experience in an office on campus to be arranged.

111. SECRETARIAL PRACTICE II. *Five hours credit.*

Prerequisite, BUS 4 and 19. Continuation of BUS 110. Advanced instruction in and practical application of the skills and knowledge needed to be a secretary. Class meets five hours a week plus five hours of work experience in an office on campus to be arranged.

112. SECRETARIAL PRACTICE III. *Five hours credit.*

Prerequisite, BUS 4 and 19. Continuation of BUS 111. Advanced instruction in and practical application of the skills and knowledge needed to be a secretary. Class meets five hours a week plus five hours of work experience in an office on campus to be arranged.

115. BUSINESS COMMUNICATIONS. *Three hours credit.*

Prerequisite, BUS I. Basic principles and practices in the preparation of business correspondence are studied and applied.

120. ACCOUNTING PROBLEMS I. *Five hours credit.*

Prerequisite, BUS 22. This is an advanced course in accounting principles that emphasizes the problems of asset and liability valuation and the related problems of measuring income periodically.

121. ACCOUNTING PROBLEMS II. *Five hours credit.*

Prerequisite, BUS 22. This course includes a study of the accounting problems caused by multiple proprietorship—partnerships, corporations, and business combinations.

122. COST ACCOUNTING. *Five hours credit.*

Prerequisite, BUS 22. This course gives emphasis to both costing for inventory valuation and income determination and costing for planning and control.

125. BUSINESS FINANCE. *Three hours credit.*

This course emphasizes the sources of short-term, intermediate-term, and long-term funds for a business.

130. BUSINESS LAW I. *Three hours credit.*

A general course in business law designed to emphasize the conceptual approach to business law. The role of law in society and the legal philosophy are seen through the careful study of actual cases and the court decisions rendered. All topics are covered briefly in this introductory course.

131. BUSINESS LAW II. *Five hours credit.*

Prerequisite, BUS 130. This course in business law is designed to provide the student with a more thorough understanding of the various areas of business law: contracts, agency, commercial paper, sales, bailments, partnerships, corporations, insurance, security devices, bankruptcy, trusts, and estates. The case approach will be used stressing the Uniform Commercial Code in understanding how the principles of business law are applied.

150. BUSINESS STATISTICS I. *Three hours credit.*

A course designed to orient the business student to statistics and their use in business affairs. The major emphasis will be on the nature of statistics, decisions based on statistics, and collection of business data.

151. BUSINESS STATISTICS II. *Three hours credit.*

Prerequisite, BUS 150. A continuation of the foundation started in BUS 150. Major emphasis will be on probability, normal distributions, sampling distributions, statistical inference, decision procedures, sampling designs, quality control, and time series analysis.

156. PRINCIPLES OF MANAGEMENT. *Five hours credit.*

A study of the managerial functions of planning, organization, staffing, direction, and control. An analysis of the on-going processes, the knowledge of which a manager must have in order to achieve desired co-ordination in the attainment of company objectives.

158. ADVERTISING. *Three hours credit.*

An introductory course in advertising. It includes a review of the psychological principles involved as well as a study of advertising media and the creation of advertisements.

164. MARKETING. *Three hours credit.*

The purpose of this course is to give students an understanding of the place of marketing in our economic system. The field of retailing, which is a part of marketing, will be given but little emphasis because of its being covered in a separate course.

171. PRINCIPLES OF RETAILING. *Three hours credit.*

A survey course of retailing principles and practices. The business policies, structure, and operation factors of a variety of distributive businesses are studied.

228. FEDERAL INCOME TAX ACCOUNTING. *Three hours credit.*

Study and application of the principles in preparing federal income tax returns for individuals.

240. PRINCIPLES OF INSURANCE. *Three hours credit.*

The different types of insurance coverage available and the kinds of policies are presented in this course. Primary emphasis is placed on life insurance. Each student will develop a tentative insurance program.

241. FUNDAMENTALS OF LIFE AND HEALTH INSURANCE. *Six hours credit.*

This course is designed to provide the student with a firm foundation in: meaning of human life concept; life insurance and annuity contracts; various uses of life insurance and annuities; and fundamental principles underlying calculation of life insurance and annuity premiums, reserves, forfeiture values and dividends.

242. GROUP INSURANCE, HEALTH INSURANCE, AND PENSIONS. *Six hours credit.*

Prerequisite, BUS 241. This course provides a thorough analysis of the important and rapidly growing fields of group insurance, individual and group health insurance, and pensions. It also covers the problems of old age, unemployment and disability along with the various plans which have been developed to meet these problems.

243. INSURANCE, LAW, TRUSTS, AND TAXATION. *Six hours credit.*

Prerequisite, BUS 241. In this course basic elements of business law and life insurance are explained. Student is given a broad background in subjects of guardianship, administration and distribution of property, administration of estates, wills and trusts. Federal income, estate, and gift tax systems are explained with particular reference to the taxation of life insurance and annuities.

244. FINANCE AND ECONOMICS OF INSURANCE. *Six hours credit.*

Prerequisite, BUS 241. The course deals with the financial and economic system within which life and health insurance exist. Different aspects of family finance are presented, including: investments in common stocks, bonds, and mutual funds; bank deposits and other saving media; and property and liability insurance coverages. The subject of economics is considered, dealing with the individual and the complex American market system.

245. BUSINESS INSURANCE AND ESTATE PLANNING. *Six hours credit.*

Prerequisite, BUS 241. The course covers advanced subjects in life underwriting such as: the use of settlement agreements in estate planning, business uses of life insurance, and estate planning in general including a section on the particular uses of life insurance in the estate planning process. A section on human behavior and ethics is also included.

250. FINANCIAL MANAGEMENT. *Three hours credit.*

Prerequisite, BUS 20, 21. 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.

252. OFFICE MANAGEMENT. *Three hours credit.*

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.

253. PERSONNEL MANAGEMENT. *Five hours credit.*

A study of the principles and techniques of personnel management with attention given to their psychological foundations.

254. INVESTMENTS. *Three hours credit.*

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.

256. BUSINESS POLICIES AND MANAGEMENT. *Three hours credit.*

The emphasis in this course is on the organization and operation of small businesses. Topics include legal forms of ownership, financing a new business, location, building and layout, purchasing, personnel, internal organization, sales policies, insurance, and records.

261. RETAIL MANAGEMENT. *Three hours credit.*

Prerequisite, BUS 171. Functions of the main division of retailing. Emphasis is on the responsibilities of the store manager and current operating practices.

275. 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.

278. SALES MANAGEMENT. *Three hours credit.*

Prerequisite, BUS 72. A study of sales management, the major problems involved, and the relationship of sales management to the total business operation.

285. SYSTEMS AND PROCEDURES. *Three hours credit.*

The relationship of systems and procedures to policies and needs of management; job characteristics, management audit; 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.

286. BUSINESS DATA PROCESSING-UNIT RECORD. *Three hours credit.*

Prerequisite, BUS 285. This introductory course is concerned with electronic computers in business; terminology, concepts and area; the logic of the computer and its operation; elements of programming, case studies; relationship of information to the decision making process; field trips to inspect installations.

287. ELECTRONIC DATA PROCESSING. *Three hours credit.*

Prerequisite, BUS 286. Computer programming in which the student will devise and complete an independent program in his field of interest or specialization such as mathematics, marketing, management, statistics, accounting, engineering, the behavioral sciences. Selected topics in data processing, analysis of the literature, current trends, developments in principles and practice.

290. THE CONSUMER IN OUR ECONOMY. *Three hours credit.*

Prerequisites, BUS 40, ECON 30. A course designed to look into the theories of consumer behavior and what the consumer can do to improve his position in the American economy. Consumption in general, national income, and government protection of the consumer are general topics discussed.

320. MANAGEMENT ACCOUNTING. *Five hours credit.*

The use of accounting for control and planning will be emphasized after a review unit on accounting principles. Case problems will be used.

333. APPLIED BUSINESS LAW. *Five hours credit.*

A comprehensive review of business law for the business teacher with practical applications to everyday situations. This course is not designed to be preceded by the undergraduate sequence.

341. FOUNDATIONS OF BUSINESS. *Three hours credit.*

A study of the major ideas sustaining business enterprise in the Western World. Discussion of the various factors which influence the modern business world: philosophical, political, economic, and social. Primarily a readings and discussion course for graduate students to provide a background for other business content courses.

353. SEMINAR IN PERSONNEL MANAGEMENT. *Two hours credit.*

Examination of managerial policies and practices in the selection, development, and motivation of employees. Consideration of factors underlying employee participation in policy formation; the effect of the work environment; administration of wages, salaries, and benefits; and the evaluation of personnel programs. Both individual and group emphasis will be accorded treatment in the course. Students will make company studies and give reports.

358. ADVERTISING STRATEGY. *Three hours credit.*

Prerequisite, BUS 158. 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.

376. MARKETING STRATEGY. *Three hours credit.*

Prerequisite, BUS 64. 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 are stressed. Readings and cases will be used.

379. MARKETING RESEARCH. *Three hours credit.*

Prerequisite, BUS 64. 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. Cases are used for discussions.

BUSINESS EDUCATION

140. INTRODUCTION TO BUSINESS EDUCATION. *Two hours credit.*

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. A minimum of 25 observations of business classes is one of the course requirements.

141. METHODS AND MATERIALS OF TEACHING TYPEWRITING. *One hour credit.*

A beginning course in the teaching of typewriting with special emphasis on various methods and techniques that have been proven useful by research. Materials will also be examined in the course.

142. METHODS AND MATERIALS OF TEACHING SHORTHAND. *One hour credit.*

An introduction to the teaching of shorthand for business teachers with emphasis on devices, techniques, and materials.

143. METHODS AND MATERIALS OF TEACHING BOOKKEEPING. *One hour credit.*

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.

144. METHODS AND MATERIALS OF TEACHING BASIC BUSINESS SUBJECTS. *One hour credit.*

A course designed to aid beginning business teachers in the teaching of the basic business subjects of general business, business law, economics, consumer economics, etc. Materials available for such classes will be examined by the class.

145. DISTRIBUTIVE EDUCATION PROGRAMS. *Three hours credit.*

A study of the organization, administration, supervision, and coordination of secondary school, post secondary school, and adult distributive education programs.

146. METHODS AND MATERIALS OF TEACHING DISTRIBUTIVE EDUCATION. *Two hours credit.*

Prerequisite, BUED 145. 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.

147. COORDINATION TECHNIQUES. *Two hours credit.*

Prerequisite, BUED 145. An analysis of the duties involved in coordinating the classroom instruction and the on-the-job experiences provided through the cooperative program. Actual problems encountered will be studied.

171. EVALUATION IN BUSINESS EDUCATION. *Two 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.

230. ECONOMIC EDUCATION SEMINAR. *Three hours credit.*

Prerequisite, ECON 30 and 102. A study of the conceptual framework of economic education for potential teachers, administrators, curriculum specialists and guidance personnel.

266. DEVELOPMENT OF DISTRIBUTIVE EDUCATION INSTRUCTIONAL MATERIALS. *Two hours credit.*

Instructional materials will be collected from original sources and qualified and organized into distributive education courses outlines.

277. ADULT PROGRAMS IN BUSINESS EDUCATION. *Two hours credit.*

Organizing, promoting, and supervising an adult program. Selecting and preparing teachers, course building, forms of effective presentation, public relations, and community organization are included.

280. WORKSHOP IN BUSINESS EDUCATION. *Maximum of nine hours credit.*

Through cooperative effort problems in business education will be solved. Not more than three of these courses may be applied to any one degree.

281. WORKSHOP IN DISTRIBUTIVE EDUCATION. *Maximum of nine hours credit.*

An intensive course designed primarily for distributive education coordinators.

353. IMPROVEMENT OF INSTRUCTION IN BOOKKEEPING. *Two hours credit.*

The instruction in this course is planned primarily for those who have had experience teaching bookkeeping. Objectives, content, good teaching practices, and evaluation as well as the specific teaching problems of the members of the class are emphasized.

354. IMPROVEMENT OF INSTRUCTION IN OFFICE PRACTICE

Two hours credit.

Analysis of methods, materials, and equipment for office practice classes. Acquiring proficiency in operating various office machines is part of the course. New equipment and new office procedures are presented.

355. IMPROVEMENT OF INSTRUCTION IN DISTRIBUTIVE EDUCATION. *Three hours credit.*

Important procedures and effective techniques used in teaching high school cooperative classes in the distributive occupations and in evening classes for employed sales and supervisory personnel.

356. IMPROVEMENT OF INSTRUCTION IN SHORTHAND. *Two hours credit.*

Primarily for experienced teachers who have had an undergraduate methods course in shorthand. Emphasis is upon improved methods of instruction in the teaching of shorthand.

357. IMPROVEMENT OF INSTRUCTION IN TYPEWRITING. *Two hours credit.*

Primarily for experienced teachers who have had an undergraduate methods course in typewriting. Emphasis is upon improved methods of instruction in the teaching of typewriting.

358. IMPROVEMENT OF INSTRUCTION IN BASIC BUSINESS. *Two hours credit.*

This course emphasizes the teaching of general business with some emphasis on the teaching of business law, consumer education, and advanced general business. Individual and group work on objectives, content, teaching practices, and evaluation.

370. ADMINISTRATION AND SUPERVISION OF BUSINESS EDUCATION. *Three hours credit.*

This course deals with the problems of administrators and supervisors who are interested in business education as well as heads of departments of business education.

371. TESTS AND MEASUREMENTS IN BUSINESS EDUCATION. *Five hours credit.*

A survey of tests and measurements in business education, their uses and methods of construction, and presentation of necessary statistical tools for test interpretation especially applicable to business education. A study is made of prognostic tests, vocational aptitude tests, and published achievement tests.

372. CURRICULUM CONSTRUCTION IN BUSINESS EDUCATION. *Five hours credit.*

High school curricula and courses of study in business subjects will be planned and developed in this course. The history, present status, philosophy, and trends of curriculum construction will be discussed.

373. CURRENT PROBLEMS IN BUSINESS EDUCATION. *Three hours credit.*

Current problems in business education are studied and discussed by individuals, committees and the class.

374. COOPERATIVE PROGRAMS IN BUSINESS EDUCATION. *Two hours credit.*

The aim of the course is to define cooperative programs in business education, to describe the typical types, to explore basic philosophies, and to clarify the nature and scope of cooperative programs by portraying its development in schools.

401. ANALYSIS OF RESEARCH IN BUSINESS EDUCATION. *Five hours credit.*

An analysis of the best studies that have been done in business education. A study will be made of research techniques as well as the findings of these research studies. Emphasis will be placed upon determining further needed research.

402. ISSUES AND TRENDS IN BUSINESS EDUCATION. *Three hours credit.*

A seminar course designed to have individual and group analysis and discussion of the various issues in business education. Trends in the field will also be analyzed and clarified.

403. POST HIGH SCHOOL BUSINESS EDUCATION. *Three hours credit.*

A course planned for those teaching or planning to teach business or business education in post high school institutions—public and private business schools, junior colleges, and colleges educating business teachers. Curriculum and instructional practices and problems are emphasized.

Psychology, Counseling and Guidance

Professors: Blanchard, Fulbright, Luker, Lutey, Shaw.

Associate Professors: Clevenger, Hughes, Koplitz, Oppelt, Stuckey.

Assistant Professors: D. Anderson, Lakin, Meier, L. Montgomery, Nelson, Quinlan.

Instructor: Tanner.

Degree programs offered in Psychology, Counseling and Guidance are as follows: (1) an undergraduate minor in Psychology; (2) a graduate major in Psychology, Counseling and Guidance leading to the Masters of Arts Degree; (3) an emphasis in School Psychology, School Psychometry and School Counseling leading to the Specialist in Education degree; (4) a concentration in Psychology, Counseling and Guidance leading to the Doctor of Education degree and providing advanced preparation in areas such as counselor education; school psychology, research and measurement, administration of personnel and guidance services, and learning and instruction in higher education.

Required courses for the undergraduate minor in psychology are:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
PCG 21 —	General Psychology and Human Performance	3
PCG 101 —	Guidance in the Classroom	3
PCG 222 —	Seminar: Psychological Issues	3
PCG 240 —	Psychology of Learning	3
PCG 170 —	Principles and Practices in Testing and Measurement	3
PCG 285 —	Mental Hygiene and Emotional Adjustment....	3
SPED 200 —	The Education of Exceptional Children.....	3
	Electives	6

Candidates for the Masters degree, the Specialists degree, and the Doctor of Education degree are required to demonstrate basic proficiency in the following six areas: (1) Guidance and Counseling; (2) General Psychology; (3) Growth and Development; (4) Educational Psychology and Learning; (5) Measurement, Evaluation, and Research; and (6) Personal, Emotional, and Social Adjustment. In addition, courses, individual studies, practicums, and internships designed to meet specific degree or certification requirements must be met.

The degree of Doctor of Philosophy is a three-year program beyond the baccalaureate. Two specialized programs are available: (1) College Student Personnel Work to prepare candidates for college placement as deans of students and in other related areas; and (2) Educational Measurements and Research designed to prepare candidates for college teaching assignments and/or researchers for curricular areas. Each candidate must demonstrate competency in two foreign languages, or competency in one foreign language and 15 quarter hours in statistics.

All areas of concentration must be planned with the student's adviser. Copies of programs required for each degree may be obtained from the adviser, from the Psychology, Counseling and Guidance office, or the Department of Student Personnel.

Description of Courses

COUNSELING AND GUIDANCE

101. GUIDANCE IN THE CLASSROOM. *Three hours credit.*

A general introduction to guidance; a study of the guidance activities

200. GREAT IDEAS SEMINAR: CREATIVE THINKING. *Three hours credit.*

The Great Ideas Seminars are conducted by authorities nationally known in their fields of specialization. The purpose of the seminar is to provide information about current important ideas in each field of knowledge.

201. GUIDANCE IN THE ELEMENTARY SCHOOL. *Three hours credit.*

A study of the principles of guidance and their application at the elementary level. Emphasis is upon the functioning of the guidance worker in meeting children's needs.

207. GUIDANCE INSTITUTE. *Maximum of fifteen hours credit.*

A course designed to meet the needs of teachers and counselors wishing to upgrade their proficiencies in guidance activities.

214. GUIDANCE WORKSHOP. *Maximum of six hours credit.*

This course is designed to provide concentration of time and study in a special problem in guidance. The needs and interests of class members will determine to a certain extent the course content.

311. ORGANIZATION AND ADMINISTRATION OF GUIDANCE SERVICES. *Three hours credit.*

The organization and administration of guidance services in the public school system with emphasis being placed on types of organizations, use of records, in-service training of workers, evaluation, and roles of various staff members.

313. OCCUPATIONAL INFORMATION AND ANALYSIS IN VOCATIONAL GUIDANCE. *Three hours credit.*

Experience in using, reviewing, and evaluating occupational information. Study of sources and types of material, occupational filing plans, and practical techniques.

314. TECHNIQUES IN GROUP GUIDANCE. *Three hours credit.*

Prerequisite, PCG 101 or 317. A study of information needed and methods used by home room or guidance teachers who help students in groups, with educational planning, vocational choice and inter-personal relations.

315. COUNSELING THEORY AND TECHNIQUES. *Three hours credit.*

A study of the place of counseling in the guidance program and a critical analysis of the theoretical approaches used in conducting counseling interviews. Opportunity is provided to practice in the application of the various approaches.

316. CLINICAL METHODS IN PSYCHOLOGY. *Three hours credit.*

Prerequisite, PCG 285, 380, 382, 388 and 412. A course designed to integrate background knowledge of human development and characteristics, both normal and abnormal, with clinical techniques for appraisal of such development and characteristics. Directed particularly to advanced graduate students preparing to be school psychologists or school counselors.

317. FOUNDATIONS OF GUIDANCE. *Three hours credit.*

Introductory course for professional guidance workers. A study of individual and society needs for guidance and the development of a guidance point of view. Includes purposes and scope of guidance services, concepts, principles, personnel, and basic elements of such services.

370. ADMINISTRATION AND SUPERVISION OF BUSINESS EDUCATION. *Three hours credit.*

This course deals with the problems of administrators and supervisors who are interested in business education as well as heads of departments of business education.

371. TESTS AND MEASUREMENTS IN BUSINESS EDUCATION. *Five hours credit.*

A survey of tests and measurements in business education, their uses and methods of construction, and presentation of necessary statistical tools for test interpretation especially applicable to business education. A study is made of prognostic tests, vocational aptitude tests, and published achievement tests.

410. SUPERVISED PRACTICE IN GUIDANCE SERVICES. *Three hours credit.*

Qualified graduate students majoring or minoring in educational psychology, counseling and guidance engage in guidance activities under the supervision of one or more members of the staff. A type-written report analyzing the experience must be submitted to the supervisors for approval and then filed in the Graduate Office.

412. ANALYSIS OF THE INDIVIDUAL. *Three hours credit.*

Prerequisite, PCG 270 and 370. A course designed to develop understandings and skills in collecting and interpreting data concerning the individual, and the use of such data in case studies and follow-up procedures.

415. SUPERVISED PRACTICE IN COUNSELING. *Three hours credit.*

Prerequisite, PCG 315. Qualified graduate students majoring or minoring in psychology, counseling and guidance engage in counseling interviews and activities under the supervision of one or more members

of the staff. A typewritten report analyzing the experience must be submitted to the supervisor for approval and then filed in the Guidance Office.

416. PLAY THERAPY. *Three hours credit.*

Prerequisite, PCG 415. Qualified graduate students majoring in Psychology, Counseling and Guidance examine the theoretical basis for play therapy and engage in practice under the supervision of one or more members of the staff.

GENERAL PSYCHOLOGY

20. GENERAL PSYCHOLOGY. *Three hours credit.*

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.

21. GENERAL PSYCHOLOGY AND HUMAN PERFORMANCE. *Three hours credit.*

Prerequisite, PCG 20. 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.

220. GENERAL PSYCHOLOGY AND THE PRINCIPLES OF BEHAVIOR. *Three hours credit.*

An introductory course in psychology designed to help students develop a basic understanding of human behavior. Principles of psychology are developed and applied in the areas of perception and cognition, maturation, motivation, learning, emotions, and personal and social adjustment. Recommended as a substitute for PCG 20.

222. SEMINAR: PSYCHOLOGICAL ISSUES. *Three hours credit.*

This is one of the culminating experiences in the 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.

324. THEORIES OF MOTIVATION. *Three hours credit.*

A consideration of the topics of physiological drives, learned needs, reinforcement, sensory cues, behavior cycles, and social motives with special emphasis on the implication for the study of human behavior.

325. HUMAN NEUROPSYCHOLOGY. *Four hours credit.*

This course integrates current knowledge of neurophysiology with psychological correlates. Emphasis is placed on learning, motivation, perception, and personality variables as revealed in supervised psychodiagnostic experiences. Selected procedures and case studies are used to assess the role of neurological, especially brain, function or dysfunction and the consequent behavioral manifestations.

420. DEVELOPMENT AND PHILOSOPHY OF IDEAS IN PSYCHOLOGY. *Five hours credit.*

This course is intended to orient the advanced graduate student in psychology to his discipline through a study of the origin, evolution and philosophical implications of issues and ideas in psychology.

421. TRENDS IN PSYCHOLOGY, COUNSELING AND GUIDANCE. *Three hours credit.*

A course designed to focus on current trends and research in the areas of human growth and development, learning, mental hygiene, guidance and counseling. Special emphases are placed on methods of identifying significant trends and recognition of broad implications of trends.

422. SEMINAR: ISSUES IN PSYCHOLOGY, COUNSELING AND GUIDANCE. *Three hours credit.*

A seminar designed to develop competency in discussion and evaluation of psychological, professional, and ethical issues, pertinent research, and implications for action. The nature and functions of professional publications and organizations are examined.

GROWTH AND DEVELOPMENT**30. HUMAN GROWTH PROCESSES AND DEVELOPMENTAL TASKS. *Five credit hours.***

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.

230. PSYCHOLOGY OF CHILDHOOD AND ADOLESCENCE. *Three hours credit.*

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.

331. CHILD PSYCHOLOGY. *Three hours credit.*

A study of the growth, adjustment and capacities of children from conception through the elementary school years. Emphasis is placed on the theories of development and on application in guiding the development of normal children.

332. PSYCHOLOGY OF ADOLESCENCE. *Three hours credit.*

This course deals with the change from the period of childhood into adulthood and the resultant physical, mental, social, and emotional growth with its implications for guiding the adolescent toward a wholesome realization of his potentialities.

334. PSYCHOLOGY OF INDIVIDUAL DIFFERENCES. *Three hours credit.*

The nature and extent of differences among individuals and differences between such groups as men and women, age, class, race and nationality; factors related to these differences; and the application of the facts of human variability to educational, vocational, social and personnel work.

EDUCATIONAL PSYCHOLOGY AND LEARNING**140. EDUCATIONAL PSYCHOLOGY. *Five hours credit.***

Prerequisite EPG 20. 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.

142. TEACHING LEARNING PROCESS. *Three credit hours.*

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.

240. PSYCHOLOGY OF LEARNING. *Three hours credit.*

A course designed to develop attitudes, understandings, and proficiencies in the application of psychological principles to the educative process. Principles, theories and research are applied to learning, motivation, transfer, readiness, remembering and forgetting, individual differences, social and emotional adjustment and evaluation.

340. THEORIES OF LEARNING. *Five hours credit.*

The several theories of learning are examined critically for the purpose of developing a working control of the learning process by the student.

347. LEARNING PROBLEMS: DIAGNOSIS AND REMEDIATION.
Three hours credit.

The course considers techniques used by school psychologists in identifying and evaluating extreme learning problems. It is also concerned with planning and coordinating remedial experiences.

MEASUREMENT, EVALUATION AND RESEARCH**170. INTRODUCTION TO MEASUREMENT AND EVALUATION.**
Three hours credit.

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.

275. 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.

370. PRINCIPLES AND PRACTICES IN TESTING AND MEASUREMENT. *Three hours credit.*

A course designed to develop understanding of the functional relationship between measurement and evaluation. Attention is given to teacher-made and standardized instruments and to essential statistical concepts. Laboratory experience is provided in construction, administration and interpretation of tests.

371. APTITUDE AND ACHIEVEMENT ANALYSIS. *Five hours credit.*

A critical review of standardized aptitude tests. Experiences in administration, use, and interpretation of educational and vocational tests of aptitude, interest, and personality.

373. INDIVIDUAL TESTS OF INTELLIGENCE. *Three hours credit.*

The history and description of the Revised Stanford-Binet Intelligence Scale, the Wechsler-Adult Intelligence Scale and the Wechsler Intelligence Scale for Children; their use in schools, and the interpretation of results.

374. SUPERVISED PRACTICE IN THE USE OF INDIVIDUAL TESTS OF INTELLIGENCE. *Four hours credit.*

Prerequisite, PCG 373. This course provides supervised practice in administering one or more of the following individual tests of intelligence: the Revised Stanford-Binet Intelligence Scale, the Wechsler-Adult Intelligence Scale and the Wechsler Intelligence Scale for Children.

470. MEASUREMENT (PREDICTION AND ASSESSMENT). *Three hours credit.*

Prerequisite, APST 275, PCG 270, 370. An advanced course in measurement integrating the principles of measurement, research and testing. Deals with the construction and use of predictor instruments. Emphasis is placed on the criterion problem and special methods of prediction and analysis.

471. MEASUREMENT (SCALING AND RELATED TECHNIQUES). *Three hours credit.*

Prerequisite, APST 275, PCG 270, 370. An advanced course on the theory and methods of scaling with emphasis on attitude scales. Several of the newer techniques, such as the Q-Sort and Semantic Differential, are also covered.

PERSONAL, EMOTIONAL AND SOCIAL ADJUSTMENT

184. INDUSTRIAL PSYCHOLOGY. *Three hours credit.*

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.

280. PERSONALITY DEVELOPMENT. *Three hours credit.*

Variables influencing characteristics and development of personality, general systems of explanation, and methods of identifying and dealing with problems of personality development are considered.

285. MENTAL HYGIENE AND EMOTIONAL ADJUSTMENT. *Three hours credit.*

Psychological principles, theories, and practices are examined and applied to individual, school, family, and community mental health problems.

293. SOCIODRAMA. *Two hours credit.*

How to use sociodrama. The topics studied are: producing a sociodrama, purposes of the sociodrama, types and use of the sociodrama.

294. SOCIOMETRY. *Two hours credit.*

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.

380. THEORIES OF PERSONALITY. *Three hours credit.*

The course explores the psychological factors underlying personality development and adjustment and concentrates on the theories by which personality structure is explained.

382. INTRODUCTION TO RORSCHACH ADMINISTRATION AND SCORING. *Three hours credit.*

Prerequisite, PCG 340, 373, 380, 388. A course for graduate students in training to become school psychologists. Stresses the conceptual basis for comparing the projective with more traditional psychometric procedures and develops beginning skills in actual administration and scoring of the Rorschach Test.

383. PROJECTIVE TECHNIQUES. *Three hours credit.*

Discusses the theory and research underlying the projective techniques with special emphasis on questions of validity and interpretation. Required of students in school psychology. The course may be of value to graduate students in related areas who desire a general background in the projective techniques.

384. GROUP DYNAMICS IN HUMAN RELATIONS. *Three hours credit.*

Prerequisite, PCG 285. A course designed to give an understanding of the principles of group dynamics as applied to group situations including the classroom.

387. SEMINAR IN SCHOOL PSYCHOLOGY. *Four hours credit.*

A seminar intended to develop an appreciation for the professional issues and problems of concern to the school psychologist. The course considers such topics as qualifications for test administration, confidentiality, relations with other professions, problems of referral, and report writing.

388. ABNORMAL PSYCHOLOGY. *Three hours credit.*

Prerequisite, PCG 285, 340, 380. The course is designed to give an understanding of abnormal behavior, its causes, symptoms, characteristics, classifications, and prevention. These concepts form a necessary background for courses in projective techniques and training as school psychologists.

390. INTERNSHIP IN SCHOOL PSYCHOLOGY. *Maximum of sixteen hours credit.*

Prerequisite, PCG 374, 382, 383. A practical field work experience in the practice of school psychology under supervision conducted in selected public school systems.

COLLEGE STUDENT PERSONNEL WORK

252. WORKSHOP FOR RESIDENCE HALL DIRECTORS AND HOUSEMOTHERS. *Two hours credit.*

The course will be designed for present and prospective residence hall directors and fraternity housemothers. The philosophy and purpose of college housing, together with various methods of supervision, direction, and programing will be discussed. Meal planning, student health, etiquette, budgeting, and advising students will also be considered.

351. STUDENT PERSONNEL WORK IN COLLEGES AND UNIVERSITIES. *Three hours credit.*

Study of the philosophy, principles and functions of student personnel work in higher education.

352. STUDENT HOUSING. *Three hours credit.*

Study of the organization, practices and problems of student housing services at colleges and universities.

353. COUNSELING SERVICES IN COLLEGES AND UNIVERSITIES. *Three hours credit.*

Study of the organization, practices and problems of student counseling services, including health counseling, in higher education.

354. ADMISSIONS AND RECORDS. *Three hours credit.*

The organization, practices and problems of the services of admissions and records in colleges and universities.

355. STUDENT GOVERNMENT, ACTIVITIES AND SPONSORSHIP. *Three hours credit.*

This course deals with the philosophy and administration of student government and student activities on the college campus. The sponsorship of student organizations is included. Consideration will be given to the above aspects of college life as it relates to the individual student, to the academic program, and to overall college experience.

356. JOB PLACEMENT. *Three hours credit.*

The organization, practices, and problems of job placement services in higher education.

357. FINANCIAL AIDS. *Three hours credit.*

The philosophy, organization and practices of this service will be studied as preparation for student personnel work in higher education.

358. INTERNSHIP IN COLLEGE STUDENT PERSONNEL WORK. *Maximum of eighteen hours credit.*

Practical experience for two hours daily in one of nine student personnel offices for two hours credit. Total internship requires registration and practice in each office, enabling the student to earn a maximum of eighteen hours credit over nine quarters. A weekly seminar is held for all interns.

451. ORGANIZATION AND ADMINISTRATION OF COLLEGE STUDENT PERSONNEL WORK. *Three hours credit.*

Study of the organizational and administrative practices of centralized and decentralized systems for providing student personnel services in higher education.

452. CURRENT ISSUES IN COLLEGE STUDENT PERSONNEL WORK. *Three hours credit.*

Study of the current problems and issues affecting student personnel work in higher education.

453. RESEARCH AND EVALUATION IN COLLEGE STUDENT PERSONNEL WORK. *Three hours credit.*

Study of the problems of evaluating student personnel services in higher education, and a critical examination of the research that has been reported.

Library Science

Associate Professors: Costello, Seager.

Assistant Professors: James Greer, J. Hall, Rider, Tilden.

Instructors: Bachenberg, Brown, Koehmstedt, Kovacs, Mueller, Richardson.

LIBRARY SCIENCE MINOR

The following program offers 27 quarter hours of credit to meet the North Central Association and the Northwestern Association requirements for a school librarian and teacher-librarian in a high school having a student enrollment of 499 or fewer.

The following courses are required:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
LS 280	— Organization and Administration of a School Library	5
LS 281	— Classification and Cataloging	5
LS 282	— Reference Materials for School Libraries.....	5
LS 283	— Book Selection for School Libraries	5
LS 284	— The Librarian and Reading Guidance for Youth	5
	Electives (minimum)	2
		27

Electives should be chosen from the following courses:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
ED 115	— Literature in the Elementary School.....	2
ED 206	— Audio-Visual Materials in Education.....	4
LS 285	— Junior High School Library Workshop.....	3

Description of Courses

LIBRARY SCIENCE

280. ORGANIZATION AND ADMINISTRATION OF A SCHOOL LIBRARY. *Five hours credit.*

This course includes a consideration of order and circulation procedures, supervising student personnel, the role of the librarian in the development of curriculum and guidance programs, the relationships of the librarian with teachers and administrators and with other local and state agencies.

281. CLASSIFICATION AND CATALOGING. *Five hours credit.*

In this course the student learns the fundamentals of classification according to the Dewey System and the construction of a dictionary catalog for the school library. It will include all necessary processes from the time books are acquired until they are ready for circulation. Attention is also given to the library care of pamphlets and audio-visual materials.

282. REFERENCE MATERIALS FOR SCHOOL LIBRARIES. *Five hours credit.*

A discussion of suitable reference materials for elementary and secondary school libraries. Covers selection principles and use of reference materials.

283. BOOK SELECTION FOR SCHOOL LIBRARIES. *Five hours credit.*

Discussion of book selection principles and book selection aids for school libraries. Covers reading levels and interests of children and young people. Course discusses suitable trade book materials for both elementary and high school libraries.

284. THE LIBRARIAN AND READING GUIDANCE FOR YOUTH. *Five hours credit.*

Acquaintance with and appreciation of books on various reading levels. The use of non-book materials and aids to stimulate and guide young people's reading. Deals with techniques to aid the individual student in selecting material at his level and to meet his needs.

285. JUNIOR HIGH SCHOOL LIBRARY WORKSHOP. *Three hours credit.*

Prerequisite, LS 280. Study of various problems involved in the administration of the junior high school library. Stresses the selection of appropriate materials and the problems involved in dealing with students of that age level. Study of recent approaches to teacher-student-library relationships.

Special Education

Professor: Vaughan.

Assistant Professors: Bourgeault, Cegelka, Dickerson, McAlees, Rapp, Whorton, Wolfe.

Instructors: Henkels, Weishahn.

Degree programs in Special Education are offered as follows: (1) a major or minor at the undergraduate level; (2) a major at the master's level; (3) a graduate area of concentration leading to the Doctor of Education degree.

The program affords undergraduate students the opportunity to qualify for a Colorado Teacher Certificate with endorsement for acoustically handicapped, mental retardation or speech correction. A certifying program is also offered in audiology. Junior and senior students may take course work in the areas of teaching the visually handicapped and physically handicapped. This course work may be used for certification in the special areas of teaching visually handicapped and physically handicapped children when all requirements for certification are met.

The campus Special Education School, a cooperative project of the Greeley Public Schools and Colorado State College, provides a laboratory in which students may observe and do student teaching. At the present time this laboratory school enrolls mentally retarded, physically handicapped, acoustically handicapped, and visually handicapped children. The Special Education facility also includes a speech and hearing clinic which provides complete audiometric evaluations as well as speech correction services; a research suite; and provision for testing and measuring exceptional children.

A graduate program is offered to prepare vocational rehabilitation counselors.

SPECIAL EDUCATION MAJORS

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Advanced Teacher Education, 29 hours, plus methods and observation courses.
3. The required courses in either of the majors as listed.
4. Twenty-four to 32 quarter hours of electives to complete the 180 quarter hours of academic credit required for graduation.

SPECIAL EDUCATION MAJOR

(With Concentration in Mental Retardation)

Required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
SPED 200	— The Education of Exceptional Children.....	3
SPED 210	— Introduction to Mental Retardation	4
SPED 211	— Education of Severely Mentally Retarded Children	3
SPED 212	— Curriculum Development and Methodology for Mentally Retarded	4
SPED 230	— Care and Pathology of the Physically Handicapped	3
SPED 264	— Speech Correction in the Classroom.....	3
ED 206	— Audio-Visual Materials in Education.....	4
PCG 230*	— Psychology of Childhood and Adolescence.....	3
PCG 170	— Introduction to Measurement and Evaluation	3
FA 127	— Craft Techniques	3
HPER 101	— Health Education in the Elementary School..	2
MUS 49	— Music Fundamentals I.....	2
	Electives in Special Education.....	11
		48

*If PCG 30 has been taken in the last five years, a Special Education elective may be substituted for PCG 230.

One minor of 27 hours outside the field of Special Education. For students planning to teach at the primary or intermediate levels, a minor in elementary education is required.

Special Education Minor (Mental Retardation)

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
SPED 200	— The Education of Exceptional Children.....	3
SPED 210	— Introduction to Mental Retardation.....	4
SPED 211	— Education of Severely Mentally Retarded Children	3
SPED 212	— Curriculum Development and Methodology for Mentally Retarded	4
SPED 264	— Speech Correction in the Classroom	3
PCG 230*	— Psychology of Childhood and Adolescence....	3
PCG 170	— Introduction to Measurement and Evaluation	3
FA 127	— Craft Techniques	3
	Electives	1
		27

*If PCG 30 has been taken in the last 5 years, a Special Education elective may be substituted for PCG 230.

Special Education Minors must student teach in Special Education.

SPECIAL EDUCATION MAJOR

(With Concentration in Acoustically Handicapped)

Required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
SPED 200	— The Education of Exceptional Children.....	3
SPED 250	— Pathology and Introduction to Education of the Deaf	3
SPED 251	— Speech Development for Acoustically Handicapped Children	6
SPED 252	— Language Development for Acoustically Handicapped Children	6
SPED 253	— Methods of Teaching Content Subjects to the Deaf	6
SPED 257	— Speech Reading	3
SPED 260	— Speech Pathology I	3
SPED 265	— The Auditory and Speech Mechanism.....	3
SPED 270	— Audiology	3
PCG 230*	— Psychology of Childhood and Adolescence....	3
PCG 170	— Introduction to Measurement and Evaluation	3
	Electives	6
		48

*If PCG 30 has been taken in the last 5 years, a Special Education elective may be substituted for PCG 230.

A minor in Elementary Education of 27 hours is recommended.

Recommended electives to complete the 180 quarter hours of academic credit required for graduation are: ED 222, 223, HPER 88, PSCI 172, and MATH I.

SPECIAL EDUCATION MAJOR
(With Concentration in Speech Correction)

Required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
SPED 200	— The Education of Exceptional Children.....	3
SPED 260	— Speech Pathology I	3
SPED 261	— Speech Pathology II	3
SPED 262	— Clinical Practice in Speech Correction.....	8
SPED 263	— Methods of Speech Correction.....	3
SPED 265	— The Speech Mechanism	3
SPED 266	— Programming Speech Correction in the Public Schools	3
SPED 270	— Audiology	3
SPED 274	— Practicum in Audiology	3
PCG 230*	— Psychology of Childhood and Adolescence...	3
PCG 170	— Introduction to Measurement and Evaluation	3
PCG 285	— Mental Hygiene and Emotional Adjustment..	3
SP 275	— Phonetics	3
	Electives	4
		48

*If PCG 30 has been taken in the last 5 years, a Special Education elective may be substituted for PCG 230.

To broaden the competencies of the student in wider view-point of this field, the following courses are recommended:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
SP 260	— Introduction to General Semantics	4
SP 270	— Psychology of Speech	4
SPED 210	— Introduction to Mental Retardation.....	4
SPED 230	— Care and Pathology of the Physically Handicapped	3
SPED 251	— Speech Development for Acoustically Handicapped Children	6
SPED 257	— Speech Reading	3

One minor of 27 hours outside the field of Special Education is required. A minor in Elementary Education is highly recommended.

Special Education Minor (Speech Correction)

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
SPED 200	— The Education of Exceptional Children.....	3
SPED 260	— Speech Pathology I	3
SPED 261	— Speech Pathology II	3
SPED 262	— Clinical Practice in Speech Correction.....	5
SPED 266	— Programming Speech Correction in the Public Schools	3
SPED 270	— Audiology	3
SPED 274	— Practicum in Audiology	3
PCG 170	— Introduction to Measurement and Evaluation	3
	Electives	1
		27

The program for a minor in speech correction is offered primarily to enable the public school teacher to assist children with minor speech problems. Individuals desiring to work as certified speech clinicians should consult with faculty members concerning further course and clinical work required for certification in speech correction.

SPECIAL EDUCATION MAJOR

(With Concentration in Audiology)

Required courses in the major:

Course Number	Course Title	Hours	Credit
SPED 200	— The Education of Exceptional Children.....	3	
SPED 251	— Speech Development for Acoustically Handicapped Children	6	
SPED 252	— Language Development for Acoustically Handicapped Children	6	
SPED 257	— Speech Reading	3	
SPED 260	— Speech Pathology I	3	
SPED 261	— Speech Pathology II	3	
SPED 262	— Clinical Practice in Speech Correction.....	3	
SPED 270	— Audiology	3	
SPED 271	— Speech Audiometry	3	
SPED 272	— Advanced Audiometry	3	
SPED 273	— The Hearing Mechanism	3	
SPED 274	— Practicum in Audiology	9	

48

Among the student's electives, care should be taken to include a broad understanding of information related to hearing and learning. Among the elective courses, the student may select from such areas as speech pathology and other types of special education, psychology, learning theory, physics, human anatomy and physiology.

One minor of 27 hours outside the field of Special Education is required. A minor in Elementary Education is highly recommended.

Description of Courses

GENERAL AND ADMINISTRATION

200. THE EDUCATION OF EXCEPTIONAL CHILDREN. *Three hours credit.*

A study of brilliant, retarded, physically handicapped, and emotionally maladjusted children, with emphasis on methods of adjusting instruction to the needs of these children.

