

COLORADO STATE TEACHERS COLLEGE BULLETIN

CATALOG AND YEAR BOOK

NUMBER

FOR THE SESSIONS OF

1931-1932



GREELEY

SERIES XXXI

APRIL, 1931

NUMBER 1

COLORADO STATE TEACHERS COLLEGE BULLETIN

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NUMBER

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1931—THE COLLEGE CALENDAR—1932

The Summer Quarter, 1931, begins June 13 and ends August 22.
First half, June 13-July 18—Second half, July 20-August 22.

1931

FALL QUARTER

<i>Sept. 24,</i>	<i>Thursday</i>	Freshman week begins; 10:30, Gunter Hall
<i>Sept. 28,</i>	<i>Monday</i>	Registration of freshmen
<i>Sept. 29,</i>	<i>Tuesday</i>	Registration of upper classmen
<i>Sept. 30,</i>	<i>Wednesday</i>	Classes begin
<i>Nov. 11,</i>	<i>Wednesday</i>	Armistice day (holiday)
<i>Nov. 26-27,</i>	<i>Thursday, Friday</i>	Thanksgiving (holiday)
<i>Dec. 12,</i>	<i>Saturday</i>	Advance registration for winter quarter
<i>Dec. 17-18,</i>	<i>Thursday, Friday</i>	Final examinations
<i>Dec. 19,</i>	<i>Saturday</i>	Christmas vacation begins

WINTER QUARTER

1932

<i>Jan. 4,</i>	<i>Monday</i>	Registration of new students; classes begin
<i>Mar. 12,</i>	<i>Saturday</i>	Advance registration for spring quarter
<i>Mar. 18-19,</i>	<i>Friday, Saturday</i>	Final examinations
<i>Mar. 20,</i>	<i>Sunday</i>	Spring vacation begins

SPRING QUARTER

<i>Mar. 28,</i>	<i>Monday</i>	Registration of new students; classes begin
<i>Apr. 29,</i>	<i>Friday</i>	Insignia Day
<i>May 30,</i>	<i>Monday</i>	Memorial Day (holiday)
<i>June 5,</i>	<i>Sunday</i>	Baccalaureate
<i>June 9-10,</i>	<i>Thursday, Friday</i>	Final examinations
<i>June 11,</i>	<i>Saturday</i>	Commencement

SUMMER QUARTER

<i>June 18,</i>	<i>Saturday</i>	Registration
<i>June 20,</i>	<i>Monday</i>	Classes begin
<i>July 4,</i>	<i>Monday</i>	Independence Day (holiday)
<i>July 23,</i>	<i>Saturday</i>	First half ends (registration for second half quarter)
<i>July 25,</i>	<i>Monday</i>	Second half begins
<i>Aug. 27,</i>	<i>Saturday</i>	Summer convocation

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PART I
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- LUCY B. DELBRIDGE** *Instructor in Violin*
Diploma, Colorado State Teachers College; Studied Voice with A. Boylan and L. C. Austin; Studied Piano with U. Williams; Studied Violin with C. K. Hunt, W. S. Daniels, E. A. Garlichs, E. Sindlinger, Geneva Waters Baker, David Abramowitz, and Paul Lemaitre.
- HENRY TRUSTMAN GINSBURG, B.M.** *Instructor in Violin*
B.M., Denver College of Music; Student of Henry Schradieck in theory, violin, composition, and history; Violin with Sametini, Sverenski, Saslovsky, Heifetz, and Thibaud; Head of the Violin Department, Denver College of Music; First Violinist with the Cavallo Symphony Orchestra; First Violinist, Capitol Symphony Orchestra, New York; Director of General Electric Orchestra; First Violinist, Denver String Quartet; Concertmeister, Denver Civic Symphony Orchestra.
- J. ALLEN GRUBB** *Instructor in Voice*
Graduate of the Western Conservatory of Music (Chicago); Voice with John F. Jones, University of California; H. W. Owens, William Claire Hall, John C. Wilcox, and Percy Rector Stephens.
- RUBY W. HEDGES** *Instructor in Harp*
Pupil of Alberto Salvi and Louise Schellsmidt Koehne. Instructor in Harp, Denver College of Music.
- BLANCHE BENNET HUGHES** *Instructor in Piano*
Student. College of Music, Cincinnati; Student with Alexander Andre, Armin Doerner, Everett H. Steele.
- ESTELL ELGAR MOHR, B.S.** *Assistant Professor of Public School Music*
Public School Music Diploma, Bowling Green Normal College, (Ohio); B.S., Music Education, Teachers College, Columbia University; Graduate Student, Teachers College, Columbia University; Voice, Prof. R. M. Tunncliffe, Walter Kieseewetter, Madame Aslanoff, Percy Rector Stephens, Dean Harold Butler, Syracuse University.
- *LESTER EDWIN OPP, B.M.** *Assistant Professor of Music*
B.M., Dana Musical Institute, Cello, L. A. Gregory, Dillon, Montana, and L. V. Ruhl, Dana Musical Institute (Warren, Ohio); Piano, Margaret Poindexter and L. A. Gregory, M. Salome Wetterholt, and L. V. Ruhl.
- *BEVERLY IVAREA BEIL OPP** *Instructor in Reed Instruments*
Saxophone, J. Dwight Reese, D. S. Strickland, Theil College, (Pennsylvania); Oboe and Saxophone, Professor J. D. Cook, Dana Musical Institute.
- ANGIE S. K. SOUTHARD, A.B.** *Instructor in Music Appreciation*
A.B., Wellesley College; Graduate Student, Colorado State Teachers College; Voice with May Sleeper Ruggles; Organ and Theory with Dr. Hamilton C. MacDougal; Piano with Alexander Lambert, V. Edwardo in Milan, and Gustave Lazarus in Berlin; Student, University of Berlin.
- JAMES J. THOMAS, B.M.** *Assistant Professor of Music*
B.M., Dana Musical Institute (Warren, Ohio); Violin Student, Charles H. Lowry, John Hundertmark, Earl King, Arthur Stanborne, Paul Fink, Carl Kling, Arthur Hartmann; Piano Student, G. P. Andrews, Jacob Schmitt; Brass Instruments, Ross Hickernell; Theory, J. D. Cook, Rei Christopher, Nellie Mae Gwynne; History and Theory, Lynn B. Dana; Graduate Student, University of Southern California.

*On Leave.

SPECIAL FACULTY AND GENERAL LECTURERS

SUMMER QUARTER, 1931

- DR. WILLIAM JOHN COOPER, United States Commissioner of Education, Washington, D. C. In charge of conference on Secondary Education.
- DR. W. C. BAGLEY, Professor of Education, Teachers College, Columbia University, New York City, N. Y. Courses in Education.
- DR. W. L. BEAUCHAMP, Assistant Professor of Education, University of Chicago, Chicago, Illinois. Courses in Biology.
- DR. NED H. DEARBORN, Director of the Institute of Education, School of Education, New York University, New York City. Courses in Education.
- DR. HOWARD C. HILL, Professor of the Teaching of History, University of Chicago, Chicago, Illinois. Courses in History and Civics.
- DR. J. M. GLASS, Professor of Secondary Education, Rollins College, Winter Park, Florida. Courses in Education.
- DR. WILLIAM S. LARSON, Instructor in Psychology, University of Rochester, Eastman School of Music, Rochester, New York. Courses in Psychology of Music.
- DR. H. H. RYAN, Principal of the University High School, University of Wisconsin, Madison, Wisconsin. Courses in Education.
- MISS MARY A. WILLSEA, Supervisor of Speech Defective Work, Denver Public Schools, Denver, Colorado. Courses in Psychology.
- DR. H. L. DONOVAN, President of State Teachers College, Richmond, Kentucky. Courses in Education.
- DR. EDWARD HOWARD GRIGGS, Orchard Hill, Croton-on-Hudson, New York. Lecturer.
- DR. GEORGE EARLE RAIGUEL, Physician and Lecturer, Philadelphia, Pennsylvania. Lecturer.
- MR. D. M. HIBNER, Superintendent of Schools, Ray, Arizona. Courses in Education.
- DR. F. L. FITZPATRICK, Head of Zoology Department, Coe College, Cedar Rapids, Iowa. Courses in Biology.
- MISS E. MURIEL ANSCOMBE, Superintendent of the Jewish Hospital, St. Louis, Missouri. Courses in Hospital Administration.
- MISS ANN DICKIE BOYD, Supervisor of the School of Nursing, Denver, Colorado. Courses in School and Public Health Nursing.
- MR. EVERETT JOHNSON, Director of the Tests and Measurements Department, Public Schools, Phoenix, Arizona. Courses in Psychology.
- MR. HENRY GODDARD LEACH, Editor of the "Forum," New York City. Lecturer.
- MISS ELMA A. NEAL, Assistant Superintendent of Schools, San Antonio, Texas. Courses in Education.

- MR. ROBERT E. NEFF, Administrator of the University Hospitals, University of Iowa Hospital, Iowa City, Iowa. Courses in Hospital Administration.
- DR. HENRY NEUMANN, Brooklyn Society for Ethical Culture, Brooklyn, New York. Lecturer.
- DR. J. T. PONTON, Author, and Organizer in Hospital Administration, Chicago, Illinois. Courses in Hospital Administration.
- MRS. MABEL SPIZZY, Special Representative of R. C. A. Victor, Incorporated, Camden, New Jersey. Special Courses in Music Appreciation.
- DR. ROBERT E. WITHAM, Director of The Children's Hospital, Denver, Colorado. Courses in Hospital Administration.
- MISS EDITH JOHNSON, Director of Nursing Education, The Children's Hospital, Denver, Colorado. Courses in Nursing Education.
- MISS CARRIE E. BENHAM, Washington University School of Nursing, St. Louis, Missouri. Courses in Nursing Education.
- MISS LOUISE NABER, Supervisor of Art Education, Phoenix, Arizona. Courses in Art.
- MR. MARQUES E. REITZEL, Professor of Fine Arts, Rockford College, Rockford, Illinois. Courses in Art.
- MR. A. E. SHIRLING, Professor of Natural Sciences, Kansas City Teachers College, Kansas City, Missouri. Courses in Biology.
- MR. A. M. HINDS, Supervisor of Penmanship, Louisville Public Schools, Louisville, Kentucky. Courses in Commercial Education.
- DR. MERLE PRUNTY, Superintendent of Schools, Tulsa, Oklahoma. Courses in Education.
- MR. L. E. SMITH, Director of Music in the High School, Sterling, Colorado. Courses in Music.
- MR. R. L. HUNT, Superintendent of Schools, Madison, South Dakota. Courses in Education.
- MR. F. A. OGLE, Superintendent of Weld County Schools, Greeley, Colorado. Courses in Education.
- MISS GLADYS POOLE, Professor of Educational Psychology, State Teachers College, Trenton, New Jersey. Courses in Psychology.
- MR. I. E. STUTSMAN, Superintendent of Schools, Greeley, Colorado. Courses in Education.
- MR. PAUL ESSERT, Principal of the High School, Fort Collins, Colorado. Courses in Education.
- MR. RAYMON H. HUNT, Director of Bands and Orchestras, Public Schools, Denver, Colorado. Courses in Music.
- MR. L. C. AUSTIN, Mount Sinai Hospital, Milwaukee, Wisconsin. Courses in Hospital Administration.
- MR. JOHN ROBERTS, Director of Music in the High School, Globe, Arizona. Courses in Music.

PART II
GENERAL INFORMATION

HISTORICAL SKETCH

The State Normal School of Colorado was established by an act of the Legislature of 1889. The first school year began October 6, 1890.

At the beginning of its second year the school was reorganized and the course extended to four years. This course admitted grammar school graduates to the freshman year, and others to such classes as their ability and attainment would allow.

At a meeting of the Board of Trustees held June 2, 1897, a resolution was adopted admitting only high school graduates or those who had an equivalent preparation, and practical teachers. This policy made the institution a professional school in the strictest sense.

The Eighteenth General Assembly passed an act making the State Normal School at Greeley, Colorado, also the State Teachers College of Colorado. In the catalog and in all the official publications hereafter the title "Colorado State Teachers College" will be used.

LOCATION

Colorado State Teachers College is located in Greeley, Weld County, Colorado, on the Union Pacific and the Colorado & Southern Railways, fifty-two miles north of Denver. This city is in the valley of the Cache la Poudre river, one of the richest agricultural sections of the state. The altitude is 4,648 feet above sea level. The streets are lined with trees, forming beautiful avenues. The elevation and distance from the mountains render the climate mild and healthful. The city is one of Christian homes and contains churches of all the leading denominations. There are 14,000 inhabitants.

PLANT

The plant consists of fourteen attractive and substantial buildings, beautiful in their architectural lines, with interiors designed with a view to maximum service. Among the structures next to be erected is a heating plant and a science building. It is also proposed to build an addition to the library as soon as funds are available.

THE ADMINISTRATION BUILDING—The main or Administration Building is 240 feet long and 80 feet wide. It has in it executive offices, classrooms, and class museums. Its halls are wide and commodious and are occupied by statuary and other works of art, which makes them very pleasing. A Natural History Museum, which is regarded as one of the most complete and interesting in the state, occupies a large part of the upper floor of this building.

THE LIBRARY—This imposing structure of gray stone forms the central unit of a group of three buildings, forming a link between the Administration Building on the west and the Training Schools on the east. It contains 67,500 volumes, a large picture collection, and several thousand pamphlets. The two floors are used for library purposes. The main floor is a reading and general reference room, where are shelved many of the periodical and reference books. On this floor also are kept reserved books, which are for special use within the building. The basement floor contains the general book collection stacks, government publications, and unbound volumes of magazines. An automatic electric book lift operates between the floors. The volumes in the library have been selected with special reference to needs of students in education, for teachers, and for educational research work.

TRAINING SCHOOLS—The Training School building is the home of the Training Schools of the College, namely, the Teachers College High School and Elementary School, and the children's library. It is a commodious building of red pressed brick and similar in style to the Administration Building. In its construction no pains or expense have been spared to make it sanitary, fireproof, and in every possible way an ideal building

for a completely graded training school from the pre-school and kindergarten to the senior year of the high school, inclusive. An expenditure approaching \$300,000.00 has been made to provide a training school center comparable in every way with any building in the country devoted to similar use.

INDUSTRIAL ARTS—The Simon Guggenheim Hall of Industrial Arts is a beautiful building, constructed of gray pressed brick. It accommodates the departments of industrial education and art, including the major branches of handwork and art training applicable to the highest type of public school of the present and immediate future. This building is a gift to the College from Senator Simon Guggenheim.

CONSERVATORY OF MUSIC—The Conservatory of Music was formerly the president's home. The large, attractive, and home-like property, formerly the center of much social life on the campus, became the home of the Conservatory of Music with the opening of the summer quarter, 1924. It is well arranged for studio work, private and class lessons, with opportunity for the segregation of the different music departments. A large recital room is located on the top floor.

HOME ECONOMICS PRACTICE HOUSE—In order that students pursuing studies in home economics shall have practical training, the College maintains this building. It is a practice house of five rooms and is used for demonstrations in home furnishings and housekeeping.

HOME ECONOMICS BUILDING—This is a structure similar in construction, color, material and architectural design to the Industrial Arts building. It is three stories high and contains ample room for all the classrooms, laboratories, kitchens, dining rooms, and workrooms for a well-organized department of home economics in a teachers college, including both household arts and household science.

GUNTER HALL—A name of far greater significance for the college gymnasium of today is found in Gunter Hall of Health. This building is regarded as one of the most attractive, commodious and complete structures in every detail given over to the work of developing healthy bodies to be found anywhere in the entire west. The building is located just south of the administration building and covers a part of the old athletic field. It measures 152x244 feet. The main gymnasium floor is 100x150 feet, with a basketball court 45x38.6 feet. Provision is made here for seating capacity of 3000 during basketball games and when used as an auditorium, as it frequently is, it has a seating capacity of 3800. There is another playing floor, measuring 50x100 feet, for the exclusive use of girls and in addition to auxiliary gymnasiums for class work. Accommodations are provided for five classrooms for use of the physical education department. The physical education and athletic departments, as well as the medical advisers for both men and women, have their offices located in Gunter Hall. A swimming pool 30x75 feet is an attractive feature of this new structure on Teachers College campus. The building is constructed of a specially made gray brick with terracotta trimmings. Its architectural lines are a combination of cathedral and gothic and make it one of the most imposing structures on the campus.

STUDENT CLUBHOUSE—This is the center of social life on the campus. An immense reception room stretching the entire width of the building affords a most appropriate setting for social occasions, both formal and informal. A combination veranda and sun parlor, which extends around three sides of the building, is the scene of many cozy afternoon teas, presided over by students and faculty. On the lower floor there is a most attractive private dining room complete in appointments, with a fully equipped kitchen close by. The lower floor also contains the grotto, which is the scene of parties practically six nights a week during the college year.

THE FACULTY CLUB—The latest building to be erected on the campus is the Faculty Club, built in the summer of 1930. It is a three story structure of red brick and stucco in old English style with a roof of colorblende

rigid asbestos shingles. On the first floor are a comfortable recreation room for men, a spacious combination banquet and ball room, and a smaller dining room and kitchen and serving room. On this floor are also the lavatories, check rooms, and the apartment for the matron's family. On the second floor above the banquet room is the club lounge, with paneled walls and high beamed ceiling. The library joins this. These are occupied by members of the faculty. The building was financed through an issue of secured notes bought by the faculty. The upkeep of the club and building and the retirement of the notes is met by dues and rentals. The spirit of the club is expressed by the inscription over the fireplace in the lounge "Whoso Would Kindle Another Must Himself Glow."

THE DORMITORIES—On a plot of ground south of the main campus proper the College maintains a Dormitory Triangle on which three attractive and serviceable dormitory units accommodate a limited number of students. It is planned at some later date to add to the dormitory provisions. Each of the three buildings now in use houses from thirty to fifty students. The small houses make it possible to maintain the atmosphere and custom of a well-ordered home. Each building is in charge of a director. The rooms are airy and well furnished. Each is provided with two single couch beds, two closets, and with hot and cold running water. Each house has a large and delightful living room, a kitchenette, and facilities in the basement for washing and ironing. No meals are cooked in the houses. The kitchenettes are for social purposes and for emergency cooking only.

Though time is very precious, divided as it is among classroom studies, departmental clubs, and extra-curricular activities, the hall girls make it possible to have fall getting-acquainted parties, with popcorn and fudge accompaniments, winter story hours in the attractive living rooms, made more attractive by firelight and candle glow, and spring waffle breakfasts in the clubhouse or picnic suppers in the ravine.

Belford Hall is the largest of the three. It has accommodations for fifty-two girls. This hall was named for Mrs. Frances Belford, a prominent Colorado woman, who for many years was on the Board of Trustees of Colorado State Teachers College.

Decker Hall is located east of Belford. It has accommodations for thirty-one girls and a director. It was named for Mrs. Sarah Platt Decker, who was not only prominent in Colorado, but known throughout the country as a pioneer worker in the women's club movement. She was president of the National Federation of Women's Clubs for many years.

Gordon Hall, south and west of Belford, has accommodations for thirty-one girls and a director. It was named for Mrs. Sophia Park Gordon of Pueblo. Like Mrs. Belford and Mrs. Decker, she was an active worker for civic and social betterment. She was one of the most active members on the Board of Charities and Corrections in the State of Colorado.

Only freshman girls now occupy the dormitories. This ruling was made in order that young girls away from home for the first time might be better cared for. After a girl has been in college a year, she can more easily find a suitable room in a private home. During the summer quarter, older students may live in the halls.

Each student living in the College dormitories is expected to care for her room and to provide the following articles:

- Two pairs of sheets, 72" by 108" in size, for a single bed
- Three pillow cases of 42-inch tubing
- Three bath towels
- Three face towels
- Three wash cloths
- Two blankets and one comforter
- One quilted mattress pad 36" by 76"

In addition to these, each student may bring her own sofa cushions, pictures, pennants, and other articles for decoration and personal comfort.

Rooms rent at from \$25.00 to \$30.00 a quarter for each student, with two students in each room.

Students who make applications for a room in the dormitories will deposit \$7.00. This deposit will be applied to the room rent the student pays for the quarter. Rent will be paid in advance for each quarter. In no case will rooms be rented except upon the quarterly plan. Students desiring rooms in the dormitories are requested to write to the dean of women at their earliest convenience, in order that their names may be placed upon the waiting list.

OTHER BUILDINGS—Other service buildings, such as heating plant, garages, automobile repair shops, and the like, are maintained.

THE CAMPUS

Surrounding the buildings is a beautiful campus of sixty-five and a half acres. It is covered with trees and grass and dotted here and there with shrubs and flowers.

JACKSON FIELD

Just two blocks from the main campus is located the athletic field. It is one of the more recent acquisitions and is called Jackson Field, named for Charles N. Jackson, Greeley member of the Board of Trustees. The field covers about twenty-three acres and affords ample space for the varied lines of sport incident to college life. This is not simply a field; grass, trees, and shrubbery make it attractive to the eye now, yet plans for the future promise an athletic field of actual beauty.

The football field is surrounded by a quarter-mile track, with a bank on the west side forming an amphitheater with a present seating capacity of 5000 and room for 3000 more seats.

The baseball diamond and practice field is separate and apart from the football field. It is located east of the cinder track and the football field.