201. WORKSHOP IN SPECIAL EDUCATION. *One to six hours credit.*

A workshop designed for teachers and administrators. The following topics will be discussed: the philosophy and needs for Special Education, working relationships with the State Department and local community groups, certification of teachers, problems of financing and services available within the local school district, screening of pupils and requirements of medical reports.

202. COUNSELING PARENTS OF EXCEPTIONAL CHILDREN. *Three hours credit.*

This course is designed to present the techniques of working with parents of exceptional children. How to interpret a handicap to parents and how the parents and family can accept the children in the home is also developed.

301. ADMINISTRATION AND SUPERVISION OF SPECIAL EDUCATION. *Three hours credit.*

Problems of organization, administration and supervision of special education programs; finance and attendance, physical facilities, budgeting, needed equipment, community agencies and curriculum development.

302. APPRAISAL OF EXCEPTIONAL CHILDREN. *Four hours credit.*

Prerequisite, PCG 170, 373, 374. A critical examination of objective tests used to appraise the intellectual abilities of exceptional children.

303. PRACTICUM IN APPRAISING EXCEPTIONAL CHILDREN. *Three hours credit.*

Prerequisite, SPED 302. Provides supervised practice in administering specialized tests to children who are visually handicapped, acoustically handicapped, cerebral palsied, speech impaired, or mentally retarded.

401. RESEARCH SEMINAR IN SPECIAL EDUCATION. *Three hours credit.*

An analysis of studies and research pertaining to the education of exceptional children. Procedures for conducting and reporting research. A survey of critical problems and trends in Special Education.

402. PROBLEM SEMINAR IN SPECIAL EDUCATION. *Three hours credit.*

A course designed for leaders and resource personnel in Special Education. Emphasis will be placed on how to develop good leadership, the identification of major problem areas, the possible solutions of these problems, and evaluation of these solutions.

403. TRENDS IN SPECIAL EDUCATION. *Three hours credit.*

A course designed for the study of historical development of educational programs for exceptional children. A critical analysis of issues and trends in special education.

414. INTERNSHIP IN SPECIAL EDUCATION. *Maximum of 15 hours credit.*

The internship is a supervised program of orientation, observation, and participation in one or more community agencies devoted to exceptional children. Specific experiences are planned to include administration, program development, and inter-agency relationships. The internship requires a minimum of 330 clock hours of field experience during one full quarter.

MENTALLY RETARDED**210. INTRODUCTION TO MENTAL RETARDATION. *Four hours credit.***

Prerequisite, SPED 200. 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.

211. EDUCATION OF SEVERELY MENTALLY RETARDED CHILDREN. *Three hours credit.*

Organization of special class and school programs for severely mentally retarded children. Diagnosis and classification. Development of teaching materials and techniques. Community organizations and parent education.

212. CURRICULUM DEVELOPMENT AND METHODOLOGY FOR MENTALLY RETARDED. *Four hours credit.*

Prerequisite, SPED 200, 210. This course will have as its main purpose the development of integrated experience-units for primary, intermediate, and pre-vocational mentally retarded children. Experience-centered units will be built around the following three areas: occupational, economic, and social. The course will consist of reading, lectures, observation, experimentation and meetings.

311. WORKSHOP FOR THE VOCATIONAL REHABILITATION OF MENTALLY RETARDED YOUTH. *Three hours credit.*

Prerequisite, SPED 200. Emphasis will be on discussing techniques in the following areas: (1) evaluating vocational fitness (2) job placement (3) working with related disciplines (4) understanding of the implications of vocational experiences on curriculum (5) on-the-job supervision and, (6) follow-up services.

312. ADVANCED CURRICULUM DEVELOPMENT. *Four hours credit.*

Prerequisite, SPED 212. This course will develop the application of the principles of preparation, development, and effective use of integrated units. Evaluation and reporting in terms of achievement of the curriculum objectives will also be emphasized.

314. PRACTICUM WITH THE MENTALLY RETARDED. *Maximum of six hours credit.*

Prerequisite, SPED 200, 210 and 212. Individual observation and supervised practice in the education of the mentally handicapped.

410. SOCIOLOGICAL AND EDUCATIONAL ASPECTS OF MENTAL RETARDATION. *Four hours credit.*

A study of the sociological and educational problems related to mental retardation. Major emphasis will be placed on research findings having to do with community and institutional care treatment, and education of the mentally retarded.

411. MEDICAL AND PSYCHOLOGICAL ASPECTS OF MENTAL RETARDATION. *Four hours credit.*

A study of the medical and psychological problems related to mental retardation. Included will be discussions of the medical causes, treatment, and prevention of mental retardation as well as a critical examination of research related to such areas as learning, perception, brain injury and psychotherapy.

EMOTIONALLY DISTURBED AND SOCIALLY MALADJUSTED

220. 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.

221. METHODS OF TEACHING CLASSES OF SOCIALLY AND EMOTIONALLY MALADJUSTED CHILDREN. *Three hours credit.*

The role of the special teacher in the development of an hygienic educational atmosphere and an adequate corrective program for socially maladjusted and emotionally disturbed children is stressed.

322. SOCIOLOGICAL AND CULTURAL ASPECTS OF SOCIALLY AND EMOTIONALLY DISTURBED CHILDREN. *Three hours credit.*

A study of the sociological and cultural problems related to social and emotional maladjustment. Major emphasis will be placed on research findings related to such areas as etiology, community and institutional care and treatment, pertinent current issues, and review of special legislation and typical community services.

324. PRACTICUM WITH THE SOCIALLY AND EMOTIONALLY DISTURBED. *Maximum of six hours credit.*

Prerequisites, SPED 200, 220, 221. Individual observation and supervised practice in the education of the socially and emotionally disturbed.

PHYSICALLY HANDICAPPED

230. CARE AND PATHOLOGY OF THE PHYSICALLY HANDICAPPED. *Three hours credit.*

Prerequisite, SPED 200. A course designed for teachers of physically handicapped children. Problems will be discussed in the following areas: vision, hearing, speech, orthopedics, epileptics and miscellaneous. Some time will be given to counseling of parents and organizing of parent groups.

231. 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, and aids used in the education of the physically handicapped child.

331. ADVANCED PROBLEMS IN TEACHING THE CEREBRAL PALSIED. *Three hours credit.*

Consideration of problems of child guidance, working with parents of cerebral palsied children and specific techniques helpful in education and training of cerebral palsied children. Emphasis upon teamwork approach to solving medical, educational, and therapeutic problems.

334. PRACTICUM WITH PHYSICALLY HANDICAPPED. *Maximum of six hours credit.*

Prerequisite, SPED 200, 230. Individual observation and supervised practice in the education of the physically handicapped. It is recommended that this course be taken over two consecutive quarters.

VISUALLY HANDICAPPED

240. STRUCTURE AND FUNCTION OF THE EYE. *Three hours credit.*

An ophthalmologist presents the anatomy and physiology of the eye and the medical eye examination. An educator presents functional implications of various pathologies in the educational setting. Educational interpretation of the medical eye report.

241. SURVEY OF EDUCATION OF THE VISUALLY HANDICAPPED. *Three hours credit.*

Educational, social, and emotional implications of visual disability. Overview of history, and current practices in educational and rehabilitation planning. Organization and implications of various education services—pre-school through college. A review of private and public agencies, their philosophies, and programs.

242. PRINCIPLES OF EDUCATION OF THE PARTIALLY SEEING. *Three hours credit.*

Identification, classification, and methods of program organization; principles of preparation, selection, effective use of instructional materials for children with limited vision. Adaptation of the school environment considered. Observation, discussion, and administration of the Snellen Vision Screening test presented.

243. BEGINNING BRAILLE. *Three hours credit.*

History of development of braille and other systems of reading used by the blind. Mastery of literary braille code. Development and use of special materials; slate and stylus techniques presented; introduction to Nemeth Code of Mathematics.

244. ELEMENTARY METHODS FOR THE BLIND. *Three hours credit.*

Special instructional techniques in teaching reading through braille; use of audio and dimensional aids; current practices in arithmetic, language, arts, music, physical education, efficient living skills; orientation and mobility foundations. Materials preparation, adaptation of commercial devices emphasized.

245. SECONDARY METHODS FOR THE BLIND. *Three hours credit.*

Curriculum adaptations and special methods; problems of adjustment and expansion of the operational environment. Use of guidance, counseling and vocational rehabilitation agency services in life planning for the senior high school blind student. Pre-adult and adult special services. Review of special legislation and typical services available to the young blind adult.

343. ADVANCED BRAILLE. *Three hours credit.*

Intensive study of Nemeth Code; including material for algebra, calculus, trigonometry, and other advanced mathematics notation. Principles of transcription; editing and adaptation of print material for the braille reader. Sources of embossed material considered; a review of the volunteer movement. Overview of the music code; overview of chemical notation.

344. PRACTICUM WITH VISUALLY HANDICAPPED. *Maximum of six hours credit.*

Supervised teaching experience with both blind and partially seeing children; placement evaluations; preparation of materials. Observation of varied programs, including resource room and residential school plans, rehabilitation agencies.

345. PRINCIPLES OF ORIENTATION AND MOBILITY FOR THE BLIND. *Three hours credit.*

Independence in exploration of the environment as a life need. Technique in developing orientation skills; pre-cane mobility instruction. Philosophy and history of cane instruction, guide dogs, and other methods of travel. Current programs review. Observation of special orientors working with children. Students will gain experience in traveling independently with cane.

ACOUSTICALLY HANDICAPPED

250. PATHOLOGY AND INTRODUCTION TO EDUCATION OF THE DEAF. *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.

251. SPEECH DEVELOPMENT FOR ACOUSTICALLY HANDICAPPED CHILDREN. *Maximum of six hours credit.*

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.

252. LANGUAGE DEVELOPMENT FOR ACOUSTICALLY HANDICAPPED CHILDREN. *Maximum of six hours credit.*

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 in both oral and written forms. The meaning and importance of an integrated language arts program.

253. METHODS OF TEACHING CONTENT SUBJECTS TO THE DEAF. *Maximum of six hours credit.*

Prerequisite, SPED 250. The use of the communication skills in all content subject areas. Methods of teaching advanced reading skills. Improvement of speech and language usage. Development of an interest in recreational reading and reading of current literature. Means of preparing pupils to enter regular high schools or Gallaudet College.

256. EDUCATION OF HARD-OF-HEARING CHILD. *Three hours credit.*

Sociologic, psychologic and economic implications of hearing loss. Survey of public school program of hearing conservation. Methods and practice of hearing therapy including lip-reading, auditory training, and speech improvement. Presentation of typical lesson plans at various levels and collection of source materials. Mechanics and use of hearing aids and other amplifying devices.

257. 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.

350. ADVANCED PROBLEMS IN TEACHING DEAF CHILDREN. *Three hours credit.*

Prerequisite, SPED 251, 252, 256. Preparation of units of work in content subject areas. Expansion of vocabulary and language comprehension and usage. Curriculum planning. An opportunity will be given experienced teachers to work on specific problems.

354. PRACTICUM WITH THE DEAF AND HARD OF HEARING. *Maximum of fifteen hours credit.*

Individual observation and supervised practice in the education of the deaf and hard-of-hearing. It is recommended that this course be taken over two consecutive quarters.

SPEECH CORRECTION**260. SPEECH PATHOLOGY I.** *Three hours credit.*

An introduction to the area of speech difficulties on the elementary, secondary, and college levels. Training in recognition, diagnosis, and treatment of minor speech problems.

261. SPEECH PATHOLOGY II. *Three hours credit.*

Prerequisite, SPED 260. A consideration of disorders of articulation, phonation, rhythm, and symbolization with emphasis on methods and materials of re-education.

262. CLINICAL PRACTICE IN SPEECH CORRECTION. *Maximum of eight hours credit.*

This course supplements the methods of speech diagnosis and treatment with observation and supervised teaching in the college speech clinic. A minimum of 275 clock hours in the laboratory is one of the requirements necessary to qualify for ASHA as a speech correctionist.

263. METHODS OF SPEECH CORRECTION. *Three hours credit.*
Prerequisite, SPED 260. The presentation of methods, materials, and techniques appropriate to speech correction in individual and group therapy. Emphasis is placed on practical procedures. Each student will begin the assembling of his own personal materials for future therapy use.

264. SPEECH CORRECTION IN THE CLASSROOM. *Three hours credit.*

This course is designed to aid the classroom teacher in evaluating speech difficulties on the elementary and secondary levels and offers techniques that may be used in the correction of minor speech problems.

265. THE AUDITORY AND SPEECH MECHANISMS. *Three hours credit.*

Prerequisite, SPED 260, 261. A study of the structure and physiology of the voice and hearing mechanisms.

266. PROGRAMMING SPEECH CORRECTION IN THE PUBLIC SCHOOL. *Three hours credit.*

Prerequisite, SPED 260 or 264. The organization, administration, and evaluation of speech correction programs in public school settings. Special emphasis is placed on methods of screening large public school populations, organizing therapy on a basis of communication needs, fitting standard practices of therapy to the needs of the school.

360. SPEECH HABILITATION IN CEREBRAL PALSY. *Three hours credit.*

Prerequisite, SPED 260. The speech problems which arise from various conditions of cerebral palsy, their etiology and manifestations. Attention is given to the various types of conditions, the extent to which speech is involved in each, the types of therapy indicated in each. Methods of assessing problems are demonstrated. Emphasis is placed on the special educational needs of the cerebral palsied person, his problems of life adjustment and communication.

361. CLEFT PALATE SPEECH AND THERAPY. *Three hours credit.*

Prerequisite, SPED 260. A study of the problems of communication common to cleft palate speech. A focus is placed on the structural defects, the major trends in surgery and prosthetic treatment, possible etiology. Special emphasis is placed on the psycho-social problems in communication of individuals with cleft palate.

362. THE REHABILITATION OF PERSONS WITH APHASIA. *Three hours credit.*

Prerequisite, SPED 260. A consideration of psycho-social and educational problems in the recovery from aphasia. The emphasis of this course is upon the problems of re-education of the individual who has lost language functions as the result of an insult to the central nervous system. Opportunity is afforded for the development of materials and techniques to be used in aphasia therapy.

363. THE THEORY AND TREATMENT OF STUTTERING. *Three hours credit.*

Prerequisite, SPED 260. A consideration of several contemporary theories concerning the cause and nature of stuttering. An investigation of research findings, clinical evidence, and of the prejudices of prominent agencies and individuals in the literature. The student is provided an opportunity to work out his own rationale for stuttering therapy. Emphasis is placed on techniques of treatment which prove successful with stutterers.

364. VOICE DISORDERS AND TREATMENT. *Three hours credit.*
Prerequisite, SPED 260. A study of the structure of the vocal mechanism, its diseases and pathologies, the nature of functional and organic voice problems. Consideration is given to the voice as an index of personality. Opportunity is provided to gain experience in examining the throat, in evaluating voice quality, and to develop techniques for treatment of voice disorders.

365. FUNCTIONAL AND ORGANIC PROBLEMS OF ARTICULATION. *Three hours credit.*

Prerequisite, SPED 260. A survey of the variety of problems contributing to defective articulation. Consideration is given to research findings in current trends in therapy. Problems in articulation are seen in relationship to communication rather than isolated incidents of production.

366. DIAGNOSIS IN SPEECH PATHOLOGY. *Three hours credit.*

Prerequisite, SPED 260 and 261. The techniques of clinical diagnosis and evaluation of speech pathologies. The student participates in all phases of assessment of speech and language problems. He is expected to complete a minimum of 100 hours of clinical internship in the area of diagnosis and evaluation under supervision.

461. SEMINAR: LANGUAGE PROBLEMS. *Three hours credit.*

Prerequisite, SPED 260, 261. An investigation of the patterns of normal speech and language development with special focus on research findings. Emphasis is placed on severe communication disruption as a result of deafness, brain damage, mental retardation or emotional disturbance.

462. SEMINAR: COMMUNICATION BARRIERS. *Three hours credit.*

Prerequisite, SPED 260, 261. An investigation of the factors of interpersonal significance in communication breakdown. The study considers the individual within the framework of a social situation communicating by all those processes by which individuals influence each other. The interpersonal aspects of therapy serve as a focus.

463. PRACTICUM IN SPEECH DIAGNOSIS. *Three hours credit.*

Prerequisite, SPED 260, 261. The student shall participate, under supervision, in the diagnostic program of the Speech and Hearing Clinic. This participation shall include all phases of diagnosis, evaluation of results, and disposition of the case. Opportunities to participate in diagnosis will be provided in additional facilities where appropriate.

464. PRACTICUM IN COMMUNICATION BARRIERS. *Three hours credit.*

Prerequisite, SPED 260, 261. An investigation of communication barriers in cases and groups undergoing therapy in the Speech and Hearing Clinic. Focus will be placed on those interpersonal and intrapersonal factors which limit successful communication, interfere with therapeutic processes, and inhibit normal integration.

AUDIOLOGY

270. AUDIOLOGY. *Three hours credit.*

A consideration of factors essential to the measurement of the loss of hearing acuity. Administration of hearing tests and interpretation of test results. The organization of hearing conservation programs, identification audiometry, and referral procedure.

271. SPEECH AUDIOMETRY. *Three hours credit.*

A presentation of the rationale for speech audiometry, the development of test materials, the techniques necessary for presentation, interpretation, and counseling from the results of speech tests of auditory acuity. Participation in a testing program to gain facility in the use of equipment of speech audiometry.

272. ADVANCED AUDIOMETRY. *Three hours credit.*

Prerequisite, SPED 270 and 271. The theory and practice of advanced pure tone and speech audiometry. 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. A study of the rationale and conduct of clinical programs.

273. THE HEARING MECHANISM. *Three hours credit.*

A detailed study of the human ear, the processes of audition, and special attention to the psychophysics of audition. A consideration of the abnormalities and diseases of the hearing mechanism.

274. PRACTICUM IN AUDIOLOGY. *Maximum of nine hours credit.*

Principles of and experience in the administration of hearing tests and their evaluation.

370. HEARING AIDS. *Three hours credit.*

Prerequisite, SPED 270 and 271. The presentation of those means by which the acoustically-impaired may most effectively utilize residual hearing, including amplification, auditory training, and speech reading. Consideration is given to the individual and group hearing aids, their design, basis for selection, and training necessary for their successful use.

371. CLINICAL STUDY IN COMMUNICATION PROBLEMS. *Three hours credit.*

Prerequisite, SPED 270, 271, 272. The evaluation of individuals with communication problems, a study is made of the various types of breakdown in communication, methods of distinguishing among these types by the use of the differential diagnosis. Emphasis is placed upon actual clinical application of evaluation techniques.

372. SEMINAR IN AUDIOLOGICAL PROBLEMS. *Three hours credit.*

This course will analyze problems involving the fitting of hearing aids and adjustment of the individuals to them. It will also involve problems concerning necessary auditory training. Experience will be provided on an individual basis.

GIFTED

280. EDUCATION OF CHILDREN WITH SPECIAL ABILITIES. *Three hours credit.*

Basic organization of programs for the education of the gifted child; classification and testing; curriculum adjustments and principles of teaching the gifted; exploring creative activities; guidance and evaluation of student programs.

VOCATIONAL REHABILITATION

390. INTRODUCTION TO REHABILITATION. *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.

391. PRINCIPLES AND TECHNIQUES OF THE REHABILITATION PROCESS. *Three hours credit.*

An introduction to the basic skills and techniques required of a rehabilitation counselor by the rehabilitation process. Designed to prepare the student for an effective period of supervised clinical practice.

392. VOCATIONAL PLACEMENT AND ADJUSTMENT OF THE DISABLED IN REHABILITATION. *Three hours credit.*

Consideration of such basic areas of knowledge as theories of vocational choice, labor market analysis, job analysis, and the psychology and sociology of work as they relate to the vocational placement problems presented by disabled persons. Analysis of job placement and training facilities and ability to relate these through vocational guidance to client capacities and employer expectations.

393. SEMINAR IN REHABILITATION: REHABILITATION PLAN FORMULATION. *Three hours credit.*

To develop proficiency in the formulation of individual rehabilitation plans and to acquaint the student with essential content of the client study process. To develop the student's understanding and appreciation of his responsibilities in the provision of medical, training, placement, and related services and to emphasize the importance, along with evaluation and services, of counseling and planning as the "heart and core" of the total rehabilitation process.

394. SUPERVISED CLINICAL PRACTICE IN REHABILITATION COUNSELING. *Sixteen hours credit.*

This internship will include supervised practice in counseling, case studies, contacts with community social agencies and employers, as well as practicum in specific rehabilitation processes. The supervised clinical practice consists of a minimum of 400 clock hours of field work, lasting one full term of approximately 11 weeks.

395. SEMINAR IN REHABILITATION: SPECIFIC DISABILITY AREAS. *Three hours credit.*

To develop a sensitive awareness of the handicapping nature of specific disabilities and the relationship between the disability and the psychological, social, and vocational aspects of successful adjustment. Specific disability areas discussed will vary from year to year according to the needs and interests of each particular group of students.

396. SEMINAR IN REHABILITATION: PROFESSIONAL PROBLEMS. *Three hours credit.*

To provide the student with a thorough understanding of his responsibilities and duties as regards non-case-work rehabilitation activities and to stimulate an awareness of the need for continuous professional growth and development. Research in rehabilitation, ethical problems, and professional issues of current concern will be discussed.

397. MEDICAL ASPECTS OF REHABILITATION. *Three hours credit.*

Medical implications for rehabilitation counselors including anatomy, physiology and pathology of human systems, physical reconstruction, restoration and adaptation. Special emphasis is placed on the social and occupational aspects of injuring, somatic and psychogenic disability and the acquiring of facility in basic medical terminology.

Division of Health, Physical Education, and Recreation

Professors: Butler, Cyphers, Everett, Hancock, Pearson, Staton, Van Anne.

Associate Professors: Behling, Best, Blasi, Heiss, Latham, Lindahl, Maria-Rossi, R. Montgomery, Steffy.

Assistant Professors: Barham, Benich, Fri, LaBonde, Mosser, Sage, Shirley.

Instructors: James, Trimble, Zenor.

The Division of Health, Physical Education, and Recreation includes programs for both men and women. Degrees and majors and minors offered are:

BACHELOR OF ARTS DEGREE (Teacher Education)

Majors: Physical Education for Women, Physical Education for Men.

Minors: Physical Education (Secondary), Physical Education (Elementary), Health Education, Dance Education.

All majors and minors in this division will earn academic credit in HPER 61, Personal and Community Health.

BACHELOR OF SCIENCE DEGREE

Major: Recreation.

MASTER OF ARTS DEGREE (Teacher Education)

Majors: Physical Education, Physical Education (Supervision), Physical Education (Dance), Health Education, Recreation.

SPECIALIST IN EDUCATION DEGREE

Area of Specialization: To be selected.

DOCTOR OF EDUCATION DEGREE (Teacher Education)

Area of Concentration: Health and Physical Education.

Supporting Area: Health and Physical Education.

PHYSICAL EDUCATION MAJOR FOR WOMEN

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours. HPER 80, 81, 89, and 98 will be substituted for the six hours of

physical education activity courses required as a part of the General Education Program.

2. Advanced Teacher Education, 29 hours, plus HPER 144, three hours credit and HPER 145, two hours credit.

3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
HPER 62	— First Aid	2
HPER 82	— Techniques of Hockey and Soccer.....	2
HPER 84	— Techniques of Tennis and Softball	2
HPER 85	— Techniques of Tumbling.....	2
HPER 90	— Techniques in Folk Dance.....	2
HPER 92	— American Square and Social Dance.....	2
HPER 93	— Techniques in Contemporary Dance.....	2
HPER 94	— Problems in Dance Composition.....	2
HPER 201*	— Problems in School Health Programs	
<i>or</i>		
HPER 102*	— Health Education in the Secondary School....	4
HPER 120	— Applied Human Anatomy.....	5
HPER 121	— Applied Human Physiology.....	5
HPER 125	— Teaching of Team Sports	2
HPER 126	— Teaching of Dance.....	2
HPER 127	— Teaching of Individual Sports.....	2
HPER 226	— Tests and Measurements in Physical Education	3
HPER 232	— Adapted Physical Education	3
HPER 235	— Educational Interpretations of Health, Physical Education, and Recreation.....	3
HPER 272	— Recreation Leadership	3

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*Students planning to teach in the elementary school will take HPER 201; those planning to teach in the secondary school will take HPER 102.

4. One minor of 27 quarter hours outside the Division of Health, Physical Education, and Recreation.

5. Twenty-nine quarter hours of free electives to complete the 180 quarter hours of academic credit for graduation.

6. Electives may be used at the students' option and under advisement to complete teaching competencies in health education and driver education.

PHYSICAL EDUCATION MAJOR FOR MEN

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours. HPER 70, 71 and 72 will be substituted for the six hours of physical education activity courses required in General Education.

2. Advanced Teacher Education, 29 hours, plus HPER 144, three hours credit and HPER 145, two hours credit.

3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
HPER 62	— First Aid	2
HPER 73	— Theory and Practice of Basketball.....	2
HPER 74	— Theory and Practice of Swimming.....	1
HPER 75	— Theory and Practice of Wrestling.....	1
HPER 76	— Theory and Practice of Football.....	2
HPER 77	— Theory and Practice of Track.....	1
HPER 78	— Theory and Practice of Baseball.....	1
HPER 90	— Techniques in Folk Dance.....	2
HPER 92	— American Square and Social Dance.....	2
HPER 201*	— Problems in School Health Programs	
<i>or</i>		
HPER 102*	— Health Education in the Secondary School....	4
HPER 120	— Applied Human Anatomy.....	5
HPER 121	— Applied Human Physiology.....	5
HPER 161	— Coaching of Football.....	2
HPER 162	— Coaching of Basketball.....	2
HPER 163	— Coaching of Track and Field.....	2
HPER 164	— Coaching of Baseball.....	2
HPER 226	— Tests and Measurements in Physical Education	3
HPER 235	— Educational Interpretations of Health, Physical Education, and Recreation.....	3
HPER 250	— Administration of Physical Education.....	3
HPER 272	— Recreation Leadership.....	3
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*Students planning to teach in the elementary school will take HPER 201; those planning to teach in the secondary school will take HPER 102.

4. One minor of 27 quarter hours outside the Division of Health, Physical Education, and Recreation.

In addition, men majoring in this field will complete the following in the minor outside the major division: Introduction to Student Teaching and Methods of Teaching.

5. Twenty-four to 26 quarter hours of free electives to complete the 180 quarter hours of academic credit for graduation.

6. Electives may be used at the students' option and under advisement to complete teaching competencies in health education and driver education.

RECREATION MAJOR FOR MEN AND WOMEN

Bachelor of Science Degree

The following is the required program:

1. General Education totaling 42 academic quarter hours. For women, HPER 80, 81, 89, and 98 will be substituted for the six hours of physical education activity courses required as a part of the General Education Program; for men, HPER 70, 71, and 72 will be substituted for the above six hours.

2. One minor of 27 quarter hours.

3. Electives to complete requirements for graduation.

4. Course requirements listed for the Recreation Major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
HPER 62	— First Aid	2
HPER 74	— Theory and Practice of Swimming (Men)	
<i>and</i>		
HPER 77	— Theory and Practice of Track (Men)	

or

HPER	84	—	Techniques of Tennis and Softball (Women)	2
HPER	88	—	Physical Education Activities for the Elementary School	2
HPER	90	—	Techniques in Folk Dance	2
HPER	92	—	American Square and Social Dance.....	2
HPER	97	—	Orientation in Health, Physical Education, and Recreation	2
SP	112	—	Children's Theater	3
FA	127	—	Craft Techniques	3
HPER	172	—	Social Recreation	2
HPER	173	—	Camp Counseling	3
MUS	206	—	Music and Recreation	2
HPER	235	—	Educational Interpretations of Health, Physical Education, and Recreation.....	3
PCG	230	—	Psychology of Childhood and Adolescence.....	3
HPER	251	—	Administration of Community Recreation.....	4
HPER	268	—	Programs in Recreation.....	4
HPER	269	—	Recreation for the Handicapped.....	3
HPER	271	—	Safety Education	3
HPER	272	—	Recreation Leadership	3
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Physical Education Minor for Women (Elementary Level)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
HPER	62	— First Aid	2
HPER	85	— Techniques of Tumbling.....	2
HPER	91	— Rhythms for the Elementary School.....	2
HPER	120	— Applied Human Anatomy.....	5
HPER	201	— Problems in School Health Programs.....	4
HPER	235	— Educational Interpretations of Health, Physical Education and Recreation.....	3
HPER	144	— Methods and Observation of Teaching Physical Education in the Elementary School	3
Electives to be planned with minor adviser.....			6
			27

Physical Education Minor for Women (Secondary Level)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
HPER	62	— First Aid	2
HPER	81	— Techniques of Volleyball and Basketball.....	2
HPER	85	— Techniques of Tumbling.....	2
HPER	102	— Health Education in the Secondary School....	4
HPER	120	— Applied Human Anatomy.....	5
HPER	121	— Applied Human Physiology.....	5
HPER	235	— Educational Interpretations of Health, Physical Education, and Recreation.....	3
HPER	145	— Methods and Observation of Teaching Physical Education in the Secondary School (Women)	2
Electives to be planned with minor adviser..			2
			27

Physical Education Minor for Men (Elementary Level)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
HPER	62	— First Aid	2
HPER	70	— Theory and Practice of Gymnastics and Matwork	2
HPER	71	— Theory and Practice of Team Sports.....	2

HPER	73	—	Theory and Practice of Basketball.....	2
HPER	77	—	Theory and Practice of Track.....	1
HPER	78	—	Theory and Practice of Baseball.....	1
HPER	91	—	Rhythms for the Elementary School.....	2
HPER	120	—	Applied Human Anatomy.....	5
HPER	201	—	Problems in School Health Programs.....	4
HPER	235	—	Educational Interpretations of Health, Physical Education, and Recreation	
<i>or</i>				
HPER	272	—	Recreation Leadership.....	3
			Electives to be planned with minor adviser....	3
				27

**Physical Education Minor for Men (Coaching Emphasis—
Secondary Level)**

Entry to this minor is by divisional approval only. Application forms are available in the division office.

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>	
A minimum of 4 hours elected from:.....			
HPER	70 — Theory and Practice of Gymnastics and Tumbling	4	
HPER	73 — Theory and Practice of Basketball		
HPER	74 — Theory and Practice of Swimming		
HPER	75 — Theory and Practice of Wrestling		
HPER	76 — Theory and Practice of Football		
HPER	77 — Theory and Practice of Track		
HPER	78 — Theory and Practice of Baseball		
A minimum of 4 hours elected from:.....			
HPER	161 — Coaching of Football	4	
HPER	162 — Coaching of Basketball		
HPER	163 — Coaching of Track and Field		
HPER	164 — Coaching of Baseball		
And the following:			
HPER	120 — Applied Human Anatomy.....	5	
HPER	121 — Applied Human Physiology.....	5	
HPER	235 — Educational Interpretations of Health, Physical Education, and Recreation		
<i>or</i>			
HPER	260 — Scientific Principles of Coaching.....	3	
HPER	270 — Administration of Athletics.....	3	
HPER	280 — Care of Sports Injuries.....	3	
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**Physical Education Minor for Men (Teaching Emphasis—
Secondary Level)**

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
HPER	62 — First Aid.....	2
HPER	70 — Theory and Practice of Gymnastics and Tumbling.....	2
HPER	71 — Theory and Practice of Team Sports.....	2
HPER	72 — Theory and Practice of Individual Sports.....	2
HPER	73 — Theory and Practice of Basketball.....	2
HPER	90 — Techniques in Folk Dance	
<i>or</i>		
HPER	92 — American Square and Social Dance.....	2
HPER	120 — Applied Human Anatomy.....	5

HPER	121	—	Applied Human Physiology.....	5
HPER	226	—	Tests and Measurements in Physical Education or	
HPER	235	—	Educational Interpretations of Health, Physical Education and Recreation.....	3
HPER	145	—	Methods and Observation of Teaching Physical Education in the Secondary School	2
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Health Education Minor (Men and Women)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
HPER	62	—	First Aid	2
HE	98	—	Elementary Nutrition or	
HE	209	—	New Trends in Nutrition.....	3
HPER	99	—	Introduction to Community Health.....	4
HPER	201	—	Problems in School Health Programs or	
HPER	102	—	Health Education in the Secondary School....	4
HPER	271	—	Safety Education.....	3
PCG	285	—	Mental Hygiene and Emotional Adjustment....	3
Electives to complete 27 quarter hours from the following:				
			HPER 205, 213, 274; BIO 252; BOT 122.....	8 or 10
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Dance Education Minor (Men and Women)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
HPER	90	—	Techniques in Folk Dance.....	2
HPER	92	—	American Square and Social Dance.....	2
HPER	93	—	Techniques in Contemporary Dance.....	2
HPER	94	—	Problems in Dance Composition.....	2
HPER	256	—	Workshop in Contemporary Dance.....	4
HPER	257	—	Dance History and Philosophy.....	4
HPER	258	—	Dance Methods and Materials.....	4
FA	65	—	Beginning Scene Design.....	3
Electives to complete 27 quarter hours from the following:				
SP	13	—	Introduction to Stagecraft	
SP	113	—	Stagecraft	
SP	220	—	Stage Costuming	
MUS	276	—	Survey of American Music	
MUS	295	—	The Art of Music Listening	
HEC	72	—	Elementary Clothing Construction	
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Physical Education Activity Program for Women—A total of six quarters of physical education activity courses is required. Courses meeting these requirements are numbered from 1 to 60 inclusive. Courses may be repeated only with the approval of divisional faculty members.

It is recommended that women students in earning their first three credits in this area enroll for one course in dance, one group sport, and one individual activity. After the first three credits are earned, students may register for any one-

hour course not previously taken, for a total of six hours credit. Credit may be earned in only one course each quarter. It is recommended that this requirement be met during the first portion of the undergraduate program.

Women students registered for physical education activity courses are required to obtain a locker padlock in the College Bookstore. Combinations for padlocks may be obtained in Gunter Hall, Room 109.

Women may purchase regulation gymnasium suits from the College Bookstore. These suits are required.

Medical excuses for exemption from all or part of the physical education activity requirement of the General Education Program are issued only by the Department of Student Health Services.

Physical Education Activity Program for Men—A total of six quarters of physical education activity courses is required. Courses meeting these requirements are numbered from 1 to 60 inclusive. Courses may be repeated only with the approval of divisional faculty members.

It is recommended that men students in earning their first three credits in this area enroll for one course in dance, one team sport, and one individual activity. Credit may be earned in only one course each quarter. It is recommended that this requirement be met during the first portion of the undergraduate program.

Men students registered for physical education activity courses will be issued lockers, locks, and certain items of equipment from the Men's Equipment Room in the basement of Gunter Hall. A cash deposit of \$5 is required prior to any such issue. This deposit is refundable upon return of all issued items at the conclusion of the quarter or program.

Medical excuses for exemption from all or part of the physical education activity requirement of the General Education Program are issued only by the Department of Student Health Services.

Description of Courses

PHYSICAL EDUCATION ACTIVITY COURSES

These courses are numbered from one to 61 inclusive with courses numbered from one to 60 meeting the Physical Education activity requirement of the Common Course program. HPER 61, Personal and Community Health, is an academic requirement of General Education. Special advisement and detailed mechanics of the Activity Program are described in the preceding section of this catalog.

1. **FIELD SPORTS.** *One hour credit.*
 2. **WINTER SPORTS.** *One hour credit.*
 3. **BADMINTON.** *One hour credit.*
 4. **ARCHERY.** *One hour credit.*
 5. **MOVEMENT FUNDAMENTALS.** *One hour credit.*
 6. **BEGINNING TUMBLING.** *One hour credit.*
 7. **ADVANCED TUMBLING.** *One hour credit.*
- Prerequisite, HPER 6.

8. GYMNASTICS. *One hour credit.*
9. PHYSICAL FITNESS AND CONDITIONING. *One hour credit.*
11. SOFTBALL. *One hour credit.*
12. TENNIS. *One hour credit.*
14. WRESTLING. *One hour credit.*
15. VOLLEYBALL. *One hour credit.*
16. BEGINNING GOLF. *One hour credit.*
18. BASKETBALL. *One hour credit.*
20. BEGINNING BOWLING. *One hour credit.*
22. FENCING. *One hour credit.*
23. INTERMEDIATE FENCING. *One hour credit.*
25. BEGINNING SWIMMING. *One hour credit.*
26. INTERMEDIATE SWIMMING. *One hour credit.*
Prerequisite, HPER 25.
27. ADVANCED SWIMMING. *One hour credit.*
Prerequisite, HPER 26.
28. ADVANCED AQUATIC ACTIVITIES. *One hour credit.*
29. SWIMMING. *One hour credit.*
All levels.
30. BEGINNING CONTEMPORARY DANCE. *One hour credit.*
31. INTERMEDIATE CONTEMPORARY DANCE. *One hour credit.*
Prerequisite, HPER 30.
32. ADVANCED CONTEMPORARY DANCE. *One hour credit.*
Prerequisite, HPER 30, 31.
33. BEGINNING SOCIAL DANCE. *One hour credit.*
34. FOLK DANCE. *One hour credit.*
35. AMERICAN SQUARE AND COUPLE DANCE. *One hour credit.*
36. TAP DANCE. *One hour credit.*
40. FRESHMAN FOOTBALL. *One hour credit.*
41. VARSITY FOOTBALL. *One hour credit.*
42. FRESHMAN BASKETBALL. *One hour credit.*
43. VARSITY BASKETBALL. *One hour credit.*
44. FRESHMAN WRESTLING. *One hour credit.*
45. VARSITY WRESTLING. *One hour credit.*
47. VARSITY GYMNASTICS. *One hour credit.*
49. VARSITY SWIMMING. *One hour credit.*
50. FRESHMAN BASEBALL. *One hour credit.*
51. VARSITY BASEBALL. *One hour credit.*
53. VARSITY TRACK. *One hour credit.*
55. VARSITY TENNIS. *One hour credit.*
57. VARSITY GOLF. *One hour credit.*
61. PERSONAL AND COMMUNITY HEALTH. *Three hours credit.*

Designed to develop the understandings, attitudes, and practices which contribute to better individual and group health. Emphasis is placed upon the major health and safety problems of the college years and early adulthood.

SPECIAL CERTIFICATION COURSES

- 62. FIRST AID.** *Two hours credit.*
- 63. ADVANCED FIRST AID.** *One hour credit.*
Prerequisite, HPER 62.
- 64. INSTRUCTOR'S COURSE IN FIRST AID.** *One hour credit.*
Prerequisite, HPER 62, 63.
- 65. SENIOR LIFE SAVING.** *One hour credit.*
- 66. WATER SAFETY INSTRUCTOR'S COURSE.** *One hour credit.*
Prerequisite, HPER 65.

Driver Education—The Colorado State Department of Education will certify as Driver Education Instructors those holders of Colorado teaching certificate who complete HPER 271, Safety Education; HPER 274, Methods and Materials in Driver Education; HPER 275, Advanced Driver Education; and who are recommended by the Division of Health, Physical Education and Recreation. Applications for certification should be obtained in the Division office, filled out by the applicant, and returned to the Division office for approval.

PROFESSIONAL COURSES FOR DIVISIONAL MAJORS AND MINORS

Courses numbered 70 and higher are intended primarily for the professional preparation of degree candidates completing a major or a minor in the various programs of the division.

- 70. THEORY AND PRACTICE OF GYMNASTICS AND TUMBLING (Men).** *Two hours credit.*
Fundamental skills on parallel bars, rings, side horse, horizontal bar, trampoline, and mats.
- 71. THEORY AND PRACTICE OF TEAM SPORTS. (Men).** *Two hours credit.*
Fundamental skill techniques in team sports such as: volleyball, soccer, and softball. An emphasis will be placed on rules, offensive and defensive strategy, lead-up drills, game courtesies and the value of the activity to immediate and ultimate fitness. Volleyball and soccer will be the primary sports activities taught.
- 72. THEORY AND PRACTICE OF INDIVIDUAL AND DUAL SPORTS (Men).** *Two hours credit.*
Fundamental skill techniques in sports. Emphasis on fundamental skill techniques in individual and dual sports such as tennis, badminton, golf, archery, casting, horseshoes and others. Instruction will be given on rules, strategy, special skill techniques, game courtesies and the value of the activity to immediate and ultimate fitness.
- 73. THEORY AND PRACTICE OF BASKETBALL (Men).** *Two hours credit.*
Fundamental skill techniques in basketball.
- 74. THEORY AND PRACTICE OF SWIMMING (Men).** *One hour credit.*
Prerequisite, HPER 25. Fundamental skill techniques in swimming.
- 75. THEORY AND PRACTICE OF WRESTLING (Men).** *One hour credit.*
Fundamental skill techniques of teaching wrestling.

- 76. THEORY AND PRACTICE OF FOOTBALL (Men).** *Two hours credit.*
Fundamental skill techniques in football.
- 77. THEORY AND PRACTICE OF TRACK (Men).** *One hour credit.*
Fundamental skill techniques in track coaching, covering the correct form in starting, running, field events and jumping.
- 78. THEORY AND PRACTICE OF BASEBALL (Men).** *One hour credit.*
Fundamental skill techniques in baseball.
- 80. TECHNIQUES OF INDIVIDUAL SPORTS (Women).** *Two hours credit.*
Fundamental skills, strategies and rules of individual sports.
- 81. TECHNIQUES OF VOLLEYBALL AND BASKETBALL (Women).** *Two hours credit.*
Fundamental skills, team play, and rules.
- 82. TECHNIQUES OF HOCKEY AND SOCCER (Women).** *Two hours credit.*
Fundamental skills, team play, and rules.
- 83. TECHNIQUES OF SWIMMING (Women).** *Two hours credit.*
Fundamental skills of swimming and diving.
- 84. TECHNIQUES OF TENNIS AND SOFTBALL (Women).** *Two hours credit.*
Fundamental skills, team play, and rules.
- 85. TECHNIQUES OF TUMBLING (Women).** *Two hours credit.*
Fundamental skills and techniques in tumbling and stunts. Practical experience in organizing tumbling games, contests, meets and demonstrations.
- 86. TECHNIQUES OF ARCHERY AND BOWLING.** *Two hours credit.*
Fundamental skills, strategies, and rules of archery and bowling.
- 87. TECHNIQUES OF FENCING AND GOLF.** *Two hours credit.*
Fundamental skills, strategies, and rules of fencing and golf.
- 88. 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.
- 89. TECHNIQUES OF TRACK AND FIELD (Women).** *One hour credit.*
Fundamental skills and rules of track and field activities for women.
- 90. TECHNIQUES IN FOLK DANCE.** *Two hours credit.*
Fundamental and advanced skills of folk dance.
- 91. RHYTHMS FOR THE ELEMENTARY SCHOOL.** *Two hours credit.*
Techniques and materials in creative dance, singing games, and folk dances.
- 92. AMERICAN SQUARE AND SOCIAL DANCE.** *Two hours credit.*
Fundamental and advanced skills of square and social dancing.
- 93. TECHNIQUES IN CONTEMPORARY DANCE.** *Two hours credit.*
The analysis and techniques of movement in relation to the aspects of time, space, and force.
- 94. PROBLEMS IN DANCE COMPOSITION.** *Two hours credit.*
Problems in dance composition includes rhythmic analysis and accompaniment for dance.

97. ORIENTATION IN HEALTH EDUCATION, PHYSICAL EDUCATION, AND RECREATION. *Two hours credit.*

Designed to orient freshman majors with the breadth, scope, and nature of the professional program in physical education.

98. ANALYSIS OF SWIMMING TECHNIQUES (Women). *One hour credit.*

Prerequisite, HPER 83. Analysis of swimming, diving and synchronized swimming techniques.

99. INTRODUCTION TO COMMUNITY HEALTH. *Four hours credit.*

Prerequisite, HPER 61. Designed to acquaint prospective teachers with health problems in a community and to make them aware of community agencies which cope with these problems.

101. HEALTH EDUCATION IN THE ELEMENTARY SCHOOL. *Two hours credit.*

Prerequisite, HPER 61. Designed to give the prospective elementary teacher a foundation in school health education, including health services, healthful school living, and health instruction.

102. HEALTH EDUCATION IN THE SECONDARY SCHOOL. *Four hours credit.*

Prerequisite, HPER 61. Designed to give the prospective secondary teacher a foundation in school health education, including health services, healthful school living, and health instruction.

120. APPLIED HUMAN ANATOMY. *Five hours credit.*

This course deals with the systematic analysis of human motion through the application of the principles of kinesiology. Major emphasis is placed on the anatomical and mechanical fundamentals of body dynamics and sports skills.

121. APPLIED HUMAN PHYSIOLOGY. *Five hours credit.*

The functions of the systems of man most notably affected by exercise, the lack of exercise and various work aids will be studied. Common physiological problems in the teaching of physical education and coaching of athletics will be considered.

125. TEACHING OF TEAM SPORTS (Women). *Two hours credit.*

Prerequisite, HPER 81, 82, 84 or HPER 1, 11, 15, 18. A consideration of the basic techniques of team sports including skills, rules and strategies, emphasizing teaching procedures.

126. TEACHING OF DANCE. *Two hours credit.*

Prerequisite, HPER 90, 92, 93, 94. Teaching procedures of dance activities. For the physical education major student.

127. TEACHING OF INDIVIDUAL SPORTS (Women). *Two hours credit.*

Prerequisite, HPER 80, 84, 85, 89. A consideration of the basic techniques of individual and dual sports, including skills, rules and strategy, emphasizing teaching techniques.

130. OFFICIATING FALL SPORTS FOR GIRLS. *One hour credit.*

Prerequisite, HPER 81. A course designed to give a background and understanding of the rules and techniques of officiating various sports found in the women's program. Officials' ratings will be given in volleyball.

131. OFFICIATING WINTER SPORTS FOR GIRLS. *One hour credit.*

Prerequisite, HPER 81. A course designed to give a background and understanding of the rules and techniques of officiating various sports found in the women's program. Officials' rating will be given in softball or tennis.

132. OFFICIATING SPRING SPORTS FOR GIRLS. *One hour credit.*

Prerequisite, HPER 84. A course designed to give a background and understanding of the rules and techniques of officiating various sports found in the women's program. Officials' rating will be given in softball or tennis.

144. METHODS AND OBSERVATION OF TEACHING PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL. *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.

145. METHODS AND OBSERVATION OF TEACHING PHYSICAL EDUCATION IN THE SECONDARY SCHOOL. *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.

161. COACHING OF FOOTBALL. *Two hours credit.*

Prerequisite, HPER 40, 41 or 76. The technique and strategy of coaching football, with emphasis upon type of formations, defense, play series, rules, and football coaching in general.

162. COACHING OF BASKETBALL. *Two hours credit.*

Prerequisite, HPER 42, 43 or 73. 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.

163. COACHING OF TRACK AND FIELD. *Two hours credit.*

Prerequisite, HPER 53 or 77. A study of the techniques of coaching the various events in track and field, the rules, and the methods of conducting track meets.

164. COACHING OF BASEBALL. *Two hours credit.*

Prerequisite, HPER 50, 51 or 78. Techniques and procedures in developing individual and team play. Defensive baseball: pitching, catching, infielding, outfielding, strategy. Offensive baseball: batting, base-running, strategy.

172. 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.

173. 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.

200. WORKSHOP IN HEALTH, PHYSICAL EDUCATION AND RECREATION. *Three hours credit.*

Designed to provide opportunities for study in the problem areas of the participants; however, the problems attacked would vary from time to time according to the experts conducting the workshop. The nature of the workshop might cover such areas as administration, curriculum, new programs and techniques, etc. Each workshop will have a subtitle; and no sub-title may be repeated by a student for credit.

201. PROBLEMS IN SCHOOL HEALTH PROGRAMS. *Four hours credit.*

Problems and trends in school health and safety education, health services and guidance, and healthful school living.

203. HEALTH EDUCATION WORKSHOP. *Three hours credit.*

The workshop will be concerned with the practical problems of the school health programs: health instruction, medical and nursing services, nutrition, lunch programs, safety, mental hygiene, and environmental sanitation.

205. FAMILY HEALTH PROBLEMS. *Three hours credit.*

The relationship of health to marriage is presented. Some of the problems encountered in marriage which would be typical of this course are: health as a qualifying factor for marriage; maternal and child care; accident prevention in the home; and medical care plans for the family.

213. HEALTH COUNSELING AND APPRAISAL. *Two hours credit.*
Prerequisite, HPER 101, 102 or 201. Designed to give the prospective teacher an insight into the purpose of health appraisals on school children, the use of the health records in health counseling, techniques in observing for deviations from normal, counseling with pupils, parents, and teachers, and how to make referrals to private and public agencies.

220. SCIENTIFIC BASES OF HEALTH AND PHYSICAL EDUCATION. *Five hours credit.*

This course is designed to acquaint the advanced student with the progress made in the scientific study of exercise and sports. Special attention is given to structural, mechanical, physiological, psychological, and therapeutic aspects of exercise and fitness.

226. TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION. *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.

232. ADAPTED PHYSICAL EDUCATION. *Three hours credit.*

Prerequisite, HPER 120, 121. 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.

235. EDUCATIONAL INTERPRETATIONS OF HEALTH, PHYSICAL EDUCATION, AND RECREATION. *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.

245. ADVANCED TECHNIQUES IN TEACHING GYMNASTIC ACTIVITIES. *Four hours credit.*

Designed to assist the high school or college teacher with special problems in teaching and officiating gymnastic activities.

246. ADVANCED TECHNIQUES IN TEACHING INDIVIDUAL SPORTS. *Four hours credit.*

Designed to assist the high school or college teacher with special problems in teaching and officiating individual sports.

247. ADVANCED TECHNIQUES IN TEACHING TEAM SPORTS. *Four hours credit.*

Designed to assist the high school or college teacher with special problems in teaching and officiating team sports.

248. ADVANCED TECHNIQUES IN TEACHING DANCE ACTIVITIES. *Four hours credit.*

Special problems and procedures for teaching social, square and folk dance. For the advanced physical education major student.

250. ADMINISTRATION OF PHYSICAL EDUCATION. *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.

251. ADMINISTRATION OF COMMUNITY RECREATION. *Four hours credit.*

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, program.

252. INTERNSHIP IN RECREATION. *Fifteen hours credit.*

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.

255. CONTEMPORARY DANCE TECHNIQUES. *Four hours credit.*
Prerequisite, HPER 94. Basic technique, movement analysis and composition for the advanced physical education major student.

256. WORKSHOP IN CONTEMPORARY DANCE. *Four hours credit.*
Problems connected with the staging of dance performances.

257. DANCE HISTORY AND PHILOSOPHY. *Four hours credit.*

Prerequisite, HPER 93, 94. History and development of dance as it is culturally determined and the philosophy influencing dance in education.

258. DANCE METHODS AND MATERIALS. *Four hours credit.*

Prerequisite, HPER 90, 92, 93, 94. Teaching procedures for folk, social, square and contemporary dance. For the dance education major and minor student.

260. SCIENTIFIC PRINCIPLES OF COACHING. *Four hours credit.*

Primarily for the athletic coach to assist him in teaching and coaching the usual major sports of the school competitive sports program. Designed to establish on a sound scientific basis the mechanical principles involved in developing techniques for sport competition.

261. MECHANICAL PRINCIPLES OF TEACHING ACTIVITIES IN PHYSICAL EDUCATION. *Four hours credit.*

For physical educators, including both men and women, and designed to assist them in teaching the activities and rhythms of the school physical education program.

264. SPORTS OFFICIATING FOR MEN. *Four hours credit.*

Designed for coaches, administrators, and officials. Considers general principles and philosophy of officiating as well as a study of the mechanics of officiating the sports for men in the school program.

265. ADVANCED TECHNIQUES IN TEACHING FOOTBALL TO MEN. *Two hours credit.*

Designed to assist the in-service teacher of major sports for men with special problems in the field of football, including organization, strategy, personnel.

266. ADVANCED TECHNIQUES IN TEACHING BASKETBALL TO MEN. *Two hours credit.*

Designed to assist the in-service teacher of major sports for men with special problems in the field of basketball, including organization, strategy, personnel.

268. PROGRAMS IN RECREATION. *Four hours credit.*

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.

269. RECREATION FOR THE HANDICAPPED. *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.

270. 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.

271. SAFETY EDUCATION. *Three hours credit.*
Comprehensive course for teachers and administrators in public schools.

272. RECREATION LEADERSHIP. *Three hours credit.*
Reading, reports and projects covering the philosophy, methods, and materials for the recreation leader.

274. METHODS AND MATERIALS IN DRIVER EDUCATION. *Three hours credit.*

Designed to give prospective teachers some experiences in methods, techniques and materials necessary to develop a driver education program. The course is divided into two parts, classroom and behind the wheel experiences. This course requires laboratory time in which prospective teachers of driver education practice driving.

275. ADVANCED DRIVER EDUCATION. *Three hours credit.*
Prerequisite, HPER 274. An advanced course, designed for Driver Education teachers, in which problems related to administration, instruction, evaluation, and research in Driver Education programs will be studied. Particular emphasis will be placed upon the development of improved testing procedures and instructional aids.

280. CARE OF SPORTS INJURIES. *Three hours credit.*
Prerequisite, HPER 120, 121. 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.

304. SCHOOL HEALTH ADMINISTRATION. *Four hours credit.*
Designed to acquaint administrators, supervisors, and health educators with the planning and organizational aspects of the total school health program. Special attention is given to administrative and supervisory problems in health and safety instruction, health services and guidance, and healthful school living.

305. PUBLIC HEALTH EDUCATION. *Four hours credit.*
This course is designed to develop understanding and appreciation of the media and techniques used in health education of the public. Program planning and evaluation of procedures influencing public opinion and attitudes toward health and safety are considered.

312. EVALUATION IN HEALTH, PHYSICAL EDUCATION, AND RECREATION. *Four hours credit.*

Prerequisite, HPER 226. Designed to give the graduate student a sound background in the tools, techniques, and methods of evaluation. Special emphasis is given to the construction of both written and activity tests as well as the use of other evaluative tools.

325. PHYSIOLOGY OF EXERCISE. *Four hours credit.*
Prerequisite, HPER 120, 121 or 220. Effect of muscular activities on the various systems and organs of the body.

336. THE SCIENCE OF BODY MECHANICS. *Four hours credit.*
Prerequisite, HPER 120, 220 or 232. A course designed to analyze movement of various activities and the recognition of and exercises for remedial defects. Emphasis will be placed on problems of individual students in relationship to home or school situations.

340. CURRICULUM IN HEALTH AND PHYSICAL EDUCATION.
Four hours credit.

The principles underlying curriculum construction, the various elements making up a curriculum, and experience in building a curriculum in either the field of health or physical education.

344. SUPERVISION OF PHYSICAL EDUCATION AND RECREATION.
Four hours credit.

Concepts, principles, organization, and techniques of supervision for use by superintendents, supervisors, and teachers in the construction or supervision of a physical education program.

375. AREAS AND FACILITIES IN PHYSICAL EDUCATION AND RECREATION.
Four hours credit.

Major problems involved in the planning, construction, and maintenance of varied types of recreation areas and facilities. Technical aspects of construction and maintenance will be emphasized.

376. SEMINAR IN CONTEMPORARY PROBLEMS IN RECREATION.
Four hours credit.

Detailed study of important problems in the area of leisure and recreation in America.

390. ISSUES AND TRENDS IN HEALTH EDUCATION, PHYSICAL EDUCATION, AND RECREATION.
Four hours credit.

A course designed to provide detailed examination of the forces affecting the allied fields of Health Education, Physical Education, and Recreation. A study, in depth, of problems will be expected of each student according to his area of specialization.

401. ANALYSIS OF RESEARCH AND LITERATURE IN HEALTH AND PHYSICAL EDUCATION.
Four hours credit.

Appraisal of research and significant literature in health and physical education for the purpose of orienting the student to possible areas of research and developing understanding and appreciation of writings in the field.

402. CHANGING PERSPECTIVES IN PHYSICAL EDUCATION.
Four hours credit.

The purpose of this course is to study the changing concepts of physical education throughout its history; to identify and analyze the forces which have influenced the program; and to determine the role which physical education should play in America today.

403. RESEARCH SEMINAR IN HEALTH AND PHYSICAL EDUCATION.
Four hours credit.

Prerequisite, HPER 401. Designed to serve the needs of doctoral candidates planning to conduct research in health education, physical education, or allied areas. Presents techniques and procedures in research and aids in the development of the required research outline for the doctoral degree.

405. HUMAN GROWTH AND DEVELOPMENT.
Four hours credit.

A study of the organic, structural, and social aspects of human growth and development as they affect teaching and learning in physical and health education and recreation.

406. ADMINISTRATIVE INTERRELATIONSHIPS IN HEALTH, PHYSICAL EDUCATION, AND RECREATION.
Four hours credit.

The purpose of this course is to develop a better understanding of and skill in the administrative process as applied to the numerous interrelationships involved in the operation of programs of health, physical education and recreation.

Division of Humanities

The Division of the Humanities includes the fields of English, Foreign Languages, Speech, and Drama. Degrees and majors and minors offered are:

BACHELOR OF ARTS DEGREE (Teacher Education)

Majors: English, English (Junior High School Level), French, German, Spanish, Speech, Drama.

Minors: English, Language and Speech (Junior High School Level), French, German, Journalism, Latin, Russian, Spanish, Speech, Drama.

BACHELOR OF ARTS DEGREE (Liberal Arts)

Majors: English, French, German, Spanish, Speech, Drama.

Minors: English, French, German, Latin, Russian, Spanish, Speech, Drama.

MASTER OF ARTS DEGREE (Teacher Education)

Majors: English, a combined program in Speech and Drama.

SPECIALIST IN EDUCATION DEGREE

Area of Specialization: To be selected.

DOCTOR OF EDUCATION DEGREE (Teacher Education)

Area of Concentration: English Education.

Supporting Area: English Education.

English

Professors: Cross, F. Frease, G. Gates, Hartman.

Associate Professors: Carriar, Freeman, Harrison, Starr.

Assistant Professors: Huff, Zimmerman.

Instructors: Agan, Applegate, Bratton, Brewer, Cleere, Forsythe, C. Frease, K. James, Luere, Peyton, Princic, Speckmann.

ENGLISH MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.

3. The following required courses in the major:

<i>Course Number</i>		<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
ENG	10	— Freshman Literature	4	
ENG	50	— Shakespeare	3	
		Five of the following six courses:	15-16	
ENG	48	— English Literature from the Beginning to 1500	3	
ENG	49	— English Literature from 1500 to 1660.....	3	
ENG	51	— The Restoration and Eighteenth Century	3	
ENG	52	— The Romantic Movement.....	3	
ENG	53	— Victorian Prose and Poetry.....	3	
ENG	54	— Contemporary English and American Literature	4	
ENG	60	— American Literature to the Civil War.....	4	
ENG	61	— American Literature Since the Civil War.....	4	
ENG	109, 110 or 111	— Creative Writing I, II or III.....	2	
ENG	209	— Advanced Grammar and Syntax	2	
ENG	210	— Advanced Expository Writing.....	3	
ENG	211	— The English Language.....	4	
EED	226	— Literature and Materials in the Secondary School	4	
ENG	257	— History of Ideas in English Literature.....	3	
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4. At least one minor of 27 quarter hours.

5. Twenty-four to 32 quarter hours of free electives to complete 180 quarter hours of academic credit required for graduation.

English Minor

<i>Course Number</i>		<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
ENG	57	— Survey of English Literature (700-1800).....	4	
ENG	58	— Survey of English Literature (1800-present)	4	
ENG	59	— Survey of American Literature.....	4	
ENG	210	— Advanced Expository Writing.....	3	
EED	226	— Literature and Materials in the Secondary School	4	
		Electives in English	8	
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ENGLISH MAJOR

Bachelor of Arts Degree (Liberal Arts)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. Course requirements listed for the English Major for the Bachelor of Arts Degree (teacher education) with the exception that substitutions may be made with the consent of the adviser.

3. One minor of 27 quarter hours.

4. Electives to complete requirements for graduation.

English Minor

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
ENG 57	— Survey of English Literature (700-1800).....	4
ENG 58	— Survey of English Literature (1800-present)	4
ENG 59	— Survey of American Literature.....	4
ENG 210	— Advanced Expository Writing.....	3
ENG 211	— The English Language.....	4
	Electives in English.....	8
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ENGLISH MAJOR (Junior High School Level)**Bachelor of Arts Degree (Teacher Education)**

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Advanced Teacher Education 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.
3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
ENG 10	— Freshman Literature	4
ENG 49	— English Literature from 1500 to 1660.....	3
ENG 50	— Shakespeare	3
ENG 51	— The Restoration and Eighteenth Century.....	3
ENG 52	— The Romantic Movement.....	3
ENG 53	— Victorian Prose and Poetry.....	3
ENG 54	— Contemporary English and American Literature	4
ENG 60	— American Literature to the Civil War.....	4
ENG 61	— American Literature Since the Civil War.....	4
ENG 109, 110 or 111	— Creative Writing I, II or III.....	2
EED 227	— Literature and Materials in the Junior High School	4
EED 228	— The Teaching of Reading in the Secondary School	4
SP 124	— Teaching Speech in Junior High School.....	4
	Electives	3
		48

4. At least one minor of 27 quarter hours.

5. Twenty-four to 32 quarter hours of free electives to complete 180 quarter hours of academic credit required for graduation.

LANGUAGE AND SPEECH MINOR (Junior High School Level)

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
EED 203	— New Approaches to the Teaching of Grammar	3
ENG 209	— Advanced Grammar and Syntax.....	2
ENG 210	— Advanced Expository Writing.....	3
ENG 211	— The English Language.....	4
SP 123	— Basic Speech and Oral Reading.....	5
	Electives	10
		27

JOURNALISM MINOR (Teacher Education)

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
JOUR 100	— Introduction to Journalism.....	2

JOUR	101	—	Newswriting	3
JOUR	201	—	Sponsorship of the School Newspaper and Annual	3
JOUR	202	—	Advanced Newswriting	3
SP	260	—	Introduction to General Semantics.....	4
BUS	158	—	Advertising	3
IA	143	—	News Photography	2
IA	144	—	School Publications—Analysis, Design and Layout	4
IA	145	—	Production of School Publications.....	3
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Description of Courses

HUMANITIES

1. INTRODUCTION. THE GREEK AND ROMAN PERIODS. *Three hours credit.*

The humanities course throughout the year is a systematic historical study of the great philosophic ideas from Greek times to the present. Humanities 1 offers an introduction to the various arts and considers the art and philosophy of the Greeks and Romans.

2. THE MIDDLE AGES AND THE RENAISSANCE. *Three hours credit.*

Following the same type of outline as Humanities 1, Humanities 2 is a study of the cultural background, the arts and the philosophy of the Middle Ages and Renaissance.

3. THE EIGHTEENTH TO THE TWENTIETH CENTURIES. *Three hours credit.*

Following the sequence started in Humanities 1 and 2, this course makes an historical study of the cultural background, the arts and the philosophy of the modern world from the rationalism of the 18th century to the new ideas which seem to be forming 20th century art and thought.

4. CREATIVE EXPRESSION IN THE HUMANITIES I. *Two hours credit.*

This course divides itself into four or five sections. These are art, music, drama, creative writing and the dance. The student chooses one section and pursues creative activities in the medium which he has chosen.

5. CREATIVE EXPRESSION IN THE HUMANITIES II. *Two hours credit.*

This course divides itself into four or five sections. These are art, music, drama, creative writing and the dance. Each student chooses a section in which he has not had experience and continues in that group to the end of the quarter.

6. CREATIVE EXPRESSION IN THE HUMANITIES III. *Two hours credit.*

In this quarter of the course in creative expression the different art media are synthesized in a single artistic production. It is felt that the theater offers the best possibility for such synthesis. The students in the course select an idea, turn it into dramatic form and produce it. This offers possibilities for creative work in each of the areas which have been studied previously.

240. ADVANCED COURSE IN THE HUMANITIES. *Four hours credit.*

Prerequisite, HUM 1, 2 and 3. The study of a specific great literary work in its setting of history, philosophic concepts, and contemporary arts. Offered only when requested by five or more students.

330. GRADUATE READINGS COURSE IN THE HUMANITIES.
Three hours credit.

This course is designed to acquaint graduate students with some of the major concepts, terms, and creative figures in the fields of literature, art, painting, and music. This course not applicable to a graduate degree in Humanities.

COMMUNICATIONS

1. 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.

2. ELEMENTARY COMPOSITION II. *Three hours credit.*

Prerequisite, COM I. 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.

3. PRINCIPLES OF SPEECH. *Three hours credit.*

A lecture and performance course in fundamentals of voice production, oral reading and public speaking.

ENGLISH

10. FRESHMAN LITERATURE. *Four hours credit.*

An introductory course in literature, designed to acquaint students with literary terminology and to introduce students to outstanding examples of various types of literature: poetry, short story, essay, novel, and drama. Emphasis will be placed on the technique of reading and explicating works of literature.

48. 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*.

49. 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.

50. SHAKESPEARE. *Three hours credit.*

A basic Shakespeare course, with special stress on the types of plays: histories, comedies, tragedies.

51. 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.

52. 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.

53. 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.

54. CONTEMPORARY ENGLISH AND AMERICAN LITERATURE.
Four hours credit.

A study of the development of British and American poetry, fiction, and drama since 1920, showing the relationships between the two literatures in a period when the interaction becomes extensive.

57. SURVEY OF ENGLISH LITERATURE (700-1800). *Four hours credit.*

Comprehensive reading in English literature following its development from Beowulf to the Romantic Movement.

58. SURVEY OF ENGLISH LITERATURE (1800-the present). *Four hours credit.*

Comprehensive readings in English literature following its development since the Romantic Movement.

59. SURVEY OF AMERICAN LITERATURE. *Four hours credit.*

Readings of major writers from the beginning to the present with particular attention to democratic values.

60. AMERICAN LITERATURE TO THE CIVIL WAR. *Four 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.

61. AMERICAN LITERATURE SINCE THE CIVIL WAR. *Four hours credit.*

A study of the literature of America since 1865, emphasizing in particular the development of modern American fiction and the late nineteenth century and twentieth century developments in American poetry. Particular attention is given to such writers as Whitman, James, Robinson, Frost, Sandburg, Faulkner, and Eliot.

109, 110, 111. CREATIVE WRITING I, II, III. *Two hours credit.*

Opportunity to write creatively under criticism with emphasis upon the individual's own purposes and experiences.

209. ADVANCED GRAMMAR AND SYNTAX. *Two hours credit.*

A course in grammatical and syntactical relationships within the English sentence, with emphasis on the logic and conventions of the patterns in acceptable English usage. This course is designed also to indicate to the prospective teacher of English the relative importance that should be given to teaching certain elements of grammar and syntax within the secondary school curriculum and to assist the teacher in explaining to students how to construct their writing according to a logical pattern of syntax and grammar.

210. ADVANCED EXPOSITORY WRITING. *Three hours credit.*

Prerequisite, COM 1, 2. 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.

211. THE ENGLISH LANGUAGE. *Four hours credit.*

The course presents a history of the development of the English language, the historical basis of usage and grammar, the sources of the English vocabulary, and the problem of communication.

230. 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.

231. 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.

232. 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.

235. CONTEMPORARY AMERICAN DRAMA. *Three hours credit.*
A comprehensive view of the best dramatic literature of the modern American theater.

236. 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.

239. 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.

255. 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 subject's reflecting the life of the times.

257. HISTORY OF IDEAS IN ENGLISH LITERATURE. *Three hours credit.*
A synthesis of the literary periods in English literature through a study of ideas.

258. READINGS IN ENGLISH LITERATURE FROM 700-1800. *Four hours credit.*
A survey of English literature from Beowulf to the Romantic Movement.

259. READINGS IN ENGLISH LITERATURE FROM 1800 TO THE PRESENT. *Four hours credit.*
A survey of English literature from the Romantic Movement to the present time.

260. READINGS IN AMERICAN LITERATURE TO 1865. *Four hours credit.*
A survey of the beginnings of American literature until the time of the Civil War.

261. READINGS IN AMERICAN LITERATURE SINCE 1865. *Four hours credit.*
A survey of modern American literature.

289. LITERATURE OF THE OLD TESTAMENT. *Three 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.

290. 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.

302. THE AMERICAN CRITICS. *Three hours credit.*
A seminar for graduate students in theory and practice of criticism of literature in America. The major critics and the recognizable "schools" are analyzed.

303. RECENT ENGLISH AND AMERICAN POETS. *Three hours credit.*
A history of recent poetry in English from the Imagists to the present.

304. THE GREEK DRAMA. *Four hours credit.*

A study of the dramas of Aeschylus, Sophocles, Euripides and Aristophanes to note the development of dramatic technique and the developing ideas from the beginnings of classicism, through the golden age, to decadence.

305. SEMINAR IN MAJOR AMERICAN WRITERS I. *Four hours credit.*

A study of selected American writers with special emphasis on their relation to the currents of American thought. Reports by each member of the class will be determined by the interest of the student.

306. SEMINAR IN MAJOR AMERICAN WRITERS II. *Four hours credit.*

A study of selected later American writers with special emphasis on their relation to the currents of American thought. Reports by each member of the class will be determined by the interest of the student.

311. THE ENGLISH ROMANTIC MOVEMENT. *Four hours credit.*

The origin, purpose and nature of the Romantic Movement. A study of the poetry and criticism of Wordsworth, Coleridge, Shelley, Keats and Byron; the prose of Lamb, Hazlitt and DeQuincey.

312. OLD ENGLISH. *Four hours credit.*

Anglo-Saxon grammar and vocabulary. Reading of important documents from the period—Alfred's Translations, Charters and Historical Documents, Anglo-Saxon poetry, etc. Emphasis on background for contemporary language.

313. CHAUCER AND MIDDLE ENGLISH. *Five hours credit.*

Writings of Geoffrey Chaucer (especially *The Canterbury Tales* and *Troilus and Criseyde*) in Middle English; selected writings to illustrate both the literary qualities and linguistic aspects of Middle English.

314. SHAKESPEARE SEMINAR. *Four hours credit.*

Detailed study of three of the great plays, introduction to Shakespearean scholarship, and a review of Shakespearean criticism. Offered only when five or more students request the course.

315. MILTON SEMINAR. *Four hours credit.*

A study of Milton's major prose and poetry. Offered only when five or more students request the course.

316. SEMINAR IN TENNYSON AND BROWNING. *Four hours credit.*

A review of the shorter poems of both men and a special stress on some of the longer works (*Maud*, *Idylls of the King*, *The Ring and the Book*) and an introduction to the critical writings about Tennyson and Browning. Offered only when five or more students request the course.

318. SEMINAR IN RESTORATION AND EIGHTEENTH CENTURY DRAMA. *Four hours credit.*

A study of the types of plays written between 1660 and 1800, with particular attention to heroic tragedy, comedy of manners, and sentimental drama, as represented by such writers as Dryden, Wycherley, Etherege, Otway, Congreve, Steele, Addison, Goldsmith, and Sheridan. Offered only when five or more students request the course.

319. LITERATURE OF THE EIGHTEENTH CENTURY. *Four hours credit.*

A study of the leading writers of the eighteenth century, with emphasis being placed on the works of Pope, Swift, Boswell, and Johnson as major figures of the century. Major ideas emanating from the century will also be stressed.

320. SEMINAR IN VICTORIAN LITERATURE. *Five hours credit.*
A graduate course, for intensive individual research into the problems of the Victorian era that bear upon major British writers; the relations between the literature and developments in politics, philosophy, religion, art, science, publication and the like that give distinctive meaning to the term "Victorian."

321. THE TWENTIETH-CENTURY BRITISH NOVEL. *Four hours credit.*

A survey of the historical and aesthetic development of the novel in Great Britain during the twentieth century.

323. MODERN ENGLISH PHILOLOGY AND USAGE. *Four hours credit.*

Prerequisite, ENG 211. An examination of the bases of current English usage, designed to acquaint the student with such matters as sound-changes, theories of correctness in grammar and pronunciation, and current discoveries or tendencies in linguistic science.

325. SEMINAR IN WORLD LITERATURE. *Four hours credit.*

The study in translation of one great work of non-English or American literature or of a small group of such masterpieces which are closely related either in form or idea. The selections vary with the needs of the students and the interest of the instructor.

ENGLISH EDUCATION

200. WORKSHOP IN THE TEACHING OF ENGLISH. *Maximum of nine hours credit.*

A series of workshops in special problems in the teaching of English, conducted by authorities in the field.

203. NEW APPROACHES TO THE TEACHING OF GRAMMAR. *Three hours credit.*

A study of recent research in the grammar of the English language and an application of the results of the research to the study and teaching of English grammar.

226. LITERATURE AND MATERIALS IN THE SECONDARY SCHOOL. *Four hours credit.*

Materials for teaching English in secondary schools. Principles for the selection of literature for high school pupils. Critical study of selected readings.

227. LITERATURE AND MATERIALS IN THE JUNIOR HIGH SCHOOL. *Four hours credit.*

Selection of literature and supplementary materials to fit the needs and interests of early adolescents. Methods of teaching literature in grades 7, 8, and 9.

228. THE TEACHING OF READING IN THE SECONDARY SCHOOL. *Four hours credit.*

Methods and materials to be used in the teaching of reading, both developmental and remedial, in the secondary school.

301. THE TEACHING OF GRAMMAR (NEW AND TRADITIONAL). *Four hours credit.*

Prerequisite, ENG 209. The origins, underlying assumptions, and processes of both the traditional grammar and the formal, linguistic grammar. The method of teaching grammatical concepts.

302. THE TEACHING OF COMPOSITION. *Four hours credit.*

Methods of improving the composition of high school students. The organization of paragraph and theme. The improvement of sentence structure.

326. RECONSTRUCTING THE ENGLISH CURRICULUM. *Four hours credit.*

A study of the place of English in the curriculum of the secondary school, with a consideration of appropriate materials and their placement.

350. SEMINAR IN LITERATURE FOR ADOLESCENTS. *Four hours credit.*

A concentrated study of and first-hand acquaintance with books written for adolescents, with emphasis upon junior novels and junior biographies. Consideration of reading guidance based upon student interests and needs. Development of criteria for evaluating literature for adolescents.

JOURNALISM**100. INTRODUCTION TO JOURNALISM.** *Two hours credit.*

Emphasizes highlights of the history of American journalism, including newspapers, magazines, special types of publications, radio and television; analysis of commercial media, their functions and responsibilities in a democratic society.

101. NEWSWRITING. *Three hours credit.*

Principles of gathering and writing of news and feature stories, writing of editorials, editing and preparation of copy with emphasis upon educational news.

106. JOURNALISM INTERNSHIP. *Maximum of six quarters, one hour credit per quarter.*

Students gain practical experience in editorial and production aspects of the student newspaper and annual by working on CSC student publications. Emphasis is on providing a complete practical background needed by the publications adviser.

201. SPONSORSHIP OF THE SCHOOL NEWSPAPER AND ANNUAL. *Three hours credit.*

Instruction in all phases of preparation and publication of school newspapers and annuals.

202. ADVANCED NEWSWRITING. *Three hours credit.*

Prerequisite, JOUR 101. Principles of gathering and writing of news and feature stories, writing of editorials, editing and preparation of copy with emphasis upon educational news.

205. WORKSHOP FOR SCHOOL PUBLICATION SPONSORS. *One hour credit.*

Acquaint students with role of publications as media for internal and external publics; study and experience procedures of doing school newspapers, annuals, handbooks, and radio programs.

PHILOSOPHY**210. ETHICS AND VALUE-THEORY.** *Three hours credit.*

A consideration of the major philosophers' views on problems of ethics and of values, from early Greek to contemporary thought.

220. LOGIC IN PRACTICE. *Three hours credit.*

A practical study of the uses of deductive and inductive logic, including consideration of current uses of verbal and material logical-fallacies.

230. PROBLEMS IN PHILOSOPHY. *Three hours credit.*

A consideration of the major philosophers' views on problems in epistemology, metaphysics, and aesthetics, from early Greek to contemporary thought.

Foreign Languages

Associate Professor: Graham.

Assistant Professors: Baer, Colby, Freyschlag.

Instructors: Brown, La Borne, R. Miller.

FOREIGN LANGUAGES MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.
3. The following required courses in the major:

A. FOR BEGINNING STUDENTS IN LANGUAGES

1. Four years of one language (48 hours) for a major in French, in German or in Spanish, or
2. Three years of one language (French, Spanish, or German) (36 hours) and one year of a second language (12-15 hours) for a major in Foreign Languages.

B. FOR STUDENTS WITH LANGUAGE IN HIGH SCHOOL

If a student has had adequate basic courses, he may start his college work at the appropriate level, planning his program with his adviser for a total of 48 hours in languages, of which a minimum of 27 hours of college credit must be earned in one language.

4. One minor of 27 quarter hours.
5. Twenty-four to 32 quarter hours of free electives to complete 180 quarter hours of academic credit required for graduation.

FOREIGN LANGUAGE MINOR (Teacher Education)

The requirement for a minor in French, German, Latin, Russian, or Spanish is 27 hours in one language.

FOREIGN LANGUAGES MAJOR

Bachelor of Arts Degree (Liberal Arts)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Course requirements listed for the Foreign Language Major for the Bachelor of Arts Degree (teacher education).
3. One minor of 27 quarter hours.
4. Electives to complete requirements for graduation.

FOREIGN LANGUAGE MINOR (Liberal Arts)

The requirement for a minor is 27 quarter hours in one language.

Description of Courses

FRENCH

1. ELEMENTARY FRENCH I. *Five hours credit.*

Summer Quarter: Must enroll for FR 2 and 3. 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.

2. ELEMENTARY FRENCH II. *Five hours credit.*

Summer Quarter: Must enroll for FR 1 and 3. Credit is not given until three quarters are completed. A continuation of FR 1.

3. ELEMENTARY FRENCH III. *Five hours credit.*

Summer Quarter: Must enroll for FR 1 and 2. Credit is not given until three quarters are completed. A continuation of FR 2.

5. INTERMEDIATE FRENCH COMPOSITION. *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.

6. INTERMEDIATE FRENCH CONVERSATION. *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 5.)

7. INTERMEDIATE FRENCH FICTION. *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 5 or 6.)

105. SURVEY OF FRENCH LITERATURE I. *Three 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.

106. SURVEY OF FRENCH LITERATURE II. *Three 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.

107. SURVEY OF FRENCH LITERATURE III. *Three hours credit.*

Prerequisite, two years of college French. Reading of anthology, with lectures and discussion in French. This course deals with nineteenth and early twentieth century literature.

110. ADVANCED FRENCH COMPOSITION. *Two 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.

111. ADVANCED FRENCH CONVERSATION. *Two 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.

112. ADVANCED FRENCH SYNTAX AND STYLISTICS. *Two 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.

125. PHONETICS OF THE FRENCH LANGUAGE. *Three hours credit.*

Prerequisite, two years of college French. The development of the sounds of the French language from earliest recorded times to the present day. The theories of sound change as applied to French. The influence of accent shift and the phenomenon of nasalization and denasalization as they apply to French. Present phonetic trends in the language as observed in our own century.

126. 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.

127. THE FRENCH THEATER FROM 1918 TO 1950. *Three hours credit.*

Prerequisite, two years of college French. The main currents in the French theater from 1918 to 1950, with main emphasis on Cocteau, Giraudoux, and Anouilh.

140. 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.

141. THE FRENCH NOVEL FROM 1800 TO 1850. *Three hours credit.*

Prerequisite, two years of college French. The development of the novel in France during the first half of the nineteenth century, with emphasis on Balzac, Stendhal, Sand, and Mérimée. Four novels, one by each author named, will form the core of this course.

142. THE FRENCH NOVEL FROM 1850 TO 1900. *Three hours credit.*

Prerequisite, two years of college French. The development of the novel in France during the second half of the nineteenth century, with emphasis on Zola, Flaubert, Daudet, and the Goncourts. Four significant novels will form the basis of the course, all in the original.

250. FRENCH WRITERS FROM 1900 TO 1914. *Three hours credit.*

Prerequisite, two years of college French. The study of French writers—novelists and poets—from the beginning of the twentieth century until World War One, mainly Jules Romains, Gide, Proust, and Apollinaire.

251. FRENCH WRITERS FROM 1919 TO 1930. *Three hours credit.*

Prerequisite, two years of college French. The study of French writers—novelists and poets—during the post-war period. They are Jules Romains, Duhamel, Martin du Gard, Valéry, Colette, Claudel, and Mauriac.

252. FRENCH WRITERS FROM 1930 TO 1955. *Three hours credit.*

Prerequisite, two years of college French. The study of French novelists and poets during the period extending from 1930 to 1955. The emphasis will be on Malraux, Mauriac, Bernanos, Sartre, and Camus.

GERMAN**1. ELEMENTARY GERMAN I.** *Five hours credit.*

Credit is not given until three quarters are completed. The course aims to develop an accurate pronunciation, a moderately large active vocabulary, a large passive vocabulary, and a sufficient understanding of grammar and sentence structure to enable the student to read without mental translation. Stress is laid on the phonological and grammatical relation of German to English.

2. ELEMENTARY GERMAN II. *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of GER 1.

3. ELEMENTARY GERMAN III. *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of GER 2.

5. INTERMEDIATE GERMAN COMPOSITION. *Four hours credit.*

Prerequisite, two years of high school German or one year of college German. A review of grammar, with oral and written exercises based on the reading of an adapted novel.

6. INTERMEDIATE GERMAN READING AND CONVERSATION.

Four hours credit.

Prerequisite, two years of high school German or one year of college German. A reader tracing the cultural history of Germany from the first century of our era to the present will be studied and used as a basis for discussion in German. (This course may be taken without having had GER 5.)

7. INTRODUCTION TO GERMAN CLASSICS. *Four hours credit.*

Prerequisite, at least one quarter of Intermediate German. The class will study one five-act play of the classical period, and an anthology of short poems, with questions and discussion in German.

105. SURVEY OF GERMAN LITERATURE I. *Three hours credit.*

Prerequisite, two years of college German. German literature from the earliest beginnings through the 17th 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.

106. SURVEY OF GERMAN LITERATURE II. *Three hours credit.*

Prerequisite, two years of college German. German literature of the 18th and 19th centuries. Emphasis on the six great classical writers, with more intense effort on Göthe 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.

107. SURVEY OF GERMAN LITERATURE III. *Three hours credit.*

Prerequisite, two years of college German or equivalent. A survey of modern German literature—latter 19th and 20th century writing. Emphasis on development and importance of Naturalism, Impressionism and Expressionism. Importance of Rainer Maria Rilke. Prose writings of Thomas and Heinrich Mann, Kafka and Hesse.

135. 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.

141. GÖTHE. *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 some understanding of Göthe's world-view (*Weltanschauung*) as expressed in *Faust*. The unique vocabulary will be studied intensively, as will Göthe's dramatic technique.

142. SCHILLER. *Three hours credit.*

Prerequisite, two years of college German. This course is designed as an introduction to the life and work of one of Germany's greatest classics. While stress will be placed upon an intensive study of one or two of Schiller's greatest dramas, Schiller's times and background will be discussed.

225. 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 Göthe. Readings and lectures in German.

226. 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 Göthe and the writings of Schiller. Readings and lectures in German.

227. 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.

ITALIAN

1. 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.

2. ELEMENTARY ITALIAN II. *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of ITL 1.

3. ELEMENTARY ITALIAN III. *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of ITL 2.

LATIN

1. ELEMENTARY LATIN I. *Five hours credit.*

Credit is not given until three quarters are completed. A foundation course for the further study of Latin literature with abundant drill in inflections and syntax and a terminal course for students who wish Latin as a background for the study of other languages or for the professions, with emphasis on vocabulary, word derivations and comparative grammar.

2. ELEMENTARY LATIN II. *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of LAT 1.

3. ELEMENTARY LATIN III. *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of LAT 2.

5. INTERMEDIATE LATIN I. *Four hours credit.*

Prerequisite, two years of high school Latin or one year of college Latin. Reading of Latin prose and poetry of intermediate difficulty, accompanied by a review of grammar, exercises in composition, and an introduction to the system of Latin versification. (Given when there is sufficient demand.)

6. INTERMEDIATE LATIN II. *Four hours credit.*

Prerequisite, two years of high school Latin or one year of college Latin. Reading of Latin prose and poetry of intermediate difficulty, accompanied by a review of grammar, exercises in composition, and an introduction to the system of Latin versification. (Given when there is sufficient demand.)

7. INTERMEDIATE LATIN III. *Four hours credit.*

Prerequisite, two years of high school Latin or one year of college Latin. Reading of Latin prose and poetry of intermediate difficulty, accompanied by a review of grammar, exercises in composition, and an introduction to the system of Latin versification.

RUSSIAN**1. 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.

2. ELEMENTARY RUSSIAN II. *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of RUS 1.

3. ELEMENTARY RUSSIAN III. *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of RUS 2.

5. INTERMEDIATE RUSSIAN. *Four hours credit.*

Prerequisite, RUS 3. Review of Russian grammar, initiative composition and the reading of intermediate Russian texts.

6. INTERMEDIATE RUSSIAN COMPOSITION AND CONVERSATION I. *Four hours credit.*

Prerequisite, RUS 5. A continuation of RUS 5 but emphasizing more intensive reading, oral reports, advanced composition and more extensive conversation.

7. INTERMEDIATE RUSSIAN COMPOSITION AND CONVERSATION II. *Four hours credit.*

Prerequisite, RUS 6. A continuation of RUS 6. A study of three Russian authors in their shorter works (Turgenev, Lermontov, Pushkin). Oral reports, advanced composition, and translation.

SPANISH**1. 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.

2. ELEMENTARY SPANISH II. *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of SPAN 1.

3. ELEMENTARY SPANISH III. *Five hours credit.*

Credit is not given until three quarters are completed. A continuation of SPAN 2.

5. 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.