The Woman's Physical Education Department has its own athletic field, adjoining Gunter Hall of Health.

SCHOOL GARDEN

One of the pleasing features of the spring, summer, and fall quarters of the school is the school garden. This garden occupies several acres of ground and is divided into four units—the conservatory, the formal garden, the vegetable garden, and the nursery. From the conservatory the student passes into the large formal garden, where all kinds of flowers, old and new, abound. Here may be found the first snowdrop of early March and the last aster of late October.

MUSEUM OF NATURAL HISTORY

The museum of Colorado State Teachers College is fully developed for actual use. The objects in the museums are such as may be used by way of illustrating lessons in nature study, general science, geography, biology and anthropology.

MAINTENANCE OF THE COLLEGE

The maintenance of the College comes from a state mill tax and from special appropriations made by the legislature.

GOVERNMENT

Colorado State Teachers College is under the management of a board of trustees of seven members appointed by the governor of the state. The state superintendent of public instruction serves ex-officio.

The control of student affairs in the larger phases of student policy is in the hands of the Associated Students, an organization of the entire student body. Every regularly enrolled student at the time of registration is required to become a member of the association and pay a quarterly fee of \$5.00, which admits the student to all Associated Student activities and conference athletics.

FUNCTION OF THE COLLEGE

The purpose of the College is to train teachers for public school service. Being supported by public taxation of all the property of the state of Colorado, the College aims first to prepare teachers for all types of public schools maintained within the state of Colorado. This includes rural schools, kindergartens, primary, intermediate grade, upper grade, junior high schools, and senior high schools. The College also accepts the responsibility of training supervisors for rural schools, principals, superintendents, teachers and supervisors of home economics, industrial education, fine and applied arts, music, commercial education, training school teachers, and instructors in teachers colleges.

While the College is supported for the training of Colorado teachers, it welcomes students from any state or country and sends its teachers wherever they may be called. Students come to Colorado State Teachers College from many states and its graduates go in large numbers into the neighboring states and in smaller numbers into distant states and countries.

The College recognizes as its plain duty and accepts as its function the training of students to become teachers in every type of school at present supported by the state, to meet all the demands of the public school system, to forecast those improvements and reforms which the evolution of public systems of education is to bring about in the immediate future, and to train teachers to be ready to serve in and direct the new schools which are in process of being evolved.

STANDARD OF THE COLLEGE

It is the purpose of the trustees and faculty of Colorado State Teachers College to maintain a high standard of scholarship and professional training. Those who are graduated are thoroughly prepared and worthy of all for which their diplomas stand. It is the policy of the school by making all graduates "worthy of their hire" to protect those who employ them, for in so doing it protects no less the graduates and the children whom they teach.

As a regular member of the North Central Association of Colleges and Secondary Schools, and of The American Association of Teachers Colleges, Colorado State Teachers College is recognized by all of the institutions of higher learning, and credits earned in this College are acceptable at their face value in all of the colleges and universities in the United States.

PHYSICAL EXAMINATIONS

A thorough health examination is required of each student as soon as practical after registration and thereafter once each year. Matriculation is not completed until this examination has been made and recorded, and students are not graduated unless the examinations are attended to regularly and promptly. The medical advisers keep regular office hours for free consultation concerning personal health problems. These examinations and conferences have for their purpose the prevention of illness and the promotion of vigorous health of students.

FEES AND EXPENSE

The expense of attending Colorado State Teachers College is as low as can be made possible by careful management. The total expense may be estimated by taking into account the three largest items: board, room, and college fees.

TUITION—1. Tuition is free to Colorado students.

2. Tuition to non-Colorado students is \$5.00 a quarter.

FEES—1. **MATRICULATION FEE**—\$5.00

Paid but once and at the time of matriculation. It covers all entrance costs such as photograph, classification test, English test, achievement test, teaching aptitude test, physical examination, and the necessary blanks in the registrar's office.

2. **INCIDENTAL FEE**—\$15.00 per quarter

This fee includes all incidental costs of students for one quarter. It includes physical education, library, and laboratory fees in all classes.

These fees are for the fall, winter and spring quarters only. See Summer School Bulletin for fees for the summer quarter.

Fees for individual lessons in piano, organ, violin, and other musical instruments, and voice are extra in the College Conservatory of Music. (See the section in the catalog under heading Music.)

Students who do not plan to be teachers and who are not taking the regular course are charged an incidental fee of \$2.00 a quarter hour for all subjects.

The regular courses for the training of teachers in public school music, supervision of music, etc., are free.

TEXTBOOKS—Students may obtain the regular textbooks at the College bookroom.

HOUSING REGULATIONS

The college requires all women students to live in approved rooming houses. For this reason, it is necessary that students apply to the associate dean of women in the office of the dean of women for a list of approved rooms. No student should rent her room by mail. Students are urged to come a few days before the opening of the quarter to select their rooms. The office of the dean of women does not take the responsibility of reserving rooms except in the dormitories.

No rooming houses will be allowed on the approved list if they do not have single beds and comfortable bathing and heating facilities. No basement rooms are allowed for sleeping purposes. The office of the dean of women is open during the month of September for the purpose of consulting with women students and placing them in approved houses. It is advised that students attending College for the first time come a few days before the beginning of the fall quarter that they may be satisfactorily located.

All students and householders are required to sign a contract covering arrangements concerning rent, moving, extra fees, heat, light, and hot water.

No student is allowed to move within a quarter except under unusual circumstances and with permission from the dean of men or the associate dean of women.

Students who wish to find roommates after they arrive in Greeley should come to the dean of women's office for a list of those desiring roommates.

BOARD AND ROOM—The dormitory triangle provides housing for 114 women students. Each room is provided with two beds and with complete accommodations for two students. Rooms in dormitories cost from

\$28.00 to \$30.00 each student for a quarter. Rooms outside of the dormitories rent from \$30.00 to \$54.00 for one in a room and from \$30.00 to \$42.00 for two in a room for each student for a quarter. Table board averages \$6.00 per week.

Board	\$ 72.00
Room	33.00
Incidental fee.....	15.00
Student Association fee.....	5.00
<hr/>	
Total for a quarter (12 weeks).....	\$125.00

Add to this your own estimate for travel, clothes, laundry, books, amusements, and the like.

TEACHERS PLACEMENT BUREAU

The College maintains a bureau to serve graduates seeking positions and school boards and superintendents seeking teachers. The only charge for this service is a small one to cover in part the cost of assembling data concerning nominees and is paid by the applicant. Superintendents and school boards are invited to visit the College, to make use of the Placement Bureau in looking for teachers, and to meet applicants in whom they are interested.

THE SUMMER QUARTER

The summer quarter will in general follow the plans that have prevailed during the past few years. Each instructor will include all the material in his courses that he regularly uses and will give full time to each topic. A student will carry sixteen hours of work as in other quarters.

The policy of bringing in from other institutions not only lecturers, but classroom teachers as well, will be continued and extended. A large corps of lecturers and teachers from other educational institutions will be in Greeley to give the best they have to the summer school students.

The summer school of Colorado State Teachers College began its work in 1904 with a small faculty and about two hundred students. In 1910, practically the whole faculty, exclusive of the training school and high school teachers, remained to teach through the six weeks of the summer school. In that year there were 443 students. In 1918, the summer term was placed upon an academic level with the other quarters of the College year. The term was lengthened to a quarter and the credits were made equal in value with those of the College year. With this step the College entered upon the four-quarter year. Today the teachers not only of Colorado, but of neighboring and distant states as well, recognize the fact that the College is doing a large service to the profession of teaching by making it possible for active teachers to keep up with the development of modern educational practice and to continue their professional education without losing time from their teaching. Nearly three thousand teachers now avail themselves of the opportunity.

Admission to the College at other times is limited to those who have fifteen units of high school work. The strict observance of this rule during the summer would make it impossible for hundreds of experienced teachers who are not high school graduates to get into touch with all the new movements in education which the College faculty and visiting instructors are presenting to the summer quarter students. The College opens the summer classes to all who would profit by the instruction offered.

Any student nineteen years of age or over may be enrolled in Colorado State Teachers College for the summer quarter without reference to meeting the College requirements for admission. The College believes it can render a valuable service to the teachers of Colorado and surrounding states by allowing any mature man or woman who is teaching or expect-

ing to teach, but who has not graduated from a high school, to enroll in the College for the summer quarter and take such work as he or she may be able to carry.

No College credit will be recorded, however, for any student until the requirements for college entrance have been fully met. A record of attendance and work will be kept. This may later be transferred to the permanent records and counted toward graduation when the entrance requirements have been complied with.

FELLOWSHIPS, SCHOLARSHIPS, AND LOAN FUNDS FOR 1931-32

TEACHING FELLOWSHIPS

Ten graduate teaching fellowships will be available for the school year 1931-32. Each fellowship carries a stipend of \$450, paid in nine equal installments. These fellowships are open to any man or woman who has a Bachelor of Arts degree and who is an exceptionally capable student. Fellows are required to teach at least six hours per week and may not register for more than twelve hours of courses per quarter. Application for these fellowships should be made to the vice-president of the College.

BOARD OF TRUSTEES SCHOLARSHIPS

The Board of Trustees of Colorado State Teachers College issues six scholarships each year. Four of these scholarships known as the "Board of Trustees Scholarships" are awarded at the spring commencement to the two men and the two women having the highest scholastic standing in the sophomore class. These scholarships cover the regular college fees, including laboratory fees, for the remaining two years in college. The two additional scholarships are awarded to the man and woman in the senior class having the highest scholastic standing. These scholarships are known as the "State Superintendent of Public Instruction Scholarships" and cover the regular college fees for one year of graduate work.

JOINT SCHOLARSHIPS

In accordance with joint action taken by the six Colorado state institutions of higher learning, the College authorizes the awarding of scholarships in accredited high schools good for four years. Such scholarships are awarded under the following conditions:

1. Scholarships are to be granted by the high school authorities.
2. Each scholarship will be good for four years' tuition or fees in ANY state institution of higher learning in Colorado. (This does not include student association fees, matriculation fee, neither does it include laboratory fees for certain state institutions, nor does it apply to the professional schools of the University of Colorado.)
3. One scholarship will be granted for each twenty-five graduates, or any part thereof, up to five scholarships, which is the maximum to be granted by any high school. The following table will show the number to be granted:

1 to 25 graduates	1 scholarship
26 to 50 graduates	2 scholarships
51 to 75 graduates	3 scholarships
76 to 100 graduates	4 scholarships
Over 100 graduates	5 scholarships

4. Each scholarship must be granted on the basis of academic standing alone. If only one scholarship is granted, it must be given to the one having the highest average scholarship. If five are granted, they must go to the five highest in scholarship.
5. Scholarships will be honored only when presented by the person to whom granted, and no substitutions will be allowed.
6. Only graduates having two full years of work in the senior high school from which they graduate are eligible.
7. The graduate earning one of these scholarships must enter college at the opening of the following fall term, or it will not be honored.
8. If the holder of a scholarship fails to make average college grades during any term, the scholarship is void until the grades are again brought up to average.
9. All scholarships expire four years from the date of issuance.
10. A scholarship student may transfer from one state institution to another in the usual manner, and use the scholarship as long as he meets all other conditions.
11. Scholarships are not honored for attendance in summer sessions.

DELTA PHI OMEGA GRADUATE SCHOLARSHIP

The Delta Phi Omega sorority offers a graduate scholarship with a stipend of \$150 for the school year of 1931-32. This is open to any student who wishes to pursue advanced study in preparation for teaching. First preference will be given to a member of the sorority. The scholarship is designed primarily to assist a student who is not financially able to continue college work, but scholarship and ability will be taken into consideration in the selection of the candidate.

WAIVER OF FEES

This College will remit fees in cases of exceptionally worthy students interested in teaching as a profession and who do not qualify under the above scholarship plan. In each case candidates must be formally recommended by a committee of the high school faculty and passed upon by a committee comprising the registrar and two faculty members appointed by the president. This school will remit fees under these conditions, but to not to exceed a total of twenty-five students in any one year. This type of award is not negotiable and is not valid during summer quarters. With these qualifications it is valid for a period of four consecutive years from the date of issuance. The same rule concerning grades applies as in the case of joint scholarships.

SCHOLARSHIP TROPHIES

THE JAMES J. BALL PRIZE

Twenty dollars in gold, the award of James J. Ball, assistant superintendent of the Denver Public Schools, is presented yearly to the athlete having the highest scholastic standing among the letter men.

HONORARY EDUCATIONAL FRATERNITY CUPS

The honorary educational fraternities on the campus, Sigma Pi Lambda, Phi Delta Kappa, and Kappa Delta Pi, offer four silver cups to outstanding, all around students, as evidenced by scholarship, citizenship, and general college activity participation. One of these cups is

awarded to a sophomore girl, one to a sophomore boy, one to a freshman boy and one to a freshman girl. These cups are permanent awards and become the sole possession of the students receiving them.

DELTA SIGMA EPSILON CUP

The Delta Sigma Epsilon sorority offers a silver cup to the outstanding sophomore boy or girl. This cup is temporary and passes from student to student at the close of each year.

LOAN FUNDS

There are numerous loan funds, aggregating more than \$22,000, designed to help worthy students to complete courses in Colorado State Teachers College. It not infrequently happens that a promising student meets with unexpected loss, through sickness or other causes, which compels him either to leave school or to continue his work at the risk of low scholarship and overtaxed body and mind, unless he is able to borrow some money. It is for the purpose of meeting just such emergencies that these loan funds have been established.

Applications for loans are made to the treasurer of the College, who carefully investigates the record of the applicant, and grants the petition only in case he is satisfied that the applicant is worthy of such help, will be in a position to repay the loan within a reasonable time, and will be a credit to Colorado State Teachers College after graduation. The student furnishes a note acceptable to the treasurer and makes arrangement for its payment when due.

SIGMA UPSILON GRADUATE LOAN FUND—The Sigma Upsilon sorority has established a graduate loan fund to be used in helping advanced students to remain in college for the degree of Master of Arts. This fund is available to any student whether a member of the sorority or not.

NORMAL STUDENTS LOAN FUND—The money constituting this fund consists of contributions from persons, classes, and organizations disposed to help in the work, and of the interest derived from loans. The freshman and sophomore classes of the College quite often contribute money left after meeting class expenditures to this fund. The freshman class of 1921-22 contributed more than \$200 for this purpose. The fund is intended particularly for those students who need some financial assistance in completing the first two years of work.

SENIOR COLLEGE LOAN FUND—This fund is an accumulation of money, contributed by four-year graduates and others who may be interested in creating a fund for those who desire to pursue a curriculum leading to the Bachelor of Arts degree. Already it has helped many worthy students to continue to the end of their four-year course.

PHI DELTA KAPPA LOAN FUND—This fund, contributed by the Alpha Mu Chapter of Phi Delta Kappa, is placed at the disposal of the Loan Fund Committee for loans to men in the senior year and graduate year of college, first preference being given to members of Phi Delta Kappa.

Y. W. C. A. STUDENT AID FUND—The Young Women's Christian Association has a fund of several hundred dollars which is kept to aid students who need small sums to enable them to finish a quarter or a course. The fund is in charge of a committee consisting of the treasurer of the society, two members of its advisory board, and a member of the faculty. Loans are made without reference to membership in the society.

THE WILLIAM PORTER HERRICK MEMORIAL FUND—This fund, the gift of Mrs. Ursula D. Herrick, in memory of her husband, the late William Porter Herrick, consists of the principal sum of \$5,000. The proceeds or income of said fund are to be paid over and expended by the Board of Trustees of Colorado State Teachers College of Colorado, in aid of such worthy and promising undergraduate students of the College, of either sex, as the president of said College may from time to time designate;

provided, however, that no student who uses tobacco in any form or who uses intoxicating liquors of any kind as a beverage shall participate in the benefits of this fund. The sum or sums, income or proceeds so expended by the said trustees shall be considered in the nature of a loan or loans to such students as may receive the same, and each of said recipients shall execute a note or notes promising to repay to said trustees the amount or amounts so received.

THE GREELEY ROTARY CLUB LOAN FUND—The Greeley Rotary Club has turned over to the Student Loan Committee of the College the sum of \$1,000 to be used as a loan fund for men students.

HOSPITAL LOAN FUND—The class of 1922 turned over to the Student Loan Committee of the College the sum of \$225 to be used as a loan fund for those who need financial assistance in meeting hospital or medical expenses.

THE J. C. KENDEL MUSIC LOAN FUND—This fund was started in February, 1924, from a balance turned over by the May Music Festival Committee for that purpose and is available to music majors only. In appreciation of the efforts put forth by Mr. Kendel in conducting the May Music Festival, the committee decided to call this fund "The J. C. Kendel Music Loan Fund."

THE SARAH PLATT DECKER MEMORIAL FUND—This fund, established on April 7, 1926, by the Sarah Platt Decker Memorial Association in memory of the late Sarah Platt Decker, consists of the sum of \$3,658 which is used as a loan fund for women students of Colorado State Teachers College under such terms as shall from time to time be determined by the Loan Fund Committee of the College.

THE RELIGIOUS ASSOCIATIONS

Y. W. C. A.—Realizing the necessity for religious and social culture in the school, and believing that much good comes of Christian association, a large number of interested students have organized themselves into the Young Women's Christian Association. Meetings are held at various times, and persons who have given considerable thought to the life and aspirations of young people are invited to address the meetings.

THE NEWMAN CLUB—The Catholic students of the College are organized into the Newman Club, the work of which is similar to that of the other Christian organizations. This club has a membership of active young people. Both organizations have been co-operative in forwarding the religious work and welfare of the College.

HONORARY FRATERNITIES

PHI DELTA KAPPA

Phi Delta Kappa is an honorary professional fraternity in education open to men of junior, senior, and graduate rank. It was founded in 1909 by the merger of education clubs in Columbia, Indiana, and Stanford Universities. The chapter at Colorado State Teachers College is the thirty-seventh chapter of the fraternity and the first chapter in a state teachers college. Membership is open by invitation to upper class men students who have passed twelve quarter hours in education, who pledge themselves to teaching as their profession, and who meet certain character qualifications.

KAPPA DELTA PI

Kappa Delta Pi is a national honorary fraternity in education open to both men and women students of upper class rank. It was founded at the University of Illinois in June, 1911. The chapter at Colorado State Teachers College was established on February 23, 1920, as the eighth

chapter of the fraternity and the first chapter in a teachers college. Membership in Kappa Delta Pi is open to upper class students who have ten quarter hours in education, who have been in residence for three quarters and who meet certain scholastic and character qualifications.

PI KAPPA DELTA

Honorary Debating Fraternity. The national honorary fraternity Pi Kappa Delta was the first honorary society to be installed in Colorado State Teachers College. It was installed in the College in the spring of 1918. The purpose of the organization is the encouragement of intercollegiate debate and oratory. Membership is limited to those who have taken part in recognized intercollegiate debates or oratorical contests, or are actively engaged in coaching such students.

ALPHA PSI OMEGA

Alpha Psi Omega is an honorary dramatic fraternity which was installed on the campus of Colorado State Teachers College in 1926. Membership in this organization is by invitation and is open to men and women students who have done outstanding work in acting and directing and staging dramatic productions on the campus.

PHI ALPHA THETA

Phi Alpha Theta is the national honorary historical fraternity and is open to both men and women of senior college rank. It was founded at the University of Arkansas in 1921. Iota chapter of Colorado State Teachers College was installed on November 16, 1929, and was the first chapter granted to a state teachers college. Membership is open only by invitation to those students who have a definite interest in history and who have satisfied high scholastic qualifications in at least sixteen hours of history.

ALPHA ZETA PI

Alpha Zeta Pi is the national honorary romance language fraternity. It was founded in Denver in 1917, and Zeta chapter was installed at Colorado State Teachers College in 1928. Membership is open to students who show a decided ability and interest in the Romance Languages, and who have completed thirty hours of work in the field. They must also have a creditable average in other subjects, and meet certain character requirements.

ALPHA GAMMA PHI

Alpha Gamma Phi is a national honorary fraternity in art open to students above freshman rank. It was founded at Colorado State Teachers College in January, 1928. The purpose of the fraternity is to encourage interest and growth in the fine arts and to maintain high ideals of personality and scholarship. Membership is by invitation to students who meet certain scholastic and character qualifications.

PI OMEGA PI

Pi Omega Pi is a national honorary fraternity in commercial education. It was founded at the Missouri State Teachers College, Kirksville, Missouri, on June 13, 1923. The Zeta Chapter in Colorado State Teachers College was organized in May, 1928. The aims of the organization include the encouragement and creation of interest and scholarship in commerce. The qualifications for membership are ten or more semester hours in education, superior standing in all commercial studies, and average standing in all other subjects.

GIFTS TO THE COLLEGE

From the beginning of the life of the College friends and organizations have been generous in making gifts of land, money, books, museum specimens, and other articles of value. The authorities of the College gratefully acknowledge their obligation to all these donors, and invite any who may feel inclined to make similar donations.

EXTENSION DEPARTMENT

The Extension Department is organized to administer the off-campus activities of the College. A bulletin giving detailed information will be mailed upon request. To enable teachers in active service to continue their professional education, the department fosters three types of extension study and now enrolls more than four thousand non-resident students each year.

EXTENSION CLASSES—Every effort is made to organize classes in those communities where a group of people wish to study the same course. In centers which can be reached conveniently, the classes are taught by faculty members and are called extra-mural classes. In more distant centers the classes are taught by superintendents, principals, and teachers who are members of the College extension staff. These classes are termed extension classes.