6. INTERMEDIATE SPANISH II. *Four hours credit.*

Prerequisite, two years of high school Spanish or one year of college Spanish. A continuation of SPAN 5 but emphasizing more intensive reading, oral reports, advanced composition and extensive conversation based on Spanish and Spanish-American culture.

7. INTERMEDIATE SPANISH III. *Four hours credit.*

Prerequisite, two years of high school Spanish or one year of college Spanish. A continuation of SPAN 6. 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.

110. 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.

115. 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.

116. 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.

117. 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.

135. 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.

145. 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.

155. SURVEY OF SPANISH LITERATURE I. *Five hours credit.*

Prerequisite, two years of college Spanish. A study of Spanish literature and civilization from the late medieval period to the Renaissance.

156. SURVEY OF SPANISH LITERATURE II. *Five 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.

157. SURVEY OF SPANISH LITERATURE III. *Five 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.

175. 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.

FOREIGN LANGUAGES

210. 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.

231. 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.

232. 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.

Speech and Drama

Professors: DeBoer, Toussaint, Wolfe.

Associate Professors: Ahlberg, Holley, K. Jones, Willcoxon.

Assistant Professors: Crawford, Jamison.

Instructors: Beihl, D'Angelo, Longwell, Norton.

SPEECH OR DRAMA MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.
3. The following required courses in a major:

DRAMA MAJOR

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
SP 13	— Introduction to Stagecraft	3
SP 16	— Voice and Diction	4
SP 63	— First Course in Drama	4
SP 113	— Stagecraft	3
SP 114	— Introduction to the Theater.....	4
SP 115	— Beginning Characterization	3
SP 116	— Beginning Play Direction.....	4
SP 200	— Techniques of Play Direction.....	3
ENG 50	— Shakespeare	3
ENG 235	— Contemporary American Drama.....	3
FA 65	— Beginning Scene Design.....	3
	Electives in Drama.....	11
		48

SPEECH MAJOR

<i>Course Number</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
SP 16	— Voice and Diction.....	4	
SP 62	— Public Speaking.....	4	
SP 63	— First Course in Drama.....	4	
SP 114	— Introduction to the Theater.....	4	
SP 117	— Oral Interpretation.....	3	
SP 118	— Argumentation and Debate.....	4	
SP 208	— Introduction to Radio and Television Production.....	4	
SP 218	— Discussion Techniques.....	4	
SP 280	— American Public Address.....	4	
SPED 264	— Speech Correction in the Classroom.....	3	
	Electives in Speech.....	10	
		<hr/>	48

4. At least one minor of 27 quarter hours.

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

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

Students majoring or minoring in Speech or Drama are expected to participate in the activities related to those areas: theater production, forensics, and clinical practice.

Drama Minor

<i>Course Number</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
SP 13	— Introduction to Stagecraft.....	3	
SP 16	— Voice and Diction.....	4	
SP 63	— First Course in Drama.....	4	
SP 113	— Stagecraft.....	3	
SP 115	— Beginning Characterization.....	3	
SP 116	— Beginning Play Direction.....	4	
FA 65	— Beginning Scene Design.....	3	
	Electives in Drama.....	3	
		<hr/>	27

Speech Minor

<i>Course Number</i>	<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
SP 16	— Voice and Diction.....	4	
SP 62	— Public Speaking.....	4	
SP 118	— Argumentation and Debate.....	4	
SP 218	— Discussion Techniques.....	4	
ED 141	— Teaching Speech in the Secondary Schools.....	3	
SPED 264	— Speech Correction in the Classroom.....	3	
	Electives in Speech.....	5	
		<hr/>	27

SPEECH OR DRAMA MAJOR

Bachelor of Arts Degree (Liberal Arts)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. Course requirements listed for the Speech or Drama Major for the Bachelor of Arts Degree (teacher education) with the exception that substitutions may be made with the consent of the adviser.
3. One minor of 27 quarter hours.
4. Electives to complete requirements for graduation.

Speech or Drama Minor

The liberal arts minor is the same as that listed for teacher education; substitutes may be made with the consent of the adviser.

Description of Courses

SPEECH AND DRAMA

- 13. INTRODUCTION TO STAGECRAFT.** *Three hours credit.*
The student is introduced to the basic problems of theatrical staging. Emphasis is placed upon the background of the art of stagecraft, the vocabulary, and the materials of the scene. Opportunity is provided for the student to learn through direct experience, techniques of construction, assembly and painting.
- 16. VOICE AND DICTION.** *Four hours credit.*
A study of the development and use of the speaking voice with particular attention to individual needs.
- 18. LABORATORY FORENSICS.** *One hour credit.*
Primarily for those students participating in campus and intercollegiate programs in speech. A total of four hours may be earned in SP 18 during the student's undergraduate program.
- 62. PUBLIC SPEAKING.** *Four hours credit.*
Prerequisite, COM 3. A second course in speech. Emphasis is placed on the preparation, organization, and presentation of the various types of speeches.
- 63. FIRST COURSE IN DRAMA.** *Four hours credit.*
An introduction to the basic principles of acting and dramatic production.
- 108. PARLIAMENTARY PROCEDURE.** *Two hours credit.*
A study of the rules which govern procedure in organized groups and practice in the application of those rules.
- 112. CHILDREN'S THEATER.** *Three hours credit.*
A lecture and laboratory course in dramatics for elementary and secondary school teachers. Contribution of creative dramatics to education. Demonstration of procedure best adapted to work in children's dramatics.
- 113. STAGECRAFT.** *Three hours credit. (Two hours lecture, two hours laboratory.)*
Prerequisite, SP 13 or FA 65. This course deals specifically with the problems and materials of play production. Materials and methods of staging, an introduction to lighting and lighting practices, and techniques of costuming the play receive the major emphasis in this course.

114. INTRODUCTION TO THE THEATER. *Four hours credit.*

An introductory course to the theater which gives a comprehensive outline of the living stage, its players and craftsmen and its place in society from primitive drama to contemporary American and European theaters.

115. BEGINNING CHARACTERIZATION. *Three hours credit.*

Prerequisite, SP 63. A lecture and laboratory course in characterization in which the student participates in college theater productions.

116. BEGINNING PLAY DIRECTION. *Four hours credit.*

Prerequisite, SP 63. A lecture and laboratory course in the principles of direction in which the student participates in college theater productions.

117. ORAL INTERPRETATION. *Three hours credit.*

The student is given an opportunity to read aloud in all the forms of literature and is aided in gaining skill in an artistic presentation.

118. ARGUMENTATION AND DEBATE. *Four hours credit.*

A basic course designed to give the speaker experience and skill in debate.

120. TEACHING DRAMA IN THE SECONDARY SCHOOL AND JUNIOR HIGH SCHOOL. *Three hours credit.*

A study of the problems, projects and organization of materials suitable for use by high school students and those in junior high school.

123. BASIC SPEECH AND ORAL READING. *Five hours credit.*

A course for prospective junior high school teachers. It is designed to develop basic speech skills and to provide meaningful learning experiences in speaking and oral reading.

124. TEACHING SPEECH IN JUNIOR HIGH SCHOOL. *Four hours credit.*

Introduction to the study of the teaching of speech with consideration of goals, source materials, and projects. The correcting of articulatory problems will be stressed.

145. SPEECH COMPOSITION. *Two hours credit.*

This course consists of the study of the techniques involved in the writing of speeches. Several speeches are studied analytically and speeches are then written to be memorized.

151. SPEECH FOR THE CLASSROOM TEACHER. *Four hours credit.*

A course designed to increase the personal effectiveness of the teacher in the classroom with emphasis on the improvement of instructional speaking. Not for speech major or minors.

200. TECHNIQUES OF PLAY DIRECTION. *Three hours credit.*

Prerequisite, SP 63, 115, and 116. An advanced course in the direction of three-act and one-act plays for public presentation.

208. INTRODUCTION TO RADIO AND TELEVISION PRODUCTION. *Four hours credit. (Two hours lecture, four hours laboratory.)*

This course includes a brief history of oral mass media, a survey in the laymen's terms of the technical phenomena involved, a comparison of radio and television to other mass media, and a study of radio and television programs and production techniques.

210, 211, 212. SUMMER THEATRE WORKSHOP I, II, III. *Five hours credit each.*

Workshop in techniques of acting, directing and technical work as observed in the daily rehearsal periods of the Little Theater of the Rockies. Students must spend six to eight hours per day in rehearsals, either as actor or technical assistant.

- 213. ADVANCED STAGING TECHNIQUES.** *Four hours credit.*
Prerequisite, FA 65, 232, SP 113. 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. Emphasis is upon stage mechanics and materials of the modern theater.
- 217. ADVANCED ORAL INTERPRETATION.** *Three hours credit.*
Prerequisite, SP 117. The development of greater artistic skill in reading various forms of literature.
- 218. DISCUSSION TECHNIQUES.** *Four hours credit.*
Principles and practice in organizing, conducting, and participating in all forms of public discussion including round-tables, symposiums, debates, and forums.
- 220. STAGE COSTUMING.** *Four hours credit.*
Prerequisite, FA 65, SP 113, 116. A study of the styles of costume used in the theater from primitive times to the present. Practical experience is gained through actual work in costume construction required by the Little Theater of the Rockies productions.
- 228. TELEVISION IN EDUCATION.** *Four hours credit. (Two hours lecture, four hours laboratory.)*
Prerequisite, SP 208. This course includes a brief study of the background of television in education, a survey of learning theory as it applies to television, a study of the research results available on televised education, and a study of the special problems of the teacher and television.
- 248. WORKSHOP IN SPEECH EDUCATION.** *Three hours credit.*
An opportunity to study cooperatively the problems involved in teaching speech. 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. These areas will include such matters as curriculum, class instructional projects, co-curricular speech activities, remedial techniques, development and use of instructional materials.
- 250. HISTORY OF SPEECH EDUCATION.** *Four hours credit.*
A seminar study of speech education: history, practices, and trends.
- 252. BUSINESS AND PROFESSIONAL SPEAKING.** *Four hours credit.*
Designed particularly to give school administrators instruction and practice in organizing and presenting speeches which they are called upon to make in connection with their professional positions.
- 260. INTRODUCTION TO GENERAL SEMANTICS.** *Four hours credit.*
An analysis of the factors in communication that lead to misunderstandings and conflict, with suggestions for improving communication.
- 270. THE PSYCHOLOGY OF SPEECH.** *Four hours credit.*
A study of the nature and origin of speech; the relationship of speech to emotion, learning, meaning and thought; the development of speech in the child; speech and personality.
- 275. PHONETICS.** *Three hours credit.*
The science of speech sounds with special application to the use of phonetics in speech instruction in elementary and secondary schools.
- 280. AMERICAN PUBLIC ADDRESS.** *Four hours credit.*
A historical and critical study of representative American speakers and speeches.

290. 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.

294. CRITICAL THINKING. *Four hours credit.*

A study of evidence involved in the communication of knowledge and ideas.

315. DIRECTING HIGH SCHOOL PLAYS. *Three hours credit.*

The reading and discussion of plays suitable for production at the high school level. The projects in the course are designed to give the student practical experience in the direction of the players.

316. SEMINAR IN THEATER PRODUCTION. *Four hours credit.*

Prerequisite, SP 200. An analysis of the practical problems in theater production, acting techniques, and the technical phases of setting and lighting the stage.

330. HISTORY OF THE THEATER. *Three hours credit.*

Prerequisite, SP 114. A study of theaters, actors, and acting from primitive times to the present. The periods are illustrated with readings from representative plays. Emphasis is placed on the theater as a social and cultural institution.

333. ADVANCED CHILDREN'S THEATER PRODUCTION. *Four hours credit.*

Prerequisite, SP 112. An advanced course in the practical problems of production in a theater for children. Emphasis is placed on the educational possibilities of this type of theater and practical experience is gained through work with community groups and with junior high school students.

350. RHETORICAL THEORY. *Four hours credit.*

An analytical review of the major contributions of Greek, Roman, English and American rhetoricians from Corax to Winans.

360. GENERAL SEMANTICS. *Four hours credit.*

Prerequisite, SP 260. An analysis of language habits which lead to conflict, confusion, and prejudice, and the development of methods leading to greater accuracy and sanity in the use of language.

Division of Music

Professors: Garlick, Hutcherson, King, J. Miller, Mohr.

Associate Professors: Dykins, George, Goodbrod, Schenkman, Schmitz, Walker.

Assistant Professors: Bartlett, Evans, Fluke, Himmel, Menk, Mickens, Skinner, Smith, Tipton.

Instructors: Ginsburg, R. James, Ludwig, Nofziger.

The Division of Music offers a variety of degree programs for the education of the musician and the music teacher. Special emphasis is placed on those programs designed to prepare teachers both for the public schools and for college teaching. The programs include all of the significant areas of music study such as music theory, sight reading and ear training, history and literature of music, music teaching methods, and all fields of applied music and performance. Degree programs extend from the undergraduate baccalaureate through the doctorate.

BACHELOR OF ARTS DEGREE (Teacher Education)

Major: Music Education.

Minors: Voice and Choral Music, Band and Band Instruments, Stringed Instruments and Orchestra, and Elementary Music Education.

BACHELOR OF ARTS DEGREE (Liberal Arts)

BACHELOR OF ARTS DEGREE (Elementary Education and Music—A Double Major Program)

BACHELOR OF MUSIC DEGREE

Major: Music.

Minors: Instrumental Emphasis, Vocal Emphasis.

BACHELOR OF ARTS AND BACHELOR OF MUSIC DEGREES (Teacher Education)

Major: Music Education (a five-year program)

MASTER OF ARTS DEGREE (Teacher Education)

Major: Music Education, Supervision of Music, Applied Music and Performance.

Minors: Voice and Choral Music, Band and Band Instruments, Stringed Instruments and Orchestra, and Elementary Music Education.

SPECIALIST IN EDUCATION DEGREE

Area of Specialization: To be selected.

DOCTOR OF EDUCATION DEGREE (Teacher Education)

Area of Concentration: Music Education.

Supporting Areas: Music Education.

plus six quarter hours of physical education activity courses.

2. Advanced Teacher Education, 29 hours, plus ED 139, two hours credit, and ED 141, three hours credit.

3. Required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
MUS 2	— Sight Singing and Notation I.....	2
MUS 3	— Sight Singing and Elementary Theory II.....	2
MUS 4	— Sight Singing and Harmonic Analysis III.....	2
MUS 40, 41, 42	— Introduction to Music Education I, II, III.....	6
MUS 43, 44, 45	— Advanced Sight Singing and Choral Literature I, II, III.....	3
MUS 52, 53, 54	— Harmony I, II, III.....	9
MUS 58, 59, 60	— Music Literature and Styles I, II, III.....	3
MUS 152	— Counterpoint	3
MUS 153	— Form and Analysis	3
MUS 154	— Instrumentation	3
MUS 158, 159, 160	— History of Music I, II, III.....	6
MUS 165	— Teaching Instrumental Music.....	3
MUS 162, 163, 164*	— Instrumental Techniques and Conducting I, II, III	
MUS 170, 171, 172*	— Choral Techniques and Conducting I, II, III.....	3
		48

*Students may choose one of the two designated groups to complete course work in this major.

Bachelor of Arts Degree (Liberal Arts)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. A 48-hour major in music as outlined for the Bachelor of Arts Degree with Music Major.

3. One academic minor or 27 quarter hours outside the Division of Music.

4. Two years of French or two years of German.

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
MUS 2	— Sight Singing and Notation I.....	2
MUS 3	— Sight Singing and Elementary Theory II.....	2
MUS 4	— Sight Singing and Harmonic Analysis III.....	2
MUS 52, 53, 54	— Harmony I, II, III.....	9
MUS 58, 59, 60	— Music Literature and Styles I, II, III.....	3
MUS 158, 159, 160	— History of Music I, II, III.....	6
MUS 152	— Counterpoint	3
MUS 153	— Form and Analysis.....	3
MUS *205	— Music Performance.....	15
MUS **	— Electives	3
		48

*One hour of Music 205 credit must be earned each quarter in the student's major performance medium. The additional 3 hours of Music 205 must be earned by performance in musical organizations such as Band, Orchestra or Choir.

**To be selected from the following:

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
MUS	202	— Opera Workshop	3
MUS	214	— Choral Literature from 1750.....	3
MUS	242	— Vocal Repertoire: German Lieder.....	2
MUS	243	— Vocal Repertoire: French and English: 19th and 20th Centuries.....	2
MUS	244	— Vocal Repertoire: 17th and 18th Centuries.....	2
MUS	262	— Symphonic Literature.....	3
MUS	295	— The Art of Music Listening.....	3

Bachelor of Music Degree

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical activity courses.
2. A 48-hour major in music as outlined for the Bachelor of Music Degree.
3. Complete 27 additional quarter hours in area of major emphasis.
4. Two years of French or two years of German.

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
MUS	2	— Sight Singing and Notation I	2
MUS	3	— Sight Singing and Elementary Theory I	2
MUS	4	— Sight Singing and Harmonic Analysis III	2
MUS	52, 53, 54	— Harmony I, II, III	9
MUS	58, 59, 60	— Music Literature and Styles I, II, III	3
MUS	158,		
	159, 160	— History of Music I, II, III	6
MUS	152	— Counterpoint	3
MUS	153	— Form and Analysis	3
MUS	154	— Instrumentation	3
MUS	*205	— Music Performance.....	15

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*One hour of Music 205 credit must be earned in each quarter in the student's major performance medium. Additional hours of Music 205 credit are to be earned by performance in musical organizations such as Band, Orchestra or Choir.

Bachelor of Arts Degree (Elementary Education and Music—A Double Major Program)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. A 48-hour major in music as outlined below.
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 2, 3, 4 (an average grade of "C" or above); (b) successful completion of a proficiency examination in music skills administered by the music faculty.
4. It is suggested that the student teaching assignment shall include 8 hours experience in music teaching in the elementary classroom under an approved music supervisor.
5. The following courses in the major:

Required Courses

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
MUS	2	— Sight Singing and Notation I.....	2

MUS	3	—	Sight Singing and Elementary Theory II.....	2
MUS	4	—	Sight Singing and Harmonic Analysis III	2
MUS	52, 53	—	Harmony I, II	6
MUS	249	—	Music Methods and Materials.....	2
MUS	162	—	Instrumental Techniques and Conducting I	
			or	
MUS	170	—	Choral Techniques and Conducting I.....	1
MUS	205	—	Music Performance (piano)	
			or	
MUS	10, 11, 12	—	Beginning Class Piano I, II, III	
			or	
MUS	20, 21, 22	—	Intermediate Class Piano I, II, III.....	3
MUS	205	—	Music Performance (Individual Instruction)	6
MUS	205	—	Music Performance (Major Ensemble).....	6
				<hr/>
				30

Music History and Literature

(Elect 5-6 hours from the following courses of which at least one-half must be above 100)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
MUS	158, 159,		
	160	— History of Music I, II, III.....	6
MUS	48	— Music Appreciation	2
MUS	58, 59, 60	— Music Literature and Styles I, II, III.....	3
MUS	262	— Symphonic Literature	3
MUS	276	— American Music	3
MUS	295	— The Art of Music Listening.....	3

(5-6)

Music Theory

(Elect 5-6 hours from the following courses of which at least one-half must be above 100)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
MUS	43, 44, 45	— Advanced Sight Singing and Choral Literature I, II, III.....	3
MUS	54	— Harmony III	3
MUS	152	— Counterpoint	3
MUS	153	— Form and Analysis.....	3
MUS	154	— Instrumentation	3
MUS	219	— Improvisation	2

(5-6)

Music Education

(Elect 6-7 hours from the following courses of which at least one-half must be above 100)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
MUS	40, 41, 42	— Introduction to Music Education I, II, III....	6
MUS	196	— Voice Class	1
MUS	210	— Music Literature for Elementary Grades.....	3
MUS	211	— Improvement of Instruction in Music Reading	3
MUS	212	— Music Activity for Classroom Teachers of Music	3
MUS	274	— Teaching Music Appreciation.....	3
MUS	253	— Music for the Exceptional Child (Required of Special Education Double Major).....	3

(6-7)

Bachelor of Arts (Teacher Education) and Bachelor of Music Degrees—Five-Year Combined Course

Admission to candidacy for the combined Bachelor of Arts and Bachelor of Music degrees is based upon the recommendation of a Music Division 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 college.

The following is required for the completion of the combined degrees program:

Complete the requirements outlined for the Bachelor of Arts Degree (Teacher Education).

Complete one of the Music Minor plans listed below.

Complete 27 additional quarter hours of applied major instrument study and performance.

Elect a minimum of 18 quarter hours from the following courses:

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
MUS	202	— Opera Workshop	3
MUS	242	— Vocal Repertoire: German Lieder.....	2
MUS	243	— Vocal Repertoire: French and English 19th & 20th Centuries	2
MUS	244	— Vocal Repertoire: 17th and 18th Centuries....	2
MUS	262	— Symphonic Literature	3
MUS	270	— Eighteenth Century Harmony and Forms.....	3
MUS	271	— Nineteenth Century Harmony and Forms.....	3
MUS	272	— Twentieth Century Harmony and Forms.....	3
MUS	277	— Church Music	3
MUS	295	— The Art of Music Listening.....	3

The candidate for the combined degrees will present a complete graduation recital.

MUSIC EDUCATION MINORS

Instrumental Music Teaching Emphasis (for Music Majors)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
MUS	13, 14, 15	— Beginning String Instruction I, II, III.....	3
MUS	190	— Clarinet Class	1
MUS	191	— Trumpet Class	1
MUS	192	— Brass Class	1
MUS	194	— Percussion Class	1
MUS	195	— Double Reed Class	1
MUS	196	— Voice Class	1
MUS	197	— Flute and Saxophone Class	1
MUS	205	— Music Performance (Major).....	7
MUS	215	— Instrumental Literature	3
MUS	217	— Methods and Materials for Class Instrumental Instruction	3
MUS	220	— Instrument Repair and Care.....	2
MUS	241	— Marching Band Techniques.....	2

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Vocal and General Music Teaching Emphasis (for Music Majors)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
MUS	10, 11, 12	— Beginning Class Piano I, II, III	

		<i>or</i>		
MUS	20, 21, 22	—	Intermediate Class Piano I, II, III	
			<i>or</i>	
MUS	205	—	Music Performance (Piano).....	3
MUS	205	—	Music Performance (Voice).....	4
MUS	13, 14, 15	—	Beginning String Instruction I, II, III.....	3
MUS	190	—	Clarinet Class	1
MUS	191	—	Trumpet Class	1
MUS	194	—	Percussion Class	1
MUS	201*	—	Stage and Opera Techniques	2
MUS	211	—	Improvement of Instruction in Music Reading	3
MUS	*214	—	Choral Literature from 1750.....	3
MUS	216	—	Methods and Materials for Class Voice Instruction	3
MUS	274*	—	Teaching Music Appreciation	3
			<hr/>	27

*Music Majors who have attained Proficiency Level II in piano or voice may substitute MUS 242, 243, and 244 for designated courses in the above plan.

Students who major in areas other than music may select music minor plans from the following:

Voice and Choir Minor (for Non-Music Majors)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
MUS	2	—	Sight Singing and Notation I.....	2
MUS	3	—	Sight Singing and Elementary Theory II.....	2
MUS	4	—	Sight Singing and Harmonic Analysis III.....	2
MUS	58, 59, 60	—	Music Literature and Styles I, II, III.....	3
MUS	170, 171	—	Choral Techniques and Conducting I, II.....	2
MUS	201	—	Stage and Opera Techniques.....	2
MUS	205	—	Music Performance (Voice).....	4
MUS	205	—	Music Performance (Choral).....	4
MUS	214	—	Choral Literature	3
MUS	216	—	Methods and Materials for Class Voice Instruction	3
			<hr/>	27

Band and Band Instruments Minor (for Non-Music Majors)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
MUS	2	—	Sight Singing and Notation I.....	2
MUS	3	—	Sight Singing and Elementary Theory II.....	2
MUS	4	—	Sight Singing and Harmonic Analysis III.....	2
MUS	162, 163	—	Instrumental Techniques and Conducting I, II, III.....	3
MUS	165	—	Teaching Instrumental Music.....	3
MUS	190	—	Clarinet Class	1
MUS	191	—	Trumpet Class	1
MUS	192	—	Brass Class	1
MUS	194	—	Percussion Class	1
MUS	195	—	Double Reed Class	1
MUS	197	—	Flute and Saxophone Class.....	1
MUS	205	—	Music Performance (Major instrument).....	4
MUS	205	—	Music Performance (Band).....	5
			<hr/>	27

Orchestra Minor (for Non-Music Majors)

<i>Course Number</i>		<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
MUS	2	—	Sight Singing and Notation I.....	2

MUS	3	—	Sight Singing and Elementary Theory II.....	2
MUS	4	—	Sight Singing and Harmonic Analysis III.....	2
MUS	13, 14, 15	—	Beginning String Instruction I, II, III.....	3
MUS	70, 71, 72	—	Laboratory Orchestra I, II, III.....	3
MUS	162, 163,			
	164	—	Instrumental Techniques and Conducting I, II, III.....	3
MUS	205	—	Music Performance (Violin, Viola, Cello or Bass)	6
MUS	205	—	Music Performance (Orchestra).....	6
				27

Students minoring in any one of the three minors for non-music majors listed above are urged to elect ED 141, Methods of Teaching in the Secondary School—three hours credit.

Music Minor for Elementary Education Majors

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>	
MUS	2	—	Sight Singing and Notation I.....	2
MUS	3	—	Sight Singing and Elementary Theory II.....	2
MUS	4	—	Sight Singing and Harmonic Analysis III.....	2
MUS	10, 11, 12*	—	Beginning Class Piano I, II, III	
<i>or</i>				
MUS	20, 21, 22*	—	Intermediate Class Piano I, II, III	
<i>or</i>				
MUS	205*	—	Music Performance (Piano).....	4
MUS	40, 41, 42	—	Introduction to Music Education I, II, III.....	6
MUS	48	—	Music Appreciation	2
MUS	205	—	Music Performance (Choral).....	3
MUS	210	—	Music Literature for Elementary Grades.....	3
MUS	212	—	Music Activities for Classroom Teachers	
<i>or</i>				
MUS	274	—	Teaching Music Appreciation	3
				26-27

*Students may choose one of the three designated course groups to complete work in this minor.

BACHELOR OF MUSIC MINORS

Instrumental Music Emphasis

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>	
MUS	262	—	Symphonic Literature	3
MUS	270	—	Eighteenth Century Harmony and Forms....	3
MUS	271	—	Nineteenth Century Harmony and Forms....	3
MUS	272	—	Twentieth Century Harmony and Forms....	3
MUS	276	—	American Music	3
MUS	*205	—	Music Performance	9
			Electives	3
				27

*Credit in Music 205 is to be earned by performance in musical organizations such as Band, Orchestra or Choir or by taking individual instructions in a medium other than that selected as the major performance area.

Vocal Music Emphasis

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
MUS 202	— Opera Workshop	3
MUS 214	— Choral Literature from 1750.....	3
MUS 242	— Vocal Repertoire: German Lieder.....	2
MUS 243	— Vocal Repertoire: French and English: 19th and 20th Centuries.....	2
MUS 244	— Vocal Repertoire: 17th and 18th Centuries....	2
MUS 270	— Eighteenth Century Harmony and Forms.....	3
MUS *205	— Music Performance	12
		27

*Credit in Music 205 is to be earned by performance in musical organizations such as Band, Orchestra or Choir or by taking individual instruction in a medium other than that selected as the major performance area.

NOTE: In addition to the 27 hours of study in foreign language required of all students seeking a Bachelor of Music Degree, those who wish a degree with vocal emphasis must earn an additional 15 hours credit in either French, German or Italian, with the 15 hours being subtracted from the 18 hours of electives available in the senior year.

Music Minor (for Liberal Arts Majors)

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
MUS 2	— Sight Singing and Notation I.....	2
MUS 3	— Sight Singing and Elementary Theory II.....	2
MUS 4	— Sight Singing and Harmonic Analysis III.....	2
MUS 52, 53, 54	— Harmony I, II, III.....	9
MUS 158, 159, 160	— History of Music I, II, III.....	6
MUS *205	— Music Performance	6
		27

*Three hours of Music 205 credit must be earned by taking 3 continuous quarters of individual instruction in a single musical medium. The other 3 hours of Music 205 credit are to be earned by performance in any musical organization such as Band, Choir or Orchestra.

Music Performance Requirements for Music Majors

Major Instrument Performance—The music major must demonstrate continuous growth in his ability to perform on his major instrument. Each student will be expected to appear frequently as a soloist in the weekly student recital series. During the senior year he will be presented in joint recital with other graduating seniors. Such proficiency in performance requires continuous study of the major instrument, or voice, under the tutorship of a private teacher.

Major Ensemble Performance—The music major must participate each quarter in the music organization which his instrument normally belongs—band, orchestra, or choir. Piano and organ majors may select either a vocal or an instrumental organization.

Music Division Chorus and Orchestra—All music majors participate in the performance of large works for chorus and orchestra.

Recital Attendance—Music majors must attend the weekly student recital series and a designated number of faculty recitals, and locally sponsored concerts each quarter.

Music Performance Organizations and Applied Music Study

The Division of Music offers a complete program in music performance, and opportunities for individual studio instruction, to all interested and qualified college students. A description of the performing organizations, and the areas in which individual instruction is available is outlined below:

Music Division Chorus and Orchestra

The entire personnel of the Division of Music holds regularly scheduled bi-weekly meetings for the purpose of the study and performance of large works for chorus and orchestra. In connection with these bi-weekly convocations, the students taking part in private study with members of the Music Division faculty are presented in recital. Participation in this activity is required of all music majors and is open to the general college student who wishes to participate.

Concert Band

The Concert Band is open to all band performers who wish a more limited band experience than is provided by the Symphonic Winds. This band provides music for the winter and spring quarter athletic events and a spring concert open to the public.

Marching Band

During the fall term the Marching Band "Pride of the Rockies" is open to all students who wish marching band experience.

Symphonic Winds

The Symphonic Wind Ensemble is limited in enrollment to approximately 70 members. This organization performs the best literature available for the band. Over the years this CSC band has become known throughout the region for its excellence as a concert organization. The Symphonic Winds presents many concerts annually. A tour of Colorado each year receives enthusiastic acclaim throughout the state.

Mixed Concert Choir

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 contem-

porary composers. The organization is recognized widely for its excellence as a choral performing group. It is in demand throughout the region for concert appearances.

Chamber Singers

A select group of approximately twenty singers chosen by audition from the membership of the Concert Choir. The choir utilizes literature from the Renaissance to the present day specializing in material specifically designed for chamber ensemble.

Men's Concert Choir

This group is open to all male students who enjoy singing the standard literature for men's voices.

Women's Concert Choir

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 college events. Elementary education majors are especially urged to apply for membership.

Madrigal Singers

The Madrigal Singers are a chamber vocal group composed of 12 members in the performing organization. The interest in the madrigal literature, and the sight-reading experience has made membership in this organization sought after by music students. As a result, many student "visitors" attend the rehearsal for the experience gained. The performing membership changes upon a try-out basis.

Opera

An opera workshop is scheduled continuously through the school year. This group studies and performs opera literature both in larger and smaller forms. See course descriptions for further information.

Symphony Orchestra

The college symphony orchestra is a rapidly developing organization in which the wealth of the world's most outstanding music is performed. The orchestra is presented regularly in local concerts and participates in performances of the large works for chorus and orchestra performed by the faculty and students of the Division of Music.

Small Instrumental Ensembles

Many small instrumental ensembles are organized and function regularly as a part of the music performance programs. These ensembles include a woodwind quintet, brass ensemble, clarinet ensemble, saxophone ensemble, string quartet, and French horn ensemble. Other combinations are developed to meet the needs of the students.

Small Vocal Ensembles

In addition to the Madrigal Singers, quartets, trios, opera ensembles, and the like are organized to meet the needs of the talented vocalists. These organizations are available to students upon the invitation of the instructors.

Individual Instruction in Applied Music

The faculty of the Division of Music offers private lessons in music in all major instruments and voice. Students enrolled receive a minimum of one-half hour lesson each week.

Individual Instruction in Voice

Individual Instruction in Piano

Individual Instruction in Organ

Individual Instruction in Stringed Instruments
(violin, viola, cello, bass)

Individual Instruction in Percussion Instruments

Individual Instruction in Woodwind Instruments
(flute, clarinet, oboe, English horn, bassoon, saxophone)

Individual Instruction in Brass Instruments
(French horn, trumpet, trombone, baritone, tuba)

Registration Procedures for Music Performance Organizations and Individual Lessons in Applied Music

Music Majors

1. Each music major will normally enroll for two quarter hours credit in music performance activities and applied music study each term in residence.

2. The course number and title will appear on the student's registration as follows:

MUS 205 Music Performance (Major) 2 hours

3. In fulfilling the requirements for the course the student will:

- a) Receive one private lesson each week.
- b) Attend the weekly student recital series and the "performance class" seminars.
- c) Perform on his major instrument in one of the primary music organizations in the Division of Music—band, orchestra, or chorus. (Piano or organ majors may select either a vocal or an instrumental organization.)
- d) Participate in the Music Division Chorus and Orchestra. This is an activity providing the student an opportunity to perform large works for chorus and orchestra. Required of all music majors.
- e) Perform as a member of small ensembles at the discretion of his teacher.
- f) Attend a designated number of concerts and recitals each quarter.
- g) Fulfill performance requirements before graduation.

4. The student's final grade for the quarter will be assigned by the major instrument instructor. The grade will be computed from the composite grades earned in the areas described above.

5. The official transcript of the music major must show not less than 22 quarter hours of music performance and applied music credit at the time of graduation.

Non-Music Majors

1. The college student who wishes to enroll for individual instruction in applied music or a music activity such as band, orchestra, or choir will be issued an enrollment card by the Division of Music as follows:

MUS 205 Music Performance 1 hour

2. One hour credit each quarter will be granted to the non-music major who is enrolled in a music organization or who studies an instrument or voice privately with a member of the Music Division faculty.

3. Individual lessons with Division of Music faculty members will be arranged by the Division of Music secretary at the time of registration.

Admission to the Teacher Education Program

In addition to meeting the general requirements for formal admission to the teacher education program at the 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. The student must 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. He must demonstrate to a jury of the music faculty his ability to read music vocally at sight with the use of solfege symbols.

4. He must show acceptable aptitude for music study as demonstrated by his record in the required freshman and sophomore music courses—Sight-reading and Ear Training, Harmony, and Literature and Styles.

5. He must demonstrate, to the satisfaction of a reviewing music education committee, professional promise as a teacher.

Description of Courses

2. **SIGHT-SINGING AND NOTATION I.** *Two 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.

3. **SIGHT-SINGING AND ELEMENTARY THEORY II.** *Two hours credit.*

Prerequisite, MUS 2. 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.

4. SIGHT-SINGING AND HARMONIC ANALYSIS III. *Two hours credit.*

Prerequisite, MUS 2 and 3. Continuation of sight-reading, ear training and dictation; chords of seventh and ninth, cadences, analysis, and ear training of standard harmonic materials.

10. BEGINNING CLASS PIANO I. *One hour credit.*

This is a course designed to fit the needs of the music major who does not have a background in piano. This includes reading skills, techniques, and style necessary to the playing of simple accompaniments, community songs and other piano music used in the public schools.

11. BEGINNING CLASS PIANO II. *One hour credit.*

This is a course designed to fit the needs of the music 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.

12. BEGINNING CLASS PIANO III. *One hour credit.*

This is a course designed to fit the needs of the music 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.

13. BEGINNING STRING INSTRUCTION I. *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.

14. 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.

15. 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.

20. INTERMEDIATE CLASS PIANO I. *One hour credit.*

This is a course in functional piano designed to fit the needs of the music major who has a slight background in piano. In this course is included the teaching of reading skills, technique, and style necessary to the playing of simple accompaniments, community songs and other piano music used in the public schools.

21. INTERMEDIATE CLASS PIANO II. *One hour credit.*

This is a course in functional piano designed to fit the needs of the music 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.

22. INTERMEDIATE CLASS PIANO III. *One hour credit.*

This is a course in functional piano designed to fit the needs of the music 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 in the public schools.

40. INTRODUCTION TO MUSIC EDUCATION I. *Two hours credit.*
Prerequisite, MUS 4. 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.

41. INTRODUCTION TO MUSIC EDUCATION II. *Two hours credit.*
Prerequisite, MUS 40. A continuation of MUS 40. Methods and materials for the teaching of singing, music reading and related skills, music listening, and rhythm in the public school music program.

42. INTRODUCTION TO MUSIC EDUCATION III. *Two hours credit.*
Prerequisite, MUS 41. A continuation of MUS 41. A study of lesson planning, and classroom techniques in the teaching of music reading, appreciation, creative music, music listening, and rhythm. Techniques in conducting high school music activities.

43. ADVANCED SIGHT-SINGING AND CHORAL LITERATURE I.
One hour credit.

Prerequisite, MUS 2, 3 and 4. This course is a continuation of the first year courses in sight-singing and will provide additional and more advanced training in the techniques of sight-singing and ear training of melodic, harmonic and rhythmic materials.

44. ADVANCED SIGHT-SINGING AND CHORAL LITERATURE II.
One hour credit.

Prerequisite, MUS 43. Continuation of training in sight-singing, ear training, and includes rhythmic, melodic and harmonic dictation. Emphasis will be given to the reading of a wide variety of standard choral works graded to supply reading experiences of progressive difficulty.

45. ADVANCED SIGHT-SINGING AND CHORAL LITERATURE III.
One hour credit.

Prerequisite, MUS 44. A continuation of the sight-singing, ear training, and dictation experiences given in the preceding courses of this series. Reading experience in this course will include standard materials for mixed women's and men's choruses, and the large vocal forms; opera and oratorio.

48. 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.

49. MUSIC FUNDAMENTALS I. *Two hours credit.*

A comprehensive study of the rudiments of music for the classroom teacher. Practice is given in simple ear training, music writing through dictation, rhythm work, syllable reading, and group singing.

50. MUSIC FUNDAMENTALS II. *Two hours credit.*

Prerequisite, MUS 49. This course is a continuation of MUS 49. Advanced music reading, pitch, rhythm, and theory will be studied. Simple chord progressions, their application to simple melodies, and their use on the keyboard will be studied. Simple melody instruments will be presented as teaching devices. Song material will be selected from basal music book series for school children (grades 4-6).

52. HARMONY I. *Three hours credit.*

Prerequisite, MUS 4. A review of scales, intervals, triads and their inversions. Correlated studies in ear training, dictation, sight-singing and composition. Normal chord progressions.

53. HARMONY II. *Three hours credit.*

Prerequisite, MUS 52. A structural harmony unit consisting of seventh chords, inversions, ninth chords and modulations. Correlated studies of ear training, dictation, sight-singing and composition.

54. HARMONY III. *Three hours credit.*

Prerequisite, MUS 53. A structural unit of chromatic harmony, altered chords, embellishing chords, modulations and original compositions.

58. MUSIC LITERATURE AND STYLES I. *One hour 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.

59. MUSIC LITERATURE AND STYLES II. *One hour 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.

60. MUSIC LITERATURE AND STYLES III. *One hour 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.

70. LABORATORY ORCHESTRA I. *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.

71. LABORATORY ORCHESTRA II. *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.

72. LABORATORY ORCHESTRA III. *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.

152. COUNTERPOINT. *Three hours credit.*

Prerequisite, MUS 54. 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.

153. FORM AND ANALYSIS. *Three hours credit.*

The purpose of this course is to acquaint the student with the structure of music, beginning with the single note or figure through to the analysis of the sonata, rondo, and variation forms.

154. INSTRUMENTATION. *Three hours credit.*

Prerequisite, MUS 152, 153. 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.

158. HISTORY OF MUSIC I. *Two hours credit.*

Prerequisite, MUS 2, 3 and 4. The historical changes in music from earliest times to the end of the sixteenth century with emphasis on the changes in style.

159. HISTORY OF MUSIC II. *Two hours credit.*

Prerequisite, MUS 158. 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.

160. HISTORY OF MUSIC III. *Two hours credit.*

Prerequisite, MUS 159. A study of the musical changes caused by the romantic, post-romantic and impressionistic periods from 1800 to 1920.

162. INSTRUMENTAL TECHNIQUES AND CONDUCTING I. *One hour credit.*

Prerequisite, MUS 2, 3, 4, 43, 44, 45, 52, 53 and 54. 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.

163. INSTRUMENTAL TECHNIQUES AND CONDUCTING II. *One hour credit.*

Prerequisite, MUS 162. 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.

164. INSTRUMENTAL TECHNIQUES AND CONDUCTING III. *One hour credit.*

Prerequisite, MUS 163. 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.

165. TEACHING INSTRUMENTAL MUSIC. *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.

170. CHORAL TECHNIQUES AND CONDUCTING I. *One hour credit.*

This course provides the student with supervised experience in choral conducting. Problems and techniques considered and applied are rehearsal procedures, voice production, diction, tone color, dynamics, intonation, the organization of the high school choral group, the literature for the chorus.

171. CHORAL TECHNIQUES AND CONDUCTING II. *One hour credit.*

This course provides the student with supervised experience in choral conducting. Problems and techniques considered and applied are rehearsal procedures, voice production, diction, tone color, dynamics, intonation, the organization of the high school choral group, and literature for the chorus.

172. CHORAL TECHNIQUES AND CONDUCTING III. *One hour credit.*

This course provides the student with supervised experience in choral conducting. Problems and techniques considered and applied are rehearsal procedures, voice production, diction, tone color, dynamics, intonation, the organization of the high school choral group, and literature for the chorus.

190. CLARINET CLASS. *One hour credit.*

To develop a teaching knowledge 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 clarinet.

191. TRUMPET CLASS. *One hour credit.*

A concentrated course in trumpet to develop a teaching knowledge of the instrument and to develop enough playing skill to demonstrate good tone, technique, and breath control.

192. BRASS CLASS. *One hour credit.*

To develop a teaching knowledge of brass instruments. To acquire sufficient skill for purposes of demonstration.

193. 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.

194. 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.

195. 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.

196. 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.

197. FLUTE AND SAXOPHONE CLASS. *One hour credit.*

Prerequisite, MUS 190. 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 these instruments.

200. WORKSHOP IN CHORUS AND ORCHESTRA. *Three hours 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.

201. STAGE AND OPERA TECHNIQUES. *Two 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.

202. OPERA WORKSHOP. *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.

205. MUSIC PERFORMANCE. *Maximum of 30 hours credit.*

Credit for all music performance courses and music activities such as band, orchestra, choir, small ensembles, and individual lessons in applied music will be entered on the student's registration under the title and course number appearing above.

206. 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 teaching others how to listen to music intelligently.

210. MUSIC LITERATURE FOR ELEMENTARY GRADES. *Three hours credit.*

Prerequisite, MUS 49 and 249. A course designed to further acquaint the classroom teacher and music supervisor with the music literature and instructional aids used in the elementary grades. Collections are made of: (1) songs; (2) rhythmic activities; (3) listening lessons; (4) elementary chorus selections; and (5) program and assembly materials. For both elementary classroom teachers and music supervisors.

211. IMPROVEMENT OF INSTRUCTION IN MUSIC READING. *Three hours credit.*

Prerequisite, MUS 40, 41, 42, 49 and 249. A complete analysis of the program in music reading in the elementary grades. Includes an evaluation of basic methods and materials, curriculum building in music reading, and a survey of published materials suitable for classroom use.

212. ACTIVITIES FOR TEACHERS OF CLASSROOM MUSIC. *Three hours credit.*

Activities in music for children requiring a minimum of musical skill on the part of the teacher. Includes a study of such activities as playing and reading music with simple melody instruments, the use of the autoharp for song accompaniment, the rhythm band, the construction of simple instruments, and the teaching of songs and rhythmic activities through the use of the phonograph.

213. CHORAL LITERATURE TO 1750. *Three hours credit.*

A study of the stylistic trends, musical characteristics and performance practice of choral music written before 1750.

214. CHORAL LITERATURE FROM 1750. *Three hours credit.*

A study of the stylistic trends, musical characteristics and performance practice of choral music written after 1750.

215. 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.

216. METHODS AND MATERIALS FOR CLASS VOICE INSTRUCTION. *Three hours credit.*

Organization of the voice class, a study of voice production problems, procedures and techniques such as posture, breath control, resonance, and interpretation through proper diction. Attention will be called to certain advantages to be gained through a class type of instruction.

217. 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.

218. PRINCIPLES OF PIANO TEACHING. *Three hours credit.*

Prerequisite, piano performance Level II or above. A laboratory course exploring musical objectives and basic principles of studio and classroom piano teaching. Observation and participation in group and individual piano instruction. Readiness and normal progress defined. Individual differences. Basic keyboard techniques. Interpretation and styles. Criteria for selecting teaching materials. Studio procedures. Recital planning.

219. 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.

220. 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.

223. 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.

224. 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.

225. 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.

241. 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.

242. VOCAL REPERTOIRE: GERMAN LIEDER. *Two hours credit.*

A course in performance of nineteenth and twentieth century German art song, with particular emphasis upon style, technical requirements and diction.

243. VOCAL REPERTOIRE: FRENCH AND ENGLISH: 19TH AND 20TH CENTURIES. *Two hours credit.*

A course in performance of nineteenth and twentieth century English and French song, with particular emphasis upon style, technical requirements and diction.

244. VOCAL REPERTOIRE: 17TH AND 18TH CENTURIES. *Two hours credit.*

A course in performance of songs and airs before the nineteenth century, with particular emphasis upon style, technical requirements, and diction in English, Italian, French and German.

249. MUSIC METHODS AND MATERIALS FOR ELEMENTARY TEACHERS. *Two hours credit.*

Prerequisite, MUS 2 or 49. A comprehensive methods course for the elementary classroom teacher covering the teaching of singing, rhythm, music reading, creative activities and music listening. A list of recorded music and song literature for each grade will be developed by the class. Grade placement for all aspects of the music program will be studied.

250. SEMINAR IN MUSIC EDUCATION. *Three hours credit.*

Prerequisite, MUS 40, 41, 42; ED 141, 144, 251. A course designed for seniors who have completed student teaching. Each student will work independently on a problem occurring in his student teaching work. The class will be conducted as a seminar with reports and discussion of the students' problems.

251. TEACHING SECONDARY SCHOOL MUSIC. *Three hours credit.*
Prerequisite, MUS 40, 41, 42; ED 141, 251. A class in junior and senior methods and materials for advanced students and experienced teachers.

253. MUSIC FOR THE EXCEPTIONAL CHILD. *Three hours credit.*
Prerequisite, MUS 49, 249. No prerequisite for music majors. Music experiences, methods, and materials for retarded, physically handicapped, emotionally maladjusted, academically gifted and the musically talented; discussed from the viewpoint of both music therapy and music education. Observation of music classes in the campus special education school.

256. PSYCHOLOGY OF MUSIC. *Three hours credit.*
The subjects included in this course are measurements of musical talent, tests and measurements in music, the psychology of musical listening and musical performance.

258. COMPOSITION. *Three hours credit.*
Prerequisite, MUS 52, 53, 54, 152, 153, 154. The course aims at giving students who have had some experience in composition and are familiar with basic harmony and forms the opportunity to find the right way to express musical ideas, to increase their power to develop musical material intellectually, and to gain a clearer understanding of contemporary styles and techniques.

262. SYMPHONIC LITERATURE. *Three hours credit.*
A study of the literature for the symphony orchestra from the time of Haydn and Mozart to the writings of present-day composers, leading to an understanding and appreciation of the larger works in music.

265. HISTORY OF OPERA. *Three hours credit.*
A survey of the history of opera from 1600 to the present. This will include a study of the aesthetic climate, stylistic, musical and dramatic development and methods of character delineation within the various periods of music history.

270. EIGHTEENTH CENTURY HARMONY AND FORMS. *Three hours credit.*

Construction and harmonization of melodies. Review of figured bass and harmonic practices deriving from a study of Bach chorales, part forms, rondo, variation, and sonata principles appearing in eighteenth century music. Altered chords, modulation, non-chordalism, and tonality concepts within Baroque and Classic periods.

271. NINETEENTH CENTURY HARMONY AND FORMS. *Three hours credit.*

Harmonic materials of the nineteenth century, beginning with a brief review of secondary sevenths, diminished sevenths, and continuing with augmented chords, ninth chords, modulation, sequence, and the whole tone scale. Study of simple part forms—song form with trio, rondo forms, variations and the sonata allegro—as used in the nineteenth century. Analysis of compositions in all major forms. Original compositions in shorter forms.

272. TWENTIETH CENTURY HARMONY AND FORMS. *Three hours credit.*

This course is concerned with new compositional techniques employed in twentieth century music as revealed in new concepts of melody, harmony, rhythm and form. When possible, this course should be combined with MUS 385, Seminar: New Music.

274. TEACHING MUSIC APPRECIATION. *Three hours credit.*
Prerequisite, MUS 42, 249; ED 142, 143. Developing a music listening program for schools covering methods of teaching, recorded materials and the construction of a graded program. The published recorded material suitable for both elementary and high school students is studied, as well as reference and textbooks dealing with music appreciation.

276. AMERICAN MUSIC. *Three hours credit.*

A comprehensive study of the music of our country and the people who have produced it, tracing the development of vocal and instrumental music from the time of the Puritans and Pilgrims to today. Some topics are folk music, symphony orchestra, jazz, and new film music. For everyone, not musicians alone.

277. CHURCH MUSIC. *Three hours credit.*

This course gives a brief survey of music in the history of the Christian church. The philosophy of church music and its real function in worship is studied. The administration of the total music program in the church is outlined. Suitable materials for all occasions are evaluated and classified.

279. ADMINISTRATION AND SUPERVISION OF THE MUSIC PROGRAM. *Three hours credit.*

A course designed to acquaint the school administration with the problems of the administration and supervision of the music program. The content includes the place of music in the school program, music equipment, schedule, budget, instructional problems, and public relations in music.

295. THE ART OF MUSIC LISTENING. *Three hours credit.*

A course designed to provide the layman with essential information about music, and to contribute to those understandings that will make him a more intelligent listener. Content of the course includes music in its relation to significant historical epochs, the relation of the arts, and the developing of a familiarity with many examples of standard music literature.

305. SUPERVISING ELEMENTARY TEACHERS OF MUSIC. *Three hours credit.*

Procedures for supervising the music program in the elementary grades, cooperative curriculum building, planning courses of study and units of work, the induction of the beginning teacher, human relations, and in-service education of the classroom music teacher.

306. TEACHER EDUCATION IN MUSIC. *Five hours credit.*

The teacher education program in music including both the pre-service and in-service education of the elementary classroom teacher, the teacher's college music curriculum, the administration of college music, the junior college, and the music program in general education.

310. PROBLEMS OF INSTRUMENTAL SUPERVISION. *Four hours credit.*

A discussion and study of the problems of instrumental supervision based upon an analysis of the professional problems found to exist in the field of teaching instrumental music.

311. IMPROVEMENT OF INSTRUCTION IN INSTRUMENTAL MUSIC. *Three hours credit.*

A study of the instrumental approach in the development of pitch, rhythm, melody and sight reading. Special emphasis will be given to the development of instrumental performance and musicianship.

317. INSTRUMENTAL TECHNIQUES AND MATERIALS (VIOLIN AND VIOLA). *Three hours credit.*

Prerequisite, MUS 193. A discussion and presentation of the methods used in both class violin and viola teaching and private lessons and a study of the materials used in class teaching. Continued proficiency in actual performance by the student.

318. INSTRUMENTAL TECHNIQUES AND MATERIALS (CELLO AND BASS). *Three hours credit.*

Prerequisite, MUS 193. This course provides an opportunity for the graduate student to study the techniques of cello and string bass, to gain additional proficiency in playing, to study materials suitable for all levels of instruction, and to become familiar with the solo and small ensemble literature for these instruments.

319. INSTRUMENTAL TECHNIQUES AND MATERIALS (WOOD-WINDS). *Five hours credit.*

Prerequisite, MUS 190, 195 or 197. This course provides an opportunity for the graduate student to study the techniques peculiar to instruments of the woodwind family; to gain additional proficiency in playing; to study teaching materials suitable for both individual and group instruction; and to become familiar with the standard solo and small ensemble literature for these instruments.

320. INSTRUMENTAL TECHNIQUES AND MATERIALS (BRASS). *Five hours credit.*

Prerequisite, MUS 191 or 192. An advanced course in the techniques, theories and problems of teaching and playing brass instruments.

323. COMPARATIVE VOICE METHODS AND MATERIALS. *Three hours credit.*

A survey of the development of singing through the centuries, classifying the known theories and teaching concepts. Correlation of available sources of bibliographic information provides a core of organized information and orientation for research in this and related fields. Each student takes one private lesson per week.

324. COMPARATIVE STRING METHODS AND MATERIALS. *Three hours credit.*

A comparison of the materials used in string teaching. The various methods for student requirements as they apply to individual cases.

325. COMPARATIVE PIANO TEACHING METHODS AND MATERIALS. *Three hours credit.*

A review of past and present piano methods, combined with the fundamentals of piano teaching and playing. Demonstrations of methods and techniques. Private lessons are required.

350. PRACTICAL ARRANGING. *Three hours credit.*

Prerequisite, MUS 154. A project course in arranging for school instrumental and vocal groups. Projects include arranging for small ensembles in both standard and unusual combinations, transcription of instrumental and vocal descants for the enrichment of song literature.

351. ADVANCED CONDUCTING. *Five hours credit.*

Prerequisite, MUS 162, 163, 164 or 170, 171 and 172. A laboratory course in advanced problems of instrumental and choral conducting. Supervised conducting experience is provided.

360. HISTORICAL ANALYSIS OF MUSIC STRUCTURE. *Five hours credit.*

Prerequisite, MUS 158, 159, 160. A detailed study of the structure of music from the period of plain song to the works of Palestrina. A thorough study of the cadential, harmonic, melodic and rhythmic changes which take place in this period.

361. AESTHETICS AND CRITICISM. *Three hours credit.*

A study of the standard literature of aesthetics. A consideration of art in its relation to experience with specific reference to the function of music in an educational program.

370. AURAL THEORY. *Three hours credit.*

A study of an aural approach to the problem of pitch and rhythm in music, with special emphasis on its application to music reading problems encountered in elementary and secondary schools.

380. SURVEY OF MUSIC HISTORY. *Three hours credit.*

A survey of music history beginning with Greek music and continuing to the present, designed specifically as a comprehensive review for the new graduate student. Emphasis is placed on styles and characteristics of the music of the Renaissance and succeeding periods. Study of musical scores and outside listening assignments are required.

- 381. SEMINAR: THE BAROQUE PERIOD.** *Three hours credit.*
 Music from 1600 to 1750. Beginning and development of opera from its Florentine beginnings through Venetian, Neapolitan and French styles; growth of chamber, orchestral and solo instrumental music; religious vocal music; principal forms, including sonata, suite, concerto, concerto grosso, oratorio, motet, fugue, toccata, prelude. Emphasis placed on compositions of Handel and J. S. Bach.
- 382. SEMINAR: THE CLASSIC PERIOD.** *Three hours credit.*
 Historical and cultural influences bearing upon the emergence of eighteenth century classicism in music. The composers, representative works, forms, styles, and media of the Classic Era. Haydn, Mozart, and Beethoven and their treatment of the sonata principle.
- 383. SEMINAR: THE ROMANTIC PERIOD.** *Three hours credit.*
 The course will be devoted to the analysis of representative music works of the Romantic period; scores and recorded music will be studied. Related literary movements will be discussed and research projects will be carried out concerning the aesthetic theories and musical criticism of the time.
- 384. SEMINAR: BEETHOVEN.** *Two hours credit.*
 The life and works of Beethoven. Readings will be assigned as a basis for study and discussion of Beethoven's life and times. Special topics will be developed by individual students. A general review of the composer's complete works will be complemented by score and record study and analysis of representative compositions.
- 385. SEMINAR: NEW MUSIC.** *Two hours credit.*
 This course is primarily concerned with new content and new media as revealed in music of the twentieth century. Literature and biography will be stressed in this course while the actual technical practices of modern composers will be more thoroughly investigated in the companion course, MUS 272, Twentieth Century Harmony and Forms.
- 401. RESEARCH SEMINAR IN MUSIC EDUCATION.** *Five hours credit.*
 Analysis of studies in music education; writing and research techniques for dissertations and field studies; a survey of critical problems in music education; the preparation of the research outline.
- 402. FOUNDATIONS OF MUSIC EDUCATION.** *Three hours credit.*
 A critical analysis of instructional procedures in teaching aural, rhythmic, and theoretical concepts in music. A study of philosophical, psychological, and sociological backgrounds of education as related to the arts. Symposium of advanced graduate students and music education faculty in addition to the regularly scheduled class meetings.
- 420. CRITERIA FOR MUSIC ANALYSIS AND COMPARISON.** *Four hours credit.*
 MUS 420 is designed as an introductory course to acquaint the candidate with the subtleties of analytical and comparative music problems.
- 421. PRACTICUM IN ARRANGING AND PERFORMANCE.** *Five hours credit.*
 Prerequisite, MUS 420. This course will deal with transcribing, editing, and performing of valuable music from unusable original forms to useful available material for pedagogic, historic and concert occasions. Stylistic practices will be given major consideration. Music of the Baroque and Pre-Baroque eras will be the chief sources of material.

Division of Nursing

Associate Professors: Huber, McMinn, O'Neal.

Assistant Professors: Sawatzky, Self, Woods.

Instructors: Carlson, Hallan, Payton, White.

Colorado State College has established a new Division of Nursing in response to state and local needs for nurse practitioners prepared to function at the professional level. Since the program was initiated, it has been guided by consultants from the Colorado Board of Nursing and by nationally recognized leaders in nursing education. The program is being developed under the direction of qualified nurse faculty members.

PURPOSE:

The purpose of the program is to prepare qualified college students for staff level positions as professional nurses in any setting and to provide the foundation for graduate study in nursing. Graduates may progress under supervised practice to positions requiring beginning competence in administrative skills, such as head nursing.

GENERAL:

The faculty of the Division of Nursing subscribes to the following beliefs:

Nursing, one of the essential health services, has a vital and unique contribution to make to the care of the sick, the prevention of disease, and the promotion and maintenance of health. Nursing care needs of people may range from the simplest to the most complex. Persons with varying levels of preparation help to meet those needs. Persons practicing at the professional level must be prepared to plan, give, and evaluate skilled nursing care and to provide leadership and guidance to other personnel in giving such care. Education for professional nursing should include the intellectual, technical and cultural components of both professional and liberal education. Opportunities should be provided for maximum development of students' potentialities as mature persons, responsible citizens and competent nurse practitioners. The program is being developed on the basis of these beliefs.

The program consists of four academic years and one summer quarter (or 13 quarters) of study and leads to a bachelor of science degree in nursing. The curriculum is planned to include an approximate balance of general and professional education. The first two years include courses in the biological, physical and behavioral sciences and the humanities. These provide a base of general education and contribute to education in the nursing major.

Education in the nursing major is offered largely on the upper division level. Nursing courses include theory and clinical practice in medical, surgical, and maternity nursing; the nursing care of children; psychiatric and public health nursing.

Preventive, remedial, supportive, and rehabilitative components of nursing are an integral part of all nursing courses. Relevant concepts from prerequisite general education courses are incorporated and applied in nursing courses. Learning experiences are cumulative and progressive and provide opportunities for students to use previous learning and to develop new skills and understandings. Opportunities are provided for students to guide the work of other members of the nursing team.

The faculty attempts to create a learning environment in which there is a dynamic student-teacher relationship; in which the student is highly motivated and in which the student accepts the relationship between planned learning experiences and the goal of professional nursing competence. Learning experiences are planned to stimulate intellectual curiosity and the use of critical thinking in the solution of nursing problems.

Total curricular offerings are planned and organized to assist students in the development of understandings, skills and attitudes necessary to:

1. Think rationally and communicate effectively.
2. Participate effectively as an informed and responsible citizen.
3. Live a full and useful life which is personally satisfying and socially acceptable.
4. Give complete nursing care to the ill and disabled according to their individual needs and within the framework of the physician's prescribed plan of care. Such care will include the following:
 - a. Manual and technical skills necessary to minister to the physical needs of the patient and to provide for his physical safety and comfort.
 - b. Interpersonal skills necessary to establish a creative, supportive and sustaining relationship with the patient and members of his family.
 - c. Teaching skills necessary to involve the patient and his family in health and self-care measures consistent with their understanding and ability.
5. Plan, delegate, direct and evaluate the work of others who participate in the nursing care of individual and groups of patients.
6. Function effectively as an individual and in cooperation with professional and citizens groups in the prevention of illness and promotion of health and safety.
7. Participate effectively in studies and activities for the improvement of total nursing services.
8. Accept responsibility for self-directed activity toward continued personal and professional growth.

Students in nursing have available to them all facilities of the college. They receive instruction in classrooms and laboratories of other Divisions as well as the Division of Nursing. The College Laboratory School, Pre-Nursery School, and Special

Education Department provide excellent facilities for experience with well children and with exceptional children. Weld County General Hospital through a cooperative agreement with Colorado State College provides the major facilities for clinical practice in nursing. This new and modern hospital has a capacity of 350 beds plus 40 bassinets and includes facilities for nursing practice in medical, surgical, maternity nursing and nursing care of children.

Experience in Public Health Nursing will be provided at the Weld County Health Department. Fort Logan Mental Health Center in Denver, will provide experience in psychiatric nursing. In this facility students will be members of a team of professional persons who provide expert care for the mentally ill. The team includes psychiatrists, clinical psychologists, psychiatric social workers, professional nurses, and psychiatric technicians. Fort Logan is a teaching as well as a treatment center and provides educational experience for a variety of students preparing for mental health careers.

Upon the successful completion of the program, graduates will be eligible to write the examination given by the Colorado State Board of Nursing. Satisfactory completion of this examination enables the graduate to practice nursing in Colorado as a registered nurse (R.N.).

A total of 180 academic quarter hours plus six quarter hours of physical activity is required for graduation.

The following is the required program:

1. General education, foundation and contributory courses totaling 97 academic quarter hours.
2. Nursing courses totaling 83 academic quarter hours.
3. Physical education activity courses 6 quarter hours.

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
Freshman Year			
COM	1	— Elementary Composition I.....	3
COM	2	— Elementary Composition II.....	3
COM	3	— Principles of Speech.....	3
PCG	20	— General Psychology	3
USH	72	— United States History.....	3
PSCI	40	— National Government of the U. S.....	5
SOC	50	— Principles of Sociology.....	5
CHEM	40	— Principles of Chemistry I.....	5
CHEM	41	— Principles of Chemistry II.....	5
CHEM	42	— Introductory Organic Chemistry.....	5
NURS	10	— Introduction to Nursing.....	3
HPER		Physical Education Activity Courses.....	3

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
Sophomore Year			
HUM	1	— Introduction—The Greek and Roman Periods	3
HUM	2	— The Middle Ages and the Renaissance.....	3
HUM	3	— The Eighteenth to the Twentieth Centuries..	3
CHEM	147	— Biochemistry	5
ZOO	12	— Vertebrate Zoology	5
ZOO	212	— Mammalian Anatomy	5
ZOO	217	— Human Physiology	5
BOT	122	— General Bacteriology	5
HEC	98	— Normal Nutrition	3
PCG	21	— General Psychology and Human Performance	3
PCG	30	— Human Growth Processes and Developmental Tasks	5
HPER		Physical Education Activity Courses.....	3
			<hr/> 48

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
Junior Year			
(Summer quarter)			
NURS	100	— Basic Principles of Nursing.....	10
NURS	101	— Pharmacology	3
(Fall, Winter, Spring)			
NURS	102	— Maternity Nursing	10
NURS	103	— Medical-Surgical Nursing	10
NURS	104	— Psychiatric Nursing	10
PCG	142	— Teaching-Learning Process	3
HEC	282	— Nutrition in Disease.....	3
Elective		3
			<hr/> 52

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
Senior Year			
NURS	200	— Public Health Nursing.....	10
NURS	201	— Preventive Medicine and Public Health.....	3
NURS	202	— Nursing of Children.....	10
NURS	203	— Advanced Medical-Surgical Nursing.....	12
NURS	204	— Trends in Nursing.....	2
Elective		3
			<hr/> 40

10. INTRODUCTION TO NURSING. *Three credit hours.*
 An introduction to the broad field of nursing in the present social order. Historical and contemporary social forces are studied in relation to their influence on the development of nursing. Emphasis is on the unique responsibilities of the professional nurse in an increasingly complex system of health and medical care.

100. BASIC PRINCIPLES OF NURSING. *Ten credit hours.*
 An introduction to clinical nursing. Considers environmental, psychosocial and individual needs for optimum health. Designed to give students beginning understanding and ability to identify and meet basic nursing needs common to patients requiring medical and surgical treatment. Application of principles from natural and social sciences emphasized.

101. PHARMACOLOGY. *Three credit hours.*
 A study of the nature, action, therapeutic uses, toxicology, and desired therapeutic effects of drugs in common use. Concurrent with NURS 100.

102. MATERNITY NURSING. *Ten credit hours.*

A study of concepts basic to effective nursing care of mothers and infants. A developmental and family centered approach which places emphasis on normal aspects of the reproductive cycle. Physiological, psychological and cultural factors affecting maternal and infant health are considered. Supervised practice in the nursing care of selected mothers and infants.

103. MEDICAL-SURGICAL NURSING. *Ten credit hours.*

A study of concepts essential for effective nursing care of adults requiring medical or surgical treatment because of illness or accident. Includes nursing measures used in prevention, treatment and rehabilitation. Guided participation in the operating room and medical and surgical units. Emphasis is on the application of appropriate knowledge and skills in identifying and meeting individual nursing needs.

104. PSYCHIATRIC NURSING. *Ten credit hours.*

A study of the principles of nursing care of the mentally ill. Content includes causes, behavior patterns, treatment, and prevention of mental illness. Continues the study of emotional needs of patients, dynamics of personality development and interpersonal relationships introduced in other courses. Major emphasis is on the therapeutic role of the nurse in the care of psychiatric patients. Supervised clinical practice.

202. NURSING OF CHILDREN. *Ten credit hours.*

A study of the child as an individual, as a member of a family unit, and as a contributing member of society. In discussing disorders peculiar to children, the emphasis is placed upon the effects of illness on normal growth and development. Utilizing the developmental approach, the course discusses the individual from infancy through adolescence. Includes supervised clinical practice.

200. PUBLIC HEALTH NURSING. *Ten credit hours.*

An introduction to the philosophy and principles of Public Health Nursing. Responsibilities and activities of the nurse in a generalized Public Health Nursing program are studied. Emphasis is given to the role of the Public Health Nurse in family and community health service. Guided Public Health Nursing field practice.

201. PREVENTIVE MEDICINE AND PUBLIC HEALTH. *Three credit hours.*

A study of concepts derived from the field of Public Health which includes an introduction to Public Health Administration, environmental sanitation, biostatistics, and epidemiology.

203. ADVANCED MEDICAL-SURGICAL NURSING. *Twelve credit hours.*

Designed to increase the student's ability to identify and analyze problems of selected medical-surgical patients and to evolve and implement a plan of nursing care. Also introduces administrative skills applicable to nursing. Guided participation in planning for, directing, and evaluating the nursing care of groups of patients.

204. TRENDS IN NURSING. *Two credit hours.*

A study of trends, problems and issues in present day nursing. Examines purpose, structure and function of nursing organizations. Explores opportunities in various fields of nursing. Emphasis is on responsibilities of the graduate to herself, to society, and to the nursing profession.

Division of Sciences

Professors: Beel, Decker, Glidden, Koch, Moinat, Neal, Shoemaker, Stamper, Tollefson, Winchester.

Associate Professors: Aas, Fisch, K. Olson, Popejoy, Sund, Thomas, Woerner, Woods.

Assistant Professors: Anders, Fields, Fry, Gapter, Hamerly, Hayes, R. Johnson, Lindauer, Rich, Rumford, Schmidt, Shropshire, Schweers, Tomasi, Trowbridge.

Instructor: Tollar.

The Division of the Sciences includes the fields of General Science, Biology, Botany, Chemistry, Earth Science, Mathematics, Physics, Science Education, and Zoology. Degrees and majors and minors offered are:

BACHELOR OF ARTS DEGREE (Teacher Education)

Majors: Biological Science, Chemistry, Earth Science, Physical Science, Mathematics, Elementary Science, and Physics.

Minors: Chemistry, Earth Science, Elementary Science, Biological Science, Mathematics, and Physics.

BACHELOR OF ARTS DEGREE (Liberal Arts)

Majors: Biological Science, Chemistry, Physical Science, Physics, Mathematics, Medical Technology.

Minors: Biological Science, Chemistry, Earth Science, Mathematics, Medical Technology Minor in Chemistry, and Physics.

MASTER OF ARTS DEGREE (Teacher Education or Liberal Arts)

Majors: Biological Sciences, Botany*, Chemistry*, Mathematics, Physical Science, Physics*, Science Education, Zoology*.

*A Master's thesis is required in these Liberal Arts programs, but is optional in the Teacher Education Program.

SPECIALIST IN EDUCATION DEGREE

Area of Specialization: To be selected.

DOCTOR OF EDUCATION DEGREE (Teacher Education)

Area of Concentration: Science Education, Botany, Chemistry, Mathematics, Mathematics Education, Physics, Zoology.

Supporting Areas: Mathematics, Mathematics Education, Science.

BIOLOGICAL SCIENCE MAJOR**Bachelor of Arts Degree (Teacher Education)**

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.

3. The following required courses in the major:

a. General Approach

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BIO	151	— Cellular Biology	5
BIO	252	— Genetics	5
BOT	23	— General Botany II.....	5
CHEM	42	— Introductory Organic Chemistry	
		<i>or</i>	
CHEM	141	— Organic Chemistry I.....	5
ZOO	12	— General Zoology—Vertebrate	5
		Electives to be selected with approval of the student's adviser in an area of concentration	23
			48

Provision is made for specialization in the b or c plans below.

b. Ecological Approach

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BIO	101	— Plant and Animal Classification.....	5
BIO	102	— Biotic Communities	5
BIO	151	— Cellular Biology	5
BIO	252	— Genetics	5
BIO	251	— Evolution	3
BOT	23	— General Botany II.....	5
CHEM	42	— Introductory Organic Chemistry	
		<i>or</i>	
CHEM	141	— Organic Chemistry I	5
ZOO	12	— General Zoology—Vertebrate	5
BOT	225	— Plant Ecology I, Physiological Plant Ecology	
		<i>or</i>	
BIO	254	— Aquatic Biology	5
		Electives to be selected with approval of student's adviser.....	5
			48

c. Physiological Approach

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BIO	151	— Cellular Biology	5
BIO	252	— Genetics	5
BOT	23	— General Botany II.....	5
CHEM	42	— Introductory Organic Chemistry	
		<i>or</i>	
CHEM	141	— Organic Chemistry I.....	5
CHEM	147	— General Biochemistry	5
ZOO	12	— General Zoology—Vertebrate	5
BOT	222	— Plant Physiology I	

ZOO	217	—	or Human Physiology	5
			Electives to be selected with approval of student's adviser.....	13
				<hr/> 48

4. Basic courses prerequisite for majors in biological science: CHEM 40, CHEM 41, BOT 22, and ZOO 11. Students may apply to take the final examination in any of these courses. If a student passes a final, he is not required to take the course.

5. One minor of 27 quarter hours.

6. Twenty-four to 32 quarter hours of free electives to complete 180 quarter hours of academic credit required for graduation.

Biological Science Minor

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BIO	151	— Cellular Biology	5
BOT	22	— General Botany I.....	5
BOT	23	— General Botany II	5
ZOO	11	— General Zoology—Invertebrate	5
ZOO	12	— General Zoology—Vertebrate	5
		Biology electives to be selected with approval of student's adviser	2
			<hr/> 27

Earth Science Minor

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
ESCI	130	— General Meteorology	4
ESCI	131	— Descriptive Astronomy	4
ESCI	132	— Physical Geology	5
ESCI	133	— Historical Geology	5
		Earth Science electives to be selected with approval of student's minor adviser.....	9
			<hr/> 27

Elementary Science Minor

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BIO	151	— Cellular Biology	5
SCI	206	— Conservation of Natural Resources.....	4
SCI	109	— Science for Elementary Teachers.....	3
SCI	205	— Physical Science Concepts.....	4
SCED	270	— Teaching Science in the Elementary School....	3
		Science Electives	8
			<hr/> 27

Note: If a student's major is Arts and Sciences in Elementary Education, substitute a subject matter course for SCED 270.

Electives must be selected from: BIO 251, Evolution; ESCI 130, General Meteorology; ESCI 131, Descriptive Astronomy; ESCI 136, General Geology; SCI 208, Elementary Science Workshop; ZOO 114, Ornithology.

Science Minor for Home Economic Majors

This minor consists of three or four quarters of chemistry and bacteriology (BOT 122) and electives with approval of the minor program adviser to complete 27 hours.

SCIENCE MAJOR (With Concentration in Physical Science)**Bachelor of Arts Degree (Teacher Education)**

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Advanced Teacher Education 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.
3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
PHYS 61	— General Physics—Mechanics	5
PHYS 62	— General Physics—Electricity	5
PHYS 63	— General Physics—Sound, Light, and Heat.....	5
PHYS 161	— Mechanics I	4
PHYS 162	— Electricity and Magnetism I	4
CHEM 42	— Introductory Organic Chemistry	5
CHEM 46	— Qualitative Analysis	5
CHEM 142	— Organic Chemistry II	
	<i>and</i>	
CHEM 243	— Organic Chemistry III	
	<i>or</i>	
CHEM 145	— Quantitative Analysis I	
	<i>and</i>	
CHEM 246	— Quantitative Analysis II	10
	Physics Electives (200 course)	5
		48

4. Substitute PHYS 165, Modern Physics, for SCI 3 requirement.

5. Twenty-seven quarter hours Mathematics Minor required.

6. Twenty-four to 32 quarter hours of free electives to complete 180 quarter hours of academic credit required for graduation.

CHEMISTRY MAJOR**Bachelor of Arts Degree (Teacher Education)**

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.
3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
CHEM 46	— Qualitative Analysis	5
CHEM 141	— Organic Chemistry I	5
CHEM 142	— Organic Chemistry II	5
CHEM 145	— Quantitative Analysis I	5
CHEM 243	— Organic Chemistry III	5
PHYS 61	— General Physics—Mechanics	5
PHYS 62	— General Physics—Electricity	5

PHYS	63	—	General Physics—Sound, Light, and Heat.....	5
			Chemistry (electives to be selected with approval of student's adviser).....	8
				<hr style="width: 100%; border: 0.5px solid black;"/>
				48

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

5. Twenty-four to 32 quarter hours of free electives to complete 180 quarter hours of academic credit required for graduation.

EARTH SCIENCE MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.
3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
ESCI 130	— General Meteorology	4
ESCI 131	— Descriptive Astronomy	4
ESCI 132	— Physical Geology	5
ESCI 133	— Historical Geology	5
ESCI 134	— Mineralogy	4
ESCI 239	— Climatology	3
CHEM 42	— Introductory Organic Chemistry.....	5
	Electives to be selected with approval of student's adviser.....	18
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		48

Electives:

ESCI 231	— Introduction to Oceanography.....	3
ESCI 232	— Principles of Stratigraphy and Paleontology	4
ESCI 233	— Field Methods	3
ESCI 234	— Geomorphology	4
ESCI 235	— Rocky Mountain Geology.....	3
ESCI 236	— Petrology	5
ESCI 238	— Elementary Physical Meteorology.....	3
SCI 206	— Conservation of Natural Resources.....	4

4. One minor of 27 quarter hours. It is recommended that this minor be in either biology or chemistry.

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

6. Additional electives in astronomy, geology, and meteorology will be provided as faculty and equipment become available.

SCIENCE MAJOR (Junior High School Level)

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.

3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
BOT 22	— General Botany I	5
BOT 23	— General Botany II	5
CHEM 40	— Principles of Chemistry I	5
CHEM 41	— Principles of Chemistry II	5
PHYS 61	— General Physics—Mechanics	5
PHYS 62	— General Physics—Electricity	5
ZOO 11	— General Zoology—Invertebrate	5
ZOO 12	— General Zoology—Vertebrate	5
ESCI 136	— General Geology (If an Earth Science Minor is elected, select an additional four hours elective in place of ESCI 136)	4
	Electives*	4
		48

*Select a minimum of four hours from the following courses: BIO 151; BOT 122; or CHEM 42.

4. One minor of 27 quarter hours.

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

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

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
PHYS 63	— General Physics—Sound, Light, and Heat.....	5
ESCI 133	— Historical Geology	4
ESCI 130	— General Meteorology	4
ESCI 131	— Descriptive Astronomy	4
ESCI 238	— Elementary Physical Meteorology	3
BIO 251	— Evolution	3
BIO 252	— Genetics	5
SCI 206	— Conservation of Natural Resources.....	4
ZOO 217	— Human Physiology	5

PHYSICS MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.

3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
CHEM 46	— Qualitative Analysis	5
PHYS 61	— General Physics—Mechanics	5
PHYS 62	— General Physics—Electricity	5
PHYS 63	— General Physics—Sound, Light, and Heat.....	5
PHYS 161	— Mechanics I	4
PHYS 162	— Electricity and Magnetism I	4
PHYS 164	— Electrical Measurements	5
PHYS 267	— Atomic Physics	5

	<i>or</i>		
PHYS	268	— Nuclear Physics I	5
		Physics (electives of 200 number or higher to be selected with approval of student's adviser)	10
			48

4. Mathematics minor of 27 quarter hours.

5. Twenty-four to 32 quarter hours of free electives to complete 180 quarter hours of academic credit required for graduation.

6. Substitute PHYS 165, Modern Physics, for SCI 3 requirement.

Chemistry Minor

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
CHEM 40	— Principles of Chemistry I	5
CHEM 41	— Principles of Chemistry II	5
CHEM 42	— Introductory Organic Chemistry	5
	Chemistry (electives to be selected with approval of student's adviser)	12
		27

Physics Minor

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
PHYS 61	— General Physics—Mechanics	5
PHYS 62	— General Physics—Electricity	5
PHYS 63	— General Physics—Sound, Light, and Heat.....	5
PHYS 161	— Mechanics I	
	<i>or</i>	
PHYS 162	— Electricity and Magnetism I	4
	Physics (electives to be selected with approval of student's adviser).....	8
		27

1. Substitute PHYS 165, Modern Physics, for SCI 3 requirement.

ELEMENTARY SCIENCE MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. Advanced Teacher Education, 29 hours, including ED 252, Internship in Advanced Student Teaching, four hours credit, plus SCI 150, Observation and Participation in Elementary School Science, three hours credit.

3. The following required courses in the major:

<i>Course Number</i>		<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
CHEM	41	— Principles of Chemistry II		
		<i>or</i>		
PHYS	62	— General Physics—Electricity	5	
BOT	23	— General Botany II	5	
ZOO	12	— General Zoology—Vertebrate	5	
SCI	109	— Science for Elementary Teachers.....	3	
ESCI	130	— General Meteorology	4	
ESCI	131	— Descriptive Astronomy	4	
ESCI	136	— General Geology	4	
BOT	122	— General Bacteriology		
		<i>or</i>		
BIO	151	— Cellular Biology	5	
BIO	258	— Field Biology		
		<i>or</i>		
ZOO	219	— Animal Ecology		
		<i>or</i>		
SCI	206	— Conservation of Natural Resources	3-4	
BIO	252	— Genetics	5	
SCED	270	— Teaching Science in the Elementary School....	3	
		Electives to be selected with approval of student's adviser	2-3	
			<hr/>	48

Electives recommended from the following: SCI 205, Physical Science Concepts; SCI 209, Aviation and Space Flight; SCED 271, Improvement of Science Instruction in the Elementary School Through Curriculum Development; BIO 151, Cellular Biology; BIO 251, Evolution; CHEM 42, Introductory Organic Chemistry; ESCI 133, Historical Geology; PHYS 63, General Physics—Sound, Light, and Heat; BIO 254, Aquatic Biology; ZOO 217, Human Physiology; ESCI 239, Climatology; BOT 122, General Bacteriology; BIO 258, Field Biology; ZOO 219, Animal Ecology; SCI 206, Conservation of Natural Resources.

4. One minor of 27 quarter hours. It is recommended that this minor be in Elementary Education.

5. Twenty-four to 32 quarter hours of free electives to complete 180 quarter hours of academic credit required for graduation.

CHEMISTRY MAJOR

Bachelor of Arts Degree (Liberal Arts)

The following is the required program.

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. The following required courses in the major:

<i>Course Number</i>		<i>Course Title</i>	<i>Hours</i>	<i>Credit</i>
CHEM	141	— Organic Chemistry I	5	
CHEM	142	— Organic Chemistry II	5	
CHEM	145	— Quantitative Analysis I	5	
CHEM	243	— Organic Chemistry III	5	
CHEM	246	— Quantitative Analysis II	5	
CHEM	249	— Inorganic Chemistry	4	
CHEM	280	— Organic Qualitative Analysis.....	3	
CHEM	281	— Physical Chemistry I	5	
CHEM	282	— Physical Chemistry II	5	
CHEM	283	— Physical Chemistry III	5	
		Chemistry (electives to be selected with approval of student's adviser).....	1	
			<hr/>	48

3. Physics 61, 62, 63.
4. A mathematics minor of 27 quarter hours (through calculus).
5. One year of foreign language (preferably German).
6. Electives to complete requirements for graduation.

BIOLOGICAL SCIENCE MAJOR

Bachelor of Arts Degree (Liberal Arts)

The following is the required program.

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. The following required courses in the major:

a. Concentration in Botany:

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BIO	151	— Cellular Biology	5
BIO	252	— Genetics	5
BOT	23	— General Botany II.....	5
BOT	225	— Plant Ecology I—Physiological Plant Ecology	5
BOT	221	— Plant Anatomy	5
BOT	227	— Identification of Seed Plants of the Local Flora	5
BOT	229	— Plant Diseases	5
BOT	122	— General Bacteriology	
		or	
BOT	228	— Mycology	5
ZOO	12	— General Zoology—Vertebrate	5
		Electives to be selected with approval of student's adviser.....	3
			48

b. Concentration in Zoology:

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
BIO	151	— Cellular Biology	5
BIO	252	— Genetics	5
BOT	23	— General Botany II.....	5
ZOO	12	— General Zoology—Vertebrate	5
ZOO	110	— Entomology	5
ZOO	215	— Vertebrate Embryology	5
ZOO	219	— Animal Ecology	5
ZOO	211	— Comparative Anatomy of the Vertebrates	
		or	
ZOO	212	— Mammalian Anatomy	5
BIO	254	— Aquatic Biology	
		or	
ZOO	214	— Faunistics	4-5
		Electives to be selected with approval of student's adviser.....	2-3
			48

3. One minor of 27 quarter hours in chemistry, physics, or mathematics.

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

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

6. Substitute a course in botany, zoology, or biology for SCI 4 requirement.

7. Electives to complete requirements for graduation.

SCIENCE MAJOR (With Concentration in Physical Science)

Bachelor of Arts Degree (Liberal Arts)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Course requirements listed for the Science Major with concentration in Physical Science for the Bachelor of Arts Degree (teacher education).
3. One minor of 27 quarter hours preferably in Mathematics.
4. Electives to complete requirements for graduation.

PHYSICS MAJOR

Bachelor of Arts Degree (Liberal Arts)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Course requirements listed for the physics major for the Bachelor of Arts Degree (teacher education).
3. A mathematics minor of 27 quarter hours (through calculus).
4. Electives to complete requirements for graduation. It is recommended that these electives include an additional quarter of mechanics, an additional quarter of electricity and magnetism, and wave mechanics. A year of biological science or geology is also advisable.

Description of Courses

GENERAL SCIENCE

3. 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.

4. 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.

5. 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.

109. SCIENCE FOR ELEMENTARY TEACHERS. *Three hours credit.*

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.

203. ELEMENTARY BIOLOGICAL SCIENCE. *Three hours credit.*
A content course that emphasizes basic understanding of animal and plant life to help teachers instruct children in the elementary school. 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 degree in science.

205. PHYSICAL SCIENCE CONCEPTS. *Four hours credit.*
The fundamental concepts of physical science are presented to provide a background for teaching of physical science in the elementary school. This course is not applicable to a degree in science.

206. 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, forests and forest products. Range management, wildlife, and mineral resources are also covered. The emphasis throughout is on their relation to man.

207. AEROSPACE WORKSHOP. *Three hours credit.*

The purpose of this course is to provide the elementary and secondary teacher with a general background in aviation and an understanding of the air and space age. Subject matter will include the elementary concepts of aircraft, rocket and satellite development, weather, navigation, theory of flight, and aviation in education.

208. ELEMENTARY SCIENCE WORKSHOP. *Three hours credit.*

Provision is made for public school groups and individual teachers to organize science activities for their schools. Opportunity is provided for the solution of individual problems through the guidance of the instructors. Visual aids, laboratory materials, demonstrations, experiments, discussions, museums, children's literature, field trips and professional literature are other resources.

209. AVIATION AND SPACE FLIGHT. *Four hours credit.*

A nontechnical elementary course in the subject matter of aviation and space flight. Units may include maps and charts, theory of flight, navigation and problems of space flight. Some attention given to teaching materials. This course not applicable to a graduate degree in science. Field trips required.

330. GRADUATE READINGS COURSE IN SCIENCE. *Four hours credit.*

The required reading in several areas of science will consist of books written for the adult lay reader. Designated books will be required and a recommended supplementary reading list will be supplied. Each book will be the basis for class discussion and comment. This course not applicable to a graduate degree in science.

SCIENCE EDUCATION

150. 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.

270. TEACHING SCIENCE IN THE ELEMENTARY SCHOOL. *Three hours credit. (Two hours lecture, two 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.