In addition to the off-campus classes the Extension Department will upon demand of fifteen or more students organize classes to meet upon the campus during late afternoon, evenings or Saturday. All classes taught upon the campus carry residence credit.

CORRESPONDENCE STUDY—For the convenience of those who cannot meet in extra-mural classes or in extension classes the College provides individual correspondence courses. Each course consists of a set of study units, which are worked through by the student. The student's response is made in writing to the instructor who reads and grades the papers. In all cases the instructors grading the correspondence papers are regular faculty members.

LIMITATIONS OF EXTENSION CREDIT—Extension credit as used in the following paragraphs includes credit earned through extra-mural courses, extension classes, and correspondence study. These terms are defined in the paragraphs above.

Since September 1, 1926, students have not been permitted to apply more than twenty-four quarter hours of extension class credit or correspondence credit toward the two-year course, or forty-eight quarter hours of extension class credit or correspondence credit toward the Bachelor of Arts degree course.

Beginning with September 1, 1929, twenty-four quarter hours of extension credit (all types) is the total number of hours which may be applied toward meeting requirements for the completion of the limited certificate two-year course; thirty-six quarter hours is the total of extension credit which may be applied toward meeting requirements for the completion of the life certificate, three-year course; forty-eight quarter hours is the total of extension credit which may be applied toward meeting the requirements for the completion of the Bachelor of Arts degree, four-year course.

These limitations will not be retroactively applied to any student who has completed (in accordance with regulations printed in the college catalog at the time of enrollment) extension credits in excess of the totals enumerated above.

Students whose extension class or correspondence credit earned before September 1, 1926, exceeds those limitations may apply all extension credits earned before that date to meet graduation requirements.

Extension courses taught by resident faculty members between September 1, 1926, and September 1, 1929, are not included in the limitations of extension credit.

If any extension class or correspondence course was taken after September 1, 1926, which increased the total credit beyond twenty-four and forty-eight hours respectively, such course will not count on present grad-

uation requirements. Likewise, any extension credit (all types) completed in excess of these specified limitations after September 1, 1929, is automatically void so far as graduation requirements are concerned.

Students who expect to graduate while in non-residence must communicate with the registrar before the middle of the quarter in order that proper arrangements may be made. In such cases, the last extension course, if in progress, must be completed and graded ten days before the end of the quarter in which the student expects to graduate.

PART III
THE TRAINING SCHOOLS

THE TRAINING SCHOOLS

The training schools include a complete elementary school and a secondary school; from the pre-school and kindergarten to the twelfth grade. The training schools have a two-fold function. First, they train college students in the theory and art of teaching. Second, they maintain as nearly as possible an ideal elementary and secondary organization.

The fundamental purpose of a training school is not to serve as a research laboratory, but rather to serve as a laboratory in which the student verifies his educational theory and principles. The Training School, as a laboratory, is a teaching and testing laboratory, rather than a research laboratory. It provides an opportunity for student teachers who have an adequate knowledge of subject matter and the theory and principles of education to clarify these and receive practice in the solution of the daily problems and management under the supervision of expert training teachers. New methods that save time, new schemes for better preparing the children for life, new curricula and courses of study are continually considered by this school and tried out, provided they are sound educationally. The aim is not to develop a school that is entirely different from the elementary and secondary schools of the state, but to reveal conditions as they are and as they should be. The Training Schools strive to lead in the state in all that is new and modern. Effort is made to maintain such standards of excellence in the work that it may at all times be offered as a demonstration of good teaching under conditions as nearly normal as possible in all respects. Untrained and unskilled teachers do not practice on the pupils. This problem is solved by having in each grade or subject a trained teacher, one chosen with the greatest care, whose personality, native intelligence, and training fit him for the double duty of teaching student teachers to teach and teaching children. The training teacher is at all times responsible for the entire work of his grade or subject. The Training Schools are planned on the theory that the best interests of student teachers and the best interests of the elementary and secondary pupils can be made to harmonize. Whatever interferes with the proper development of one interferes with the proper development of the other.

A minimum of twelve quarter hours of student teaching credit is required for the limited Certificate with the exception of the upper grade curriculum. A minimum total of eight hours of student teaching credit is required for the Bachelor of Arts degree. A student taking a four-year course should not postpone both quarters of student teaching to the senior year. Student teaching in the Training Schools includes lesson planning, observation, teaching, testing, conferences, etc. Provision is made for group and individual conferences.

ELEMENTARY

The College Elementary School is a complete elementary school containing pre-school, kindergarten, first, second, third, fourth, fifth, and sixth grades.

The Elementary School exists for the purpose of training students who expect to teach in the elementary grades of the public schools. The students enrolled for work in this school spend their time in observing the training teacher and in teaching. No student whose knowledge of the subject matter of the elementary grades is inadequate for successful teaching is allowed to enroll for student teaching in the Elementary School. Each student must pass satisfactorily an achievement test as one of the prerequisites for student teaching.

The courses in pre-teaching observation (Ed. 55 or 56) enables students to orient themselves in their major field, to learn how the training teacher applies principles of teaching to actual classroom situations, to observe the work of the pupils in a given grade, and to become familiar with the

subject matter of the grade observed. It also enables students to learn the names of the pupils and to distinguish outstanding characteristics of the pupils whom they will teach the following quarter.

A more detailed description of the work in observation will be found on page 92.

During the period of student teaching the work of the classroom is put more nearly into the hands of the student teachers. They continue to learn the best practices through observation of the training teacher and apply the knowledge thus gained to their own teaching. Through close supervision and conferences with the training teacher, they learn how to improve their instruction. No student is allowed to continue teaching for any considerable period of time when the class is not making progress under that individual's instruction.

SECONDARY

The Secondary Training School is a complete secondary school unit containing the Junior High School (grades seven, eight, and nine) and the Senior High School (grades ten, eleven, and twelve).

The primary function of the secondary school is to train that group of teachers who expect to enter the field of secondary education. Three years of college training are prerequisite to student teaching in grades ten, eleven, and twelve. In the high school, the student teacher spends about two-fifths of his time in teaching and the remainder in observation.

Students will select the subjects they teach upon the recommendation of the head of the department in which they are majoring and of the principal of the secondary school. Students who have not fulfilled the teaching requirements in the junior college will be held for pre-teaching observation in the high school as a prerequisite for eight hours of student teaching.

EXTRA-MURAL STUDENT TEACHING

In addition to the campus Training School the College uses three school systems off the campus as teacher-training centers. The Big Bend school, eight miles from Greeley; the Gilcrest school, three miles farther south; and the Ashton school, six miles southwest. The Big Bend system is organized with primary, intermediate, and junior high school departments. The Gilcrest system includes an elementary school with primary and intermediate departments and a six-year high school. The Ashton school is an eight-year elementary system. There is an experienced training teacher in charge of each of the departments in these schools. Student teachers are assigned to these schools for a full half day for twelve weeks. The students are paired; while one is attending college classes the other is doing student teaching. The college provides a thirty-passenger bus for the transportation of the student teachers to and from the College. Three round trips are made each school day.

REQUIREMENTS IN STUDENT TEACHING

1. No student is eligible for student teaching whose college grades average below 2.5 prior to the quarter of student teaching. No credit will be given for less than a full quarter of teaching.
2. As a prerequisite to the first quarter of student teaching each student shall be required to spend one quarter in a systematic schedule class in observation and class work (Ed. 55 or 56) with the training teacher with whom he is to teach the following quarter and the principal of the elementary or secondary school. All pre-teaching observation is carried on in the campus school.
3. Each student shall be required to pass satisfactorily an achievement test and make a grade not less than "C" in Ed. 55 or 56, as prerequisites to student teaching (Ed. 58).

4. Each student making a grade of less than "C" in student teaching shall be required to repeat the course. A student receiving a grade of "F" in two quarters work in student teaching is not permitted further enrollment in the Training Schools.

5. Mature students who submit the required evidence of at least three years' satisfactory experience may substitute the required student teaching for an advanced course in College upon the approval of the associate director of Training Schools under the following conditions:

- a. A score above average on the classification test.
- b. A score above average on the English exemption test.
- c. A grade of "B" on the achievement test.
- d. A score above average on the teaching aptitude test.
- e. A grade of less than "C" (the average) in two college courses within one quarter disqualifies.
- f. No exemption is allowed where students have changed their major and have had no teaching experience in their new field.
- g. A formal application must be made for exemption prior to the quarter of graduation and filed with the secretary of the Department of Training Schools. All students will be held for the requirements for exemption in effect at the time of application.
- h. No course taken prior to the application for exemption will be accepted for substitution; nor shall this course be a core or departmental required. This course must be taken on the campus.

PART IV
THE GRADUATE SCHOOL

THE GRADUATE SCHOOL

The purpose of the Graduate School is to increase the candidate's efficiency as a teacher and an independent worker in the field of education. To achieve these ends, three main phases of his training are emphasized: (1) To give the candidate a better background of academic information in his major and related fields; (2) to enlarge his knowledge in the professional field of education and educational psychology to the end that he may better understand the learner's mind, its laws of growth, and the means to be employed in its development; (3) to acquaint the student with the elements of research technic in order to give him some degree of facility in attacking and solving problems similar to those that will later confront him in his professional life.

DEGREE OF MASTER OF ARTS

On this level the Graduate School recognizes two classes of graduate students: (1) Regular students who wish to enter and become candidates for the degree, Master of Arts; (2) special students who, having taken a Bachelor's degree, wish to broaden their education without reference to a higher degree.

ADMISSION

1. Application for admission to the Graduate School for either of the purposes named above shall be made to the registrar of the college. Formal blanks for this purpose will be furnished by his office.

2: The requirements for admission:

- a. The degree, Bachelor of Arts, Philosophy, Science or other four-year degree from a reputable institution authorized by law to confer these degrees and approved by this institution
- b. All undergraduates in Colorado State Teachers College who are within four hours of meeting the requirements for the Bachelor of Arts degree may be admitted to the Graduate School, provided they carry twelve hours of graduate work
- c. Official credentials to be filed with the registrar giving
 - (1) A record of high school work
 - (2) Transcript of the undergraduate college or university grades. Students, if possible, should present these credentials two months before entrance. If the required credentials have not been filed previously with the registrar, the student's registration will be considered tentative until this requirement is met

Excess undergraduate work taken in Colorado State Teachers College may be applied toward the Master of Arts degree, provided the student files with the registrar, prior to the time the work is done, a statement from the director of the Graduate School granting him the privilege to do this. Such credit will be granted only to students who in their fourth year do not need all of their time for the completion of their undergraduate work. The graduate class card (pink) must be used by students who wish credit for courses taken under this provision.

A student must take at least one course of graduate rank to be enrolled as a graduate student. Otherwise his status will be that of an undergraduate student.

The student's first quarter in the Graduate School is considered to be a test of his ability to do acceptable graduate work. Any student whose record or personal qualifications at the end of the first quarter are unsatisfactory will not be admitted to candidacy for the degree.

Admission to the Graduate School *does not guarantee admission to candidacy* for the Master of Arts degree.

GRADUATE STUDY

1. Students entering the Graduate School should realize that their status is different from that of the undergraduate. Administrative machinery cannot be wholly dispensed with, so minimum requirements must be made. However, the aim of the graduate student should not be to meet requirements primarily. He should see in his graduate experience the opportunity to enlarge his knowledge and make himself an *independent* worker. To realize these ends, his interest and effort should carry him beyond the bounds of mere requirements. His achievement should be limited only by the time, energy, and ability at his command.

2. The department in which the student elects to do the greater part of his work is designated as his "major department." While no definite credit hour regulations as to majors and minors are set, nevertheless the graduate student's efforts should not be scattered and unrelated. Narrow specialization within a single field in most cases is not advised, but the candidate's work should be characterized by a certain definiteness and unity. To this end the student and his major professor are expected at the outset to formulate a tentative three quarter program of articulate courses to be approved by the director of the Graduate School.

3. No graduate credit will be given for courses numbered under 100, or for scattered and unrelated courses.

4. All courses numbered under 200 require additional work for graduate credit. The additional work consists of requirements such as special reports, term papers, or original research. The particular requirement made in each case must be indicated by the instructor on the back of the student's class card before it is filed with the registrar at the end of the quarter.

5. Fellows are required to reduce their student load in proportion to the amount of assistance given the college.

6. Sixteen quarter hours are recognized as constituting a full program for the graduate student. However, if his classification tests are sufficiently high, on the recommendation of his major professor, he may be permitted by the director of the Graduate School to carry a *maximum* of seventeen or eighteen hours. Research upon the thesis must be included within the limit stated.

7. Not more than one-half (twenty-four quarter hours) of the student's graduate credit shall fall below the grade of "B". Otherwise, he will be required to do additional work to complete the requirement for the degree.

8. Graduate students will not be permitted to engage in more than one extra-curricular activity a quarter and then only when they reach a fifty percentile rank on the intelligence test and have made an average of "B" or more in their course work. Extra-curricular activities shall be construed to include athletics, debates, oratory, dramatics, student publications, student participation in government, and the Boosters Club.

SPECIAL STUDENTS

Special students must meet all graduate requirements of the course for which they register. If they should decide later to become candidates for the advanced degree, they must meet all the requirements in the field of their chosen major.

Courses taken under the status of a special student may not be counted toward the Master's degree unless they be approved by the director of the Graduate School on the recommendation of the student's major professor at the time of admission to candidacy.

ADMISSION TO CANDIDACY

1. Not later than the tenth week of the student's first quarter, application for admission should be made to the registrar of the College. Formal blanks will be furnished by his office.

2. As soon as practicable, after grade reports for the first quarter's work are in the hands of the registrar and the student's application is filled out in satisfactory form, he will be considered for admission to candidacy by the director of the Graduate School.

3. Before a student can be admitted to candidacy, he must meet the following requirements:

- a. He must have demonstrated his ability to do a high grade of work in his field of specialization and must have shown promise of ability to do research
- b. The average of his first quarter's grades must be above the mean grade of "C"
- c. He must have given evidence to the director of the Training School of his ability to teach. This may have been done by either of the following ways:
 - (1) Successful teaching experience; (2) successful student teaching
- d. He must have established satisfactory classification test scores during the first quarter of his graduate work
- e. He must have demonstrated to his major professor during his first week in graduate work a proficiency in organization and expressing thought in writing. This may be done in one of three ways:
 - (1) Writing, in form suitable for publication in an educational magazine, an article based on the report of a Colorado State Teachers College Master's study in the student's major field of interest
 - (2) Writing, in form suitable for publication in an educational magazine, an article based on a subject or problem of his own on which he has objective information ready
 - (3) Writing his educational history in the presence of the major professor (This should be sufficiently extensive to require one to two hours)

If the student by any of the above tests is found to be deficient in the use of written English, he will be required to take English 110 during his first quarter of graduate work.

- f. He must have shown his personal fitness to become a candidate
- g. The student's major professor must have filed with the registrar a statement endorsing the student for admission to candidacy and giving the subject of his thesis. Blanks for this purpose will be furnished by the registrar's office.
4. A candidate may be required by his major professor or the director of the Graduate School to pass either a written or an oral preliminary examination before he is admitted to candidacy.

AD INTERIM WORK ON THE MASTER'S STUDY

Data for a thesis study may be collected in absentia without credit if approved in advance by the student's major professor. The thesis, however, must be written while the student is in residence.

TIME LIMIT FOR DEGREE

There are two main types of residence work—that carried on during the regular academic year (fall, winter, and spring quarters) and that carried on entirely in the summer quarter. Continuous systematic study so far as is possible in either case is very essential. Hence the following regulations are made:

1. Students entering upon graduate work during any one of the regular academic quarters (fall, winter, or spring) must complete and have approved by the Graduate Council all graduate work including the thesis within two years from the time graduate work is begun, or additional requirements may be made by the Graduate Council
2. Students who restrict their graduate work entirely to the summer quarters must complete and have approved by the Graduate Council all requirements including the thesis within five summer quarters, or additional requirements may be made by the Graduate Council

REQUIREMENTS FOR THE DEGREE

1. Beyond the four year undergraduate course, the student working for the degree, Master of Arts, must earn graduate credits amounting to forty-eight quarter hours. Three quarters of work in residence are required, but one quarter of approved graduate work may be transferred from another institution; or sixteen hours of approved graduate work may be done in extra-mural group classes conducted by instructors approved by the director of the Graduate School. In no case shall these provisions reduce the two full quarters of work (thirty-two hours) required to be done on the campus.

2. Research culminating in the writing of a thesis upon some selected problem shall be an integral part of the work required for the degree. A maximum of ten hours credit may be granted for this research.

3. Every student must register for Research 223 in his major field during his first full quarter of regular graduate work.

4. The student must have at least sixty-four quarter hours of undergraduate and graduate work in his major or closely related subjects.

5. He must have not less than thirty-two hours of undergraduate and graduate professional work in Education, and related fields, such as Educational Sociology and Educational Biology. If the candidate majors in Education sixty-four quarter hours will be required, but only work in Education will be accepted for such undergraduate and graduate work.

6. Before final approval for the degree, the student may be held for an examination by the student's major professor assisted by the director of the Graduate School.

7. The Master's Degree will not be conferred upon students who meet their residence requirements by attending summer sessions only, until twelve months after the date upon which the student was admitted to candidacy for the Master of Arts degree.

8. The Master of Arts degree shall be granted only by vote of the Graduate Council.

THESIS

1. When the subject of the thesis study has been decided upon, the student's major professor shall notify the director of the Graduate School in writing, giving both the name of the student and the subject of the study. The director shall then appoint a member of the graduate faculty to serve with the major professor as a Thesis Advisory Committee. The advisory member shall have official relation to the major professor alone and not to the student.

The major professor shall, after consultation with the advisory professor, approve the whole plan of procedure as outlined in the agendum and they both shall constitute a reviewing committee for the thesis in its final form.

2. At least four weeks before the date upon which the degree is to be conferred two copies of the student's thesis shall be filed with the major professor for examination and criticism by the Thesis Advisory Committee.

3. At least two weeks before the date on which the degree is to be conferred, the complete thesis in final form must be approved, and two copies, properly signed, filed with the director of the Graduate School. One of these must be an original copy. For the purpose of binding these copies, the student must deposit \$2.00 with the business agent of the College.

4. One week before graduation date, brief typewritten digests of the thesis must be filed, one with the student's major professor, one with the director of research, and two with the director of the Graduate School, the latter to be bound with the copies of the thesis prepared for the library.

5. The thesis must conform to definite standards. It must be typewritten on paper of good quality, size 8½x11 inches, and be properly bound. The arrangement of the title page is as follows:

COLORADO STATE TEACHERS COLLEGE

Title of Thesis

A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Arts

by

(Student's Name)

(Title of Major Department)

Date

6. The form of the approval sheet shall be as follows:

Approved by:

Major Professor

Department

Advisory Professor

Department

Director of the Graduate School

DEGREE OF DOCTOR OF PHILOSOPHY

A tentative plan has been developed for the granting of the Doctor's degree in the department of Education.

Since 1927, a few exceptionally well qualified administrators and teachers in the field have been admitted to candidacy for the Doctor's degree. But the policy of the College is still in the formative stage. The above mentioned candidates have been encouraged by the department of Education as a result of their excellent qualifications for advanced graduate training.

General standards for this degree have been tentatively established by the Graduate Council:

1. The candidate must complete the equivalent of two years of graduate work above the Master's degree.

2. Great emphasis is placed upon practical research carried on by the candidate in the field. In fact, research of this nature is stressed as the significant feature of the Doctor's degree in Colorado State Teachers College. All of the candidate's work is designed to give him specific help through courses and field studies in improving public education while he is in service. Instead of the conventional dissertation, two or three field studies are required at the option of the candidate's major professor. For each field study the candidate registers each quarter of a school year (fall, winter, and spring) in a research field course. For the research, a maximum of thirty-six quarter hours of credit may be earned. The report of each field study must be published in acceptable summary form before credit is granted for it. In no case will the degree be conferred in less than three years from the date of admission to work for the Doctor's degree.

3. Residence work is required in the summer quarters while the candidate is free from his administrative or teaching duties to pursue course work. During the summer quarters, the candidate completes his course work and secures help from his major professor on his field studies.

The Graduate Council will not permit any candidate for the Doctor's degree to do graduate residence work during the regular academic year (fall, winter, and spring quarters).

4. The Graduate Council may approve residence graduate work in other graduate schools, particularly where special course work may be pursued.

5. The candidacy of each student thus far has been treated as an individual case. Only superior students who have successful records as administrators or teachers will be considered by the council for admission to candidacy for the Doctor's degree. For students without previous graduate work in Colorado State Teachers College, the council will require at least one quarter of graduate work before such students will be considered for candidacy. This requirement is necessary in order to secure personal evaluation of the qualifications of the student for admission to candidacy.

6. Graduate students working for the Doctor's degree will be required early in their first quarter to take a thorough classification test.

ADMISSION

1. Application for admission to the Graduate School as a prospective candidate for this degree must be made to the director of the Graduate School. Formal blanks for this purpose will be furnished by his office.