271. IMPROVEMENT OF SCIENCE INSTRUCTION IN THE ELEMENTARY SCHOOL THROUGH CURRICULUM DEVELOPMENT. *Three hours credit.*

Elementary science programs organized by science educators are evaluated in terms of basic criteria. From the above analysis and a review of research, curricula are planned to satisfy certain requirements. This includes a statement of the student's philosophy, objectives, types of learning activities and generalizations which coordinate elementary science with secondary.

273. PROBLEMS IN TEACHING PHYSICS. *Four hours credit.*

A study of current trends in the teaching of high school physics and the various problems which confront the teacher.

274. PROBLEMS IN TEACHING BIOLOGY. *Four hours credit.*

The course deals with the organization of biological units, teaching procedures, and evaluation of learning. Preparation of teaching materials and organization of lessons are included. Evaluation of present practices will be accomplished in terms of criteria that foster general education in a secondary school program.

275. PROBLEMS IN TEACHING CHEMISTRY. *Four hours credit.*

This course is designed to deal with special problems in the teaching of chemistry. This includes elementary concepts, laboratory and stockroom problems, and demonstrations.

277. TEST CONSTRUCTION IN SCIENCE. *Three hours credit.*

A study of test construction and use by the science teacher. Topics include the philosophy, purpose and values of classroom tests. Kinds of tests, test length and time limits, the administration, marking, scoring, and physical form. Elementary statistical techniques applicable in daily classroom use will be presented. Tests of various kinds will be constructed.

372. IMPROVEMENT OF SCIENCE INSTRUCTION IN THE SECONDARY SCHOOL THROUGH CURRICULUM DEVELOPMENT. *Three hours credit.*

Secondary science programs organized by science educators are evaluated in terms of basic criteria. From the above analysis and review of research, K-12 curricula with emphasis on the secondary program are planned to satisfy certain requirements. This includes a statement of the student's philosophy, objectives, types of learning activities and generalizations which coordinate secondary science with elementary.

373. SEMINAR IN SCIENCE EDUCATION. *Three hours credit.*

Elementary and secondary school science teachers who wish to improve their professional work may elect this course. The problems studied in the course are those that concern the professional science educator.

374. INSTRUCTIONAL PROBLEMS IN TEACHING SCIENCE. *Three hours credit.*

The study of instructional problems in teaching science in the elementary and secondary schools. The instructional problems may include problems relating to the pupils' ability in mathematics, reading and problem solving ability, to problems in laboratory, evaluation, demonstration, vocabulary, and provision for the better students.

375. DEVELOPMENT OF SCIENTIFIC INQUIRY ABILITIES OF CHILDREN THROUGH SCIENCE. *Four hours credit.*

The course emphasizes a need for the knowledge of the research in the field of scientific inquiry, the psychological elements involved in problem solving, the procedures incident to the organization of classroom techniques which will develop critical thinking and the scientific abilities of the student. Procedures for evaluation are considered fundamental.

376. HISTORY OF SCIENCE. *Three hours credit.*

The fundamental purpose of the course is to show the evolution of scientific thought and how it has contributed to contemporary methods of research. Emphasis will be devoted to the origin of the underlying principles, theories, laws of science, and the techniques used by various scientists in formulating their conclusions.

477. EVALUATION AND TESTING IN SCIENCE. *Four hours credit.*

Prerequisite, APST 275. This course involves the construction, administration and analysis of various kinds of tests used by classroom science teachers. The application of statistical techniques to classroom testing and some work in planning and developing of testing programs in science will be studied.

BIOLOGY**53. 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. Science majors and minors will not receive credit for this course.

101. PLANT AND ANIMAL CLASSIFICATION. *Five hours credit.*

(Two hours lecture, six hours laboratory.)

Prerequisite, ZOO 11, 12, BOT 22, 23. An introductory course concerned with recognition and identification of plants and animals at the species and family levels. Emphasis on laboratory work involving collecting techniques, and use of keys and manuals.

102. BIOTIC COMMUNITIES. *Five hours credit. (Two hours lecture, six hours laboratory.)*

An introductory course concerned with the fundamentals, principles and concepts pertaining to plant and animal organization at the community level. Field trips required.

151. CELLULAR BIOLOGY. *Five hours credit. (Three hours lecture, four hours laboratory.)*

A course in general biological principles based upon the structure and functioning of the cell. Some topics receiving special emphasis are: the cell in division and reproduction, genetic control of cell activity, the molecular basis of cell metabolism, energy transformations within the cell, homeostatic regulation of the cellular environment, and the effects of high energy radiation of the cell.

251. 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.

252. GENETICS. *Five hours credit. (Three hours lecture, four hours laboratory.)*

A study of the fundamental laws of heredity and their application to plants and animals, with emphasis on the heredity of man.

253. HUMAN GENETICS AND EUGENICS. *Three hours credit.*
 A survey of the principles of human heredity together with a consideration of their significance in the problems of the world today. The importance of human genetics in marriage counseling and in medical or legal practice is included. BIO 252 is recommended as a preparation for this course.

254. AQUATIC BIOLOGY. *Five hours credit. (Three hours lecture, four hours laboratory.)*
 A course in the study of fresh water plants and animals of the Rocky Mountains Region. Emphasis will be upon methods of collecting, classification, ecological relations, and economic importance of the fresh water biota. Field trips arranged.

258. FIELD BIOLOGY. *Three hours credit.*
 A natural history course for elementary and secondary school teachers. The course deals with the identification of common plants, animals and rocks, the relationship of the plants and animals to their environment. Frequent field trips, including one to the higher mountains, are required.

287. ANIMAL GROWTH AND DEVELOPMENT. *Two hours credit.*
 (NSF In-Service Institute)
 The study of animal growth and development including embryological studies are developed.

288. BSCS GENETICS BLOCK. *Two hours credit. (NSF In-Service Institute)*
 An extensive study of the BSCS Laboratory Block in Genetics with emphasis on those laboratory procedures particularly relevant to high school genetics studies.

289. PLANT DEVELOPMENT AND MORPHOLOGY. *Two hours credit. (NSF In-Service Institute)*
 The study of plant growth and development including influences of environment and hormonal studies will be carried out.

296. ECOLOGICAL PRINCIPLES. *Five hours credit. (NSF Summer Institute)*
 This course will arrange a laboratory situation similar to that recommended by BSCS for high school biology. Participants will set up experiments and demonstrations in the chronological sequence recommended by the ecological (green) version. Greatest attention will be given to ecological principles that are most critical for the survival of plants and animals.

297. BASIC GENETICS. *Four hours credit. (Two hours lecture, four hours laboratory.) (NSF Summer Institute)*
 Designed to give institute participants a basic background in genetics, this course will deal with basic genetics, genetics of speciation and population dynamics of both plants and animals. The genetics block of the BSCS will be used as a laboratory guide.

298. PLANT GROWTH, DEVELOPMENT, AND REGULATION. *Four hours credit. (Two hours lecture, four hours laboratory.) (NSF Summer Institute)*
 This course is a study of the responses of plants to factors in the internal and external environment. Explanations of the plant responses will be given on a physio-chemical basis. Techniques of tissue culture and bioassay for hormone activity will be studied.

299. SEMINAR IN SCIENCE INQUIRY. *Two hours credit. (NSF Summer Institute)*
 This seminar will deal with the reasons for teaching science as inquiry and the practical consideration and applications in teaching biological science using the invitations to scientific inquiry established by the BSCS high school curriculum.

350. SEMINAR IN BIOLOGICAL SCIENCES. *One hour credit.*

A study of current research and literature in a field of biological interest. One quarter each will be devoted to botany, zoology, and biological science. The field will be selected by the biology department. Maximum three credit hours.

357. BIOLOGICAL RESEARCH. *Five hours credit. (Two hours lecture, six hours laboratory.)*

Designed to give the student actual practice in planning, executing, and presenting the results of a problem in the biological sciences. Each student selects a problem and carries it out through original research in the laboratory or field. He learns how to prepare and give reports of his results both in written and oral form.

359. RADIATION BIOLOGY. *Five hours credit. (Three hours lecture, four hours laboratory.)*

A course which deals with the basic physical, chemical and biological principles upon which the study of biological effects of radiation are based.

BOTANY**22. GENERAL BOTANY I.** *Five hours credit. (Three hours lecture, four hours laboratory.)*

A study of seed plants, the conifers and flowering plants, their structure and functions, economic aspects and classification.

23. GENERAL BOTANY II. *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisite, BOT 22. A survey of the plant kingdom including the life cycles, habitats, relationships and evolutionary aspects of the great groups of plants, the algae, fungi, mosses, liverworts, ferns, conifers and flowering plants. Economic relationships are also emphasized.

121. MORPHOLOGY OF THE LOWER PLANTS. *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisite, BOT 22, 23. Morphology of the algae and bryophytes. Structure, development, and relationships of the algae and of the bryophytes.

122. GENERAL BACTERIOLOGY. *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisite, SCI 4. The course emphasizes the control measures used for microorganisms and the basic information pertaining to morphology and growth characteristics. The content is organized about important personal and community health problems.

220. ECONOMIC BOTANY. *Two hours credit.*

Prerequisite, BOT 23. 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.

221. PLANT ANATOMY. *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisite, BOT 22. A study of the anatomy of plants with emphasis on the seed plants. Careful consideration is given to the various tissues as to their origin, development, and structure as related to their function. Some consideration is given to the evolution of tissues in plants.

222. PLANT PHYSIOLOGY I. *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisite, BOT 22, CHEM 42. A course dealing with the fundamental principles of absorption of water and minerals, transpiration, photosynthesis, translocation, respiration and growth of plants, including biochemical mechanisms.

- 224. MORPHOLOGY OF THE VASCULAR PLANTS.** *Five hours credit. (Three hours lecture, four hours laboratory.)*
Prerequisite, BOT 22, 23. Structure, development, and relationships of the Gymnosperms and Angiosperms.
- 225. PLANT ECOLOGY I—PHYSIOLOGICAL PLANT ECOLOGY.** *Five hours credit. Three hours lecture, four hours laboratory.)*
Prerequisite, BOT 22, 23. A study of the interrelations between the individual plant and the environment including soil, climatic and biotic factors. The responses of plants to such factors are studied primarily under the controlled conditions of the greenhouse and the growth chamber.
- 226. BOTANICAL MICROTECHNIQUE.** *Two hours credit. (Four hours laboratory.)*
Prerequisite, BOT 22, 23, 221. Study of plant tissues and the preparation of permanent slides of tissues and other plant materials.
- 227. IDENTIFICATION OF SEED PLANTS OF THE LOCAL FLORA.** *Five hours credit. (Two hours lecture, six hours laboratory.)*
Prerequisite, BOT 22, 23. An introductory course concerned with recognition and identification of plants at the species and family levels. Use of keys, manuals, and collecting techniques.
- 228. MYCOLOGY.** *Five hours credit. (Three hours lecture, four hours laboratory.)*
Prerequisite, BOT 22, 23. A survey of the fungi emphasizing how they live, grow, and reproduce. Isolation and cultural techniques of some of the common fungi will be demonstrated. Also, emphasis will be placed on terms and techniques needed to identify the common fleshy fungi found in this area.
- 229. PLANT DISEASES.** *Five hours credit. (Three hours lecture, four hours laboratory.)*
Prerequisite, BOT 22, 23. A study of the fungi, their structures, life cycles, habitats and nutrition, with emphasis upon those which cause diseases in higher plants.
- 320. PLANT GROWTH AND DEVELOPMENT.** *Four hours credit. (Three hours lecture, two hours laboratory.)*
Prerequisite, BOT 22, 23. A study of the growth cycles of plants in the laboratory and field as the cycle may be affected by external and internal conditions. The effect of auxins is a principal feature of the laboratory work as these compounds condition general growth, curvatures and movements. Practical problems connected with fruit setting, defoliation, herbicides, and other physiological phenomena are considered.
- 322. PLANT PHYSIOLOGY II—METABOLISM.** *Five hours credit. (Three hours lecture, four hours laboratory.)*
Prerequisite, BOT 22, CHEM 147. An intensive study of the metabolic activities of the plant from those of the organelles of the individual cell to those of the integrated organs of the entire higher plant. Laboratory technique introduces the use of isotopic tracers and chromatography.
- 323. PLANT GEOGRAPHY.** *Three hours credit.*
Prerequisite, BOT 227 or 325. A study of the floras of the past and present, and of the factors that have affected their distribution.
- 325. PLANT ECOLOGY.** *Five hours credit. (Three hours lecture, four hours laboratory.)*
Prerequisite, BOT 22, 23. 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.

- 327. RESEARCH METHODS IN BOTANY.** *Three hours credit. (One hour lecture, four hours laboratory.)*
Prerequisite, BOT 22, 23, 222. A study of the techniques of research in botany with application to a particular problem chosen by the student.

CHEMISTRY

- 40. 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, and home economics students.

- 41. PRINCIPLES OF CHEMISTRY II.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, CHEM 40. 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 groups of students as CHEM 40 and is necessary to provide a reasonably complete understanding of the basic concepts of chemistry.

- 42. INTRODUCTORY ORGANIC CHEMISTRY.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, CHEM 40, 41. 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.

- 46. QUALITATIVE ANALYSIS.** *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisite, CHEM 41 and MATH 23. 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.

- 141. ORGANIC CHEMISTRY I.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, CHEM 41. 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.

- 142. ORGANIC CHEMISTRY II.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, CHEM 141. 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.

- 145. QUANTITATIVE ANALYSIS I.** *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisite, CHEM 46. This course provides a discussion of quantitative procedures as well as continued emphasis on analytical theory. The methods of volumetric and gravimetric analysis are applied to common substances in the laboratory.

- 147. GENERAL BIOCHEMISTRY.** *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, CHEM 42 or 142. An introduction to the chemistry of foods, nutrition, and body processes is given.

- 148. FOOD ANALYSIS.** *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisite, CHEM 42. This course deals with some of the techniques of qualitative and quantitative analysis of foods for certain inorganic and organic constituents.

241. ELEMENTS OF GLASS BLOWING. *One hour credit. (Three hours laboratory.)*

blowing; the construction and repair of borosilicate glass laboratory equipment.

242. ORGANIC CHEMISTRY. *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, CHEM 40. A beginning course in organic chemistry for students with no previous background in organic chemistry. Some of the fundamental types of aliphatic and aromatic organic compounds are treated with regard to theory and application.

243. ORGANIC CHEMISTRY III. *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, CHEM 142. 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.

244. LABORATORY IN ORGANIC CHEMISTRY. *Maximum of two hours credit. (Three or six hours laboratory.)*

Prerequisite, CHEM 243. Organic preparations and qualitative organic analysis constitute the laboratory work.

245. QUANTITATIVE ANALYSIS. *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisite, MATH 23 and CHEM 41. 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 analysis. Students having credit in any quantitative analysis course must obtain permission of instructor before enrolling in this course.

246. QUANTITATIVE ANALYSIS II. *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisite, CHEM 145, 282. Special attention is given to the analysis of complex mixtures, and the use of certain analytical instruments.

249. INORGANIC CHEMISTRY. *Four hours credit.*

Prerequisite, CHEM 145. This course is designed to bridge the gap between analytical chemistry and physical chemistry. The course will include units on atomic structure.

280. ORGANIC QUALITATIVE ANALYSIS. *Three hours credit. (Nine hours laboratory.)*

This course is an advanced laboratory course in organic chemistry. The identification of organic compounds constitutes the laboratory work. No classwork is required but a paper on some phase of organic chemistry is required.

281. PHYSICAL CHEMISTRY I. *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, CHEM 142, 145, MATH 33, PHYS 63. 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. The laboratory demonstrates the principles developed in the lecture.

282. PHYSICAL CHEMISTRY II. *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, CHEM 281. This course is a continuation of CHEM 281. The following topics are considered: solutions, homogeneous and heterogeneous chemical equilibria, and chemical kinetics.

283. PHYSICAL CHEMISTRY III. *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, CHEM 282. This course is a continuation of CHEM 282. Electrochemistry, ionic equilibria, and colloids are considered.

284. INSTRUMENTAL METHODS OF ANALYSIS. *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, CHEM 246, 283. 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, refractometer, infrared spectrophotometer and polarograph.

285. CHEMICAL LITERATURE. *One hour credit.*

Prerequisite, CHEM 243. This course covers the use of the library and the function of chemical literature. Problems in the use of the library are assigned.

287. PHYSICAL BIOCHEMISTRY. *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisites, CHEM 243, 283 (or taken concurrently). The physical and organic basis of modern biochemistry will be studied. Enzyme chemistry, the physical chemistry of macromolecules, and the molecular organization of the cell will be emphasized.

289. SENIOR RESEARCH. *Two hours credit.*

Prerequisites, CHEM 243, 283. 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.

344. THEORETICAL ORGANIC CHEMISTRY. *One hour credit. (Maximum six credit hours.)* Prerequisite, CHEM 243, 282. An intensive study of the electronic theory and stereochemistry of organic molecules.

346. SEMINAR IN CHEMISTRY. *Maximum six hours credit.*

This course gives the graduate student an opportunity to report on some topic of interest treated in recent literature, as well as profit by the reports of others.

349. ADVANCED INORGANIC CHEMISTRY. *Three hours credit.*

Prerequisite, CHEM 249. Presented in this course is the descriptive chemistry of typical inorganic elements and compounds. Relationships within the periodic classification will be stressed and correlation of the chemistry of the various substances will be related to theoretical concepts treated in CHEM 249.

381. CHEMICAL THERMODYNAMICS. *Three hours credit.*

Prerequisite, one year of Physical Chemistry. An advanced study of the fundamental laws of thermodynamics and calculation of thermodynamic quantities. Mathematical treatment is stressed.

382. STATISTICAL THERMODYNAMICS. *Three hours credit.*

Prerequisite, CHEM 381. A course which deals with mathematical probability, fundamentals of statistical mechanics, Boltzmann statistics, partition functions, equilibrium constants in terms of partition functions, heat capacities of gases and solids, and Bose-Einstein and Fermi-Dirac statistics.

384. CHEMICAL SPECTROSCOPY. *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, CHEM 284, 381. Designed to amplify the spectroscopy portion of CHEM 344, Chemical Spectroscopy deals primarily with the application and theory of this important tool in chemical analysis. Emission and absorption spectroscopy are considered, but the primary emphasis is on infrared methods. A short section on nuclear magnetic resonance is included.

EARTH SCIENCE**130. GENERAL METEOROLOGY.** *Four hours credit. (Three hours lecture, two hours laboratory.)*

A study of the weather factors of temperature, pressure, humidity, and air movements at the surface and aloft. There will be discussion of traditional and modern meteorological instruments and the principles of their operation. Attention will be given to the formation of air masses and fronts, their movements, and associated clouds and storms. There will be two hours per week laboratory for work with meteorological instruments, plotting and interpretation of various weather charts and maps.

131. DESCRIPTIVE ASTRONOMY. *Four hours credit.*

A study of the solar system and the place of our sun in the family of stars. The student learns to recognize and locate the more important stars. Extensive knowledge of science, mathematics and constellations not required.

132. PHYSICAL GEOLOGY. *Five hours credit. (Four hours lecture, three hours laboratory.)*

This is the required introductory course for all majors and minors—a study of earth materials and the processes affecting them. Students will study the origin of rocks, the processes of weathering and erosion, and the counterprocesses of vulcanism and diastrophism. Two Saturday field trips required.

133. HISTORICAL GEOLOGY. *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, ESCI 132. The course stresses methods of reading Earth history from rocks and fossils. Then follows a survey of changes the Earth has undergone by action of the various geologic processes through geologic time. Fossil study is emphasized, including suites of fossils for each of the geologic systems.

134. MINERALOGY. *Four hours credit. (Two hours lecture, six hours laboratory.)*

Prerequisite, ESCI 132. This course stresses the methods of identifying minerals by simple physical and chemical tests. Course also includes some introductory crystallography, and a brief study of occurrence and importance of the several mineral classes.

136. GENERAL GEOLOGY. *Four hours credit.*

This course stresses the recognition of common minerals and rocks and the processes at work wearing down or building up the Earth's crust. The geologic history of the Earth is reviewed briefly. The course is arranged primarily for teachers (non-science majors) who will take no additional work in geology. Two Saturday field trips required.

230. COMMON MINERALS AND ROCKS. *Three hours credit. (Offered Summer Quarter and occasional Winter Quarter as evening course.)*

A laboratory course in the recognition of common minerals and rocks. On an arranged field trip each student will collect a set of specimens. Some library reading also required. Not applicable to a science degree, or as a substitute for a required science course.

231. INTRODUCTION TO OCEANOGRAPHY. *Three hours credit.*

Prerequisite, ESCI 133. The work of this course, a relatively new area in geology, will cover two major areas of study; first the erosional and depositional features of the ocean floor and their possible origin; second, the various types of waves and currents, their origin and relation to the floor features.

232. PRINCIPLES OF STRATIGRAPHY AND PALEONTOLOGY. *Four hours credit.*

Prerequisite, ESCI 133. This course will investigate the methods of studying the sedimentary rocks and their contained fossils, and also

methods of correlation and interpreting the stratigraphic record to build a picture of the geologic past. Finally, there will be an introduction to the regional stratigraphy of this area.

233. FIELD METHODS. *Three hours credit. (Two hours lecture, three hours laboratory.)*

Prerequisite, MATH 25. This course will give the student some appreciation of how geologic information is obtained in the field and recorded on maps. By use of Brunton compass and alidade, each student will prepare several maps of areas near the campus, plus one map of an area of moderately complex structure. Open only to earth science majors.

234. GEOMORPHOLOGY. *Four hours credit. (Three hours lecture, three hours laboratory.)*

Prerequisite, ESCI 133. This course consists of a detailed study of land forms and their evolution—the geologic interpretation of landscapes. Special emphasis is given to examples located in the United States. Interpretation of aerial photos and topographic maps is stressed.

235. ROCKY MOUNTAIN GEOLOGY. *Three hours credit.*

This course seeks to apply the student's geologic knowledge to a study of the extensive current literature in geology, especially that dealing with the Rocky Mountain area. A brief overview of the development of geology introduces the course. Two day field trip required. Open only to earth science majors.

236. PETROGRAPHY AND PETROLOGY. *Five hours credit. (Three hours lecture, six hours laboratory.)*

Prerequisite, ESCI 134. The origins of the various rocks, their compositions, and the bases for their classification will be investigated in the classroom. Also, the basic theories and methods of optical crystallography will be studied. In the laboratory various petrographic techniques will be learned and practiced, including use of the petrographic microscope for identifying mineral grains and minerals in rock thin sections.

238. ELEMENTARY PHYSICAL METEOROLOGY. *Three hours credit.*

Prerequisite, ESCI 130. A study of radiation processes, the thermodynamics of moist air, condensation, and precipitation. Attention given to severe weather phenomena associated with precipitation processes. Study of adiabatic diagrams and other pressure-height-temperature charts. Discussion of air masses, cyclones and anticyclones, fronts and frontogenesis.

239. CLIMATOLOGY. *Three hours credit.*

Prerequisite, ESCI 130. A study of the meteorological basis of climate, nature and origin of the atmosphere, and classifications of world climates. Specific attention will be given to climates of Colorado and surrounding western states. Relationships of climate to water resources, agriculture, housing, transportation, and other human activities will be studied.

PHYSICS

61. GENERAL PHYSICS—MECHANICS. *Five hours credit. (Four hours lecture, two hours laboratory.)*

Prerequisite, MATH 25. The first quarter of the general course in physics treats of the laws, principles, and generalizations of mechanics.

62. GENERAL PHYSICS—ELECTRICITY. *Five hours credit. (Four hours lecture, two hours laboratory.)*

Prerequisite, PHYS 61. The second quarter of the general course in physics treats of the principles, laws, and generalizations in electricity.

- 63. GENERAL PHYSICS—SOUND, LIGHT, AND HEAT.** *Five hours credit. (Four hours lecture, two hours laboratory.)*
Prerequisite, PHYS 62. The third quarter of the general course in physics treats of the laws, principles, and generalizations concerning sound, light, and heat.
- 161. MECHANICS I.** *Four hours credit.*
Prerequisite, PHYS 63 and MATH 34 or taken concurrently. 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.
- 162. ELECTRICITY AND MAGNETISM I.** *Four hours credit.*
Prerequisite, PHYS 63 and MATH 34 or taken concurrently. First course of a sequence of two courses. An advanced study in electric fields, electric potential, magnetic fields and induced electromotive force.
- 164. ELECTRICAL MEASUREMENTS.** *Five hours credit. (Four hours lecture, three hours laboratory.)*
Prerequisite, PHYS 63 and MATH 33. 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.
- 165. MODERN PHYSICS.** *Four hours credit.*
Prerequisite, PHYS 63. A general course of the concepts in physics formulated since 1900 including an elementary presentation of atomic and nuclear physics.
- 166. RADIATION PHYSICS.** *Four hours credit.*
Prerequisite, PHYS 63. 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.
- 167. ELEMENTARY PHOTOGRAPHY.** *Three hours credit. (Two hours lecture, two hours laboratory.)*
Prerequisite, PHYS 63. An introductory course covering the basic elements of photography. Topics include developing, printing and enlarging, and the use of photography in the teaching of physics.
- 260. PHYSICS OF 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.
- 261. MECHANICS II.** *Four hours credit.*
Prerequisite, PHYS 161. Second course of 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.
- 262. ELECTRICITY AND MAGNETISM II.** *Four hours credit.*
Prerequisite, PHYS 162. 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.
- 263. LIGHT AND OPTICS.** *Five hours credit. (Four hours lecture, three hours laboratory.)*
Prerequisite, PHYS 63 and MATH 34. This course is an introduction to the advanced study of light. Topics to be studied in this course include: geometrical optics, reflections, thin and thick lenses, optical instruments, wave theory of light, interference, diffraction and the electromagnetic nature of light.
- 264. ELECTRONICS.** *Five hours credit. (Four hours lecture, three hours laboratory.)*
Prerequisite, PHYS 164. A continuation of PHYS 164. 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.

266. THERMODYNAMICS. *Four hours credit.*

Prerequisite, PHYS 63, MATH 34. An introduction to heat and thermodynamics. This course covers thermodynamic systems, equations of state, the first and second law of thermodynamics and an introduction to kinetic theory.

267. ATOMIC PHYSICS. *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, PHYS 161, 165; MATH 34. 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.

268. NUCLEAR PHYSICS I. *Five hours credit. (Four hours lecture, three hours laboratory.)*

Prerequisite, PHYS 161, 165; MATH 34. A study of the nucleus of the atom including nuclear processes, decay schemes, sub-atomic particles and high energy reactions.

361. INTRODUCTION TO THEORETICAL PHYSICS I. *Three hours credit.*

Prerequisite, PHYS 261, 262, 263; MATH 35, 230. First course in a sequence of three courses. Particle and rigid body motion are treated by the methods of vector calculus, calculus of variations, and matrix algebra. Included are the LaGrangian and Hamiltonian formulations, small oscillations, rigid body motion, and relativistic mechanics.

362. INTRODUCTION TO THEORETICAL PHYSICS II. *Three hours credit.*

Prerequisite, PHYS 361. Second course in a sequence of three courses. Static charge distributions in space, upon conductors, or in dielectrics, motion of charges and the magnetic field arising from such motion, electromagnetic induction, electromagnetic radiation, and magnetic properties of matter are examined by advanced mathematical techniques.

363. INTRODUCTION TO THEORETICAL PHYSICS III. *Four hours credit.*

Prerequisite, PHYS 362. Third course in a sequence of three courses. Mathematical formalism and electromagnetic theory are utilized to analyze and connect the topics of Fresnel diffraction, dispersion, reflection, ordinary and double refraction, polarization, absorption, and scattering.

367. NUCLEAR MEASUREMENTS. *Two hours credit.*

Prerequisite, PHYS 268. This is a laboratory course in which various nuclear phenomena are studied in the laboratory. Some of the experiments to be performed include G-M measurement techniques, gamma ray spectrum, absorption of alpha, beta, and gamma rays, half-life measurements.

368. NUCLEAR PHYSICS II. *Three hours credit.*

Prerequisite, PHYS 268. A graduate course in theoretical nuclear physics. Topics include: elementary quantum theory, particle and photon interactions, theory of alpha, beta, and gamma decay, the shell and liquid drop models of the nuclear atom.

369. WAVE MECHANICS I. *Four hours credit.*

Prerequisite, PHYS 261, 267 and MATH 230. This course is an introduction to quantum mechanics and the quantum theory. Some of the topics to be covered include: Planck's radiation theory, the Bohr postulates, the correspondence principle, de Broglie waves, the Schrodinger wave equation, and the uncertainty principle.

469. WAVE MECHANICS II. *Three hours credit.*

Prerequisite, PHYS 369. A continuation of Wave Mechanics I. Topics to be covered include: The three dimensional wave equation, eigenvalues and eigenfunctions, operators and expectation values, time dependent and time independent perturbation theory.

ZOOLOGY**11. GENERAL ZOOLOGY—INVERTEBRATE.** *Five hours credit. (Three hours lecture, four hours laboratory.)*

The principles of animal biology are considered as they apply to the invertebrate phyla. In the laboratory a series of animals from protozoa through arthropods are used to illustrate the concepts developed in the classroom.

12. GENERAL ZOOLOGY—VERTEBRATE. *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisite, ZOO 11. The principles of animal biology are considered as they apply to the vertebrates. Anatomy and physiology of typical vertebrates are studied in the laboratory using representative specimens from each vertebrate class. The principles of ecology and evolution of vertebrates are considered.

110. ENTOMOLOGY. *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisite, ZOO 11, 12. 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.

114. 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.

211. COMPARATIVE ANATOMY OF THE VERTEBRATES. *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisite, ZOO 12. A detailed study of the systems of the vertebrates. The student is expected to make careful dissections of selected types. Sharks through mammals are used for laboratory study.

212. MAMMALIAN ANATOMY. *Five hours credit. (Three hours lecture, four hours laboratory.)*

Prerequisite, ZOO 12. 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.

214. FAUNISTICS. *Four hours credit. (Two hours lecture, four hours laboratory.)*

Prerequisite, ZOO 12. An advanced taxonomy and ecological survey of the local fauna of Colorado with special emphasis on aquatic invertebrates, amphibians, reptiles, fishes, 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.

215. VERTEBRATE EMBRYOLOGY. *Five hours credit. (Three hours lecture, four hours laboratory.)*

A study of biological processes and fundamental principles of embryology. In the laboratory embryos of the frog, chick, and pig are used to illustrate concepts developed in lecture sessions.

- 217. HUMAN PHYSIOLOGY.** *Five hours credit. (Three hours lecture, four hours laboratory.)*
Prerequisite, ZOO 12. A course in the functions of the human body designed to help the student understand normal functions of the human body and give him the knowledge with which to establish good health practices.
- 218. ANIMAL MICROSCOPIC TECHNIQUES.** *Three hours credit. (Six hours laboratory.)*
Prerequisite, ZOO 12. The skills of killing, staining, and preparing animal tissues for study. Collections prepared by students are assumed to have value for future reference.
- 219. ANIMAL ECOLOGY.** *Five hours credit. (Two hours lecture, six hours laboratory.)*
Prerequisite, ZOO 12. The principles governing animal relationships with their environment. Distribution, food supply, migratory movements, and territorial requirements will be emphasized. Field work required.
- 310. CYTOLOGY.** *Five hours credit. (Three hours lecture, four hours laboratory.)*
Study of cells with special reference to morphology, cytochemistry and physiology. This study will include the cytoplasmic organelles and the nucleus.
- 311. ADVANCED INVERTEBRATE ZOOLOGY.** *Five hours credit. (Three hours lecture, four hours laboratory.)*
Prerequisite, ZOO 11, 12. A comparative study of the classification, anatomy, physiology and natural history of the invertebrates, exclusive of insects and most parasitic forms.
- 315. VERTEBRATE ORGANOGENY.** *Four hours credit. (Two hours lecture, four hours laboratory.)*
Prerequisite, ZOO 215. A study of the origin and development of the organ systems of vertebrates from the triploblastic embryo through organ formation. In the laboratory serial sections of frog, chick, and pig supplemented with incubated chick and amphibian eggs are used to illustrate processes discussed in lecture.
- 318. VERTEBRATE HISTOLOGY.** *Five hours credit. (Three hours lecture, four hours laboratory.)*
An intensive study of normal tissues and organs of vertebrates, with emphasis on mammals.
- 319. ANIMAL PARASITOLOGY.** *Five hours credit. (Three hours lecture, four hours laboratory.)*
Prerequisite, ZOO 12. A study of the symbiotic relationships of parasitism as exemplified by typical parasites of man, domesticated and wild animals. In the laboratory methods of clearing, staining, and mounting are practiced.

MATHEMATICS MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.
3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
MATH 31*	— Calculus with Analytic Geometry I.....	5
MATH 32*	— Calculus with Analytic Geometry II.....	5
MATH 33*	— Calculus with Analytic Geometry III.....	4
MATH 34*	— Calculus with Analytic Geometry IV.....	4
MATH 35*	— Calculus with Analytic Geometry V.....	4
MATH 122	— Introduction to Modern Algebra.....	5
MATH 142	— College Geometry	5
	Electives: Courses in mathematics, mathematics education, and statistics. A minimum of 10 hours must be taken in courses in mathematics	16
		48

*Qualified students may be exempted by examination.

MATHEMATICS MINOR (Teacher Education)

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
MATH 24*	— College Algebra	5
MATH 25*	— Trigonometry	5
MATH 31*	— Calculus with Analytic Geometry I.....	5
MATH 32*	— Calculus with Analytic Geometry II.....	5
	Electives in mathematics chosen from the following: MATH 201, 202, 203, 142, 222, 250, 281	7
		27

*Qualified students may be exempted by examination.

MATHEMATICS MAJOR

Bachelor of Arts Degree (Liberal Arts)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Course requirements listed for the Mathematics Major, Bachelor of Arts Degree (Teacher Education).
3. One minor of 27 quarter hours preferably in either biological science, physics, or chemistry.
4. Electives to complete requirements for graduation.

MATHEMATICS MINOR (Liberal Arts)

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
MATH 31	— Calculus with Analytic Geometry I.....	5
MATH 32	— Calculus with Analytic Geometry II.....	5
MATH 33	— Calculus with Analytic Geometry III.....	5
	MATH (electives selected with approval of adviser)	12
		27

Description of Courses

MATHEMATICS

1. BASIC MATHEMATICS I. Three hours credit.

The first of a two course sequence representing arithmetic and algebra

from a modern approach. Topics include the natural numbers, integers, rational numbers, real numbers, relations, functions, and equations. Emphasis will be placed upon understanding mathematical structures and in solving problems. This course cannot be applied on a major or minor in mathematics.

2. BASIC MATHEMATICS II. *Three hours credit.*

Prerequisite, MATH 1. A continuation of MATH 1. This course cannot be applied on a major or minor in mathematics.

3. INTRODUCTION TO MODERN MATHEMATICS. *Three hours credit.*

Set language and symbolism, operations on sets, relations, functions, and simple logic. This course cannot be applied on a major or minor in mathematics.

10. 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.

23. INTERMEDIATE ALGEBRA. *Five hours credit.*

An introductory course in algebra covering the elementary concepts of algebra through quadratic equations. This course cannot be applied on a major or minor in mathematics.

24. COLLEGE ALGEBRA. *Five hours credit.*

Prerequisite, MATH 23. A standard course in algebra beyond quadratics.

25. PLANE TRIGONOMETRY. *Five hours credit.*

Prerequisite, MATH 24. A course which develops the trigonometric functions and their application, both theoretical and practical, in the solution of the triangle. Special emphasis is put upon the logarithms and their use in computation in the solution of the triangle and other problems.

31. CALCULUS WITH ANALYTIC GEOMETRY I. *Five hours credit.*

Prerequisite, MATH 24 and 25. 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.

32. CALCULUS WITH ANALYTIC GEOMETRY II. *Five hours credit.*

Prerequisite, MATH 31. A continuation of MATH 31 of differential and integral calculus combined with analytic geometry, together with applications from all three fields. Special emphasis in calculus on transcendental functions, and an analytic geometry on conic sections.

33. CALCULUS WITH ANALYTIC GEOMETRY III. *Four hours credit.*

Prerequisite, MATH 32. The third course in the sequence of five courses in analytic geometry and calculus. Curve tracing is considered in analytic geometry, while the principal emphasis in calculus is on integration and formal procedures in integration.

34. CALCULUS WITH ANALYTIC GEOMETRY IV. *Four hours credit.*

Prerequisite, MATH 33. This is the fourth course in the sequence of five courses in calculus with analytic geometry. Infinite series, hyperbolic functions and partial differentiation are the main topics in calculus, with emphasis on solid analytic geometry in that area.

35. CALCULUS WITH ANALYTIC GEOMETRY V. *Four hours credit.*

Prerequisite, MATH 34. This is the final course in elementary analytic geometry and calculus combined. Such topics as multiple integrals, differential equations, and vector analysis are covered. The student, on completion of this sequence of courses, should be prepared to study more advanced and formal courses in mathematical analysis.

122. INTRODUCTION TO MODERN ALGEBRA. *Five hours credit.*

Prerequisite, MATH 33. An introduction to basic topics in modern algebra including vector spaces, matrices, polynomials and general algebraic structures. Stress is placed on the characteristics of algebraic systems.

142. COLLEGE GEOMETRY. *Five hours credit.*

Prerequisite, MATH 32. 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.

201. THEORY OF SETS. *Three hours credit.*

Prerequisite, MATH 32. 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.

202. BASIC MATHEMATIC LOGIC. *Three hours credit.*

Prerequisite, MATH 32. 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.

203. STRUCTURE OF NUMBERS. *Three hours credit.*

Prerequisite, MATH 32. 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.

205. MATHEMATICS OF FINANCE. *Five hours credit.*

Prerequisite, MATH 23. 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.

222. BASIC MATRIX ALGEBRA. *Five hours credit.*

Prerequisite, MATH 32. An introduction to the theory of determinants and matrices. The development of the algebra of matrices is followed by a consideration of the inverse of a matrix, rank of matrices, equivalence of matrices, and the relation of these concepts to systems of linear equations.

223. MODERN ALGEBRA I. *Five hours credit.*

Prerequisite, MATH 32. A study of modern abstract algebra including integral domains, fields, polynomials, rings, groups, isomorphisms, automorphisms, homomorphisms.

230. DIFFERENTIAL EQUATIONS I. *Five hours credit.*

Prerequisite, MATH 34. A study of the theory and solution of differential equations. Ordinary and partial equations are treated along with numerous applications.

231. DIFFERENTIAL EQUATIONS II. *Five hours credit.*

Prerequisite, MATH 230. A continuation of MATH 230. Topics to be covered include series solutions of differential equations, systems of equations, partial differential equations, Fourier series and boundary value problems.

232. ADVANCED CALCULUS I. *Five hours credit.*

Prerequisite, MATH 34 and 201. 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.

233. ADVANCED CALCULUS II. *Five hours credit.*

Prerequisite, MATH 232. 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.

234. ADVANCED CALCULUS III. *Five hours credit.*

Prerequisite, MATH 233. 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.

243. MODERN GEOMETRY I. *Five hours credit.*

Prerequisite, MATH 242. A first course in a two course sequence which will emphasize new topics in present-day geometry. This emphasis will be partly Euclidean in nature and partly non-Euclidean. Special emphasis will be placed upon the foundations of geometry along with the different geometries which can be developed from this foundation. Topics to be covered are: foundations of geometry, transformations, types of geometry, selected Euclidean topics.

281. INTRODUCTION TO COMPUTER MATHEMATICS. *Five hours credit. (Four hours lecture, two hours laboratory.)*

Prerequisite, MATH 25. An introduction to basic computer mathematics, including computer arithmetic, Boolean equations, arithmetic design criteria and programming routines. Stress will be placed on teaching computer methods for use in the junior and senior high schools. Lab work will consist of Fortran programming with application to available computers.

282. COMPUTER MATHEMATICS I. *Four hours credit. (Three hours lecture, two hours laboratory.)*

Prerequisite, MATH 33. This is the first course in a two term course designed to give mathematics majors or others interested in computers a solid background in programming fundamentals, numerical analysis, computer arithmetic design and the application of Boolean algebra, matrices and modern algebra to practical computer design. Two hours lab per week will be directed toward programming local computers.

283. COMPUTER MATHEMATICS II. *Four hours credit. (Three hours lecture, two hours laboratory.)*

Prerequisite, MATH 282. This is the second of a two term course in computer mathematics designed to give the mathematics majors or others interested in computers a solid background in programming fundamentals, numerical analysis, computer arithmetic design and the application of Boolean algebra, matrices and modern algebra to practical computer design. Two hours (lab time) per week will be directed toward programming local computers.

290. 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, measurement and approximate computation.

291. THEORY OF NUMBERS. *Five hours credit.*

Prerequisite, MATH 32. Foundations of arithmetic and algebra, including the fundamental laws, the linear Diophantine equation, properties of integers and the properties of linear and quadratic congruences.

324. MODERN ALGEBRA II. *Five hours credit.*

Prerequisite, MATH 223. A continuation of MATH 223 with emphasis on linear algebra including vectors and vector spaces, matrix algebra, linear groups, algebra of classes.

332. COMPLEX VARIABLE I. *Three hours credit.*

Prerequisite, MATH 34. The first course of a sequence of three courses which will cover the basic theory of functions of a complex variable. The course will cover the following topics: complex numbers and their algebra, analytic functions, Cauchy Riemann conditions, and differential calculus of analytic functions.

333. COMPLEX VARIABLE II. *Three hours credit.*

Prerequisite, MATH 332. A second course in a sequence of three courses. The topics to be considered in this course are: elementary functions of a complex variable and their inverses, residues and poles of a function of a complex variable and their application to evaluating real integrals.

334. COMPLEX VARIABLE III. *Three hours credit.*

Prerequisite, MATH 333. The third course in a sequence of three courses. From the background established in the first two courses, several advanced topics and applications will be considered. These will include conformal mapping and applications (to solutions of differential equations) and the concept of analytic continuation.

340. INTRODUCTION TO TOPOLOGY. *Four hours credit.*

A first course at the graduate level in topology. The approach will be mainly from the viewpoint of the use of topology as a tool for courses in analysis. Topics to be covered will be basic and special topological spaces, continuous functions and metric spaces. The course is strongly recommended to any prospective college teacher of mathematics.

344. MODERN GEOMETRY II. *Five hours credit.*

Prerequisite, MATH 243. A continuation of MATH 243. This course will continue to emphasize types of geometry with special emphasis being placed on non-Euclidean topics. Special types to be covered include: absolute geometry, parabolic geometry, elliptic geometry and differential geometry.

MATHEMATICS EDUCATION**170. MATHEMATICAL INSTRUMENTS AND SURVEYING.** *Four hours credit.*

Prerequisite, MATH 25. 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.

264. HISTORY OF MATHEMATICS I. *Three hours credit.*

Prerequisite, MATH 31. A general view of the development of mathematics through the 18th century. Particular attention is given to the history of arithmetic, algebra, geometry, and mathematical symbolism.