2. The Requirements for Admission:

- a. Both the Bachelor's and the Master's degrees, or their equivalent, from an approved institution authorized by law to confer these degrees
- b. Official credentials to be filed with the registrar, giving
 - (1) Transcript of under-graduate college or university work
 - (2) Transcript of graduate college or university work
- c. Students if possible should present these credentials two months before entrance. If the required credentials have not been filed previously with the registrar, the student's registration will be considered tentative until this requirement is met

3. Admission to the Graduate School *does not guarantee admission to candidacy* for the Doctor of Philosophy degree.

PROCEDURE TO BE FOLLOWED AFTER ADMISSION

1. Upon entering the Graduate School for work leading to the doctorate, the student will first confer with the director of the Graduate School who will appoint a member of the graduate faculty to serve as the student's major professor. This major professor is to have general supervision of the student's entire work and is to be held responsible for the student's meeting the requirements for the degree.
2. The student will then confer with the major professor. The purpose of such conference shall be:
 - a. To outline a tentative program of studies to be undertaken by the student
 - b. To determine the fields in which the research studies are to be undertaken
3. The student will then confer with each research professor to determine the specific problems to be investigated as the research studies. In the case of each problem, the research professor shall have entire executive charge of the investigation to be made under his direction.

EXAMINATIONS

The Graduate Council on the recommendation of the candidate's major professor will conduct the following examinations:

- a. At the end of the first summer of residence, qualifying written examinations for purposes of guidance in preparing the candidate's program of course work
- b. Not later than the end of the second summer or following the completion of the candidate's first field study, a general oral examination to determine whether the candidate shall be admitted to candidacy for the Doctor's degree
- c. An oral examination on each field study
- d. A final examination may be held in the last quarter of work prior to granting the Doctor's degree

ADMISSION TO CANDIDACY

1. The candidate must have passed satisfactorily the qualifying examinations.
2. The student's major professor and the director of the Graduate School must have ascertained his fitness for candidacy in terms of the following requirements:
 - a. The candidate must have demonstrated his ability to do a superior grade of work in his field of specialization, and must have shown through the completion of his first field study promise of ability to do independent research
 - b. He must have submitted evidence of his professional ability and fitness for candidacy for the Doctor's degree
 - c. He must have established satisfactory classification test scores
 - d. He must have demonstrated a proficiency in organizing and expressing thought in writing
3. No candidate will be considered who is not at the time of his admission actually holding an administrative or teaching position in the field.

LIFE CERTIFICATE

All graduate degrees entitle the holder to a Life Certificate in the State of Colorado. These certificates are accepted, also, without question by practically all other state departments.

EXTENSION WORK

No graduate credit is given for correspondence work.

With the approval of the director of the Graduate School, a maximum of sixteen quarter hours of graduate credit may be earned by completing graduate courses offered in extension classes. In order to register for graduate credit in extra-mural classes, the following procedure must be observed:

1. The student shall file with the registrar proof of having received a Bachelor's degree from a reputable institution, together with a transcript of his work in such institution and the preparatory credits upon which he was originally admitted.
2. The director of the Graduate School may not approve an extra-mural course for graduate credit unless the instructor holds a Master's or Doctor's degree with minimum specialized training as follows:
 - a. Thirty-two quarter hours in education
 - b. Twenty quarter hours in the special field in which he wishes to teach
3. Not more than six quarter hours of credit may be earned by study in extension classes until the student has been admitted to candidacy for the Master's degree. Graduate credit earned before admission to candidacy will be recorded but not validated until admission to candidacy has been completed. On the basis of his residence record, credit for extra-mural work will be subject to revision.
4. A student may not be admitted to candidacy until after sixteen quarter hours have been completed in residence study.
5. Extra-mural students expecting to become candidates for the Master's degree should plan their program for their entire Master's degree work with their major professor before enrolling for the second extra-mural course.
6. A graduate student enrolled in an extension course numbered below 200 must prepare, under the direction of the instructor, a special paper dealing with some phase of the course. This paper must be of such a standard that for each quarter hour of credit a minimum of four clock hours will be required in preparation. For illustration, a course carrying three quarter hours of credit will require a special paper which will occupy the student, in the judgment of the instructor, a minimum of twelve clock hours in preparation period. At the conclusion of the course, the instructor must send his paper to the director of the Extension Department for filing in order that it may be available for inspection by the student's major professor.

PART V
ADMISSION, GRADUATION, CREDITS

ADMISSION

The qualifications for admission to Colorado State Teachers College are four:

1. Graduation from a high school or secondary school fully accredited by the North Central Association of Colleges and Secondary Schools or by the State University of the state in which the high school is situated. The student must have passed in fifteen or more regular high school units. The college does not prescribe what the high school subjects shall be. It accepts any units that have been accepted for graduation by the secondary school.

ADMISSION MAY BE UNCONDITIONAL OR CONDITIONAL—Even though graduation from an accredited high school yields admission, only those whose rank in the high school graduating class is in the upper seventy-five per cent and whose scores in matriculation tests are correspondingly good are admitted unconditionally.

Candidates for admission in the lowest twenty-five per cent of the high school graduating class whose scores in matriculation tests are correspondingly low are admitted on probation for one quarter. This group is given individual attention usually in the form of personal interviews and guidance. At the end of the probationary period the status of each student thus admitted will be definitely determined.

GRADUATES OF UNACCREDITED HIGH SCHOOLS—Applicants graduating from unaccredited high schools may be conditionally admitted on probation for one quarter if they make scores in the three matriculation examinations high enough to convince the Committee on Admissions of their ability to do college work successfully. Average scores on these examinations are usually accepted for admission. Success in studies during the first quarter of residence removes the student's name from the probation list and makes him or her a regular student subject to the same rules and regulations as apply to graduates of accredited schools. Failure to pass in ten hours of a regular fifteen, sixteen, or seventeen hour program in the first residence quarter or failure to make an average of 2.5 for the quarter cancels the conditional admission and makes it necessary for such students to withdraw indefinitely from the college.

ADULT STUDENTS NOT HIGH SCHOOL GRADUATES—Applicants nineteen years of age or over who are not high school graduates are given conditional admission and placed on the probation list on the same terms as graduates of unaccredited high schools. Conditions for dropping or continued residence are also exactly the same.

2. The applicant for admission must be recommended by the principal of the high school from which the student graduated, or by some one authorized to act for him, as being to the best of his knowledge of good moral character.
3. The applicant is required to pass a health examination given by the College physicians. Those who have an active communicable disease or such physical defects as would interfere with their success as teachers are not accepted.
4. All applicants for admission are required before receiving permanent registration cards to take a series of matriculation examinations to determine as nearly as possible the probability of success. These examinations are:
 - a. A standard intelligence test
 - b. A standard English test

- c. A standard achievement test (knowledge of the subject-matter of the common branches taught in the public elementary and junior high schools)

The combined scores on these tests serve as a guide to the Committee on Admissions.

MATRICULATION OF FRESHMEN

September, 1931

An applicant for admission should file a written request with the high school principal to submit a transcript of record to the registrar not later than September 15. Since required subjects for entrance are not specified, any condition would result from matriculation tests and could not be determined before the end of freshman week. Therefore, no advance report is made to the applicant by the College. Adult students who are not high school graduates must make application to the registrar in person before taking matriculation tests.

FRESHMEN ENROLLMENT—All freshmen enrolling for the first time in this College are required to report at half past ten o'clock Thursday, September 24, 1931, to make complete arrangements for matriculation in the College. Each student must at that time present an official transcript of his or her high school record on the blank adopted by the Colorado-Wyoming Association of Registrars, must present himself or herself for a health examination and for the usual matriculation examinations. During the afternoons and evenings of the remaining days of the week the freshmen will be given instructions about the various phases of college life, and will find an opportunity to engage suitable rooming and boarding places. Reports on the acceptability of the student's credentials and upon the various tests will be ready by 9 o'clock, Monday, September 28. Those who are accepted for entrance into the College will then complete their registration in classes during Monday, September 28. Upper class registration will take place on Tuesday, September 29, and classes will begin on Wednesday, September 30.

FRESHMEN SECTIONS. On the basis of the scores made in the English examination the freshmen class is divided into three sections as follows:

SECTION A. Those in the upper third on the test scores

SECTION B. Those in the middle third

SECTION C. Those in the lower third

Notice will be given each freshman student on Monday, September 28, stating which section he or she is assigned to.

Students in Section A have their core required courses coming in a certain sequence; those in Section B in another sequence; and those in Section C in still another. In the diagram on page 65 the subjects are arranged for each of these three groups of students.

QUALITY OF WORK REQUIRED

The College does not encourage students who do poor work to continue in the institution. Two regulations designed to eliminate this class of students are in force. These are:

1. **THE TEN-HOUR RULE.** Any student in any quarter who fails to pass in ten hours of a regular program of fifteen, sixteen, or seventeen hours is warned in writing of his failure and has the following notation made on his permanent record: "Came under ten hour rule fall quarter, 1931. Readmitted one quarter on probation." Such a student may continue in College on probation. For a second failure under this rule the student is notified in writing that he is indefinitely dropped from the College rolls.

A student carrying a limited program (less than fifteen hours) is required to pass in two-thirds of his program; for example, one making less than eight hours out of a twelve-hour program would get the same notice as would be given for failure to carry ten hours in a fifteen, sixteen, or seventeen hour program.

2. THE TWO-POINT-FIVE RULE. A student whose scholastic average is under 2.5 at the time he applies for an assignment for student teaching will not be given such an assignment. One whose scholastic average is less than 2.5 at the time he applies for graduation will not be graduated or granted a teaching certificate until he has by further residence study raised his total average to or above that mark.

NOTE: Students are not dropped from the rolls for failure under this rule except in unusual cases and then only after a full quarter's warning.

NOTE: To determine the student's average the grade letters have the following values: A=5, B=4, C=3, D=2, F=1.

Typical example: Mary A. Black

Soc. 1	4 hrs	grade B=	16	
Sci. 3	4 hrs	grade C=	12	
Eng. 41	4 hrs	grade A=	20	The total is 60.
Eng. 4	4 hrs	grade D=	8	Divided by 17 the re-
Phys. Ed.	1 hr	grade B=	4	sult is 3.53.
	<hr/>			
	17 hrs		60	

Typical example: Martha White

Hist. 25	4 hrs	grade C=	12	
Hyg. 1	4 hrs	grade D=	8	
Music 25	2 hrs	grade B=	8	The total is 41.
Art 1	2 hrs	grade D=	4	Divided by 17 the re-
Ed. 75	4 hrs	grade F=	4	sult is 2.41.
Phys. Ed.	1 hr	grade A=	5	
	<hr/>			
	17 hrs		41	

THE GRADING SYSTEM—The following grading system has been adopted by faculty action and has been in effect since October 1, 1924:

- A indicates superior work
- B indicates work above average
- C indicates average work
- D indicates work below average, but passing
- F indicates failure

A grade of A, B, C, or D, yields normal credit in any course taken. A course marked "F" carries no credit and may not be adjusted except by repetition of the course at a later time. Other markings may be used when necessary, as follows:

- "Inc.," Incomplete
- "W," Withdrawn

A course marked "Incomplete" must be made up within three months, or during the succeeding quarter, if credit is to be recorded for it. By special arrangement in advance with the vice-president or registrar and the teacher a longer time may be given. An "Inc." must be removed in any subject within three months of the closing date of the quarter, or in the case of summer students who do not attend during the regular year, twelve months. It is advisable to remove a condition early, since members of the faculty are not always available for interview.

If a student withdraws from a class or from College without making formal arrangements with the registrar, he or she will receive an F in all subjects. In either case the teachers concerned must be consulted in order that their records may be correct. This must be done before the

student leaves the campus. Should the student be obliged to leave because of an emergency, a letter giving all facts must be filed with the vice-president within ten days, and if near the end of the quarter, before the closing date. No adjustment is possible after that.

THE SCHOOL YEAR—The school year is divided into four quarters of approximately twelve weeks each. These are:

1. The Fall Quarter
2. The Winter Quarter
3. The Spring Quarter
4. The Summer Quarter

This division of the year is especially well suited to a teachers college for it gives teachers in active service an opportunity equal to any of securing a complete education while actually teaching.

CERTIFICATES AND DEGREES

I. THE LIMITED CERTIFICATE

The Limited Certificate, valid for a period of five years in the elementary schools, will be issued on the completion of the prescribed two-year course in the following curricula: Kindergarten-Primary, Intermediate, Upper Grades, and Rural Schools. This applies to students matriculating after September 1, 1928. Students having pursued work prior to that time will be permitted to complete the course leading to the Life Certificate provided said course is completed before September 1, 1931.

II. THE LIFE CERTIFICATE

Upon evidence of a satisfactory teaching experience of two years (at least sixteen months) during the life of the Limited Certificate and the completion of forty-eight hours of additional prescribed work in this college, a Life Certificate to teach in the elementary schools of the state will be issued to holders of the Limited Certificate. This third-year work must be in the same curriculum in which the limited certificate was received.

The diploma given upon the award of a degree is a Life Certificate to teach in any of the schools of the state.

III. THE BACHELOR OF ARTS DEGREE

The Bachelor of Arts degree is granted upon the satisfactory completion of four years of work (See pages 61, 62 for details.)

IV. THE MASTER OF ARTS DEGREE

See Part IV "Graduate Work," pages 43-50.

V. THE DOCTOR OF PHILOSOPHY DEGREE

See Part IV "Graduate Work," pages 43-50.

ADVANCED STANDING—Students who come to the College after having done work in another college, normal school, or university, will be granted advanced standing for all such work that is of college grade, provided that the institution in question has required high school graduation as a condition for admission. Those who receive advanced standing are required to take here all of the prescribed subjects in the course they select, unless these prescribed subjects or their substantial equivalents have been taken in the colleges and universities from which the students come. Heads of departments involved have the power to excuse students from taking these prescribed subjects within the major department. The registrar must be consulted about exemptions from core subjects. No advanced standing is granted for additional units above the usual sixteen earned in the four-year high school course. All advanced standing is provisionally allowed pending the satisfactory completion of matriculation tests and one quarter's work.

MINIMUM RESIDENCE REQUIREMENT—The College does not grant any certificate or degree for less than three full quarters of resident study/

during which time the student must have earned at least forty-eight quarter-hours of credit. If the student's first graduation is with the Bachelor of Arts degree, he must have spent at least three quarters in residence. Students who have already taken the two-year course must spend in residence at least two additional quarters for the Bachelor of Arts degree. Correspondence students when enrolling in residence should apply to the extension department for an extension of time which will permit the completion of correspondence courses at a time when the student is not enrolled in residence courses. Students in residence are not permitted to enroll in correspondence courses during vacations except during the vacation between the end of the summer quarter and the beginning of the fall quarter.

CREDITS

Application for any certificate or degree must be made to the registrar at least sixty days before the close of the quarter in which the certificate or degree is to be granted.

TIME LIMIT FOR COMPLETING COURSES—A student is allowed three years after beginning resident work on a two-year course in which to complete that course under the conditions which prevailed at the time the student entered the College. Another three years is allowed to complete the work of the third and fourth years under the requirements in effect at the time the student begins resident or group extension courses of the third year. If a limited or life certificate is not applied for before the student becomes a candidate for a degree a total of six years is allowed to follow requirements of the Year Book in effect at the time of the student's entrance. This extension of time is made to take care of those who must teach between the years of resident work. Even though these time limits are given, candidates for graduation are both permitted and encouraged to meet the current requirements. At the expiration of this time a student may continue in the course already begun, but must meet any new requirements which may have been adopted in the meantime. This is intended to cover conditions of admission and general changes, as well as any which may have been made within the student's major department. In any event, when a student graduates from a two-year course the current Year Book shall be his guide in the work of the third and fourth years rather than the Year Book used for the first two years.

UNIT OF COLLEGE CREDIT—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 a year, approximately twelve weeks. Most of the College courses call for four recitations a week. These are called four-hour courses. A student usually selects sixteen quarter-hours, the equivalent of four courses each meeting four times a week, as his regular work.

MAXIMUM AND MINIMUM HOURS OF CREDIT—A student registers usually for fifteen or sixteen hours, exclusive of a physical exercise course, each quarter. The average, including the physical exercise course, shall be not more than seventeen hours for any three consecutive quarters dating from the first quarter's work, or fifty-one for the year of nine months. If a student attends during the summer quarter, this average shall be understood to apply.

If the work is to count as a resident quarter, the student must carry at least twelve quarter-hours. A student who wishes to take a larger program than seventeen hours regularly must take one of the standard classification tests. Following the test, the student may carry seventeen or eighteen hours exclusive of physical education regularly, if the score is high enough to warrant it. In no case shall more than eighteen hours be allowed.

No credit will be allowed for physical exercise courses in the senior college. (Not more than six hours will be accepted in the junior college.) This does not apply to majors or minors in physical education.

EXCESS CREDIT IN THE UNDERGRADUATE SCHOOL—Excess undergraduate work, taken in Colorado State Teachers College, may be applied toward the Master of Arts degree provided the student files with the registrar, prior to the time the work is done, a statement from the director of the Graduate School granting him the privilege to do this. Such credit will be granted only to students who in their fourth year do not need all of their time for the completion of their undergraduate work. The graduate class card (pink) must be used by students who wish credit for courses taken under this provision.

ENROLLMENT

The College enrolls students under the following classifications:

1. **RESIDENCE**—Students must successfully complete a minimum of twelve quarter hours each quarter, in order that it be counted as one of the required residence quarters.
2. **PART TIME**—Students may, with the consent of the College, enroll for any number of hours less than twelve.
3. **EXTRA-MURAL**—Students are enrolled in classes off campus, and taught by faculty members.
4. **EXTENSION**—Students are enrolled in classes off campus and taught by extension instructors duly approved by the College. For limitations of credits, see page 33.
5. **CORRESPONDENCE**—Students are enrolled in correspondence courses taught by faculty members. For limitations of credits, see page 33.

PART VI
THE CURRICULA

THE CURRICULA

Throughout this catalog courses numbered 1-99 are primarily first- and second-year subjects; 100-199 are third- and fourth-year. Those numbered 200 and above are graduate work. Senior college students must select at least two-thirds of their courses in the senior college.

Colorado State Teachers College is a technical school whose sole function is to prepare teachers for the teaching profession in the same sense that medical colleges prepare physicians and surgeons, engineering schools prepare engineers, etc.

For this reason its curricula are sharply differentiated from those of other technical schools and also from those of the colleges of liberal arts whose aim is to give a general rather than a specific training.

The curricula in Colorado State Teachers College are formulated on the basis of four years of work. The following departments prepare teachers to receive the bachelor's degree:

Art	English and Literature
*Athletics	Foreign Languages
Biology	Geology, Physiography, and Geography
Chemistry	History and Political Science
Commercial Education	Home Economics
Education	Industrial Education
Superintendents	Mathematics
Principals for	Music
Elementary Schools	Physical Education and Athletics for
Junior High Schools	Women
Senior High Schools	Physics
Supervisors and Teachers for	Sociology and Anthropology
Kindergarten-Primary	
Intermediate	
Upper Grades	
Rural Schools	
Training Schools	

Any student who wishes to take a two-year course leading to a Limited Certificate before the completion of a full four-year course must take such a certificate through the completion of all the core requirements and departmental requirements in one of the following curricula:

Kindergarten-Primary	Upper Grades
Intermediate Grades	Rural Schools

A student who expects to go straight through a four-year curriculum may major in any of the departments, but, except as noted above, can not get a certificate until the full degree course is completed. One who finally expects to complete a degree course in some other department than the ones listed in the Limited Certificate group may, however, begin his course as a major in the upper grades curriculum and at the same time elect the requirements of the first two years of the department he finally expects to major in for the degree. At the end of two years he may take his limited certificate in upper grade teaching. He would at that time have completed all the core requirements and departmental requirements of the upper grades curriculum, and also, the departmental requirements of the first two years of his four-year major, for example, history or geography. Then he may go out and teach for a time. When he returns to the College he may register as a major in the department of his own preference, and complete his four-year curriculum, receiving the degree of Bachelor of Arts in the field finally chosen. During the first two years this student would register as a major in the education

*Students taking the four-year course in Athletics and Physical Education for Men must in addition to the requirements of this department fulfill the major requirements in another department.

department. His adviser would be the head of that department. In the third and fourth years his adviser is the head of the department finally chosen for the Bachelor of Arts curriculum.

LENGTH OF COURSES--The degree course is planned to occupy twelve quarters. Upon the completion of 192 hours, exclusive of physical exercise courses, the degree of Bachelor of Arts and the Life Certificate will be granted. The courses leading to the (five year) Limited Certificate in kindergarten-primary, intermediate, upper grades, or rural schools, requires ninety-six hours, exclusive of physical exercises courses. Upon completion of forty-eight additional hours in the same curriculum in which the limited certificate was received and two years of successful teaching experience the Life Certificate to teach in the elementary schools will be granted. A quarter is approximately twelve weeks in length.

SELECTION OF MAJORS AND MINORS

In choosing a major the student naturally selects in accordance with his interests and the demand for service after graduation. Graduates of the two-year course cannot legally teach in the high schools of Colorado, but they are in great demand in rural and village schools. The greatest demand is for teachers of the lower grades; upper grade teachers with a limited certificate sometimes find it difficult to obtain positions. For that reason the college Placement Bureau recommends that students preparing themselves to teach in the upper grades elect methods courses, and observe teaching in the intermediate grades of the Training School. Students preparing to teach in the primary or intermediate grades will greatly increase their chances of obtaining positions by electing courses dealing with rural school methods and management. Students preparing to teach in the high school should remember that it is necessary to have at least fifteen quarter hours in a subject in order to qualify to teach that subject. Nearly all inexperienced high school teachers must teach two, and many times three, different subjects. For this reason the college Placement Bureau recommends the selection of one major and two minor subjects.

A survey of the vacancies reported to the Placement Bureau during the past five years and the studies of Whitney of Colorado, Woody of Michigan, and Buckingham of Ohio indicate that definite subject combinations are desirable from the viewpoint of placing the graduate.

Following is a list of suggested minors for each major department. Minors are listed in order of frequency-of demand.

MAJOR	MINOR
Art	Music, English, Spanish
Physical Education for Men	Industrial Arts, Physics, Chemistry, Mathematics
Biology	Chemistry, Physics, Mathematics
Chemistry	Physics, Mathematics, Biology
Commercial Education	There are many positions for Commercial Education majors without minors if they can teach Book-keeping, Shorthand, and Typewriting.
Education	This subject is fundamental for all teachers. Experienced teachers with Education as a major secure positions as superintendents, principals or supervisors. Seldom does a person without experience secure an attractive supervisory position. Many city schools are giving preference to grade teachers who hold the Bachelor of Arts degree. Majors in Education who have had experience in the grades and who have completed the work for the Master of Arts degree are in demand for college training school positions.

English	Latin, History, Geography, Mathematics, Library Science.
Spanish	Latin, English, History.
Geography	History, Biology, General Science, Sociology.
History	English, Public Speaking, Men's Athletics, Geography, Sociology.
Home Economics	Chemistry, General Science, Biology.
Industrial Arts	Men's Athletics, Physics, Chemistry, Mathematics.
Mathematics	Physics, Chemistry, Men's Athletics.
Music	Art, English, History.
Physical Education for Women	Biology, General Science.
Physics	Chemistry, Mathematics, Biology.
Sociology	An understanding of the fundamental principles of Sociology is essential for successful teaching. Sociology is taught as a subject, however, in very few high schools. Sociology courses are usually taught in high schools by the history teacher.

The relation of supply and demand in various fields should always be considered in choosing majors and minors. For the past few years there has been an urgent demand for teachers of the following subjects: Science, Mathematics, Music, Commerce, and Latin.

In choosing teachers, principals and superintendents are always anxious to find applicants who are able to handle extra-curricular activities. From the viewpoint of getting a position, it is desirable for teachers to prepare themselves to direct glee clubs, coach athletics, coach debating teams, manage student publications, and supervise high school clubs of various kinds.

Men teachers can increase their salaries and obtain better positions if they understand and know how to coach boys' athletics.

The Curricula in Detail

The curricula are built upon four principles: (1) The inclusion of a common group of general, cultural, and background courses; (2) the inclusion of a common group of professional courses; (3) the inclusion of a group of courses in each curriculum to give adequate instruction in and preparation for a specific teaching job; (4) leaving ample room for individual choices by students so that their education may be suited to their own likes and preferences while preparing them for a definite place in the teaching profession.

THE CONSTANTS OR CORE REQUIRED SUBJECTS: Each of the curricula differ somewhat from the others in the subjects required by the various departments but each curriculum contains certain subjects common to all. These are shown in the diagram on page —? and are known as core required subjects or constants.

THE DEPARTMENTAL REQUIREMENTS: In addition to the "core" subjects or constants required of all students, each student takes a number of prescribed courses in the department which he chooses as his major.

In the descriptions of the courses offered by each department will be found the sequence of the required courses within that department. In addition to the core and the departmental subjects for the Bachelor of Arts degree, the student must select a minor of twelve to twenty-four hours outside his major department. In addition to these three types of courses there are free electives.

The lists of subjects required by the several departments may be found on the pages indicated below:

Art	73	Industrial Education	131
Athletics and Physical Edu- cation for Men	79	Mathematics	137
Commercial Education	82	Music	140
Education	87	Nursing Education	145
English and Literature	106	Physical Education for Women	148
Foreign Languages	112	Sociology and Anthropology	167
Geography, Physiography, and Geology	115	Sciences—	
History and Political Science	119	Biology	153
Home Economics	126	Chemistry	158
		Physics	163

CORE REQUIREMENTS

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THE CORE REQUIRED SUBJECTS

Sec. A	Sec. B		Sec. C		
FIRST YEAR					
Fall					
✓ Soc. 1	4 hrs.	Eng. 41	4 hrs.	Art 1	2 hrs.
✓ Ed. 1	4 hrs.	Ed. 1	4 hrs.	Eng. 0	0 hrs.
✓ Hyg. 1	4 hrs.	Eng. 4	4 hrs.	Eng. 41	4 hrs.
✓ Sci. 3	4 hrs.	Sci. 3	4 hrs.	Soc. 1	4 hrs.
✓ Phys. Ed.	1 hr.	Phys. Ed.	1 hr.	Music 25	2 hrs.
				Phys. Ed.	1 hr.
Winter					
✓ Art 1	2 hrs.	Eng. 42	4 hrs.	Sci. 3	4 hrs.
✓ Eng. 41	4 hrs.	Hyg. 1	4 hrs.	Ed. 1	4 hrs.
✓ Music 25	2 hrs.	Soc. 1	4 hrs.	Eng. 4	4 hrs.
✓ Sci. 4	4 hrs.	Phys. Ed.	1 hr.	Phys. Ed.	1 hr.
✓ Phys. Ed.	1 hr.				
Spring					
Eng. 42	4 hrs.	Art 1	2 hrs.	Eng. 42	4 hrs.
Ed. 56*	2 hrs.	Sci. 4	4 hrs.	Sci. 4	4 hrs.
Ed. 75	4 hrs.	Music 25	2 hrs.	Hyg. 1	4 hrs.
Phys. Ed.	1 hr.	Phys. Ed.	1 hr.	Phys. Ed.	1 hr.

SECOND YEAR

Fall					
Ed. 58*	4 hrs.	Ed. 56*	2 hrs.	Hist. 25	4 hrs.
Ed. 76	4 hrs.	Ed. 75	4 hrs.	Phys. Ed.	1 hr.
Phys. Ed.	1 hr.	Hist. 25	4 hrs.		
		Phys. Ed.	1 hr.		
Winter					
Hist. 25	4 hrs.	Ed. 58*	4 hrs.	Ed. 56*	2 hrs.
Phys. Ed.	1 hr.	Ed. 76	4 hrs.	Ed. 75	4 hrs.
		Phys. Ed.	1 hr.	Hist. 26	4 hrs.
				Phys. Ed.	1 hr.
Spring					
Hist. 26	4 hrs.	Hist. 26	4 hrs.	Ed. 58*	4 hrs.
Phys. Ed.	1 hr.	Phys. Ed.	1 hr.	Ed. 76	4 hrs.
				Phys. Ed.	1 hr.

THIRD YEAR

Winter					
Soc. 105	4 hrs.	Soc. 105	4 hrs.		
Spring					
				Soc. 105	4 hrs.

FOURTH YEAR

Fall					
Ed. 157	4 hrs.	Ed. 195	4 hrs.	Ed. 195	4 hrs.
Winter					
		Ed. 157	4 hrs.		
Spring					
Ed. 195	4 hrs.			Ed. 157	4 hrs.

*In a four year curriculum the observation and first quarter of student teaching may be postponed until the junior year. Majors in elementary education take Ed. 55 and 156 in place of Ed. 56 and 157.

DEPARTMENTAL REQUIREMENTS FOR KINDERGARTEN-PRIMARY MAJORS¹

Sec. A		Sec. B		Sec. C	
FIRST YEAR					
Winter Ed. 5	4 hrs.	Geog. 50 Ed. 30	2 hrs. 2 hrs.	Art 2	4 hrs.
Spring Ed. 55 Hist. 13a Ed. 6	2 hrs. 2 hrs. 4 hrs.	Ed. 5 Art 2	4 hrs. 4 hrs.	Ed. 7 Ed. 77	2 hrs. 2 hrs.
SECOND YEAR					
Fall Ed. 58	12 hrs.	Ed. 55 Hist. 13a Ed. 6	2 hrs. 2 hrs. 4 hrs.	Ed. 5 Music 1a Ed. 50	4 hrs. 4 hrs. 4 hrs.
Winter Music 1a Art 2 Ed. 7 Ed. 77	4 hrs. 4 hrs. 2 hrs. 2 hrs.	Ed. 58	12 hrs.	Ed. 55 Hist. 13a Ed. 6 Geog. 50 Ed. 30 Hist. 26 (Jr. Year)	2 hrs. 2 hrs. 4 hrs. 2 hrs. 2 hrs.
Spring Sci. 1 Ed. 50 Ed. 30 Geog. 50	4 hrs. 4 hrs. 2 hrs. 2 hrs.	Ed. 7 Ed. 77 Music 1a Ed. 50	2 hrs. 2 hrs. 4 hrs. 4 hrs.	Ed. 58	12 hrs.
THIRD YEAR					
Fall Ed. 110-210 Ed. 145-245 Electives	4 hrs. 4 hrs. 8 hrs.	Sci. 1 Elective Ed. 110-210 Ed. 145-245	4 hrs. 4 hrs. 4 hrs. 4 hrs.	Elective Ed. 110-210 Ed. 145-245	4 hrs. 4 hrs. 4 hrs.
Winter Art 113 Ed. 111-211 Ed. 136 Elective	4 hrs. 4 hrs. 4 hrs. 4 hrs.	Art 113 Ed. 111-211 Ed. 136	4 hrs. 4 hrs. 4 hrs.	Hist. 26 Art 113 Ed. 111-211 Ed. 136	4 hrs. 4 hrs. 4 hrs. 4 hrs.
Spring Ed. 112-212 Ed. 126 Elective	4 hrs. 4 hrs. 4 hrs.	Ed. 112-212 Ed. 126 Elective	4 hrs. 4 hrs. 8 hrs.	Sci. 1 Ed. 126 Ed. 112-212 Elective	4 hrs. 4 hrs. 4 hrs. 4 hrs.
FOURTH YEAR					
Fall Ed. 162 Electives	4 hrs. 8 hrs.	Ed. 162 Electives	4 hrs. 8 hrs.	Ed. 162 Electives	4 hrs. 8 hrs.
Winter Biol. 101 Electives	4 hrs. 12 hrs.	Biol. 101 Electives	4 hrs. 12 hrs.	Biol. 101 Electives	4 hrs. 12 hrs.
Spring Soc. 160 Electives	4 hrs. 12 hrs.	Soc. 160 Electives	4 hrs. 12 hrs.	Soc. 160 Electives	4 hrs. 12 hrs.

¹For Kindergarten-Primary Majors the Limited Certificate is granted those who complete the two-year course as prescribed. The Life Certificate is granted on the completion of the third year of work and two years of teaching experience. The Bachelor of Arts degree is granted on completion of the fourth year. For one of six required quarters of active physical exercise take P. E. 11; for a second course, take P. E. 2; other four quarters of active physical education to be selected by student. Use electives to obtain two subject matter minors of sixteen hours each.

DEPARTMENTAL REQUIREMENTS FOR INTERMEDIATE MAJORS*

Sec. A		Sec. B		Sec. C	
FIRST YEAR					
Winter					
Ed. 8	4 hrs.	Geog. 10	4 hrs.	Geog. 10	4 hrs.
Spring					
Ed. 55	2 hrs.	Ed. 8	4 hrs.	Geog. 11	4 hrs.
Hist. 13b	2 hrs.	Music 1a	4 hrs.		
Art 2a	4 hrs.				
SECOND YEAR					
Fall					
Ed. 58	12 hrs.	Ed. 55	2 hrs.	Ed. 8	4 hrs.
		Art 2a	4 hrs.	Math. 10	2 hrs.
		Hist. 13b	2 hrs.	Ed. 30	2 hrs.
				Music 1a	4 hrs.
Winter					
Ed. 50	4 hrs.	Ed. 58	12 hrs.	Ed. 55	2 hrs.
Eng. 121	4 hrs.			Ed. 50	4 hrs.
Geog. 11	4 hrs.			Art 2a	4 hrs.
				Hist. 13b	2 hrs.
				Hist. 26 (Jr. Year)	
Spring					
Geog. 10	4 hrs.	Math. 10	2 hrs.	Ed. 58	12 hrs.
Math. 10	2 hrs.	Ed. 30	2 hrs.		
Ed. 30	2 hrs.	Ed. 50	4 hrs.		
Music 1a	4 hrs.	Sci. 1	4 hrs.		
Sci. 1	4 hrs.				
Hist. 26 (Jr. Year)					
THIRD YEAR					
Fall					
Ed. 110-210	4 hrs.	Elective	4 hrs.	Eng. 121	4 hrs.
Ed. 145-245	4 hrs.	Ed. 110-210	4 hrs.	Ed. 110-210	4 hrs.
Elective	4 hrs.	Ed. 145-245	4 hrs.	Ed. 145-245	4 hrs.
Hist. 10	4 hrs.			Elective	4 hrs.
Winter					
Ed. 111-211	4 hrs.	Eng. 121	4 hrs.	Hist. 26	4 hrs.
Ed. 136	4 hrs.	Ed. 111-211	4 hrs.	Ed. 111-211	4 hrs.
Electives	8 hrs.	Hist. 10	4 hrs.	Ed. 136	4 hrs.
		Ed. 136	4 hrs.		
Spring					
Hist. 26	4 hrs.	Geog. 11	4 hrs.	Sci. 1	4 hrs.
Ed. 126	4 hrs.	Ed. 126	4 hrs.	Art 114	4 hrs.
Ed. 112-212	4 hrs.	Ed. 112-212	4 hrs.	Ed. 112-212	4 hrs.
		Art 114	4 hrs.	Hist. 10	4 hrs.
FOURTH YEAR					
Fall					
Electives	16 hrs.	Electives	16 hrs.	Electives	16 hrs.
Winter					
Biol. 101	4 hrs.	Biol. 101	4 hrs.	Biol. 101	4 hrs.
Electives	12 hrs.	Electives	12 hrs.	Electives	12 hrs.
Spring					
Soc. 160	4 hrs.	Soc. 160	4 hrs.	Soc. 160	4 hrs.
Art 114	4 hrs.	Electives	8 hrs.	Electives	8 hrs.
Electives	4 hrs.				

*For Intermediate Majors the Limited Certificate is granted those who complete the two-year course as prescribed. The Life Certificate is granted on completion of the third year of work and two years of teaching experience. The Bachelor of Arts degree is granted on completion of the fourth year. For one of six required quarters of active physical exercise take P. E. 11; for a second quarter, take P. E. 5; other five quarters of active physical exercise to be selected by student. Use electives to obtain two subject matter minors of sixteen hours each.

DEPARTMENTAL REQUIREMENTS FOR UPPER GRADES—JUNIOR HIGH SCHOOL³

Sec. A		Sec. B		Sec. C	
FIRST YEAR					
Winter					
Minor	4 hrs.	Minor	4 hrs.	Minor	4 hrs.
Spring					
Minor-Methods	6 hrs.	Minor-Methods	4 hrs.	Ed. 65	4 hrs.
		Minor	4 hrs.	Minor-Methods	4 hrs.
SECOND YEAR					
Fall					
Ed. 117	4 hrs.	Ed. 117	4 hrs.	Ed. 50	4 hrs.
Minor	4 hrs.	Minor	2 hrs.	Minors	8 hrs.
Winter					
Ed. 65	4 hrs.	Ed. 50	4 hrs.	Ed. 117	4 hrs.
Minors	8 hrs.	Ed. 65	4 hrs.	Minor	2 hrs.
Spring					
Ed. 50	4 hrs.	Minors	12 hrs.	Minor	4 hrs.
Minors	8 hrs.				
THIRD YEAR					
Fall					
Ed. 145-245	4 hrs.	Ed. 145-245	4 hrs.	Ed. 145-245	4 hrs.
Minors	8 hrs.	Minors	12 hrs.	Minors	12 hrs.
Winter					
Ed. 136	4 hrs.	Ed. 136	4 hrs.	Ed. 136	4 hrs.
Minors	12 hrs.	Minors	8 hrs.	Minors	12 hrs.
Spring					
Ed. 126	4 hrs.	Ed. 126	4 hrs.	Ed. 126	4 hrs.
Minors	12 hrs.	Minors	12 hrs.	Minors	8 hrs.
FOURTH YEAR					
Fall					
Ed. 156a	4 hrs.				
Minors	12 hrs.	Minors	16 hrs.	Minors	16 hrs.
Winter					
Minors	16 hrs.	Ed. 156a	4 hrs.	Minors	16 hrs.
		Minors	12 hrs.		
Spring					
Soc. 160	4 hrs.	Soc. 160	4 hrs.	Soc. 160	4 hrs.
Minors	8 hrs.	Minors	8 hrs.	Ed. 156a	4 hrs.
				Minor	4 hrs.

³For Upper Grade-Junior High School Majors the Limited Certificate is granted those who complete the two-year course as prescribed. In addition to the course herewith, select two minors from the list suggested for upper grade majors on page 89, and take as many as possible of the exact courses outlined in the first two years of each minor selected. Complete the remaining courses in the third and fourth years. It is urged that the candidate have a methods course in the field in which he is to do student teaching. Advise with the head of the Education Department before beginning senior college major in education. For one of six required quarters of active physical exercise take P. E. 11; for the second quarter, take P. E. 5; other four quarters to be selected by student.

DEPARTMENTAL REQUIREMENTS FOR RURAL MAJORS⁴

Sec. A

Sec. B

Sec. C

FIRST YEAR

Winter			Ed. 80			Ed. 80		
Ed. 31	4 hrs.		Ed. 31	4 hrs.		Ed. 31	4 hrs.	
Spring			Art 2a			Art 2a		
Ed. 55	2 hrs.		Hist. 10	4 hrs.		Geog. 10	4 hrs.	
Ed. 8	4 hrs.		Eng. 42 (Jr. Year)	4 hrs.		Science 4 (Jr. Year)	4 hrs.	
Hist. 13b	2 hrs.							

SECOND YEAR

Fall			Ed. 55			Ed. 8		
Ed. 58	12 hrs.		Ed. 50	4 hrs.		Sci. 1	4 hrs.	
			Hist. 13b	2 hrs.		Math. 10	2 hrs.	
						Electives	2 hrs.	
Winter			Ed. 58			Ed. 55		
Ed. 80	4 hrs.					Ed. 50	4 hrs.	
Ed. 50	4 hrs.					Ed. 31	4 hrs.	
Electives	4 hrs.					Hist. 13b	2 hrs.	
Spring			Ed. 8			Ed. 58		
Sci. 1	4 hrs.		Sci. 1	4 hrs.				
Geog. 10	4 hrs.		Math. 10	2 hrs.				
Math. 10	2 hrs.		Electives	2 hrs.				
Art 2a	4 hrs.							
Electives	2 hrs.							
Hist. 26 (Jr. Year)								

THIRD YEAR

Fall			Ed. 132			Ed. 132		
Ed. 132	4 hrs.		Ed. 110-210	4 hrs.		Ed. 110-210	4 hrs.	
Ed. 110-210	4 hrs.		Ed. 130-230	4 hrs.		Ed. 130-230	4 hrs.	
Ed. 130-230	4 hrs.		Geog. 10	4 hrs.				
Hist. 10	4 hrs.							
Winter			Geog. 11			Hist. 10		
Geog. 11	4 hrs.		Electives	8 hrs.		Electives	4 hrs.	
Electives	8 hrs.		Eng. 42	4 hrs.		Sci. 4	4 hrs.	
						Hist. 26	4 hrs.	
Spring			Ed. 112-212			Ed. 112-212		
Ed. 112-212	4 hrs.		Ed. 131	4 hrs.		Ed. 131	4 hrs.	
Ed. 131	4 hrs.		Ed. 126	4 hrs.		Geog. 11	4 hrs.	
Ed. 126	4 hrs.					Ed. 126	4 hrs.	
Hist. 26								

FOURTH YEAR

Fall			Ed. 145-245			Ed. 145-245		
Ed. 145-245	4 hrs.		Electives	12 hrs.		Electives	12 hrs.	
Electives	8 hrs.							
Winter			Electives			Ed. 111-211		
Ed. 111-211	4 hrs.		Electives	8 hrs.		Electives	12 hrs.	
Electives	12 hrs.		Ed. 111-211	4 hrs.				
Spring			Soc. 160			Soc. 160		
Soc. 160	4 hrs.		Electives	8 hrs.		Electives	4 hrs.	
Electives	8 hrs.							

⁴For Rural Majors the Limited Certificate is granted those who complete the two-year course as prescribed. The Life Certificate is granted on completion of two years of teaching and the third year listed above. The Bachelor of Arts degree is granted on completion of the fourth year. For one of six required quarters of active physical exercise take P. E. 11; for a second quarter, take P. E. 5; other four quarters of active physical exercise to be selected by student. Use electives to obtain two subject matter minors as suggested for kindergarten-primary and intermediate majors.

PART VII
COURSES OF INSTRUCTION

COURSES OF INSTRUCTION

ART

This department offers technical art courses, professionalized courses in art education, history and appreciation of the different phases of the world's art.

Technical courses are for improvement in understanding and expression of art structure as it pertains to drawing, composition, color, painting, lettering, and industrial art crafts.