271. INSTRUCTIONAL MATERIALS IN SECONDARY SCHOOL MATHEMATICS. *Three hours credit.*

Prerequisite, MATH 31. 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.

277, 278, 279. MATHEMATICS TEACHERS' WORKSHOP I, II, III.*Three hours credit each.*

Provision is made for students to work on individual problems related to arithmetic and mathematics. A student may take no more than six quarter hours for credit.

364. HISTORY OF MATHEMATICS II. *Three hours credit.*

Prerequisite, MED 264. A deeper study of the development of elementary mathematics which is begun in MED 264 as well as a study of the development of calculus, statistics, and recent advances in the field of mathematics.

372. CURRICULUM IN SECONDARY SCHOOL MATHEMATICS.*Five hours credit.*

A study of the mathematics curriculum in grades 7-14 with emphasis on committee and commission reports, changes in textbooks, and modern curricular programs in both large and small secondary schools.

373. PROBLEMS IN THE TEACHING OF SECONDARY MATHEMATICS. *Four hours credit.*

Prerequisite, 27 quarter hours in college mathematics. Content, special problems, and modern trends in algebra will be studied. Emphasis will be placed upon new approaches and content.

374. SEMINAR IN TEACHING SECONDARY MATHEMATICS. *Four hours credit.*

Content, special problems, and modern trends in geometry and trigonometry will be studied. Emphasis will be placed upon new approaches and content.

471. SEMINAR IN MATHEMATICS EDUCATION. *Three hours credit.*

Prerequisite, PCG 340, APST 376. Recent issues, trends, research, and philosophy in mathematics. Major emphasis will be placed upon theory and practice of learning mathematics and recent research in learning mathematics.

STATISTICS**Mathematical Statistics****250. PROBABILITY THEORY. *Three hours credit.***

Prerequisite, MATH 34 and 201. Probability as a set function on a collection of events in a sample description space. Random variables as real-valued functions. Probability distributions of random variables; the discrete and continuous types. Moments of a distribution; mean and variance. Distributions in more than one dimension; covariance and correlation independence and conditional probability.

251. MATHEMATICAL STATISTICS I. *Five hours credit.*

Prerequisite, MATH 250. Empirical distribution and concepts of random sample. Mathematical models and the normal family. Other sampling distributions including the t , X^2 , and F . Significance tests. Tests of hypotheses about a single parameter and two-parameter tests. Nonparametric tests. Estimation including maximum likelihood and confidence interval techniques.

252. MATHEMATICAL STATISTICS II. *Five hours credit.*

Prerequisite, MATH 251. A continuation of MATH 251. Regression theory and correlation analysis with special emphasis on the linear hypothesis. Least squares methods and normal equations, estimates and distribution theory when normality is assumed. Analysis of variance including treatment of fixed effects and random effects models with one and two-way classifications. Brief treatment of enumeration data and introduction to decision theory.

253. MATHEMATICAL STATISTICS III. *Five hours credit.*
Prerequisite, MATH 252. A continuation of MATH 252. Multi-variate analysis and additional topics in analysis of variance. Special attention to design and analysis of experiments, with some practice in organizing such experiments.

Applied Statistics

275. DESCRIPTIVE STATISTICS. *Five hours credit. (Four hours lecture, two hours laboratory.)*

Compilation summarization and presentation of statistical data. A study of the problems of gathering and recording data, preparing basic descriptive measures, and meaningful presentation of the results. Four class meetings per week plus two hours laboratory work on calculating machines.

376. STATISTICAL INFERENCE. *Five hours credit.*

Prerequisite, APST 275. An introduction to sampling error theory is presented, along with some elements of testing hypotheses, internal estimation, and distribution models. Emphasis is upon inferences from parametric data. Theoretical distribution models are set forth in their relationship to research problems. The task of making inferences from research data is explored and analyzed.

377. NONPARAMETRIC STATISTICS IN BEHAVIORAL RESEARCH. *Three hours credit.*

Prerequisite, APST 376. Selected nonparametric tests of research hypotheses are discussed in the light of: (1) the data to which the test is applicable, (2) the rationale underlying the test, (3) examples of application of the test in behavioral research, (4) comparison of the test with its parametric equivalent.

440. RESEARCH PRACTICUM. *Twenty-four hours credit.*

Three quarters must be taken with eight quarter hours credit given for each quarter successfully completed. Student applies advanced statistical techniques and electronic data processing equipment to the solution of approved educational measurement and research problems.

475. DESIGN AND ANALYSIS OF EXPERIMENTS. *Five hours credit.*

Prerequisite, APST 376. Presents a sequence designed to help students and research workers learn how to select or devise appropriate designs for the experiments they may have occasion to perform, and to analyze and interpret properly the results obtained through the use of those designs.

476. PREDICTION ANALYSIS IN BEHAVIORAL RESEARCH. *Three hours credit.*

Prerequisite, APST 376. Methods of prediction analysis discussed include multiple regression, biserial and tetrachoric correlation, and discriminant analysis. Sampling error theory is applied to each method of analysis.

477. THE SCIENCE OF RESEARCH IN EDUCATION. *Three hours credit.*

Prerequisite, APST 475. Techniques and design procedures are applied to the problem of organizing and conducting research in education. The applications of measurement techniques and of electronic computers are integrated into the framework for research.

MEDICAL TECHNOLOGY MAJOR

Bachelor of Arts Degree (Liberal Arts)

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, plus six quarter hours of physical education activity courses. A minimum of 139 quarter hours will be earned on the campus of Colorado State College during the first three years and 47 quarter hours of Medical Technology will be earned during the senior year (July to June) at the Weld County General Hospital under the supervision of the clinical staff. The courses in Medical Technology are open only to majors in Medical Technology. The general college policies regarding registration and grading will be followed.

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. The following required courses in the major:

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
MT	250	— Urinalysis and Clinical Microscopy.....	4
MT	251	— Basal Metabolism and Electrocardiography....	1
MT	252	— Hematology	8
MT	253	— Pretransfusion Tests and Blood Bank Procedures	3
MT	254	— Clinical Chemistry	12
MT	255	— Serology	4
MT	256	— Medical Microbiology	12
MT	257	— Histologic Technique	3
		Electives	1
			48

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

4. Forty-four 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 151, BOT 122, CHEM 147, MATH 23, 25, PHYS 62, 63, ZOO 11, 12, 217.

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

Medical Technology Minor in Chemistry

<i>Course Number</i>		<i>Course Title</i>	<i>Hours Credit</i>
CHEM	40	— Principles of Chemistry I.....	5
CHEM	41	— Principles of Chemistry II.....	5
CHEM	142	— Organic Chemistry II.....	5
CHEM	141	— Organic Chemistry I.....	5
CHEM	145	— Quantitative Analysis I.....	5
		Electives	2
			27

These courses are open only to majors in Medical Technology.

Medical Technology

250. URINALYSIS AND CLINICAL MICROSCOPY. *Four 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.

251. 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.

252. HEMATOLOGY. *Eight 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.

253. PRETRANSFUSION TESTS AND BLOOD BANK PROCEDURES. *Three 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 Rh₀, (D) typing, cross-matching tests, subgroups A, irregular agglutinins, cold agglutinins, transfusion reactions, emergency transfusions, Rh antibody tests, and Coombs' test.

254. CLINICAL CHEMISTRY. *Twelve hours credit.*

Urine, cerebrospinal fluid, feces and other biologic 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.

255. SEROLOGY. *Four 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 opsonocytophagic tests cold agglutinins are studied.

256. 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.

257. HISTOLOGIC TECHNIQUE. *Three 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.

Division of the Social Sciences

Professors: Arnold, Christensen, Reynolds, West.

Associate Professors: Boeck, Larson, Minkel, Perchlik, Pogue, Quammen, Trainer.

Assistant Professors: Byerly, Greer, Matoren, J. Mickey, Rothweiler, Willoughby.

Instructors: Brooks, Hurd, B. Mickey.

The Division of the Social Sciences includes: (1) General Social Studies, (2) Social Science, (3) History and (4) Social Studies Education. Degrees and majors and minors are:

BACHELOR OF ARTS DEGREE (Teacher Education)

Majors: Social Science, History, Social Studies (Junior High School).

Minors: Social Science, World History, U. S. History.

BACHELOR OF ARTS DEGREE (Liberal Arts)

Majors: Social Science, History.

Minors: Social Science, World History, U. S. History.

MASTER OF ARTS DEGREE (Teacher Education)

Majors: Social Science, History.

SPECIALIST IN EDUCATION DEGREE

Area of Specialization: To be selected.

DOCTOR OF EDUCATION DEGREE (Teacher Education)

Area of Concentration: Social Science.

Supporting Area: Social Science.

SOCIAL SCIENCE MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.

3. The following required courses in the major:

<i>Course Number</i>	<i>Course Title</i>	<i>Hours Credit</i>
GEOG 10	— World Geography	5
ANT 20	— General Anthropology	5
ECON 30	— Introductory Economics	5
PSCI 40	— National Government of the U. S.	5
SOC 50	— Principles of Sociology	5
	Advanced Electives—Courses in anthropol- ogy, economics, geography, political sci-	

		ence and/or sociology. These electives to be chosen in consultation with the student's adviser from <i>one, two, or three</i> of these social science areas	20
SS	200	— Social Philosophy	3
			<hr/> 48

(For teaching the social studies in the public schools the following history courses USH 70, 71, 72 and WHS 30, 31, 32 are necessary. To teach a separate subject such as anthropology, economics, geography, political science or sociology, accrediting agencies require that the teacher has earned a minimum of eight quarter hours in that subject.)

4. One minor of 27 quarter hours *outside* the Division of the Social Sciences.

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

Social Science Minor (Teacher Education)

Twenty-seven quarter hours in the areas of anthropology, economics, geography, political science and sociology. The student, with advisement, will select *one, two* or *three* of these areas. In each instance, the student is required to take the introductory course in the area or areas selected. These introductory courses are:

Course Number		Course Title	Hours Credit
GEOG	10	— World Geography	5
ANT	20	— General Anthropology	5
ECON	30	— Introductory Economics	5
PSCI	40	— National Government of the U. S.	5
SOC	50	— Principles of Sociology	5

(To teach the social studies, USH 70, 71, 72 is recommended as a supplement. To teach a separate subject, accrediting agencies require that the teacher has earned a minimum of eight quarter hours in that subject.)

HISTORY MAJOR

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.
2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.
3. The following required courses in the major:

Course Number		Course Title	Hours Credit
WHS	30, 31, 32	— World History I, II, III	12
USH	70, 71, 72	— United States History I, II, III	9
		Advanced Electives—Courses in American and/or world history	24
WHS	200	— Introduction to Historical Research	3
			<hr/> 48

(For teaching the social studies in the public schools 21 hours *outside* of history in social science are necessary. Credit should be obtained in *one, two, or three* of the following subject areas: anthropology, economics, geography, political science, sociology. To teach

a separate subject, accrediting agencies require that the teacher has earned a minimum of eight quarter hours in that subject.)

4. One minor of 27 quarter hours *outside* the Division of the Social Sciences.

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

World History Minor (Teacher Education)

Course Number	Course Title	Hours Credit
WHS 30, 31, 32	— World History I, II, III	12
	Advanced electives in World History	15
		<hr style="width: 100%; border: 0.5px solid black;"/> 27

(To teach the social studies USH 70, 71, 72 and selected courses from *two* of the following areas: anthropology, economics, geography, political science and sociology are recommended as a supplement. To teach a separate subject, accrediting agencies require that the teacher has earned a minimum of eight quarter hours in that subject.)

United States History Minor (Teacher Education)

Course Number	Course Title	Hours Credit
USH 70, 71, 72	— United States History I, II, III	9
	Advanced electives in United States History..	18
		<hr style="width: 100%; border: 0.5px solid black;"/> 27

(To teach the social studies, WHS 30, 31, 32 and selected courses from *two* of the following areas: anthropology, economics, geography, political science and sociology are recommended as a supplement. To teach a separate subject, accrediting agencies require that the teacher has earned a minimum of eight quarter hours in that subject.)

SOCIAL STUDIES MAJOR (For Junior High School Teachers)

Bachelor of Arts Degree (Teacher Education)

The following is the required program:

1. General Education totaling 42 academic quarter hours, plus six quarter hours of physical education activity courses.

2. Advanced Teacher Education, 29 hours, plus ED 140, two hours credit, and ED 141, three hours credit.

3. The following required courses in the major:

Course Number	Course Title	Hours Credit
WHS 30, 31, 32	— World History I, II, III	12
USH 70, 71, 72	— United States History I, II, III	9
USH 250	— History of Colorado	2
GEOG 250	— Geography of Colorado	2
PSCI 40	— National Government of the U. S.	5
GEOG 10	— World Geography	5
GEOG 48	— Anglo-America	5
	Electives (Select eight hours from the following: PSCI 171, 275; ECON 30; SOC 50; ANT 20)	8
		<hr style="width: 100%; border: 0.5px solid black;"/> 48

4. One minor of 27 quarter hours *outside* the Division.

5. It is recommended that each student elect a minimum of 11 additional hours of subject matter courses which *may* be selected from WHS 268, USH 246, BIO 257, ESCI 236 and a minimum of 10 additional hours of professional courses which *may* be selected from ENG 228, ED 206, PCG 101, SSE 231.

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

Recommended Concentration in the Social Sciences for Elementary Education Majors

Take fifteen (15) quarter hours, with advisement, from *one, two, or three* of the following areas: anthropology, economics, geography, history, political science or sociology. (Professor West will be elementary education adviser.)

Recommended Electives for Elementary School Teachers

Course Number	Course Title	Hours	Credit
ANT 20	— General Anthropology	5	
ANT 221	— Indians of the Americas	3	
ECON 30	— Introductory Economics	5	
ECON 102	— Contemporary Economic Problems	3	
GEOG 10	— World Geography	5	
GEOG 250	— Geography of Colorado	2	
USH 246	— Geographic Influences in U. S. History.....	2	
USH 250	— History of Colorado.....	3	
USH 251	— Colonial America (1607-1763)	3	
USH 252	— History of the West	3	
PSCI 40	— National Government of the U. S.	5	
PSCI 171	— State and Local Government	5	
SOC 50	— Principles of Sociology	5	
SOC 204	— Marriage and the Family	3	
SOC 206	— Crime and Delinquency	3	

BACHELOR OF ARTS DEGREE (Liberal Arts)

There are two liberal arts majors: *Social Science* and *History*. The course requirements are the same as those listed for the Teacher Education majors except that supplementary courses required for teaching are not necessary.

There are three liberal arts minors: *Social Science*, *World History*, and *United States History*. The course requirements are the same as those listed for the Teacher Education minors. Supplementary courses recommended for teachers are not necessary.

Description of Courses

GENERAL SOCIAL SCIENCE

81. THE INDIVIDUAL AND HIS SOCIAL RELATIONS. *Three hours credit.*

The importance of general education and of general education in the social sciences; critical thinking and scientific method in relation to the alleviation of insistent social problems; analysis of the social

behavior of the individual based upon data from all fields in the social sciences; intergroup relations; and, major social institutions, in relation to their provisions for freedom and security for individuals and groups.

82. AMERICAN LIFE AND INSTITUTIONS. *Three hours credit.*

Major problems in the life of the citizens of the United States in the contemporary period; problems connected with the maintenance of the family, relationships between man and government, man's organization for production, the role of labor in an industrial society, the position of agriculture.

83. CONTEMPORARY WORLD CULTURES. *Three hours credit.*

The geographic framework of contemporary world cultures; some world cultures, the interdependent and inter-related nature of world cultures, and the problem of the maintenance of world peace; the search for freedom and security in the contemporary world situation.

200. SOCIAL PHILOSOPHY. *Three hours credit.*

The meaning of the experiences of mankind; a study of progress toward more adequate conceptions of relationship among men and peoples.

220. EUROPEAN CONTRIBUTIONS TO AMERICAN CULTURE.

Eleven to fifteen hours credit.

The major contributions of European civilization to American culture are studied for five weeks on campus and then one month in Europe. Contemporary influences and relationships are included as well as origins of social, economic and political institutions. The background of art, architecture, and literature will also be covered.

250. NEW VIEWPOINTS IN THE SOCIAL SCIENCES. *Three hours credit.*

A survey of recent findings and new interpretations in the various social science fields. Recent literature in the fields will be studied and discussed. Specialists will be invited to contribute to discussions. Teaching experience is a course prerequisite. Credit is not applicable to graduate programs in the Division of the Social Sciences.

330. GRADUATE READINGS COURSE IN THE SOCIAL SCIENCES.

Four hours credit.

This course is designed to give doctoral candidates who are deficient in the social sciences an opportunity to acquire a basic amount of knowledge and understanding of our cultural heritage and of the political, social, and economic problems that confront America and the rest of the world. Possible solutions of contemporary problems are examined. This course not applicable to a graduate degree in social studies.

THE SOCIAL SCIENCES

Anthropology

20. GENERAL ANTHROPOLOGY. *Five hours credit.*

The nature and scope of anthropology, organic man, the problems of race, the nature of culture, the gathering and production of food, economic organization, social organization, political organization, religion, language, education and the formation of personality, problems of culture change, acculturation and applied anthropology. Emphasis upon cultural anthropology.

200. GREAT IDEAS SEMINAR: ANTHROPOLOGY. *Three hours credit.*

The Great Ideas Seminars are conducted by authorities nationally known in their fields of specialization. The purpose of the seminar is to provide information about current important ideas in each field of knowledge.

220. WORLD ETHNOLOGY. *Three hours credit.*

Analysis of cultures different from our own in Asia, Africa, the Americas, Polynesia, Micronesia and adjacent areas, cultural and linguistic areas of the world.

221. INDIANS OF THE AMERICAS. *Three hours credit.*

Nonliterate cultures of the Americas. Emphasis on the Indian cultures of North America.

224. INDIANS OF THE SOUTHWEST. *Three hours credit.*

One-half of the time will be spent on background materials relative to Pueblo and Apache cultures, and the eventual abandonment of Mesa Verde area. The remaining portion of the course will be spent in the field at Mesa Verde and other appropriate sites. Those wishing to enroll should contact the division.

225. CULTURES OF AFRICA; SOUTH OF THE SAHARA. *Five hours credit.*

This course is designed to acquaint the student with the cultural background of the modern African states. The emphasis will be placed on the tribal backgrounds of modern Africa and the acculturation that is taking place between European economic, political and social systems and the equivalent African systems. The African nativistic movements such as the Mau Mau and the secret societies and the growing number of peoples who are de-tribalized are considered.

323. SPANISH-AMERICAN CULTURE. *Three hours credit.*

A survey of the cultures in the new world in the pre-hispanic era. The Spanish culture as it was brought to the Americas and a study of the resulting amalgamation that produced the Spanish-American cultures of today.

Economics

30. 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.

102. CONTEMPORARY ECONOMIC PROBLEMS. *Three hours credit.*

Prerequisite, ECON 30. 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.

200. LABOR-MANAGEMENT RELATIONS. *Five hours credit.*

A study into the origins of the labor movement and an examination of the impact of trade unionism on contemporary industrial organization.

202. MONEY AND BANKING. *Five hours credit.*

Prerequisite, ECON 30. A study of the origins and present roles of our monetary system, commercial banking and Federal Reserve System.

205. 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.

210. HISTORY OF ECONOMIC SYSTEMS: SOCIALISM, COMMUNISM, CAPITALISM, FASCISM. *Five hours credit.*

A survey of social economic reform movements, including Utopian schemes, mercantilism, monopolistic capitalism, socialism, communism, fascism and modified capitalism.

212. INTERNATIONAL ECONOMICS. *Three hours credit.*

Prerequisite, ECON 30. 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.

220. INTERMEDIATE ECONOMICS 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.

241. PUBLIC FINANCE. *Five hours credit.*

Prerequisite, ECON 30. 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.

250. NATIONAL INCOME ANALYSIS. *Three hours credit.*

Prerequisite, ECON 30. 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.

266. 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.

277. GOVERNMENT AND BUSINESS. *Three hours credit.*

Prerequisite, ECON 30. A study of the relation of American public policy to the challenge of industry, labor, agriculture and inflation-depression periods.

302. ADVANCED ECONOMICS. *Five hours credit.*

Prerequisite, ECON 30. The purpose of this course is to provide a summary exposition of contemporary economic theory for those students intending to undertake other graduate courses in economics. Emphasis is upon value and distribution theory. It is assumed that students will have had an introductory course in economics.

310. ECONOMETRICS. *Five hours credit.*

Prerequisite, ECON 30. This is a course characterized by two essential qualities: (1) economic relationships are expressed in mathematical form, (2) numerical estimates are made making use of techniques based upon the theory of probability; the course shall be concerned with econometric models requiring specification, estimation, verification, and prediction.

320. HISTORY OF ECONOMIC THOUGHT. *Three hours credit.*

Prerequisite, ECON 30. 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.

324. SEMINAR IN INTERNATIONAL ECONOMICS. *Three hours credit.*

Prerequisite, ECON 30. This course will be primarily concerned with current issues facing nations engaged in international trade. Specific interest will be directed toward problems facing the United States in the world economy.

Geography

10. WORLD GEOGRAPHY. *Five hours credit.*

Tools of world geography. World survey of the inter-relationships of man and his culture to the climates, animal life, minerals, soils and surface features of the earth.

48. ANGLO-AMERICA. *Five hours credit.*

A study of regions and their interdependence. Land use, social and economic problems emphasized.

64. MAPS AND THEIR USES. *Two hours credit.*

The course presents the basis for an effective use of maps and globes in the classroom. It is designed to develop the skill of map reading and map interpretation.

112. ECONOMIC GEOGRAPHY. *Three hours credit.*

Geographic and economic conditions affecting the products, industries, commerce and resources of the world. Special emphasis on the United States.

203. WORLD RESOURCES AND INDUSTRIES. *Three hours credit.*

A functional appraisal of the resources and industries of the world, including a consideration of their geographical, historical, sociological, technological, and political aspects.

218. 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.

221. PHYSICAL GEOGRAPHY. *Five hours credit.*

The earth as a globe; the meteorological basis of climate; climates of the world; soils and their distribution; maps as tools; landforms, their recognition, causes and patterns.

226. AFRICA. *Five hours credit.*

Relationships between the physical and cultural patterns. Land use, resource development, social and political problems.

237. MIDDLE AMERICA. *Three hours credit.*

Emphasis is placed upon the heterogeneity of physical conditions, people, historical development, natural resources and economic activities. Particular attention is given to the problems and prospects of the Middle American countries in their efforts toward improved economic conditions and political stability.

238. SOUTH AMERICA. *Three hours credit.*

An analysis of the geographic characteristics of those Western Hemisphere nations lying south of the equator. Attention is focused upon the significant differences from place to place in physical conditions, racial and cultural heritage, and stage of economic development. Particular attention is given to the impact of the Industrial and Democratic Revolutions upon a previously pre-industrial society.

243. EUROPE. *Three hours credit.*

Physical and cultural patterns. The nations of Europe, their regions, cultures, social and economic organizations with resulting conflicts.

244. ASIA. *Five hours credit.*

The countries of Asia in terms of their physiography, climates, regions, cultures, cultural landscapes, social organizations and economic activities.

250. GEOGRAPHY OF COLORADO. *Two 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; agriculture, mining, manufacturing, water supply, transportation and commerce and industry; population problems, state government and current problems in the growth and development of Colorado.

360. POLITICAL GEOGRAPHY. *Five hours credit.*

A study of the principles of political geography as developed through a systematic and regional analysis of political phenomena and their relation to geographic conditions. Historical and current problems in local, national, and international affairs will be considered from the aspect of the geographic factors involved.

365. THE SOVIET UNION. *Three 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.

370. URBAN GEOGRAPHY. *Five hours credit.*

A study of the urban community as a geographical phenomena. 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.

392. SYRACUSE UNIVERSITY SUMMER FIELD COURSE IN GEOGRAPHY. *Eight hours credit.*

Most of each day is spent in the field. Evening seminars offer an opportunity to discuss ways and means of proceeding in field investigation. Practice is provided in the various map-making, recording, and interviewing techniques. The final weeks will be devoted to group field projects.

Political Science (And International Relations)**40. 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.

171. STATE AND LOCAL GOVERNMENT. *Five hours credit.*

Prerequisite, PSCI 40. The organization of state, county, and municipal governments.

172. PROBLEMS IN UNITED STATES GOVERNMENT. *Three hours credit.*

Prerequisite, PSCI 40 and 171. 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.

173. EUROPEAN POLITICAL SYSTEMS. *Three hours credit.*

A comparative functional analysis of the political systems of selected European nations, including Great Britain, France, West Germany, and the Union of Soviet Socialist Republics.

176. INTERNATIONAL RELATIONS. *Four hours credit.*

A study of the power relationships existing in a world of sovereign nation states at mid-century.

- 218. RUSSIAN-AMERICAN RELATIONS.** *Two hours credit.*
 An analysis of the contemporary political and economic relations between the United States and the Soviet Union; of zones of tension and conflict, areas of agreement and possible solutions to the controversies which currently make for strained relations between these world powers.
- 275. 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.
- 279. POLITICAL PARTIES.** *Three hours credit.*
 Prerequisite, PSCI 40. 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.
- 280. REGIONAL AND SUPRANATIONAL POLITICAL ORGANIZATIONS.** *Four hours credit.*
 Prerequisite, PSCI 176. 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.
- 377. CONSTITUTIONAL LAW.** *Five hours credit.*
 Prerequisite, PSCI 40. The major sections and clauses of the Constitution as developed and interpreted by the courts and by leading writers in the field of constitutional law.
- 379. SEMINAR IN INTERNATIONAL POLITICS.** *Three hours credit.*
 Research and reports on selected topics.

Sociology

- 50. 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.
- 203. WORLD'S GREAT RELIGIONS.** *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.
- 204. MARRIAGE AND THE FAMILY.** *Three 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.
- 206. CRIME AND DELINQUENCY.** *Three hours credit.*
 A study of the problem of crime and delinquency, causes, treatment and prevention.
- 211. HISTORY OF SOCIAL THOUGHT.** *Five hours credit.*
 Prerequisite, SOC 50. A systematic and historical development of social thought from primitive folk thinking to contemporary theories of society and social relations.
- 291. 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.

292. PROBLEMS OF INTERGROUP RELATIONS. *Two 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.

293. RURAL-URBAN SOCIOLOGY. *Two hours credit.*
Prerequisite, SOC 50. Ecological, social, psychological, institutional and organizational aspects of rural and urban areas are investigated as they affect human interaction. The rural-urban continuum is used as the framework.

294. WORLD POPULATION PROBLEMS. *Two hours credit.*
Prerequisite, SOC 50. 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.

302. AMERICAN SOCIETY TODAY. *Three hours credit.*
An advanced study of the main cultural and social structures of American society, the social relations, beliefs and values which characterize the people of the United States.

310. COMPARATIVE SOCIAL INSTITUTIONS. *Five hours credit.*
The course will discuss social transition from the stateless society of the pre-historic period to the contemporary nation-states. It will illustrate the change from small isolated units of social interchange to the interdependent and interrelated world-centered units of today. The course will conclude with an analysis of the recent trends toward universalism and the one-world concept.

311. SOCIOLOGICAL THEORY. *Three hours credit.*
Prerequisite, SOC 50. The development of sociological theory from Comte to the present is analyzed with special emphasis on various European and American "schools." The principal aim is to acquaint the student, systematically, with the concepts of sociological theory in order to orient him to various frames of reference for viewing human interaction.

HISTORY

World History

30. WORLD HISTORY I. *Four hours credit.*
World history—early times to 800. Major civilizations. For teachers in elementary and secondary schools.

31. WORLD HISTORY II. *Four hours credit.*
Prerequisite, WHS 30. World history—800-1800. Major civilizations. For teachers in elementary and secondary schools.

32. WORLD HISTORY III. *Four hours credit.*
Prerequisite, WHS 30 and 31. World history—1800 to the present. Major civilizations. For teachers in elementary and secondary schools.

All of the following World History courses have as pre-requisites WHS 30, 31, 32, or equivalent.

200. INTRODUCTION TO HISTORICAL RESEARCH. *Three hours credit.*

An introduction to the nature of history; what is history; why study history; how to study history. Pursuit of evidence; familiarization with library catalogs; bibliographies and indexes. Selection of topic for research by student. Note taking; criticism; construction of research papers; elements of good English usage.

234. HISTORY OF LATIN AMERICA. *Five hours credit.*

A study of the development of the economic, educational, political, religious, and social institutions of Latin America. Consideration will be given to United States relations with Latin America, and to the status of and prospects for democracy in Latin American nations.

260. ANCIENT HISTORY. *Five hours credit.*

The life and institutions of the Ancient Near East, Greece, and Rome; culture development, living conditions, and recent archaeological discoveries.

261. THE MIDDLE AGES. *Five hours credit.*

An advanced coverage of history from the end of ancient times to the beginnings of modern Europe.

263. RENAISSANCE AND REFORMATION. *Five hours credit.*

A study of political, social, economic, religious and cultural developments from 1300 to 1600.

264. THE OLD REGIME. 1600-1789. *Five hours credit.*

A study of the political, social, economic, intellectual, and cultural developments from the end of the Renaissance and Reformation period to the French Revolution.

266. 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 social-economic changes.

267. 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.

268. CONTEMPORARY WORLD HISTORY. *Five hours credit.*

An advanced study of world developments in recent times which will investigate the period from 1900 to the present. The course will discuss the ideologies of Communism, Socialism, Fascism, and Democracy in their world setting.

269. THE FAR EAST. *Five hours credit.*

The economic, social, educational, philosophical, and political life of the major nations and regions of the Far East.

270. HISTORY OF RUSSIA. *Five hours credit.*

Social, political, and economic history of Russia, with emphasis on the nineteenth and twentieth centuries. Considerable attention will be given to the various factors which contributed to or influenced the revolutions of 1905 and 1917. Considerable time will also be devoted to the post-revolution policies of Russia.

271. ENGLISH HISTORY. *Five hours credit.*

The emphasis of the course will be on the economic, political and social transitions since the defeat of the Spanish Armada but it will contain a brief survey of the background of English history to the Tudor Dynasty.

330. HISTORY OF NATIONALISM. *Five hours credit.*

Deals mainly with the rise of nationalism in the 18th century, its spread over Europe in the 19th century, and its world-wide expansion in the 20th century. Examines the interaction of nationalism, industrialism, revolution and democracy. Compares different manifestations of nationalism in Russia, Japan, and other non-Western nations as well as European nations.

332. INTERRELATIONSHIP OF WESTERN AND EASTERN CIVILIZATIONS. *Three hours credit.*

Traces the historical origins of the division between Western Democracies and communistic Russia; the impact of Western civilization upon India, China, Japan, and Southeastern Asia; and the more recent counterimpact of the non-Western civilizations. Explores the possibility of reconciling the conflicting ideologies through a more inclusive cultural ideal.

333. REVOLUTIONS IN MODERN TIMES. *Five 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.

334. EUROPEAN IDEOLOGIES. *Four hours credit.*

Prerequisite, WHS 30, 31, 32. Traces the history of three European ideologies, namely, Socialism, Communism, and Fascism, from the beginning of the 19th century to the present. These will be related to their interaction with liberalism, nationalism and democracy.

365. 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.

372. CONSTITUTIONAL HISTORY OF MEDIEVAL ENGLAND.

Three hours credit.

Prerequisite, WHS 30, 31, 32. 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.

373. CONTEMPORARY GERMANY. *Four hours credit.*

Prerequisite, WHS 30, 31, 32. A survey of German history from World War I to the present, through the reading of original sources and documents.

399. HISTORIOGRAPHY. *Three hours credit.*

Required of all graduate students majoring in history. An examination of the great historians and the major schools of historical interpretation from classical Greece to the Twentieth Century.

United States History

70. 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.

71. 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.

72. UNITED STATES HISTORY III. *Three hours credit.*

United States history, 1912 to the present. The new freedom, the First World War, prosperity and depression, the New Deal, the long armistice, the Second World War, post-war problems and adjustment.

75. 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.

209. ECONOMIC HISTORY OF THE UNITED STATES. *Four hours credit.*

A review of the historical changes in the major American economic institutions with emphasis on the post-Civil War period.

246. GEOGRAPHIC INFLUENCES IN UNITED STATES HISTORY. *Two hours credit.*

Relationships of the geography of the times to the discovery, exploration, settlement, and development of the United States.

250. 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.

251. COLONIAL AMERICA, 1607-1763. *Three hours credit.*

Political, economic, and social aspects of the transplanting of European civilization to North America, with the beginnings of the rise of a distinctive American civilization.

252. HISTORY OF THE WEST. *Three hours credit.*

Western movement beginning with 1607. The colonial west, organization of Northwest territory, Indian wars, Cumberland road, coming of steamboat, canal era, frontier monetary problems, relation of Mormons to westward movement, pre-emption and homestead acts, forty-niners and fifty-niners, transcontinental railroads, range cattle industry.

253. 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.

265. CONTEMPORARY UNITED STATES HISTORY. *Three hours credit.*

Brief summary of the great trends in the United States in the period following 1865. World War I, League of Nations, normalcy and reaction, the great depression, new deal, World War II, United Nations, Korean "Police Action," contemporary problems.

272. CONTEMPORARY AMERICAN FOREIGN POLICY. *Three hours credit.*

The course examines American foreign policy by visiting Washington, D. C., and the United Nations at New York City. In Washington the class hears lectures at the State Department and observes the Foreign Relations committees of both Houses of Congress. At the United Nations headquarters in New York the class is briefed on America's role in the world organization. May count toward a major or minor in Social Science.

273. DIPLOMATIC HISTORY OF THE UNITED STATES. *Five hours credit.*

Survey of the diplomacy which has affected the United States during its entire history. Supplementary readings required in the original and secondary sources.

274. AMERICA COMES OF AGE. *Three hours credit.*

The course will examine the events, trends, and movements in the United States from 1870 to 1916. Major themes are political developments, the rise of Big Business and Big Labor, the settlement of the last frontier, America's emergence as a world power, and social and intellectual movements. Political developments to be studied include growth of congressional government, Populism and Free Silver, Progressivism, and Wilson's New Freedom.

- 356. TOPICS IN AMERICAN HISTORY.** *Two hours credit.*
Stated in general terms, the objective of the course is to allow the student who has become familiar with the chronological sequence of events in American history to examine in depth the most significant topics, issues, and trends in the evolution of the American society.
- 363. EMERGENCE OF A NEW NATION, 1763-1815.** *Five hours credit.*
Background of Revolution, the conflict between the Colonies and Great Britain, Declaration of Independence, Treaty of Paris 1783, Articles of Confederation, U. S. Constitution, administrations of Washington, Adams, Jefferson and Madison.
- 364. CIVIL WAR AND RECONSTRUCTION.** *Three hours credit.*
Slavery in America, the crises of the 1850's and the election of 1860, secession, conflict between the states, the Emancipation Proclamation, the reconstruction of the defeated South.
- 366. THE ERA OF JACKSONIAN DEMOCRACY, 1815-1850.** *Five hours credit.*
An intensive survey of the social, economic, and political developments of the "Middle Period" of American History. Major themes are the advent of industrialism, democracy, Manifest Destiny, and the genesis of a bitter sectional controversy.
- 367. INTELLECTUAL HISTORY OF THE UNITED STATES.** *Five hours credit.*
A study of the intellectual aspects of characteristic institutions and the changing modes of thought in American life from the Colonial period to the present day. The relationship of intellectual life to social and economic conditions is stressed.
- 368. THE POPULIST—PROGRESSIVE AGE, 1887-1920.** *Five hours credit.*
A study of the Populist and Progressive periods in America with particular attention given to developments in the Rocky Mountain West. Research in primary sources located in nearby libraries and archives will be stressed as well as familiarization with the secondary sources in the college library.

SOCIAL STUDIES EDUCATION

- 231. INSTRUCTIONAL MATERIALS FOR THE SOCIAL STUDIES IN THE JUNIOR HIGH SCHOOL.** *Two hours credit.*
Study of instructional materials for junior high school social studies. Attention will be given to collateral, supplementary, and source materials, historical fiction, audio-visual aids, graphic materials, community resources, current news media, music, creative activities, and techniques of evaluation.
- 245. ELEMENTARY AND SECONDARY SCHOOL SOCIAL STUDIES CURRICULUM WORKSHOP.** *Two hours credit.*
A workshop designed for elementary and secondary school teachers of the social studies who desire a knowledge of social studies curriculum research, theory and practice. Specialists drawn from both elementary education and secondary education will conduct the sessions.
- 305. IMPROVEMENT OF INSTRUCTION IN SOCIAL STUDIES IN THE SECONDARY SCHOOL.** *Three hours credit.*
Consideration of recent trends in the organization and teaching of Social Studies courses in the secondary school. Teachers will be given opportunity to evaluate new courses of study, new materials and new equipment.

402. CONCEPTS IN THE SOCIAL SCIENCES. *Five hours credit.* Students will be exposed to the basic concept incorporated in theory relative to each social science discipline. Students will also be expected to develop annotated bibliographies relevant to each concept and to also participate in regularly scheduled classroom discussions.

403. SEMINAR IN PROBLEMS OF TEACHING. *Five hours credit.* Doctoral candidates will utilize understandings in the areas of (1) social analysis, (2) objectives, (3) curricular content, (4) the learning process, and (5) evaluation, in resolving problems anticipated in the light of doctoral and post-doctoral plans.

Instructional Staff

1964-1965

WALLACE AAS, B.S., Moorhead State Teachers College; M.A., Colorado State College.

Associate Professor of Physics
On leave, Fall, Winter, Spring, Summer Quarters, 1965-66.

WILLIAM T. AGAN, B.A., San Francisco State College.

Instructor in English

VERNE AHLBERG, A. B., Macalaster College; A. M., Columbia University.

Associate Professor of Speech
On leave, Fall Quarter, 1965.

FRANK W. ANDERS, B.S., University of California, Berkeley; M.S., U. S. Naval Post Graduate School.

Assistant Professor of Mathematics

ARTHUR L. ANDERSON, A.B., Augustana College; M.A., Colorado State College.

Instructor in Education

DARRELL E. ANDERSON, A.B., York College; Ph.D., University of Nebraska.

Assistant Professor of Psychology

PATRICIA APPLGATE, B.A., State College of Iowa; M.A., Colorado State University.

Instructor in English

DEAN ALEXANDER ARNOLD, B.Ed., Eastern Illinois State College; M.A., Stanford University; Ph.D., University of Chicago.

Professor of History

ELMER V. BACHENBERG, B.A., Nebraska State Teachers College; M.S., University of Illinois.

Instructor in Library Science—Head Catalog Librarian

GUNTHER F. BAER, A.B., A.M., Witwatersrand University, Johannesburg; J.D., University of Heidelberg.

Assistant Professor of Foreign Languages

RICHARD F. BALL, B.S., State Teachers College, Pennsylvania; M.A., Colorado State College.

Associate Professor of Art
On leave, Fall Quarter, 1965.

JERRY N. BARHAM, B.S., Arkansas Agricultural and Mechanical; M.S., Ed.D., Louisiana State University.

Assistant Professor of Physical Education

ALVIN E. BARNHART, B.S., Southern Oregon College; M.Ed., University of Oregon; Ed.D., Colorado State College.

Assistant Professor of Education

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., Colorado State College.

Associate Professor of Physical Education

ROXANN L. BEIHL, B.A., Macalaster College; M.A., University of Kansas.

Instructor in Speech

THOMAS R. BENICH, B.A., M.A., University of Denver.

Assistant Professor of Physical Education

CHARLES HOWARD BENSON, B.S., Colorado State University; M.A., Eastern New Mexico University.

Instructor in Elementary Education

WARREN PAUL BEST, B.S., Nebraska State Teachers College, Wayne; M.A., Colorado State College.

Associate Professor of Physical Education

HOWARD LAWRENCE BLANCHARD, B.A., State College of Iowa; M.S., Drake University; Ed. D., Colorado State College.

Professor of Psychology, Counseling and Guidance

On leave, Winter Quarter, 1966.

ROBERT L. BLASI, B.S., Colorado State University; A.M., Colorado State College.

Associate Professor of Physical Education

CHARLES THOMAS BLUBAUGH, B.F.A., M.A., University of Colorado.

Instructor in Art

GEORGE A. BOECK, B.A., State College of Iowa; M.A., Ph.D., State University of Iowa.

Associate Professor of History

JOHN EDGAR BOTHELL, A.B., A.M., Colorado State College; Ed.D., George Peabody College for Teachers.

Professor of Education

STANLEY E. BOURGEAULT, B.A., University of the Pacific; M.A., University of Denver; Ed.D., Colorado State College.

Assistant Professor of Special Education

D. HAROLD BOWMAN, B.S., McPherson College; M.Ed., Ed.D., Wayne State University.

Associate Professor of Education

WANDA E. BREWER, B.F.A., University of Denver; M.A., Colorado State College.

Instructor in English

GEORGE H. BROOKS, A.B., Sterling College, Kansas; M.Ed., University of Kansas.

Instructor in Social Studies

GLENDA JEAN BROWN, B.A., University of Oregon; M.A., University of Illinois.

Instructor in French

LOIS NADINE BROWN, A.B., Colorado State College; A.M., University of Denver.

Periodicals Librarian

JOSEPHINE MAE BRUCE, A.B., Colorado State College.

Instructor in Elementary Education

MARILYN M. BURNS, B.S., Colorado University; M.A., Colorado State College.

Instructor in Home Economics

LOUIS CONNER BUTLER, A.B., M.A., Colorado State College; Ed.D., New York University.

Professor of Physical Education

BENJAMIN F. BYERLY, B.S., Kansas State University; M.A., Ph.D., University of Illinois.

Assistant Professor of History

MARIANNA CADIGAN, B.A., M.A., Colorado State College.

Instructor in Home Economics

JEAN D. CARLSON, B.S., University of Minnesota; M.S., University of Colorado.

Instructor in Nursing

SHIRLEY MAY CARRIAR, B.A., Superior State College; M.A., University of Wisconsin; Ed.D., Colorado State College.

Associate Professor of English

DONALD WAYNE CHALOUKKA, B.S., University of Nebraska; M.A., Ed.D., Colorado State College.

Associate Professor of Education

JOHN M. CHRISMER, B.S., University of Denver; A.M., Willamette University; Ed.D., University of Nebraska.

Assistant Professor of Business Education

HARALD PETER CHRISTENSEN, A.B., A.M., Ph.D., State University of Iowa.

Professor of Political Science

AMOS L. CLAYBAUGH, B.E., Wisconsin State College; M.S., University of Wisconsin; Ed.D., Colorado State College.

Associate Professor of Elementary Education

FORD W. CLEERE, B.A., M.A., Los Angeles State College.

Instructor in Journalism

SUSAN JEANNETTE CLEVINGER, A.B., Ball State Teachers College; A.M., San Francisco State College; Ed.D., Stanford University.

Associate Professor of Psychology, Counseling and Guidance

On leave, Fall Quarter, 1965.