History and appreciation cover the great masters and their works, the relation of art to national life, and ways to think about art which will help to interpret the art of the world.

Professionalized courses in art education have to do with the problems of teaching and supervising art in the schools. These courses deal specifically with learning and teaching expression, appreciation, supervision, organization, and research in art education.

Courses in drawing, lettering, design, art craft and art methods are offered for students from other departments who choose a minor in art.

The aim in this department is to prepare teachers and supervisors for the field of art education, to help teachers of elementary and secondary schools to a better understanding of art in its relation to life and to the general school curriculum, and to lead to a greater realization of the need for leadership in art among the youth of today.

A FOUR-YEAR CURRICULUM IN ART

In addition to the core subjects listed on page 65, the following courses are required of majors in the department: Art 3, 3a, 4, 5, 10, 11, 16, 17, 100, 101, 103, 104a, 106, 107, 108, 109, 112, 115, 120, Ed. 126, Ed. 141 (for men).

Courses in interior decoration, dress appreciation, bookbinding, art metal, printing, mechanical drawing, slide-making, music or French are suggested as valuable units in the equipment of an art teacher. These courses may be taken as electives or minors. A minor of at least twelve hours is required of all art majors.

The following art courses are suggested from which a minor may be chosen by majors in other departments: Art 3, 3a, 4, 5, 10, 11, 15, 16, 17, 101, 104a, 106, 107.

1. ART APPRECIATION. Two hours.

The purpose of this course is to help students to successfully solve art problems which they will encounter in daily activities, to develop ability to see beauty and art quality wherever they may be found, to recognize the value of art as an educational, cultural, and social force, to encourage interest in that which is beautiful and inspiring in the world's art.

An introduction to the elements and fundamental principles of the space arts; how to recognize and understand these principles at work in producing simple harmonies. Study illustrations of rhythm, balance, and proportion in art objects such as sculpture, painting, architecture, clothing, and furnishings; simple facts about color and how to use color intelligently; appreciation of color as a source of enjoyment; art in the home; knowledge of good spacing, color and value relations in making the home and the community more attractive and satisfying; study of various rooms with regard to finish, furnishing, and arrangement; recognition of art quality in windows, doors, draperies, curtains, rugs, accessories of artistic value, lighting fixtures, lamp shades, pottery, china, silver, flower arrangement; how to select, frame and hang pictures; architecture of the home, the yard and gardens.

2. FINE ART METHODS FOR KINDERGARTEN-PRIMARY. Four hours.

The purposes of the course are: (a) to present the aims and purposes of the teaching of fine art in the elementary school; (b) to develop the

essentials of creative art expression as adapted to fine art problems for kindergarten and the first four grades; (c) by means of exercises, reading, and discussion bring the student into contact with mediums and forms of expression suitable for these grades; (d) to formulate standards of art appreciation as they relate to the small child; (e) to plan organization of fine art problems for kindergarten and lower grades.

Topics include the child's native equipment and interests as they relate to the teaching of fine art, fine art structure, free brush drawing, painting, vocabulary of symbolic forms, developing the creative impulse, the fine art project, the lesson in art appreciation, color design, lettering.

2a. FINE ART METHODS FOR INTERMEDIATE GRADES AND JUNIOR HIGH SCHOOL. Four hours.

The purpose of the course is to present the methods of teaching fine arts and the subject matter handled in the intermediate grades and junior high school.

The content includes practice in art expression, in organization of subject content, and in lesson planning. The subjects considered are freehand drawing, perspective, composition, color, design, art appreciation, art in costume, in the home and community life. Mediums used are pencil, charcoal, water color, crayons, cut paper, print block.

3. FREEHAND DRAWING I. Four hours.

This course is designed to develop the student's power in graphic expression. This is the foundation course in drawing and should be taken preliminary to any advanced work in creative art. A progressive plan of study enables the student to meet his difficulties singly and to develop increasing power. Attention is given to plan and procedure in drawing, aims and objectives, differing conventions and consistent viewpoints; analysis of the problem of form, analysis of modes of representation, technical study in vision, essentials of perspective, constructive drawing and expressive drawing. Work is done in a variety of mediums and modes of expression, from still life arrangements, the antique, figure poses, student poses, out-door sketching, creative compositions.

3a. ART STRUCTURE I. Two hours.

All students beginning the study of art should take this course. It is the introduction to the study of elements and basic principles in art structure, and it aims to give the student a working basis for interpretation and expression of fine arts. It includes creative problems in line and space, line problems converted to pattern of dark-light and color, drawing of many views of an object combined into a single design, study of rhythm; composition of the rhythm of movement of things, analysis of the three qualities of color—hue, value, chroma; problems illustrating variations of color qualities.

4. DESIGN. Four hours.

Prerequisites 3, 3a, or equivalent.

The purposes of this course are (a) to give the student an appreciation of design throughout the field of the plastic arts; (b) to develop an understanding of the principles of order underlying good design, and the ability to apply them in the student's own creative work. It aims to approach creative design through native sensibility to esthetic stimuli. An analysis of the elements of art structure and design principles emphasizing the rational basis for aesthetics of line, mass, and color is studied, special attention being given to an understanding of color relationship in design. Problems in constructive design and designs for specific fine arts objects are studied.

5. WATER COLOR PAINTING. Four hours.

Prerequisite Art 3.

This course aims to give the student a technical command of the medium, to develop individual expression in creative painting.

The content consists of study of limitations and resources of water color as a medium for artistic expression, study of materials, pigments, brushes, papers. Representation of form, color theory, tone relations, study of different modes of painting in water color: pure water color, line and flat tone, wash and outline, charcoal and water color; pen and wash drawing; study of old and modern masters of water color; creative compositions; outdoor painting, still life, and sketching from costumed model.

10-110. FINE ARTS METHODS. Four hours.

For art majors.

The purposes are, (a) to make the student familiar with the art needs of the elementary and high school student; (b) to make him acquainted

with the subject matter related to the teaching of fine art; (c) to present methods of teaching; (d) to discuss organization and adaptation of art subject matter for the child mind.

The topics covered are: Objectives in the teaching of fine art, relating fine art subject matter to the needs of the child, psychological sequence in the development of art problems, practice in drawing and painting for expression, symbolic drawing, perspective, drawing from nature and from life, lettering, design, illustration.

11-111. INDUSTRIAL ART METHODS. Four hours.

A course for art majors that presents the industrial needs of the child from the first grade through junior high. Methods of teaching and organization of work into units or projects are presented.

The content includes problems in basketry, clay modeling, mold making, papier-mache, paper construction, bookmaking, toys, puppets, textile study and decoration, weaving, costume, and the interior. These are organized under such uses of products as food, clothing, shelter, records, utensils, tools and machines.

16. COMPOSITION AND FREEHAND DRAWING. Four hours.

Prerequisite Art 3 or equivalent.

The purpose of this course is to develop power in freehand drawing and in the use of compositional principles; to improve the appreciation of line quality, of value and tone relations.

Problems studied will be: (1) building tones to express characteristic texture of things drawn, such as plastered wall, wood, drapery, glass, fur, roofs, trees, clouds; (2) the meaning of line direction in compositional structure—line quality, contour drawing from museum specimens; (3) contrast the movement of line and tone in two-dimensional design with that of three-dimensional composition; (4) recognition of plastic form, and how to attain it through equilibration of forces contrasting straight and curve, long and short, dynamic and calm, modulation of dark and light. Subjects: Roofs, street scenes, interiors, animals, birds, still life, landscape, clouds, life situations including the figure. Charcoal and pencil are the media used.

17. LETTERING I. Two hours.

Objectives of the course are: (1) to give students the ability to design and execute fine lettering; (2) to increase the student's appreciation of the beauty of letters in form and arrangement.

The content covers pen-formed letters, work in various styles of lettering pens, simple letter form, spacing, design, manuscript writing, the uncial and half-uncial alphabets, historic development of lettering, the built-up letters, the classic Roman capitals, variants. Special attention is given to creating expressive letter forms for specific purposes. Composition. Specific problems. Study of poster, formal and informal.

*18. CLASSROOM PROBLEMS IN TEACHING ART (Given only in extension classes). One hour.

The aim of this course is to set forth simply the fundamental principles of art and their application to school problems. It will aid the elementary and rural teacher in encouraging creative expression; in planning appreciation lessons; in developing projects through life situations. Students will have opportunity to observe demonstrations and to execute problems in the various art mediums, such as paint, crayon, clay, and cloth. Emphasis will be according to needs of the group.

100. SUPERVISION OF ART EDUCATION. Four hours.

The teaching and supervising of art in the schools. Methods of supervision, organization of objectives and course content for elementary and secondary schools. Analysis of subject matter, revision of old material and organization of new projects. Study of courses and textbooks now in use in the field of art education.

101. FIGURE DRAWING. Four hours.

The objectives: (a) to gain a knowledge of the human figure in its relation to artistic expression, (b) to develop the ability to use the human figure creatively in original designs and compositions, (c) to develop the ability to draw the figure without model in any expressive action desired, (d) increased power in drawing.

The content includes a study of the figure as a whole, proportion; essentials of artistic anatomy; the bony structure, the important musculature and its effect on the essential form; a study of the figure in

*Given also by extension.

action; a study of pose and gesture; the expressive qualities of the figure; rhythm; drawing from life model and from memory; constructive drawing; expressive drawing; outside problems involving use of human figure in design and composition.

This work may be continued for four additional hours as Art 101a.

***102. ART STRUCTURE FOR ELEMENTARY AND JUNIOR HIGH SCHOOLS**
(Given only in extension classes). Four hours.

This course deals with the analysis and use of art principles in school and home problems. Color theory with specific application to problems in aesthetics; ways of using art structure in creative expression concerning dress; home and school projects; design, illustration, and posters.

103. ART STRUCTURE II. Four hours.

The purpose of the course is to develop the student's creative ability in original composition.

The content includes analysis of art structure involved in the great works of art, the synthesis of these elements in the student's own creative work, theory of composition, design principles, expressive arrangement, line, the aesthetics of line, its expressive possibilities; rhythm in its relation to line, line plans of the old masters; mass, the music of dark and light abstractly considered; the dark and light patterns of the master painters, aesthetics of dark and light, design principles involved in mass arrangements, color in composition a distinct means, the expressive function of color, color an emotional experience, aesthetic content; the grammar of color, some harmonic principles, the close analogy with the musical composer's problem, art structure analyzed in various art forms, varied yet consistent viewpoints, dynamic symmetry a specific formula for adjustment of areas and structurally related lines. Assigned problems in composition.

This work may be continued for four additional hours as Art 103b.

103a. ART STRUCTURE (Given on request). Two hours.

For description of course see Art 3a.

Senior college students will be required to do advanced problems in addition to the work outlined for 3a.

104. DESIGN. Four hours.

For description of course see Art 4.

Senior college students will be required to do advanced problems in addition to the work outlined for students of Art 4.

104a. DESIGN IN TEXTILES. Two hours.

Art structure as the basis of fine pattern is presented through the study of fine historic woven and printed textiles. Such typical designs as Coptic, Byzantine, Persian, Italian, Spanish, and French are analyzed through photographs and reproductions. Practice in designing textiles is given. Experience in textile processes such as stitchery, tie dyeing, free brush, batik, and block printing. This course may be continued for two additional hours as 104b.

105. WATER COLOR PAINTING. Four hours.

The purpose of the course is to give the student a technical command of the medium, to develop individual expression in creative painting.

The content consists of study of limitations and resources of water color as a medium for artistic expression, study of materials, pigments, brushes, papers, representation of form, color theory, tone relations, study of different modes of painting in water color; pure water color, line and flat tone, wash and outline, charcoal and water color; pen and wash drawing; study of old and modern masters of water color; creative compositions; outdoor painting, still life, and sketching from the costumed model.

This work may be continued for four additional hours as Art 105a.

106. TEACHING ART APPRECIATION. Two hours.

The purpose is to present definitely organized lesson plans and course units for the teaching of art appreciation.

The content includes analysis of paintings, sculpture, architecture, and products of the minor arts with methods of teaching adapted to the different schools; to differentiate the historic, the story, and the art values in subjects considered. The lesson plan.

*Given also by extension.

107. CONSTRUCTIVE DESIGN. Four hours.

Prerequisites 4a, 4 or the equivalent.

The purpose of the course is to develop appreciation of the interest in the different crafts of the world; to study the harmonious relationship between the construction and enrichment of an artistic product; to teach correct use of materials; to stimulate desire for good craftsmanship and create design.

Problems involved are leathercraft, design, construction, tooling, staining of such articles as bags, purses, book covers, desk sets; basketry of pine needles and reed, lamp shades—parchment and batik; Gesso-demonstration of the essentials necessary for using this medium. Loom weaving. Instruction in the technic of pattern and experience in weaving on the loom. Weaving will be emphasized for students interested in this craft.

Textile design and block printing are elective in this course if the student has previously covered the other subject matter.

This work may be continued for four additional hours as Art 107a.

108. POTTERY. Two hours.

The historical development of pottery making as a craft is presented with emphasis on standards for judging the art value. Through reference reading, photographs, and models the student is acquainted with the best of Greek, Egyptian, Persian, Italian, Spanish, Chinese, and Indian pottery forms and decoration. Practice is given in modeling by the coil and slab processes such objects as tiles, vases, bowls, and book ends. Experience is obtained in decorating with incised lines, mats and Majolica glazes, and in casting and firing.

This work may be continued for two additional hours as Art 108a.

109. HISTORY OF ART. Four hours.

The purposes of this course are: (1) to give a background of knowledge of the world's art and its development from the beginning of history, (2) to increase the student's appreciation and understanding of the different kinds of art.

The content of the course includes growth of the great schools and their influences; study of important masters and their work as an index to the time in which they lived; study of the crafts and minor arts in relation to the progress of civilization.

112. COLOR THEORY AND COMPOSITION. Four hours.

Prerequisite Art 4.

An extensive study of the field of color as one of the major elements in plastic expression. The emphasis is placed upon the aesthetic principles involved in color organization. A course for everyone who works creatively in color. Problems include Munsell's measurements, major schemes for hue combination, complementary and near complementary plans, studies in limitation, balance and discord, pigment and light, design principles underlying good color, saturated scale experiments, color sequences, experiments in related harmonies, experiments within one of the major schemes, color notation, transposition.

This work may be continued for four additional hours as 112a.

113. INDUSTRIAL ARTS METHODS FOR KINDERGARTEN PRIMARY. Four hours.

The purposes of the course are: (1) to present the aims and functions of the teaching of industrial art in the elementary school; (2) to develop simple industrial art processes adaptable for use in kindergarten and the primary grades; (3) by means of practice and discussion make the student familiar with types of materials, their uses, preparation and sources; (4) to discuss the organization and method of presentation of the study of industrial art in relation to the needs of the primary school child.

An introduction to child interests, growth and development of the teaching process by means of materials, organization of industrial art problems in the elementary school, relation between industrial art and fine art, development of problems and projects.

114. INDUSTRIAL ARTS METHODS FOR INTERMEDIATE GRADES AND JUNIOR HIGH SCHOOL. Four hours.

A study of art in the industries with relation to the life of the individual and the community.

The content includes practice in design and color in industrial expression. Methods of teaching are presented with such subject matter as clothing, shelter, utensils, and records. Problems in basketry, clay modeling, textiles, costume, the interior, papier-mache, toys and puppets, and paper construction are executed.

115. FREEHAND DRAWING II. Four hours.

Prerequisite, Art 3.

A continuation of Freehand Drawing I, providing an opportunity for students to do advanced work in drawing. Emphasis is placed on sound draftsmanship and developing the expressive qualities peculiar to the medium employed. Drawings and prints by master draftsmen will be studied and an appreciation developed for the finer distinctions in the art. Work will be done in a variety of mediums: charcoal, pastel, pen and ink, crayon, and pencil. From these the student will choose one or possibly two for special study. The student will be introduced also to etching and lithography. This course may be continued for four additional hours as 115a.

116. COMPOSITION AND FREEHAND DRAWING. Four hours.

For description of course see Art 16. Senior college students will be required to do the advanced problems in addition to the work outlined in Art 16.

This work may be continued for four additional hours as Art 116a.

117. LETTERING II. Two hours.

For description of course see Art 17. Senior college students will be required to do advanced problems in addition to the work outlined for Art 17.

118. STAGECRAFT AND PAGEANTRY. Two hours.

The objectives are: (1) to study the art of the theatre from the viewpoint of the art director, (2) to give students practical experience in working out the art problems involved in amateur productions.

The content includes theory, historic development, the modern trend, the genesis of a distinct art form, composition, modern color and lighting, instruction and practice in fundamentals of scenic construction and production, designing and making of properties, masks and lanterns, essentials of figure and general drawing, costume, a study of current productions.

119. ADVANCED POSTER COMPOSITION. Two hours.

Prerequisite, Art 17.

The purpose of the course is to afford to qualified students an opportunity to do advanced work in poster design and lettering.

The content covers advanced problems in design and lettering, design in its relation to advertising art, processes of reproduction.

120. OIL PAINTING. Four hours.

Prerequisites, Art 3, 16.

The purposes are: (1) to ground students in the fundamentals of good painting; (2) to develop the student's individual power of expression in this medium; (3) to give the student a vital interest in creative art through power gained in the use of the oil medium; (4) to acquaint the student with viewpoints of the different schools of painting.

The content includes materials and technical employment, painting from still life, emphasis placed on composition; pigments, pigment range vs. light range; representation of form as revealed through light, technical study in vision and employment of palette, seeing significantly, expressing the individual viewpoint, imaginative composition, painting from costumed model and from nature out of doors.

This work may be continued for four additional hours as Art 120a.

121. MODELING. On request. Two hours.

The purpose of the course is to broaden the student's conception of form in the third dimension, to develop his perception and appreciation of organization in nature, to develop a certain technical mastery and power of expression in this medium.

The content includes basic elements and principles in form structure, figures and animals from life, creative compositions suggested by observation of figures and animals in every day life.

122. TESTS IN ART EDUCATION. Two hours.

A study of the content of tests in art education and experience in compiling tests in aesthetics.

123. PRINT MAKING.

Etching, lithograph, wood cut, monotype. A study of print processes. Experience in the making of prints.

212. ADVANCED COLOR THEORY. Four hours.

Prerequisite Art 112.

Research in the field of color aesthetic.

220. ADVANCED OIL PAINTING (Given on request).

222. INDIVIDUAL STUDIES IN ART. Two or four hours.

223. RESEARCH IN ART EDUCATION. Four hours.

Taken in the first quarter of graduate work.

This is a required seminar and conference course for graduate students who are working on their masters' investigations. The director of educational research meets the group three times each week and confers with the individual students in the research office. Small group conferences are held when needed. Each student meets his thesis adviser regularly.

224. RESEARCH IN ART EDUCATION. Four hours.

This course is intended primarily for graduate students working on their masters' theses. Subjects for research and methods of organization will be considered in weekly conference with the head of the department.

225. RESEARCH IN ART EDUCATION. Two hours.

A continuation of Art 224.

ATHLETICS AND PHYSICAL EDUCATION FOR MEN

An activity course in physical education is required of all first and second year students throughout the college year. A total of six credits must be earned.

At the beginning of the college year each student is given a thorough physical examination by the College physician. The condition and health of the student as shown by this examination are used in outlining the exercises and development work given.

All the candidates for the various athletic teams must first obtain a permit from the College physician before having any equipment checked out to them.

All requests for exemption or postponement must be made at the office of the director of physical education, and to become effective they must be approved by him and by the class adviser of the student's department. They will be granted ONLY in the following cases:

1. Students physically unfit to take part
2. Students providing satisfactory evidence of previous completion of this work.
3. Other cases deemed advisable by the director of physical education and approved by the head of the department in which the student is enrolled

The objectives of this department are concerned with:

The satisfaction of student interest in games, sports, contests, and sportsmanship; in physical development and vigor; and in the achievement of athletic skills;

The formation of habits that improve, maintain, and defend health; habits of exercise, recreation, and athletic competition with their evolutions of individual and group hygiene; habits of periodic health examinations and of discriminating selection of health advisers, health literature, and health service;

The production of an understanding of the basic facts that determine mental and physical health and the applications of those facts for the benefit of the individual, his group, and society;

A capitalization of the character disciplines and of the training of social personality that may be furnished by experience in organized games and college athletics;

The training of the student leaders and the preparation of men for professional service in the field of educational hygiene and physical education;

The provision of programs of physical education and hygiene adapted to the needs of the individual student, whatever his limitations may be.

A FOUR-YEAR CURRICULUM IN ATHLETICS

All men doing major work in this department are required to have a second major in some subject matter department, in order that they may be prepared to teach some subject along with physical education and athletics.

In addition to the core subjects listed on page 65, the following athletic courses are required of majors in this department: Ath. 3, 37, 40, 44, 51, 52, 60, 70, 72, 73, 74, 75, 125, 165, 166, 168, 169, 170, 171, 172, 180.

THEORY COURSES IN HEALTH EDUCATION FOR MAJORS

HYG. 1. INDIVIDUAL AND SOCIAL HYGIENE (for men). Four hours.

A first year course covering the essentials of personal and community hygiene. The course aims to secure better personal health habits; gives an outline of some of the broader fundamental aspects of public or social hygiene; and indicates some of the aims and methods of teaching hygiene in the public schools. Required of all men during the first year's work.

3. FIRST AID. Two periods. Two hours.

A study of the causes of accidents and type injuries; what the first-aid should do in case of fracture, dislocation of joints, hemorrhage, poisoning, electric shock, asphyxiation, etc. The American Red Cross text is followed. Required of all majors, but open to all.

P. E. 120. APPLIED ANATOMY AND PHYSIOLOGY. Four hours.

See page 153.

P. E. 121. APPLIED ANATOMY AND PHYSIOLOGY. Four hours.

See page 153.

P. E. 122. KINESIOLOGY. Two hours.

See page 153.

125. PHYSIOLOGY OF EXERCISE. Four periods. Four hours.

This course is designed to give students an insight into the effects of muscular activity upon the various organs and systems of the body, and upon the human mechanism as a whole, in order that they may more intelligently direct the physical training and athletic activities of their pupils when teaching physical education.

ACTIVITY COURSES

All first and second year students are required to take one active course in physical education each quarter in residence.

30. SPEED BALL. Three periods. One hour.

Technic and rules of the game, which is a combination of soccer and basketball.

31. TOUCHBALL. Three periods. One hour.

A mild form of Rugby football. Open to all men students.

33. VOLLEYBALL. Three periods. One hour.

A recreational game for all men students.

36. TENNIS (Rec.). Three periods. One hour.

A recreational course for all men students.

37. PLAYGROUND BASEBALL. Three periods. One hour.

A recreational game for all men students.

40. ELEMENTARY SWIMMING. Three periods. One hour.

A course for the beginner in swimming.

43. CUBS' BASKETBALL. One hour.

44. FRESHMAN FOOTBALL. One hour.

Competition with other Rocky Mountain Conference freshman teams. All men who plan to be candidates for the varsity are urged to take this course in their freshman year.

50. CALISTHENICS. Three periods. One hour.

Setting-up exercises; marching tactics. Personal proficiency and correctness of form; progressive programs of exercises and their value and adaptation; and methods of instruction.

51. GYMNASTICS. Three periods. One hour.

Exercise on horizontal bar; parallel bars; horse; rings.

52. MAT WORK. Three periods. One hour.

Tumbling and elementary mat work.

53. ADVANCED MAT WORK. Three periods. One hour.

54. BOXING. Three periods. One hour.

Fundamentals for class and individual work.

55. WRESTLING, ELEMENTARY. Three periods. One hour.

Fundamentals and personal proficiency.

56. DOUBLE TUMBLING. Three periods. One hour.

57. CORRECTIVE GYMNASTICS. Three periods. One hour.

Exercises which aid in the correction of abnormalities, and which are suited to individuals having deformities. Necessity of thorough and expert physical examination and adapted programs of exercise.

60. THEORY OF PLAY AND GAMES. Four periods. Four hours.

An assortment of plays and games suitable for the playground and gymnasium.

61. GOLF. Two periods. One hour. Small fee.

A course for the beginner in golf.

67. INTRA-MURAL. One hour.

An assortment of group games suitable for all the men students who are unable to take part in college sports.

68. CROSS COUNTRY. Three periods. One hour.

The men in this course are trained for a cross-country run of three miles; this event is then held on Homecoming Day.

69. SPRING FOOTBALL. Three periods. One hour.

This course offers the practical application of theory courses in football coaching. Fundamentals, forward pass defense, situation play, kicking, line shifting, and formations in use at the present time are stressed.

VARSITY SPORTS

70. SWIMMING—Daily. One hour.

71-71a. GYM—Daily. One hour.

72. FOOTBALL—Daily. One hour.

73. BASKETBALL—Daily. One hour.

74. BASEBALL—Daily. One hour.

75. TRACK—Daily. One hour.
 76. TENNIS—Daily. One hour.
 77. WRESTLING—Daily. One hour.

THEORY COURSES IN COACHING

165. FOOTBALL COACHING. Four periods. Four hours.

Prerequisite, football experience.

A discussion of equipment, mechanical devices for training men, and field equipment. Theory of offensive play and play structure. Theory of defense and structure of defensive formations; drawing up of schedules.

166. BASKETBALL COACHING. Four periods. Four hours.

Prerequisite, basketball experience as player or coach.

Theory of coaching the various styles of both offense and defense as used by the outstanding coaches of the country; methods of goal-throwing, signals from tip-off and for out-of-bounds plays; value and use of the pivot, and the other fundamentals.

168. TRACK COACHING. Two periods. Two hours.

Theory and practice in starting, sprinting, distance running, hurdling, jumping, vaulting, throwing the weights and the javelin; also training and conditioning men, the management of meets, and the rules for the various events.

169. BASEBALL COACHING. Two periods. Two hours.

Discussion of the best methods in batting, fielding, base-running, pitching, and team play in general. Attention is given to teaching the fundamentals and gaining a knowledge of "inside baseball"; also a study of the rules.

170. ORGANIZATION AND ADMINISTRATION OF ATHLETICS AND PHYSICAL EDUCATION. Four hours.

Organization problems and methods; ideal programs for a Department of Physical Education and Athletics; the relation this department bears to the other departments of the school; and the relation of the various branches of the department to each other.

171. PSYCHOLOGY OF ATHLETICS. Two periods. Two hours.

The application of psychological laws and principles to all forms of athletic competition.

172. OFFICIATING AND MANAGEMENT. Two periods. Two hours.

Analysis and interpretation of rules from the official's standpoint. Practice in the recognition of faulty play and the assignment of the corresponding penalties. Also a study of the best methods to use in staging contests.

180. ATHLETIC TRAINING AND DIAGNOSIS. Two periods. Two hours.

This course aims to aid the prospective coach in gaining a knowledge of emergency treatment, and to be able to properly diagnose the common injuries. Also to furnish theory training for the various sports. A study of simple massage and treatment of sprains and bruises.

COMMERCIAL EDUCATION

This department offers a complete program of courses carefully planned and organized for the training of commercial teachers in secondary schools, junior colleges, and teacher training institutions. No attempt has been made to arrange the program of courses, nor to adapt the content to the needs of students who plan to do office work. The training of commercial teachers is the sole aim of the department.

A number of elective courses are offered in the department. Many of them are of general nature and would be desirable courses for students majoring in other departments. Majors in this department should plan their programs so as to take full advantage of these electives.

Students who have had courses similar in content to any of those that are required in this department will be excused from taking the same work again upon satisfying the instructor that they have had equivalent work. Students who have had two years of shorthand and typewriting in the secondary schools may not take Com. Ed. 1, 2, 11, and 12 for credit.

A FOUR-YEAR CURRICULUM IN COMMERCIAL EDUCATION

In addition to the core subjects listed on page 65, the following courses are required of majors in the department: Com. Ed. 1, 2, 11, 12, 14, 104, 138, 150, 151, 153, 155, 157; Ed. 116, 126; Ed. 141 (for men).

Majors in commercial education are required to select twelve hours in economics from the following list of courses: Com. Ed. 39, 60, Geog. 7, Hist. 10, Com. Ed. 101, 111, 140, Geog. 199, and Hist. 101. In addition to the above requirements, at least one minor of from twelve to twenty-four hours must be selected in some other department.

1. SHORTHAND I. Four hours.

This course, which covers the first eighteen units of Gregg shorthand as outlined in the Gregg Manual, is a beginning course and is required of all majors in commercial education who have not had previous training in the subject of shorthand. Credit is granted only on completion of the shorthand work of the second quarter.

2. SHORTHAND II. Four hours.

Prerequisite, Com. Ed. 1 or the equivalent.

This course is a continuation of Com. Ed. 1 and it covers the last eighteen units of the Gregg Manual.

10. OFFICE APPLIANCES. Four hours.

Prerequisite, Com. Ed. 12 or the equivalent.

The course aims to familiarize the student with modern office machines and special equipment. It provides a limited amount of practice in the use of modern office machines and other equipment. The following machines are used for demonstrations and practice: The mimeograph, mimeoscope, multigraph, automatic electric typewriter, dictaphone, adding and listing machines, calculating machine, and other equipment. Students will be required to do eight hours of laboratory work a week in addition to the four hours of class work.

*11. TYPEWRITING I. Four hours.

This course is required of all majors in commercial education except those who have had one or more years of typewriting in the secondary schools or the equivalent amount of training in other institutions. It is a beginning course for those who have had no typewriting before. Credit will be granted for this course only upon completion of the work of the second quarter, Com. Ed. 12.

*12. TYPEWRITING II. Four hours.

Prerequisite, Com. Ed. 11 or the equivalent.

This course is a continuation of Com. Ed. 11. It is required of all majors in commercial education who have not had similar training. Students who have had previous training in typewriting should consult the instructor before including this course in their programs.

14. PROBLEMS IN TEACHING TYPEWRITING. Two hours.

Prerequisite, Com. Ed. 12 or the equivalent.

The purpose of the course is to give prospective teachers of typewriting a knowledge of the material and equipment necessary for teaching this subject. Some attention will be given to the various problems concerning the acquirement of speed and accuracy that teachers of this subject have to deal with.

15. BUSINESS REPORTS AND COMPOSITIONS. Two hours.

This course will deal with the material and methods for teaching business English and the fundamentals of business reports, letter writing, and other business composition. Oral expression and oral reports will constitute a part of this course. Emphasis will be placed upon business reports

*Given also by extension.

and commercial composition rather than upon the fundamentals of English grammar, punctuation, capitalization, and the other elementary details. Some attention will be given to punctuation, sentence structure, and other details but this will constitute only a minor part of the content of the course.

16. THE TEACHING OF FILING. Two hours.

The purpose of this course is to give teachers an outline of the material and methods necessary for the teaching of filing in the high school. It also provides practice with modern equipment and the following systems of filing: The loose sheet system; the Shannon file; vertical filing; methods of indexing and alphabetical filing; numerical filing; direct name filing; geographical filing; subject filing; follow-up devices; copying outgoing papers; card record systems; special card systems; document and check filing; card ledgers; stock record keeping; and transfer devices.

***36. HANDWRITING METHODS. Two hours.**

This course is a combination of methods of teaching handwriting, supervision of penmanship in the public schools, and practice in the skill of writing. The class meets four times a week and no outside preparation is required. All who take this course are required to reach a standard of skill equal to eighty as measured by the Zaner Handwriting Scale No. 5 before credit will be given.

***37. BUSINESS MATHEMATICS. Four hours.**

The principal aim of this course is to give the commercial teacher a better mathematical background for the teaching of business arithmetic in the high school. The course begins with a very brief review of the application of percentage. Mercantile discounts, problems of buying and selling, interest, bank discount, compound interest, periodic or installment payments, insurance, commission, taxes, and problems of trading concerns are treated.

***39. INTRODUCTION TO BUSINESS. Four hours.**

A broad picture of the entire business field is presented in this course, without going far into detail at any point, with a review of such historical material as is necessary for an understanding of present business phenomena. Special attention is given to the most important industries and business concerns of the country. The first part of the course deals with the business aspects of the industries furnishing the raw materials of commerce. This is followed by a discussion of production and distribution which traces the raw product from the producer to the workshop and to the consumer. The next part of the course deals with business organizations and business functions. Such topics as risk bearing institutions, business men's organizations and associations, and the relations of government to business are touched upon near the end of the course. Special attention throughout the course is given to the problems of the small business.

41. BUSINESS EDUCATION IN THE JUNIOR HIGH SCHOOL. Two hours.

This course offers an opportunity for the student to become familiar with the material and methods used in the teaching of business in the junior high school. The problems of commercial education in the junior high school will be discussed. Some of the topics treated in this course will be: The place of commercial education in the junior high school; the vocational aspects of commercial education in the junior high school; the aims and objectives of commercial education in the junior high school; the content material that should be emphasized; try-out courses in commercial education; and textbooks and material available for the course in the junior high school.

***60. PRINCIPLES OF ECONOMICS. Four hours.**

A general introductory course in economics covering the fundamental principles underlying the organization of modern industrial society with applications to the outstanding economic problems of the present day. Some attention is given to the material and methods for teaching such a course in the secondary school. This is a desirable course for all majors in commercial education to select as a required course in economics. Any student interested in developing a better understanding of our economic organization will do well to elect this course.

101. APPLIED ECONOMICS. Four hours.

The visual and concrete aspects of economics are given special emphasis in this course. The course aims to present the problems of economics in the form in which the student will meet them in actual life experiences. The relationship between theory of economics and practice will be kept constantly in mind. Illustrations from modern business practice will be used whenever possible for the practical applications of economic laws.

*Given also by extension.

103. SECRETARIAL PRACTICE I. Four hours.

Prerequisite, Com. Ed. 2 or the equivalent.

This course offers a review of the principles of Gregg shorthand and some practice in taking dictation. Problems of acquiring speed in dictation taking and methods of teaching shorthand dictation will be introduced.

104. THE TEACHING OF SHORTHAND. Four hours.

Prerequisite, Com. Ed. 2 or the equivalent.

This course attempts to give the student an opportunity to become more familiar with the material and special methods used in teaching shorthand. No attention will be given to practice in taking dictation.

105. THE TEACHING OF SHORTHAND TRANSCRIPTION. Four hours.

Prerequisite, Com. Ed. 2 and Com. Ed. 12 or the equivalents.

This course will attempt to give ways and means for the teaching of shorthand transcription with emphasis on accuracy and speed in turning out the finished product. It is a combination of shorthand dictation, typewriting, office appliances, and secretarial studies. Practice in taking dictation and operating the typewriter in turning out the finished product will be correlated. It is necessary that students taking this course shall be highly skilled in both typewriting and the taking of shorthand dictation. This course should be very valuable for teachers interested in the organization of a course in the secondary school in the teaching of transcription.

111. INDIVIDUAL FINANCIAL MANAGEMENT. Four hours.

This course attempts to treat in an elementary way some of the economic and financial problems that every individual must consider. The importance of thrift, habitual saving, and care in the investment of savings will be studied. Some of the topics that will be studied are: Life insurance, property insurance, savings, home ownership, personal property, investments, taxes, buying and selling, banking, communication, transportation, business organization, wills and estates, record keeping, and personal budgets.

***138. COMMERCIAL LAW I. Four hours.**

This course treats of law in general, property rights, contracts, and agency. It is a treatment of the common law principles that apply to these subjects. The Colorado statutes will be consulted freely. Many cases and hypothetical problems will be used in connection with the lectures and class discussions. The course begins with the classification and sources of law; precedents and the law merchant. The formation, operation, drawing, and termination of contracts will be studied.

***140. ELEMENTARY PRINCIPLES OF INVESTMENTS. Four hours.**

This course attempts to cover the entire field of investments in a clear, concise, and non-technical manner. The tests by which a sound investment is analyzed are studied, together with the methods of applying these tests to securities. A study of the information available on the financial pages of the daily papers, in order that it may be utilized in buying or selling securities, will be treated. The mechanics of the purchase and sale of securities, and some of the principles back of the judicious investment of capital are considered. Technical terms will be avoided as much as possible. A careful distinction is made and maintained throughout the course between speculation and investment. The following aims are set forth for the course; To discourage a tendency toward speculation; to create a tendency toward thrift; to aid the individual in finding suitable investment possibilities; and to prepare teachers to teach similar content material in the public schools.

***142. ADVERTISING. Four hours.**

This course deals with the principles of good advertising. An attempt is made to combine all of the arts and sciences that enter into the work of advertising and to study the fundamentals of each with reference to all of the others. The course treats the economic, physical, and psychological factors, together with the essential principles of artistic arrangement and English composition as applied to the construction of advertisements. Practical aspects of the subjects are held constantly in mind as the course develops. Considerable attention is given to the analysis of advertising copy selected from current periodicals. Attention is also given to the selection of material for the teaching of this subject in the secondary schools. The social and economic aspects of advertising will be given special attention.

*Given also by extension.

***144. COMMERCIAL LAW II. Four hours.**

Prerequisite, Com. Ed. 138 or the equivalent.

This course is a continuation of Com. Ed. 138. It treats the law of negotiable instruments rather extensively. Guaranty and suretyship, common carriers, master and servant, sales of personal property, and bailments are also included in the course. Actual business blanks and forms are used in connection with the treatment of negotiable instruments and other topics.

***150. ACCOUNTING I. Four hours.**

This course presents the elementary principles of account keeping and provides practice through laboratory exercises in the keeping of double entry books. It gives practice in the handling of business records, accounts, and business papers. Some of the material used in high school courses in bookkeeping will be used in this course in order to familiarize the student with the content of these courses in the secondary schools.

***151. ACCOUNTING II. Four hours.**

Prerequisite, Com. Ed. 150 or the equivalent.

This course is a continuation of C. E. 150. The partnership type of business organization is studied with the appropriate accounting records. The corporate form of organization and the necessary bookkeeping records is introduced. Students who complete these two courses, Com. Ed. 150 and 151, should have a sufficient understanding of bookkeeping and accounting to be qualified to teach all of the bookkeeping work offered in the high school.

***153. SALESMANSHIP. Four hours.**

This course attempts to reconcile sound economics with practical business practice and procedure in selling. Personal selling is essentially an economic activity, directed, therefore, toward the satisfaction of economic wants. The personal selling which effectively serves those wants is socially and economically desirable and sound. In the approach of the subject a study of wants and their nature is taken up followed by a discussion of both buyers and sellers in their efforts to satisfy wants through personal selling efforts. The general principles developed in such analyses apply to intangible products such as insurance or securities as well as to materials, equipment, and consumers' goods of tangible nature.

The course will give considerable attention to the selection, organization, and presentation of material dealing with the subject of retail selling as it should be presented in the high school.

155. THE ECONOMICS OF RETAILING. Four hours.

This course aims to present fact material and to suggest constructive thought on the subject of retail distribution. It presents but little theory and advocates no particular or special method of doing the work of the retail store. The course begins with a brief historical sketch of the retail business and methods of distribution of goods. Some of the problems of retailing that are treated are: Securing good salespeople; education and training for salespeople; the wages of salespeople; location and rent in the retail business; the fixing of retail prices; the expenses of the retail store; and similar topics.

The course is intended for the training of commercial teachers for a field of specialization in the secondary school that has been sadly neglected. Considerable attention will be given to the organization of content material for such a course in the high school.

157. PROBLEMS IN THE TEACHING OF BOOKKEEPING. Four hours.

Prerequisite, Com. Ed. 151 or the equivalent.

This course will offer the student an opportunity to become more familiar with the most popular texts in the subject of bookkeeping that are being used in the high schools. It will also develop the different methods of treating bookkeeping data as presented by different authors and other authorities in the field of accounting. Attention will be given to the organization of material and methods for the teaching of the subject to high school pupils.

160. BANKING PRACTICE. Four hours.

Prerequisite, Com. Ed. 150 or the equivalent.

This course includes a brief study of the principles of money and banking. It also provides for some laboratory work dealing with the bookkeeping forms, reports, and business papers kept and handled in a modern bank. It gives the student a sufficient training in the use of these banking

*Given also by extension.

records that he should be able to organize all of the records for the introduction of a school savings bank and provide for keeping its records. Popular accounting and bookkeeping machines are demonstrated and may be used by the student in connection with the laboratory work that is required.

162. THE COMMERCIAL CURRICULUM. Four hours.

A study of the evolution of the commercial curriculum in the secondary school, colleges, and teacher-training institutions will be made. The placement of subjects, proper sequences, and the reorganization of content material will be studied. The organization of the commercial curriculum will be studied from the standpoint of the one-commercial-teacher high school, the larger high school, and the large city high school.

212. PROBLEMS IN COMMERCIAL EDUCATION. Four hours.

This course provides for the treatment, by research and study, of some of the most important problems in commercial education. Some of the topics that may be treated are: State and city supervision; the establishment of school and community cooperation in business training, job analyses of the positions that are open in the community to high school students; the kind of training expected by the business man; and many other problems dealing with the organization and presentation of subject matter. No text is required for this course.

213. SUPERVISION AND ADMINISTRATION OF COMMERCIAL EDUCATION. Four hours.

The problems of supervision and administration of commercial education will be treated. Some of the topics to be studied are: The organization and supervision of co-workers; the hiring, training, promotion, and discharge of teachers; cooperation with superiors, co-workers, and community interests; records and reports; the establishment of relationships between educational institutions and business enterprises; placement and follow-up of graduates; vocational information and guidance; tests, measurements, and examinations; textbooks, material, and supplies; curriculum problems; equipment, and other problems.

222. INDIVIDUAL STUDIES IN COMMERCIAL EDUCATION. Two or four hours.

223. RESEARCH IN COMMERCIAL EDUCATION. Four hours.

This course should be taken in the first quarter of graduate work. It is a required seminar conference course for graduate students who are working on their masters' investigations. The director of educational research meets the group three times each week and confers with individual students in the research office. Small group conferences are held when needed. Each student meets his thesis adviser regularly.

224. RESEARCH IN COMMERCIAL EDUCATION. Four hours.

Prerequisite, Com. Ed. 223.

This is a seminar and conference course for graduate college students who are working on their masters' theses. Students will have an opportunity to report on the progress being made with their studies at each meeting of the class. All students majoring in commercial education who are candidates for the master's degree will be required to include this course in their program for two quarters. Research work will be conducted by the candidate under the supervision of the head of the department and this course offers an opportunity for discussion of the problem and plans for its development.

225. RESEARCH IN COMMERCIAL EDUCATION. Two hours.

This course is a continuation of Com. Ed. 224.