ROY EDWARD COLBY, B.A., Ohio University; M.A., University of Michigan.

Assistant Professor of Foreign Languages

HARRY EDMON COLLINS, A.B., A.M., Ed.S., Colorado State College.

Assistant Professor of Industrial Arts

VIRGINIA SMITH COSTELLO, A.B., University of Nebraska; B.S. in Library Science, Columbia University; A.M., Colorado State College.

Associate Professor of Library Science—Reference Librarian

RICHARD JOE CRAWFORD, B.S., M.A., Southern Illinois University, Carbondale.

Assistant Professor of Speech

NEAL MILLER CROSS, A.B., A.M., Colorado State College; Ed.D., Stanford University.

Professor of English

JAMES P. CURTIS, B.S., Florence State College; M.A., George Peabody College for Teachers; Ed.D., Colorado State College.

Assistant Professor of Education, Pakistan Project

VINCENT A. CYPHERS, B.S., Pacific University; M.A., Ed.D., Colorado State College.

Professor of Physical Education

GARY ADAM D'ANGELO, B.A., M.A., University of Nebraska.

Instructor in Speech

JOHN A. DAMGAARD, JR., A.B., Colorado College; M.B.A., University of Michigan; Ed.D., University of Utah.

Assistant Professor of Business Education

RAYMOND LAWRENCE DEBOER, A.B., Augustana College; M.A., Ed.D., University of Denver.

Professor of Speech

DONALD GILMORE DECKER, B.S., Eastern Michigan College; M.A., Colorado State College; Ph.D., Teachers College, Columbia University.

Professor of Science Education

WINDEL LEE DICKERSON, B.A., M.S., North Texas State University.

Assistant Professor of Special Education

WALTER C. DOWNING, Major, U. S. Air Force, A.B., University of California at Berkeley.

Assistant Professor of Aerospace Studies

DALE DYKINS, B.Mus., M.Mus., College of Music, Cincinnati.

Associate Professor of Music

ALLAN R. ELLIOTT, A.B., Western Michigan University; M.A., Ed.D., Stanford University.

Professor of Education

WILLIAM RENTZ ERWIN, B.S., M.S., North Texas State College; Ed.D., University of Houston.

Professor of Industrial Arts

CALVIN E. EVANS, Lt. Col., U. S. Air Force, B.S., University of Colorado; M.A., Colorado State College.

Professor of Aerospace Studies

KENNETH GENE EVANS, BA., M.A., Colorado State College; M.F.A., Ph.D., State University of Iowa.

Assistant Professor of Music

MARGARET ELIZABETH EVERETT, B.S., University of Wisconsin; M.A., Ph.D., State University of Iowa.

Professor of Physical Education

CLARK LEROY FIELDS, B.A., Pasadena College; M.S., Ph.D., State University of Iowa.

Assistant Professor of Chemistry

EDGAR EUGENE FIELDER, B.A., Northwestern State; M.A., Phillips University; Ed.D., Colorado State College.

Assistant Professor of Education, Pakistan Project

KENNETH WAYNE FINDLEY, B.S. in Ed., Manchester College; M.A., Ph.D., The Ohio State University.

Professor of Education Pakistan Project

FOREST NORLAND FISCH, A.B., A.M., Colorado State College.

Associate Professor of Mathematics

JOHN HOLMAN FLUKE, B.F.A., Carnegie Institute of Technology; M.Ed., Central Washington College of Education; Ed.D., Colorado State College.

Assistant Professor of Music

IRVINE HUGH FORKNER, B.S., M.A., Ed.D., Columbia University.

Assistant Professor of Business Education

JOHN TERRENCE FORSYTE, B.A. in Ed., Central Washington State College; B.A., M.A., University of Washington.

Instructor in English

CYNTHIA R. FREASE, B.A., University of Kansas; M.A., University of Minnesota; Ed.D., Colorado State College.

Instructor in Humanities

FORREST WILLARD FREASE, A.B., B.S., Kansas State Teachers College, Emporia; M.A., University of Kansas; Ph.D., University of Pennsylvania.

Professor of English

SAM. F. FREEMAN, B.A., Ph.D., University of Oklahoma.

Associate Professor of English

ROSEMARY FRI, B.S., University of California, Los Angeles; M.A., Colorado State College.

Instructor in Physical Education

RICHARD KENT FRY, B.S., M.S., Ph.D., Kansas State University.

Assistant Professor of Mathematics

JOHN BARTON FULBRIGHT, B.A., Adams State College; M.A., Ed.D., Colorado State College.

Professor of Psychology, Counseling and Guidance

CLARA ELLEN FUNDERBURK, B.S., Colorado State University; A.D.A., University of Michigan Hospital; M.A., Colorado State College.

Assistant Professor of Home Economics

GLEN SCOTT GAGON, B.S., M.Ed., Brigham Young University; Ed.D., Colorado State College.

Assistant Professor of Elementary Education

JOHN K. GAPTER, B.S., M.S., Colorado State University.

Assistant Professor of Botany

DON GARLICK, B.F.A., University of Oklahoma; M.Mus., D.M.A., Eastman School of Music, University of Rochester.

Professor of Music

GEORGE GAILIA GATES, A.B., William Jewell College; A.M., University of Missouri; Ed.D., Stanford University.

Professor of English

SAM GERALD GATES, B.A., A.M., Colorado State College; Ed.D., Stanford University.

Professor of Education

MARVIN EDGAR GEORGE, B.S., Bowling Green State University; M.A., Columbia University.

Associate Professor of Public School Music

BLANCHE L. GINSBURG, A.B., Colorado State College.

Instructor in Music

PHILIP L. GLEB, B.A., Western Washington College; M.A., Colorado State College.

Instructor in Industrial Arts

HARLEY F. GLIDDEN, B.S., Buena Vista College, Iowa; M.A., State University of Iowa; Ph.D., University of Nebraska.

Professor of Science

On leave, Fall Quarter, 1965.

RUPERT MARTIN GOODBROD, B.F.A., University of Nebraska; M.S., Teachers College, Columbia University; M.A., Julliard School of Music.

Associate Professor of Music

JOYCE K. GRABLE, A.B., Colorado State College.

Instructor in Home Economics

ROBERT S. GRAHAM, B.A., Queen's University; M.A., Ph.D., University of Colorado.

Associate Professor of Foreign Languages

JAMES BIRD GREER, B.A., Texas Christian University; M.A., University of Denver.

Assistant Professor of Library Science—Acquisitions Librarian

JANET R. GREER, B.S., State Teachers College, Minot; M.S., University of Wyoming.

Instructor in Mathematics

LELLOINE GUNNING, B.S., Southwestern State Teachers College; M.A., Eastern New Mexico University.

Instructor in Elementary Education—Pakistan Project

JAMES ROSS HALL, B.S.E., M.S.E., Arkansas State Teachers College.

Instructor in Physical Education

JOSEPHINE L. HALL, B.S., Northern Illinois University; M.A. in Library Science, University of Denver.

Assistant Professor of Library Science—Curriculum Librarian

RHODA FOSS HALL, B.S., University of Colorado; M.S., Colorado State University.

Associate Professor of Home Economics

MABEL B. HALLAN, B.H., St. Olaf College; M.S., Indiana University.

Instructor in Nursing

ROBERT G. HAMERLY, B.S., Western Illinois University; M.S., University of Illinois.

Assistant Professor of Physics

JOHN WILLIAM HANCOCK, A.B., State University of Iowa; A.M., Colorado State College.

Professor of Physical Education

BEATRICE ELIZABETH HANSEN, B.S., Northwest Missouri State Teachers College; M.A., Columbia University.

Instructor in Business Education

MARJORIE LOU HARKNESS, B.S., University of Minnesota; A.M., Ed.D., Colorado State College.

Associate Professor of Elementary Education

F. EDWARD HARRIS, B.A., University of Miami; M.A., Kent State University.

Temporary Part-Time Instructor in Special Education

JOHN HARRISON, B.S., California Institute of Technology; M.A., University of Denver; Ph.D., University of Colorado.

Associate Professor of English
On leave, Fall Quarter, 1965.

WILLIAM HARTMAN, A.B., Nebraska State Teachers College, Chadron; A.M., Ed.D., Colorado State College.

Professor of English

J. GILBERT HAUSE, A.B., A.M., Colorado State College; Ed.D., University of Colorado.

Professor of Education, Chief of Party, Pakistan Project

STUART F. HAYES, A.B., Princeton University; B.D., S.T.M., Faith Theological Seminary; M.S., University of New Mexico.

Assistant Professor of Physics

RAMON P. HEIMERL, B.S., B.Ed., St. Cloud State College; M.A., Ph.D., University of Minnesota.

Professor of Business Education

WILLIAM C. HEISS, B.S., University of Illinois; M.A., Teachers College, Columbia University.

Associate Professor of Health and Physical Education

MILO PAUL HENKELS, B.A. in Ed., Nebraska State Teachers College; M.A. in Ed., University of Michigan.

Instructor in Special Education

MILDRED C. HILLESTAD, B.Ed., Wisconsin State College; M.Bus. Ed., University of Colorado; Ph.D., University of Minnesota.

Associate Professor of Business Education

TYRUS HILLWAY, B.A., Willamette University; M.A., University of California; Ph.D., Yale University.

Professor of Education

JOSEPH E. HIMMEL, B.A., North Central College; M.Mus., Northwestern University.

Assistant Professor of Music

KENNETH EDGAR HOGAN, B.A., Ot-tawa University; M.A., Ed.D., Colorado State College.

Assistant Professor of Education

DONALD LEAGUE HOLLEY, B.Ed., Illinois State Normal University; M.A., University of Illinois; Ed.D., Colorado State College.

Assistant Professor of Speech

DARRELL HOLMES, B.A., M.A., Ph.D., Ohio State University.

Professor of Education

CHESTER C. HUFF, JR., B.S., Indiana University; M.A., DePaul University.

Instructor in English

HERBERT HOWARD HUGHES, B.S., University of New Mexico; M.S., Ph.D., Florida State University.

Associate Professor of Psychology

On leave fall 1965

BERNICE ELEANOR HUNN, B.S., Kansas State Teachers College, Emporia; M.A., Ed.D., Colorado State College.

Assistant Professor of Elementary Education

JAMES HURD, B.A., M.A., Colorado State College.

Instructor in Social Studies

FAY B. HUSTED, B.S., University of Connecticut; M.S., Washington State University.

Instructor in Physical Education

RITA JOHNSON HUTCHERSON, A.B., Culver-Stockton College, Missouri; Certificate in Theory, Yale University School of Music; M.A., Ph.D., State University of Iowa.
Professor of Music

ELIZABETH ANNE JACOBSON, B.Sc., M.E., Ed.D., University of Nebraska.
Assistant Professor of Education, Pakistan Project

KATE L. JAMES, B.A., M.A., Los Angeles City College.
Instructor in English

ROBERT S. JAMES, B.M.E., M.Mus., Northwestern University.
Instructor in Music

FRANK RAYMOND JAMISON, B.A., University of Kansas City; M.S., Syracuse University.
Instructor in Radio & Television

DAVID L. JELDEN, A.B., Nebraska State Teachers College, Kearney; M.A., Colorado State College; Ed.D., University of Missouri.
Assistant Professor of Industrial Arts

F. MORRIS JOHNSON, A.B., A.M., Colorado State College; Ed.D., University of Denver.
Professor of Industrial Arts

MAX RICHARD JOHNSON, B.S. in Ed., Northwest State College; M.A., Colorado State College.
Part-time Instructor in Social Science

ROBERT LEO JOHNSON, A.B., A.M., Colorado State College; M.S., University of Illinois.
Assistant Professor of Mathematics

KENNETH LEE JONES, B.A., Michigan State University; M.A., Northwestern University.
Associate Professor of Drama

FREDERICK DAVID KAGY, B.S., Northern Illinois University; M.A., Colorado State College; Ed.D., University of Wyoming.
Professor of Industrial Arts

EDWARD JAMES KELLY, B.A., De fiance College, Ohio; M.A., Ph.D., State University of Iowa.
Professor of Elementary Education

LEO J. KELLY, B.S. in Ed., Nebraska State Teachers College, Kearney; M.A., Ed.D., Colorado State College.

Assistant Professor of Special Education
On leave, Fall Quarter, 1965.

LEROY RAYMOND KERNS, A.B., A.M., Colorado State College; Ed.D., University of Colorado.
Professor of Education

LOWELL D. KETCHUM, Capt., U. S. Air Force, B.S., University of Missouri.
Assistant Professor of Aerospace Studies.

RALPH ROY KING, A.B., M.A., Colorado State College; Ed.D., University of Denver.
Professor of Music

WILLIAM GEORGE KOCH, B.S., University of Notre Dame; M.A., Montana State University; Ph.D., University of Illinois.
Professor of Chemistry

CAROL L. KOEHMSTEDT, B.A., College of St. Scholastica; M.A., University of Minnesota.
Instructor in Library Science—Assistant Reference Librarian

E. FRANK KOLLER, B.A., University of Utah; M.A., Brigham Young University; Ph.D., Pennsylvania State University.
Assistant Professor of Geography

EUGENE DE VERE KOPLITZ, B.S., Wisconsin State College; M.S., Ph.D., The University of Wisconsin.

Associate Professor of Psychology, Counseling and Guidance

GABOR KOVACS, B.A., Air Force Academy, Hungary; M.A., Western Michigan University.
Instructor in Library Science—Circulation Librarian

KLAAS KRAMER, A.B., Ashland College, Ohio; M.S. Drake University; Ph.D., State University of Iowa.
Associate Professor of Elementary Education

JACK JOSEPH LABONDE, B.A., M.A., Colorado State College.
Assistant Professor of Health and Physical Education

PAUL C. LABORNE, A.B., North Texas State College; A.M., Colorado State College.
Instructor in Foreign Languages

FRANK P. LAKIN, A.B., A.M., Colorado State College; Ed.D., Oregon State University.

Assistant Professor of Psychology, Counseling and Guidance

HELEN LANGWORTHY, A.B., M.A., Ph.D., State University of Iowa. *Professor of Speech and Drama* Will retire September, 1965.

ROBERT WALTER LARSON, B.A., M.A., University of Denver; Ph.D., University of New Mexico.

Associate Professor of History

JESSIE EMILY LATHAM, R.N., City Hospital, McKinney, Texas; B.A., M.A., Colorado State College.

Associate Professor of Health Education

ROSE AILEEN LEACOCK, B.S., M.A., George Peabody College for Teachers.

Associate Professor of Art

ALICE JUANITA LEWIS, B.S., West Texas State College; M.A., Ph.D., University of Iowa.

Associate Professor of Elementary Education

VIRGIL Y. LINDAHL, A.B., Nebraska State College, Wayne; A.M., Colorado State College; P.E. Dir., Indiana University.

Associate Professor of Physical Education

IVO E. LINDAUER, B.S., Colorado State University; M.A., Colorado State College.

Assistant Professor of Science On leave, Fall, Winter, Spring Quarters, 1965-66.

ROBERT LEROY LONGWELL, A.B., University of Nebraska; A.M., Colorado State College.

Instructor in English and Speech

BETTY LUCILLE LOWRY, A.B., A.M., Colorado State College; Ph.D., University of Iowa.

Associate Professor of Elementary Education

J. MAX LUBBERS, A.B., A.M., Colorado State College.

Associate Professor of Industrial Arts

JEANE L. LUERE, B.A., B.S., M.A., Ohio State University.

Instructor in English

ARNO HENRY LUKER, LL.B., B.S., University of South Dakota; A.M., Michigan State University; Ed.D., Colorado State College.

Professor of Psychology, Counseling and Guidance

DONALD M. LUKETICH, B.S.E., Arkansas State College; M.S., Illinois University; Ed.D., Colorado State College.

Assistant Professor of Education

CAROL L. LUTEY, B.S., M.A., University of Minnesota; Ph.D., Michigan State University.

Professor of Psychology, Counseling and Guidance

ANTHONY MARIA-ROSSI, B.S., New York University; M.A., Colorado State College.

Associate Professor of Physical Education

JOHN IRVING MARIANI, A.B., University of Nevada; B.F.A., Chicago Art Institute; A.M., Colorado State College.

Professor of Art

STANLEY MATOREN, B.A., Brooklyn College; M.A., New York University; M.A., University of Missouri.

Assistant Professor of History

DANIEL C. MCALEES, A.B., Albright College, Pennsylvania; M.A., Ph.D., Michigan State University.

Assistant Professor of Special Education

DOUGLAS CHARLES MCKENZIE, B.A., M.A., Colorado State College.

Temporary Instructor in Speech

L. ELAINE MCMINN, B.S., University of Tulsa; M.S., Western Reserve University.

Associate Professor of Nursing

JOHN HENRY MEIER, B.A., Regis College; M.A., University of Denver; Ph.D., University of Denver.

Assistant Professor of Psychology, Counseling and Guidance

ANTHONY MENK, B.A., M.A., Colorado State College.

Instructor in Music

HOWARD M. MICKENS, B.S., Bowling Green State University; M.M., Northwestern University.

Assistant Professor of Music

BARBARA H. MICKEY, B.A., M.A., Ph.D., Indiana University.
Temporary Instructor in Anthropology

JOHN ROBERT MICKEY, B.S., Kansas State Teachers College, Emporia.

Assistant Professor of Anthropology

GARY EVAN MILLER, A.B., A.M., Colorado State College.

Instructor in Education

JAMES EARL MILLER, B.M., Michigan State University; M.A., Colorado State College; M.F.A., Ph.D., State University of Iowa.

Associate Professor of Instrumental Music

ROGER W. MILLER, B.A., Arizona State University; M.A., State University of Iowa.

Instructor in Spanish

CLARENCE W. MINKEL, B.A., M.A., Colorado State College; Ph.D., Syracuse University.

Associate Professor of Geography

DIANNE MARIE MIZERKA, B.S., Illinois State Normal University; M.A., Colorado State College.

Instructor in Physical Education

ESTELL E. MOHR, B.S., Teachers College, Columbia University; A.M., Colorado State College; Ed.D., Stanford University.

Professor of Public School Music

ARTHUR DAVID MOINAT, B.S., Colorado State University; M.S., Oregon State College; Ph.D., University of Illinois.

Professor of Botany

LOLA J. MONTGOMERY, A.B., University of Kansas; M.A., Colorado State College; Ed.D., Teachers College, Columbia University.

Assistant Professor of Psychology, Counseling and Guidance

ROBERT A. MONTGOMERY, A.B., Pepperdine College; M.S., University of Southern California; Ed.D., Colorado State College.

Associate Professor of Physical Education

GAYLORD DEAN MORRISON, B.S., Northwest Missouri State College; M.A., University of Nebraska; Ed.D., University of Missouri.

Professor of Education

ALVIN O. MOSBO, A.B., Luther College; M.A., State University of Iowa; Ed.D., Colorado State College.

Associate Professor of Elementary Education

L. CAROL MOSSER, B.S., East Stroudsburg State College; M.A., Colorado State College.

Instructor in Physical Education

MORRIS L. MOWER, B.S., Brigham Young University; M.S., University of Utah.

Instructor in Elementary Education

LOUISE S. MUELLER, A.B., A.M., Colorado State College.

Instructor in Library Science

LOUISE ADELAIDE NEAL, A.B., Friends University, Wichita, Kansas; A.M., University of Colorado; Ed.D., Colorado State College.

Professor of Elementary Science

THEODORE MURRAY NELSON, B.S., M.A., Ph.D., University of Minnesota.

Assistant Professor of Psychology

GLENDON P. NIMNICH, B.A., M.A., University of Wyoming; Ed.D., Stanford University.

Associate Professor of Education

HOWARD DANIEL NINEMIRES, B.A., A.M., Colorado State College.

Associate Professor of Education

DWIGHT E. NOFZIGER, B.S. in Ed., Bowling Green State University, Ohio; M.A., Teachers College, Columbia University.

Instructor in Music

LLOYD A. NORTON, A.B., M.A., Colorado State College.

Instructor in Speech

DAVID OLIN OLSON, B.S., Northern Illinois University; M.A., Colorado State College.

Associate Professor of Industrial Arts

KENNETH V. OLSON, B.A., Augsburg College; M.A., Ph.D., University of Minnesota.

Associate Professor of Science Education

NORMAN T. OPPELT, B.S., Colorado State University; M.A., Colorado State College; Ph.D., Michigan State University.

Associate Professor of Psychology, Counseling and Guidance

ARTHUR R. PARTRIDGE, A.B., M.S. in Ed., University of Kansas; Ed.D., Stanford University.

Associate Professor of Education

DALE O. PATTERSON, A.B., M.A., Colorado State College; Ph.D., University of Minnesota.

Professor of Mathematics
Will retire September, 1965.

RITA J. PAYTON, B.S., St. Marys College; M.S., Indiana University.

Instructor in Pediatric Nursing

RICHARD ADOLPH PERCHLIK, B.S. in Business, B.S. in Education, M.A., Ohio State University. Ed.D., University of Colorado.

Assistant Professor of Social Sciences

KENNETH FREDERICK PERRY, A.B., A.M., Colorado State College; Ph.D., Columbia University.

Professor of Industrial Arts

RICHARD W. PEYTON, B.A., Occidental College; M.A., Los Angeles State College.

Instructor in English

ALLEN A. PLATTER, B.F.A., M.L., Ed.D., University of Houston.

Assistant Professor of Arts

PAULINE CRAIG POGUE, B.A., M.A., Colorado State College.

Associate Professor of History

WILLIAM DEAN POPEJOY, B.S. in Ed., M.A. in Ed., Illinois State Normal University; Ed.D., Colorado State College.

Associate Professor of Mathematics

JOHN F. POWERS, B.A., Grinnell College.

Temporary Instructor in Social Studies

WALTER FRANK PRINCIC, B.A., Baldwin-Wallace College; M.A., University of Illinois.

Instructor in English

FRANCIS RUSHFORD QUAMMEN, A.B., A.M., Colorado State College.

Associate Professor of Economics

CLAIRE A. QUINLAN, B.A., University of Rhode Island; M.A., Ph.D., Colorado State College.

Assistant Professor of Psychology

WILLIAM EDWARD RAPP, B.A., M.A., University of Denver; Ed.D., Colorado State College.

Instructor in Special Education

JERRY L. RATLIFF, A.B., A.M., Colorado State College.

Instructor in Business Education.

DONALD H. REICHERT, B.S., University of Dayton; M.A., Ohio State University.

Assistant Professor of Philosophy and History of Education

ALBERTA ELOISE REITZE, A.B., Ohio Wesleyan University; M.S., Kansas State College.

Associate Professor of Education

ARTHUR RAE REYNOLDS, A.B., Nebraska State Teachers College, Peru; M.A., Ph.D., University of Minnesota.

Professor of History

WINNIFRED R. RICHARDSON, B.A., M.A. in Library Science, University of Denver.

Instructor in Library Science—Assistant Reference Librarian

MARY E. RIDER, B.A., Miami University, Oxford, Ohio; B.S. in Library Science, University of Illinois.

Instructor in Library Science—Assistant Reference Librarian

ROBERT L. ROTHWEILER, B.S., Northwestern University; A.M., Ph.D., Washington University, St. Louis.

Assistant Professor of Political Science

GEORGE H. SAGE, A.B., M.A., Colorado State College; Ed.D., University of California, Los Angeles.

Assistant Professor of Physical Education

GEORGE FRANKLIN SANDERSON, A.B., A.M., Colorado State College.

Associate Professor of Education

TEDDY C. SCHAFFER, Capt., U. S. Air Force, B.S., University of Wyoming.

Assistant Professor of Aerospace Studies

WALTER ALLEN SCHENKMAN, A.B., Harvard University; Diplome d'Etudes, Paris Conservatory; M.Mus., Yale Music School. D.Mus., Indiana University.

Associate Professor of Music

GERALD D. SCHMIDT, A.B., Colorado State College; M.S., Ph.D., Colorado State University.

Assistant Professor of Zoology

CLAUDE MATTHIAS SCHMITZ, A.B., A.M., Colorado State College.

Associate Professor of Music

HERBERT C. SCHUMACHER, B.F.A., M.F.A., University of Kansas.

Instructor in Fine Arts

REX. R. SCHWEERS, JR., A.B., M.A., Colorado State College.

Assistant Professor of Mathematics

On leave, Fall, Winter, Spring Quarters, 1965-66.

DANIEL ALBERT SEAGER, B.A., Oklahoma Baptist University, Shawnee; A.B., M.A., University of Oklahoma.

Associate Professor of Library Science—Head Librarian

JACK SHAW, A.B., University of Saskatchewan; B.Ed., M.Ed., University of Manitoba; Ph.D., University of Minnesota.

Professor of Educational Psychology and Guidance, Pakistan Project

JOHN MAX SHIRLEY, B.S., M.A., University of New Mexico; Ed.D., Colorado State College.

Assistant Professor of Physical Education

JOSEPH LESLIE SHOEMAKER, B.A., A.M., Colorado State College; Ed.D., University of Colorado.

Associate Professor of Science

HOWARD M. SKINNER, B.A., Sterling College, Kansas; B.Mus., M.Mus., MacPhail College of Music; D.Mus., Northwestern University.

Assistant Professor of Music

ROBERT SMITH, L.R.A.M., Royal Academy of Music; M.M.E., Ed.D., Florida State University.

Assistant Professor of Music

JACK NORMAN SPARKS, B.S., Purdue University; M.A., Ph.D., State University of Iowa.

Associate Professor of Statistics and Research

GRACE E. SPECKMANN, A.B., M.A., University of Colorado.

Instructor in English

MAYNARD N. STAMPER, B.S., Eastern Kentucky State College; A.M., Colorado State College; Ph.D., Ohio State University.

Professor of Zoology

WENDELL R. STARR, A.B., Ottawa University; M.A., University of Colorado; Ph.D., University of Minnesota.

Associate Professor of English

WESLEY MORGAN STATON, B.S., University of Alabama; Ed.M., Ed.D., Boston University.

Professor of Health Education

DORIS CAROL STEFFY, B.A., State College of Iowa; M.A., State University of Iowa.

Associate Professor of Physical Education

JAMES ALLEN STOFFLER, B.S., Southern Illinois University; M.A., Marquette University.

Assistant Professor of Education

JUNE ELIZABETH STUCKEY, A.B., B.S. in Ed., Wilmington College; M.A., Ohio State University; Ph.D., Ohio State University.

Associate Professor of Psychology

ROBERT B. SUND, B.A., Reed College; M.S., Oregon State University; M.A., Ed.D., Stanford University.

Associate Professor of Science Education

On leave, Fall, Winter, Spring Quarters, 1965-66.

LARRY A. TANGEMAN, B.S., M.A., University of Nebraska; Ed.D., University of Colorado.

Associate Professor of Education, Pakistan Project

GERALD E. TANNER, A.B., A.M., Colorado State College.

Instructor in Psychology, Counseling and Guidance

JO ANN TAYLOR, B.S., Northwest Missouri State College; M.A., Colorado State College.

Temporary Part-time Instructor in Home Economics

BERT O. THOMAS, B.S., M.S., Colorado State University; Ph.D., University of Minnesota.

Associate Professor of Zoology

VIVIAN B. TILDEN, A.B., Hastings College; M.A., Colorado State College.

Assistant Professor of Library Science—Assistant Catalog Librarian

ELEANOR TIPTON, B.F.A., University of Nebraska; M.A., Ed.D., Teachers College, Columbia University.

Assistant Professor of Music

OSCAR WILLIAM TOLLEFSON, B.S., Huron College; M.A., Ph.D., University of Colorado.

Professor of Geology

GORDON ERNEST TOMASI, A.B., A.M., Colorado State College; Ph.D., University of Louisville.

Assistant Professor of Chemistry

SYLVESTER ROY TOUSSAINT, A.B., Ripon College, Wisconsin; A.M., University of Michigan; Ph.D., University of Wisconsin.

Professor of Speech

ORVEL LEROY TRAINER, A.B., M.A., Ph.D., University of Colorado.

Associate Professor of Economics

On leave, Winter Quarter, 1966.

DORRIS E. TRIGG, B.S., M.S., Kansas State College, Pittsburg.

Instructor in Elementary Education

C. WILLIAM TRIMBLE, B.A., M.A., Colorado State College.

Instructor in Physical Education

LESLIE WALTER TROWBRIDGE, B.S., Central State College, Wisconsin; M.S., University of Chicago; M.S., University of Wisconsin; Ph.D., University of Michigan.

Assistant Professor of Science

JOHN R. TRYBA, B.A., M.A.E., Art Institute of Chicago.

Assistant Professor of Art

GLEN CORBIN TURNER, A.B., Pomona College; M.B.A., Harvard University.

Professor of Business Administration

NANCY VAN ANNE, A.B., State College of Iowa, Cedar Falls; M.A., State University of Iowa; Ph.D., University of Oregon.

Professor of Physical Education

PETER VAN DUSEN, B.A., University of Florida; M.A., University of Oregon.

Temporary Assistant

Professor of Geography

EVERETT HENRY VAN MAANEN, B.S., Northern State Teachers College, Aberdeen, S.D.; M.A., Colorado State College; Ed.D., University of Oregon.

Associate Professor of Elementary Education

TONY DALE VAUGHAN, A.B., Northeastern State College, Oklahoma; M.Ed., Ed.D., University of Oklahoma.

Professor of Special Education

WAYMAN E. WALKER, B.M.E., University of Colorado; M.Mus., University of Southern California.

Associate Professor of Instrumental Music

ROLAND CORNELL WATERMAN, B.S., New York State College for Teachers, Albany; M.A., Ed.D., Columbia University.

Professor of Business Education

MEL W. WEISHAHN, B.A., M.A., Colorado State College.

Instructor in Special Education

RUTH VIRGINIA WERNER, B.A., University of North Dakota; M.F.A., University of Colorado.

Temporary Instructor in Art

LORENA M. WERTZ, A.B., A.M., Colorado State College.

Instructor in Business Education

LEE R. WEST, B.S., Southwestern State Teachers College, Oklahoma; M.A., George Peabody College for Teachers.

Professor of Geography

GLADYS PUGH WHORTON, A.B., Cleveland College; M.A., Ph.D., Western Reserve University, Cleveland.

Assistant Professor of Special Education

GARY G. WILLOUGHBY, B.A., M.A., University of Colorado.

Assistant Professor of Sociology

ALBERT MCCOMBS WINCHESTER, A.B., Baylor University; M.A., Ph.D., University of Texas.

Professor of Biology

PAUL J. WISCH, B.A., Illinois College; M.S.Ed., Western Illinois University; Ed.D., Colorado State College.

Temporary Assistant Professor of Education—Pakistan Project

DALE EARL WOERNER, B.S., Kansas State College; M.S., Ph.D., University of Illinois.

Associate Professor of Chemistry

RICHARD R. WOLFE, B.S., Thiel College; M.S., Westminster College; Ph.D., University of Pittsburgh.

Assistant Professor of Special Education

WELBY B. WOLFE, B.A., M.A., Colorado State College; Ed.D., Teachers College, Columbia University.

Professor of Art

On leave Fall Quarter, 1964

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**ERNEST JUDSON WOODS, A.B., Ot-
tawa University; A.M., Colorado
State College.**

*Associate Professor of
Mathematics*

**GENEVA B. WOODS, B.S., Universi-
ty of Colorado.**

*Assistant Clinical
Professor of Nursing*

**ALICE MARY YETKA, B.S., Univer-
sity of Minnesota; A.M., Ed.D.,
Colorado State College.**

*Assistant Professor of Business
Education*

**MINA LEE ZENOR, B.F.A., Drake
University; M.A., Bowling Green
University.**

Instructor in Physical Education

**DONALD E. ZIMMERMAN, B.S. in
Ed., M.S., Kansas State Teachers
College, Emporia.**

Assistant Professor of English

Laboratory School Assignments

Ernest Horn Elementary School—College High School

LEROY RAYMOND KERNS, Ed.D., Director of the Laboratory School; Chairman of Curriculum Development for the Laboratory School; Supervisor and Instructor in Secondary School Science.

DONALD WAYNE CHALOUPKA, Ed.D., Secondary School Principal; Chairman of Curriculum Development for the Secondary School.

AMOS L. CLAYBAUGH, Ed.D., Elementary School Principal; Chairman of Curriculum Development for the Elementary School.

ARTHUR LEROY ANDERSON, M.A., Sixth Grade Supervisor and Instructor in Education.

CHARLES HOWARD BENSON, M.A.,
Principal of the Elementary School

GEORGE BROOKS, M.Ed., Supervisor and Instructor in Secondary School Social Studies; Dean of Boys.

JOSEPHINE MAE BRUCE, A.B., Kindergarten Supervisor and Instructor.

EDITH BELLE BRUMMER, B.S., Elementary and Secondary School Librarian.

SHIRLEY MAY CARRIAR, Ed.D., Supervisor and Instructor in Secondary School English.

DARLENE KAY CONOVER, A.B., Supervisor and Instructor in Girls' Health and Physical Education for the Intermediate Grades and High School.

HAZEL R. DALBEY, M.A., Third Grade Supervisor and Instructor.

HELEN L. EASTERBROOK, M.A., Supervisor and Instructor in Secondary School English.

ANITA L. ESPINOSA, A.B., Supervisor and Instructor in Spanish.

LELLOINE GUNNING, M.A.,
Third Grade Supervisor and Instructor

RHODA FOSS HALL, M.S., Chairman of Curriculum Development in Home Economics; Supervisor and Instructor in Home Economics.

MARJORIE LOU HARKNESS, Ed.D., Fourth Grade Supervisor and Instructor.

BERNICE ELEANOR HUNN, Ed.D., Second Grade Supervisor and Instructor.

JAMES EDMUND HURD, M.A., Supervisor and Instructor in Secondary School Social Studies.

KENNETH LEE JONES, A.M., Chairman of Curriculum Development in Dramatics; Supervisor and Instructor in Dramatics.

RALPH ROY KING, Ed.D., Supervisor and Instructor in Instrumental Music.

PAUL LABORNE, A.M., Supervisor and Instructor in the Foreign Languages.

LEONARD PETER LANDRY, B.A., Chairman of Curriculum Development in Secondary School English; Supervisor and Instructor in Secondary School English.

IVO LINDAUER, M.A., Supervisor and Instructor in Secondary School Science.

ROBERT LEROY LONGWELL, A.M., Supervisor and Instructor in Secondary School Speech.

HOWARD M. MICKENS, M.M., Supervisor and Instructor in Intermediate and Secondary School Instrumental Music.

MORRIS L. MOWER, M.S., Supervisor and Instructor in Fifth Grade.

LOUISE S. MUELLER, M.A.,
Elementary and Secondary School Librarian

LOUISE ADELAIDE NEAL, Ed.D., Chairman of Curriculum Development in Elementary School Science; Supervisor and Instructor in Elementary School Science.

DWIGHT E. NOFZIGER, M.A., Supervisor and Instructor in Intermediate School and Secondary School Vocal Music.

DAVID OLIN OLSON, M.A., Chairman of Curriculum Development in the Arts; Supervisor and Instructor in Industrial Arts.

REX SCHWEERS, M.A., Supervisor and Instructor in Secondary School Mathematics.

JOSEPH LESLIE SHOEMAKER, A.M., Chairman of Curriculum Development in Secondary School Science; Supervisor and Instructor in Secondary School Science.

JERRY L. RATLIFF, M.A., Supervisor and Instructor in Physical Education and in Business Education

HELEN B. TRAYLOR, Ed.D., Supervisor and Instructor in Secondary School Social Studies.

DORRIS E. TRIGG, M.S., First Grade Supervisor and Instructor.

C. WILLIAM TRIMBLE, M.A., Director of Athletics; Instructor in Health and Boys' Physical Education, Intermediate Grades and High School.

JOHN TRYBA, A.M., Supervisor and Instructor in Fine Arts.

ROLAND CORNELL WATERMAN, Ed.D., Supervisor and Instructor in Secondary School Bookkeeping.

ERNEST JUDSON WOODS, A.M., Chairman of Curriculum Development in Secondary School Mathematics; Supervisor and Instructor in Secondary School Mathematics.

LORENA M. WERTZ, M.A., Chairman of Curriculum Development in Business Education; Supervisor and Instructor in Secondary School Shorthand, Bookkeeping, and Accounting

ALICE MARY YETKA, Ed.D., Chairman of Curriculum Development in Business Education; Supervisor and Instructor in Secondary School Shorthand and Typing.

Emeritus Faculty

WINFIELD DOCKERY ARMENTROUT, A.B., A.M., Ed.D., LL.D. Appointed, 1920; Emeritus since 1955.
Vice President Emeritus

CLARENCE THEODORE BAAB, A.B., A.M., Ed.D. Appointed, 1935; Emeritus since 1960.
Professor Emeritus of Industrial Arts

GRACE MAE BAKER, B.Art Ed., B.S., A.M. Appointed, 1917; Emeritus since 1941.
Professor Emeritus of Art

SAMUEL CLAY BEDINGER, A.B., A.M. Appointed, 1922; Emeritus since 1948.
Assistant Professor Emeritus of Business Education

RALPH THOMAS BISHOP, A.B., A.M. Appointed, 1917; Emeritus since 1955.
Professor Emeritus of Industrial Arts

IRENE ENGLE BOGAN, A.B., B.S. Appointed, 1946; Emeritus since 1964.
Associate Professor Emeritus of Library Science

MARGARET ELIZABETH BRYSON, A.B., A.M., M.D. Appointed, 1921; Emeritus since 1942.
Professor Emeritus of Health Education

JOHN WILLIAM BUNN, B.S., A.M. Appointed 1956, Emeritus since 1963.
Professor Emeritus of Health Education

MARTIN CANDELARIA, A.B., A.M., Ed.D. Appointed 1948; Emeritus since 1963.
Professor Emeritus of Spanish

EUGENE SHAW CARTER, A.B., A.M. Appointed 1936; Emeritus since 1962.
Professor Emeritus of Industrial Arts

JEAN CAVE, B.S., A.M. Appointed 1921; Emeritus since 1961.
Professor Emeritus of Physical Education

JOHN ELBERT CHADWICK, A.B., A.M., Ph.D. Appointed 1924; Emeritus since 1962.
Professor Emeritus of Music

LUCY ROSENQUIST CHAMBERLAIN, Ph.B., A.M. Appointed, 1923; Emeritus since 1949.

Associate Professor Emeritus of Elementary Education

AMBROSE OWEN COLVIN, B.C.S., A.M., Ph.D. Appointed, 1918; Emeritus since 1947.

Professor Emeritus of Business Education

OLIVER MORTON DICKERSON, A.B., A.M., Ph.D. Appointed, 1923; Emeritus since 1940.

Professor Emeritus of History and Political Science

RICHARD G. ELLINGER, A.B., A.M. Appointed 1927; Emeritus since 1962.

Professor Emeritus of Art

ROSE WILMA FARRAR, A.B., A.M. Appointed 1938; Emeritus since 1962.

Professor Emeritus of Business Education

CATHERINE CRATES GIBERT, A.B., A.M. Appointed, 1922; Emeritus since 1959.

Professor Emeritus of Foreign Languages

HENRY TRUSTMAN GINSBURG, B.Mus., A.B., A.M., D.Mus. Appointed, 1931; Emeritus since 1958.

Professor Emeritus of Music

LYMAN BEECHER GRAYBEAL, B.S., A.M., Ed.D. Appointed, 1950; Emeritus since 1960.

Professor Emeritus of Education

EZRA CLARENCE HARRAH, A.B., A.M., Ph.D. Appointed, 1926; Emeritus since 1954.

Professor Emeritus of Zoology

M. LUCILLE HARRISON, Ph.B., A.M. Appointed 1926; Emeritus since 1963.

Professor Emeritus of Elementary Education

JOSEPHINE MARY HAWES, A.B., A.M. Appointed, 1917; Emeritus since 1946.

Professor Emeritus of English

FRED LOUIS HERMAN, A.B., A.M. Appointed, 1922; Emeritus since 1960.

Professor Emeritus of Physics

EDNA MARY HOYDAR, B.M., M.M. Appointed 1957; Emeritus since 1962.

Professor Emeritus of Public School Music

HELEN BARBARA HUNT, B.S., M.S. Appointed, 1949; Emeritus since 1959.

Associate Professor Emeritus of Home Economics

GEORGE A. IRVIN, A.B., A.M. Appointed, 1928; Emeritus since 1960.

Director Emeritus of Special Services

FRANK COVERT JEAN, A.B., A.M., Ph.D., Sc.D. Appointed, 1921; Emeritus since 1945.

Professor Emeritus of Biology

WINFIELD LEROY KNIES, A.B., M.B.A. Appointed, 1922; Emeritus since 1957.

Associate Professor Emeritus of Business Education

ELIZABETH LEHR, B.A., A.M. Appointed, 1926; Emeritus since 1959.

Associate Professor Emeritus of Elementary Education

ANNIE MARGARET McCOWEN, A.B., B.S., A.M., Ph.D. Appointed, 1921; Emeritus since 1958.

Professor Emeritus of Elementary Education

CHARLES WILLIAM MCLAIN, B.S., M.S., Ed.D. Appointed 1951; Emeritus since 1963.

Professor Emeritus of Educational Psychology and Guidance

FLORENCE MARGUERITE MEYER, A.B., A.M. Appointed, 1930; Emeritus since 1960.

Associate Professor Emeritus of English

VERA LANORE NEWBURN, B.S., M.S. Appointed, 1926; Emeritus since 1964.

Professor Emeritus of Home Economics

ANNA EVELYN NEWMAN, Ph.B., Ph.M., Ph.D. Appointed, 1920; Emeritus since 1946.

Professor Emeritus of English

ORA BROOKS PEAKE, A.B., A.M., Ph.D. Appointed, 1919; Emeritus since 1949.

Professor Emeritus of History

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WILLIAM ROBERT ROSS, B.S., M.S., Ph.D. Appointed, 1942; Emeritus since 1964.

President Emeritus

EARLE UNDERWOOD RUGG, A.B., A.M., Ph.D. Appointed 1923; Emeritus since 1957.

Professor Emeritus of Education

EDITH MARIE SELBERG, A.B., A.M. Appointed 1926; Emeritus since 1962.

Professor Emeritus of Biology

OLIVER LEONARD TROKEL, B.S., A.M., Ph.D. Appointed, 1929. Emeritus since 1958.

Professor Emeritus of Education

FLOSS ANN TURNER, Ph.B., A.M. Appointed, 1925; Emeritus since 1954.

Associate Professor Emeritus of Elementary Education

EDITH GALE WIEBKING, A.B., A.M. Appointed, 1918; Emeritus since 1949.

Professor Emeritus of Home Economics

GRACE HANNAH WILSON, A.B., A.M., Ph.D. Appointed, 1915; Emeritus since 1953.

Professor Emeritus of Education

LESLIE DAY ZELNY, B.S., A.M., Ph.D. Appointed, 1946; Emeritus since 1963.

Professor Emeritus of Sociology

The faculty members listed on pages 261-276 are the faculty for the 1964-65 academic year. The faculty members listed at the head of each of the eight scholastic divisions are the 1965-66 staff.

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