EDUCATION

The courses outlined herewith have been arranged for the purpose of making all students familiar with the professional information, techniques, and tools of the teaching profession. The educational program is viewed from the standpoint of the two great objectives of education—tolerant understanding of society and the nature and needs of the child. The courses are designed to contribute to an understanding of the problems of what the school should be and what teachers should do in order to preserve the child's physical and mental health, respect his native capacities and tendencies, attain his normal development, utilize his best modes of learning, and measure the efficiency of his responses.

The two-year courses (junior college) outlined on pages 66-69 are primarily intended for students who plan to teach on limited certificates in the kindergarten-primary, intermediate, upper grade, or rural and consolidated schools.

The senior college courses are advanced in nature for students who wish to obtain the Bachelor of Arts degree after successful teaching experience or who wish to continue their four years of training prior to entering upon teaching. Conditions of supply and demand of teachers today warrant three and four years of professional training as a minimum.

In addition to classroom teaching in the four above-mentioned curricula, the department offers specialized curricula in the senior college for superintendents, principals, supervisors, training teachers and teachers of education in teachers colleges. Prerequisites for entrance to such special curricula in the senior college include: (1) Successful teaching experience and (2) junior college work (two years) equivalent to the junior college curricula outlined for kindergarten-primary, intermediate, upper grade, or rural two-year majors. Inexperienced senior college students who wish administrative or supervisory work ultimately are urged to prepare themselves for teaching some grade or subject.

Students without experience completing the two-year upper grade curriculum and desirous of completing the four-year course are urged to select a subject matter major and minor in the senior college. If unable to complete requirements of subject matter major and minor, follow senior college junior high school curriculum (p. 69). Also consult head of the Education Department.

Some of the education courses that follow are basic to all students in a professional teacher-training institution, e. g., Ed. 1, 75, 76, and 195-295. In addition to these core professional courses there are departmental courses, required in a given curriculum. Many other courses are specialized and are offered, particularly in the summer quarter, to meet the needs and interests of individual students and small groups of students.

Graduate courses in education are offered leading particularly to the Master of Arts degree. Such graduate work is primarily for experienced teachers, supervisors, and administrators who wish still more advanced training for such positions as superintendencies, elementary and high school principalships, supervisors, college teachers, advisers of girls, guidance work, measurements, and research activity, or who may wish to take preliminary graduate work for the Doctor of Philosophy degree.

Students majoring in kindergarten-primary or intermediate or rural teaching for the Bachelor of Arts degree should utilize electives designed in their four-year curriculum to complete at least two subject matter minors of at least sixteen hours each (cores and departmental courses to count) in: (1) Art, (2) music, (3) geography, (4) history, (5) English, (6) mathematics, and (7) science. For example, a minor in art could count Art 2a and the senior college art for eight hours of the sixteen required for this minor. Two more four-hour courses would have to be taken.

Students majoring in the upper grades (two years) and junior high school (four years) should select two minors in subject matter as outlined herewith (p. 89), and take as many of the exact courses listed as possible in the first two years. For third and fourth years a subject-matter major should probably be chosen, for example, history or industrial arts, or one may continue as a four-year junior high school major by selecting two strong subject-matter minors (at least thirty-six hours in each minor chosen).

FOR TRAINING SCHOOL WORK AND TEACHERS OF EDUCATION IN
TEACHERS COLLEGES

Ed. 110-210	Ed. 113-213	Ed. 190	Ed. 160
Ed. 111-211	Ed. 145-245	Ed. 192	Biol. 101
Ed. 112-212		Ed. 156c	Soc. 160

(Two minors of sixteen hours each in any of the following: English, art, music, geography, science, history.)

The merger of education and psychology courses under the Education Department, effective October, 1931, has made it necessary to renumber courses. An attempt has therefore been made to organize the courses in related fields and on levels as follows:

Freshman courses Nos. 1-49; Sophomore courses, Nos. 50-99; Junior courses, Nos. 100-149; Senior courses, Nos. 150-199; Graduate courses, Nos. 200 and above.

Introductory general courses—1, 50-51, 100-103

Methods of teaching, including observation and teaching—5-8, 55-59, 105-109, 155-159

Elementary education—110-114, 160-163, 210-213

Secondary education—15-17, 65, 116-118, 165-167, 265-267

Research courses—120, 223-225, 322-325

Psychology—75-77, 125-129, 175-179, 226-229, 275-279

Rural education—30-31, 80-82, 130, 230

History of education—135-137

Administration—140-144, 190-192, 242-244

Philosophy and curriculum—145-147, 195-198, 245-247, 295-298

It will be noticed that some senior college-graduate courses carry two numbers. In such cases, graduate students will enroll for the graduate (the 200) number and undergraduates for the senior college (the 100) number. Graduate students in no case may enroll for credit in a course numbered below 100.

I. COURSES PRIMARILY FOR JUNIOR COLLEGE STUDENTS

*1. INTRODUCTION TO EDUCATION. Four hours.

Required of all Freshmen.

This course aims to introduce the student to the study of education or to orient the student in the field of teaching and to prepare him for the more specialized study to come later. Among the topics to be discussed are the following: professional opportunities in teaching; historical background of education; the present program of education; needs of education today; purposes of public education; where education takes place; how education takes place; administrative background for teachers; the facts on pupils' health, instincts, laws of learning, individual differences, measurement; the teacher and the community; and professional preparation of teachers.

*5. LANGUAGE ARTS IN PRIMARY GRADES (Formerly Ed. 3a). Four hours.

Prerequisite, Ed. 1.

This is a course dealing with materials and methods of teaching language, reading, and spelling in the primary grades. Emphasis will be placed upon reading readiness; types of silent and oral reading; standard and informal testing and suitable remedial measures for the primary grades. Also, oral and written English as an outgrowth of children's interest in their own experience and activities and materials and methods of spelling in relation to child needs. Demonstration lessons illustrating the application of method of these phases of primary school work are a part of the course.

*Given also by extension.

***6. SOCIAL ARTS IN PRIMARY GRADES (Formerly Ed. 3b). Four hours.**

Prerequisite, Ed. 1.

This course attempts to show modern trends in the teaching of numbers in the primary grades. Number concepts as growing out of the child's experiences, materials, methods of teaching, standardized and informal tests, remedial work, textbooks, and various courses of study are discussed. Interrelationship of the work of these grades is evident through the social sciences which are centered in the various phases of home life, utilization of immediate environment of the child, growth in citizenship through purposeful activities, and interests which have social value and lead into basic social learning. Demonstration lessons illustrating the application of method to these phases of primary school work are a part of the course.

***7. KINDERGARTEN-PRIMARY METHODS (Formerly Ed. 3c). Two hours.**

A course in kindergarten-primary methods. The history of the kindergarten and primary grades is briefly surveyed. The desirable planned environments suitable for the four-year age level up to the eight-year age level are carefully studied. Reference books, catalogs, and frequent visits for inspection to the kindergarten and primary grade rooms of the College Elementary School are all used to aid in developing a better understanding of the educative value of the latest approved equipment, apparatus, materials, constructive toys, and art mediums. Experiencing or "learning to do by doing" in a wholesome environment is stressed throughout the course.

Demonstration lessons, illustrating the supervised and spontaneous reactions of the children to the different phases of work and play activities in the planned environments, are a part of this course.

***8. LANGUAGE ARTS IN THE INTERMEDIATE GRADES (Formerly Ed. 4a). Four hours.**

Prerequisite, Ed. 1.

Reading deals with the objectives of reading instruction, the relationship of reading to progress in other school subjects, the methods of developing habits, attitudes, and skills relating to work-type and recreational reading, and the methods of developing permanent interests in reading.

Spelling deals with the objectives of spelling instruction and the methods of teaching spelling.

Composition deals with the oral and written phases of language skills. Attention is given to the fundamental purpose in teaching composition and to the educational principles which must be employed in realizing this purpose. Study is made of those schoolroom activities which offer opportunities for growth in the language skills. The levels of achievement for the different intermediate grades are studied. Textbooks in composition and language and their use in accomplishing these aims are discussed.

The relationship is shown of handwriting to other schoolroom activities. The methods of improving handwriting, the uses of handwriting charts, and means of correlating handwriting with the other classroom subjects are studied.

Observation lessons of each phase of the work are a part of the course.

***15. EDUCATIONAL AND VOCATIONAL GUIDANCE (Summer quarter only). Two hours.**

This course aims to acquaint the student with the various agencies and methods for guiding pupils in their school work and in regard to the choosing and preparation for a vocation. The course deals with the proper educational guidance of pupils for a long period preceding their choice of a vocation and their proper vocational direction toward the end of their school period. This includes a study of individual capacities and personal factors, the exploration of special interests and abilities, the organization of a guidance program in studies, health building and character building activities, civic training, the imparting of vocational information, and guidance in making vocational choices.

16. TRAINING COURSE FOR CAMP FIRE GIRLS' LEADERSHIP. Two hours.

This course is a training for leadership in leisure time programs for girls. It includes lectures and practical demonstrations in leadership, fundamental studies of the girl, projects in the seven crafts of Camp Fire, symbolism, motion songs, hiking, camping, first-aid, council fires, organization, program planning, and so on. The course leads to the national certificate for leadership in Camp Fire Girls' work.

*Given also by extension.

17. BOY SCOUT WORK (Summer quarter only). Two hours.

This course is designed to equip young men for leadership in adolescent boy activity. It includes lectures and practical demonstrations concerning typical Boy Scout activities.

30. RURAL SCHOOL PROBLEMS. Two hours.

This course aims to orient the prospective teacher with those problems which are peculiar to the small schools where the beginning teachers get their first teaching experience. Topics considered include arranging the daily program, getting started right, grade grouping and classification, the physical basis, cooperating with the community, records and reports, and the teacher's personal and professional problems in relation to the school and the out-of-school environment.

***31. AGRICULTURE FOR TEACHERS IN RURAL ELEMENTARY SCHOOLS. Four hours.**

This course deals with topics selected from the fields of agriculture and rural science which are considered vital to the attitude and preparation of rural teachers in their particular role of leadership among rural people. It is intended for those non-specialized teachers who are required to teach agriculture in the vast majority of rural elementary schools. It is planned to meet the various requirements in agriculture laid down by the different states for rural elementary teachers of agriculture. The subject of agriculture is considered in its rural life setting, and is studied from the sociological point of view with special attention to its relations to rural life.

***50. PRINCIPLES OF EDUCATION (Formerly Ed. 10). Four hours.**

Prerequisites, Ed. 1 and sophomore standing.

This is a more advanced (sophomore) course in education for college students in education. It is designed to acquaint the student with present-day principles of what and how to teach in the school. The course covers: methods of study; general principles of teaching and management; technics of discipline; what the school teaches and might teach; educational values and criteria; theory and practice in organizing (a) tool subjects and (b) the major classes of activities; and adaptation of subject matter to the community and pupil.

51. PARENT-TEACHER ORGANIZATION AND PRACTICE (Formerly Ed. 40. Summer quarter only). Two hours.

Consideration will be given to the fundamental significance of the parent-teacher movement and its place in education; the organization, objects, and parent education program of the national organization; its relation to other educational, social, and welfare agencies; its relation to state and local parent-teacher groups; the organization of a state branch, its function and its relation to the national body and to the local groups within its borders. The course will acquaint students with plans for organizing and conducting the different types of parent-teacher associations and the legitimate fields of work and appropriate activities for each. Special emphasis will be given to program making to meet the needs of different types of community needs.

55. PRE-TEACHING OBSERVATION IN THE ELEMENTARY SCHOOL (Formerly Ed. 2a). Two hours.

This course consists of four regularly scheduled observation and discussion periods a week. A part of these periods is spent in large group discussions and discussion work in which the students observe work in all the grades of the school level in which they are majoring. These observations and discussions deal with the major types of subject matter presentation. The remainder of the observation work is spent by the students in observing the work in the particular grade in which they are to do student teaching. This quarter of pre-teaching observation gives the student an opportunity to gain an insight into the technic of teaching and the mechanics of classroom management and a knowledge of the complete sequence of the subject matter of which he will teach only a part. Related readings and references in both content and method are required in this course. A student making a grade of less than "C" shall repeat the course.

56. PRE-TEACHING OBSERVATION IN THE JUNIOR HIGH SCHOOL (Formerly Ed. 2c). Two hours.

This course is the observation course in the junior high school (grades 7-9). This course is preparatory to and should next precede the quarter of

*Given also by extension.

student teaching. Of the four regularly scheduled weekly meetings two shall be under the direction of the principal of the secondary school and the remaining two under the direction of the training teacher under whose supervision the student is to teach the following quarter. The general phase of the course under the direction of the principal, designed to give the student an opportunity to become acquainted with principles of teaching in the junior high school, general technic, mechanics of classroom management, etc., will include directed observation as well as regular class work. The specific phase of the course under the direction of the training teacher has as its purpose the preparation of the student to do a specific piece of work in a certain grade and subject and will consist of directed observations and conferences. A student making a grade of less than "C" shall repeat this course.

58. STUDENT TEACHING IN THE ELEMENTARY AND JUNIOR HIGH SCHOOL (Formerly Ed. 2b). Four to twelve hours.

A full quarter of teaching carries four to twelve hours' credit, meeting five days a week with two monthly group conferences on the first and fourth Tuesdays. Each student making a grade of less than "C" shall be required to repeat this course. As prerequisites to student teaching (Ed. 58) each student must make at least a grade of "C" in observation (Ed. 55 or 56), pass satisfactorily an achievement test, Ed. 1, and the methods courses in his major department.

***65. THE JUNIOR HIGH SCHOOL (Formerly Ed. 113). Four hours.**

This course deals with the general problems of junior high school education. Following are some of the topics included: criticism of the 8-4 organization; history and extent of the movement for reorganization; the peculiar functions of the junior high school; the essential features of the junior high school; the program of studies; some consideration of the subjects of study; provisions for individual differences; departmentalization and promotions; brief consideration of methods of teaching; guidance and the advisory system; the social organization; the staff, and the school plant.

***75. INTRODUCTION TO EDUCATIONAL PSYCHOLOGY (Formerly Psych. 2a). Four hours.**

Required of all students.

The topics of this introductory course include: purposes of educational psychology and the application of psychological methods to the problems of the schoolroom; origin, development, and general characteristics of inherited nature; individual differences of school children; introduction to statistical terminology and usage; meaning and measurement of intelligence—samples of intelligence tests and the interpretation of the results; problems of measurement of educational achievement—samples of standard educational tests and the interpretation of their results; the use and construction of classroom tests, distribution of school marks from scores obtained from objective tests.

***76. PSYCHOLOGY OF LEARNING (Formerly Psych. 2b). Four hours.**

The topics of this second junior college course in psychology are: a classification of the kinds of learning such as motor, perceptual, and informational; the laws of learning illustrated by reference to such elementary school subjects as handwriting, reading, arithmetic, spelling, history, geography, poetry, etc.; the physiological, psychological, and educational conditions of learning; general characteristics of learning such as the rate, amount, and limits of improvement, as found in different functions; learning and forgetting curves, plateaus, and physiological limits in different functions; factors and principles entering into economical learning and studying; and the problem of transfer.

77-177. CHILD DEVELOPMENT (Formerly Psych. 3). Two or four hours.

This course is designed to meet the needs of those interested in the education of the pre-school, the kindergarten, and the elementary school child.

This course deals with the nature of development; heredity versus environmental factors in the development of the child; innate equipment common to all children; growth characteristics of the pre-school and kindergarten child; activity characteristics or behavior tendencies of these periods; emotional responses characteristic of these periods; habit formation throughout these periods, developing mental activities—sensation, perception, attention, imagination, thinking, etc.; social attitudes and the development of personality.

*Given also by extension.

80. RURAL SCHOOL MANAGEMENT (Formerly Ed. 23). Two or four hours.

This course deals with those problems of rural school management which are due chiefly to the many grades and consequent difficulties of rural school organization; with the needs for special rural school methods; with the dependence of method on differences in objectives, on differences in time allotments, and the daily schedule. The adaptations of special methods to rural school conditions are considered.

***81. SCHOOL AND HOME GARDENS (Formerly Ed. 28). Four hours.**

This course considers the fundamentals of plant culture together with definite instructions in selection, propagation, growing, and care of plants commonly grown in the schoolroom, the home, the yard, and the garden. This is not a course in truck gardening. The dominant aim of the course is to train teachers to be able, through the school, to train a generation of people in the knowledge and appreciation of the things which make their surroundings more beautiful and more pleasant to live in. Laboratory practice is provided in the spring quarter through the Training School gardens.

82. RURAL EDUCATION AND COUNTRY LIFE. Two hours.

This course deals with the more important problems of rural education; the proposed objectives for rural elementary education found in educational writings; present status and progress of rural education; the distinctive characteristics and outstanding problems of American country life as they affect rural education.

II. COURSES PRIMARILY FOR SENIOR COLLEGE STUDENTS

100. UNIT COURSES IN EDUCATION. One hour each course. Units given different letters for each summer.

***105. SCHOOL DISCIPLINE (Formerly Ed. 117. Summer quarter only). Two or four hours.**

This course is based on actual problems that have been met in the schoolroom. A comparison of the old and new ideas of discipline, kinds of offenses committed, causes for offenses or misconduct, kinds of punishments or corrective measures, difficult disciplinary cases successfully handled, the teacher's responsibilities, legal aspects of discipline, and general theories and principles of disciplines are the phases of the course discussed.

***106. CHARACTER AND MORAL EDUCATION (Formerly Ed. 118). Two or four hours.**

This course is planned to give the teacher a practical method of attacking this problem in the schoolroom. It is not a course in ethics for teachers. Actual moral situations from typical school systems are the bases for the conclusions and recommendations made. This course attempts to equip the teacher with the necessary facts in order to present the leading problems and phases of moral or character education.

107. FOUNDATIONS OF METHOD (Formerly Ed. 150. Summer quarter only). Two hours.

The aim of this course is to make an analysis of the principles on which method in general may be founded. An analysis of method is made to show that it is sound just to the extent that it utilizes the laws of learning. An attempt is made to unify our scattered notions about learning and teaching to see that they are based upon a sound educational psychology and philosophy.

108. VISUAL AIDS IN EDUCATION (Formerly Ed. 130. Summer quarter only). Two hours.

The purpose of this course is to show some of the more important phases of visual aids in education. Some of the questions discussed are (1) What is the meaning of visual education; (2) How can I best inform myself on the subject of visual aids; (3) What are the different types of visual aids and what is their comparative effectiveness; (4) How have the administration problems been solved; (5) What has been accomplished in the field and by whom. In addition, the use of the different types of visual aids will be illustrated and discussed. The course should be valuable to teachers and administrators alike.

*Given also by extension.

***109. SUPERVISED STUDY (Summer quarter only). Two hours.**

This course deals with the principles and methods of supervised or directed study. The various conceptions of supervised study and plans of organization and administration in carrying out a program of directed study in school are presented. The course is intended to develop ways and means of enriching the child's school life through proper direction of his efforts.

110-210. IMPROVEMENT OF INSTRUCTION IN SPELLING AND READING. First Advanced Course in Elementary Education (Formerly Ed. 258). Four hours.

A student may earn up to twelve hours in elementary education by taking Ed. 110-210, 111-211, and 112-212. Prerequisite, Junior standing.

In the light of the results of research, the following items will be considered concerning each subject: (1) Selection of the content of the course of study; (2) determination of grade-placement; (3) selection of efficient methods and materials of teaching; and (4) selection of procedures in measuring pupil accomplishment.

111-211. IMPROVEMENT OF INSTRUCTION IN THE CONTENT SUBJECTS. Second Advanced Course in Elementary Education (Formerly Ed. 259). Four hours.

Prerequisite, junior standing.

This is a course in the supervision of the content subjects in the elementary school. It is intended to serve experienced teachers, principals, supervisors, and superintendents. In the light of research, the following items will be considered concerning each subject: (1) Selection of the content of the course of study; (2) determination of grade-placement; and (3) selection of efficient methods and materials of teaching. Attention will be given to such commonly used procedures in the content subjects as the problem of method and the socialized recitation.

112-212. IMPROVEMENT OF INSTRUCTION IN HANDWRITING, COMPOSITION, AND ARITHMETIC. Third Advanced Course in Elementary Education (Formerly Ed. 260). Four hours.

Prerequisite, junior standing.

This is a course in the supervision of handwriting, composition, and arithmetic in the elementary school. It is intended to serve experienced teachers, principals, supervisors, and superintendents. In the light of research, the following items will be considered concerning each subject: (1) Selection of the content of the course of study; (2) selection of efficient methods and materials of teaching; and (3) selection of procedures in the measurement of pupil accomplishment.

113-213. TOOLS AND TECHNIQS OF SUPERVISION IN THE INTERMEDIATE GRADES (Formerly Ed. 108). Four hours.

Prerequisite, Ed. 110-210, or Ed. 111-211, or Ed. 112-212.

This course will discuss: Meaning and purpose of supervision and what the supervisor needs to know—subjects to be taught, grade placement, methods of testing accomplishment; tools of supervision—supervisory surveys, bulletins, demonstration lessons, and conferences, classroom visitations; gathering facts on children and their use in the improvement of instruction.

114. TOOLS AND TECHNIQS OF SUPERVISION IN THE PRIMARY GRADES (Summer quarter only). Four hours.

Prerequisites, Ed. 5 and 6 or equivalents.

This course is intended for supervisors and advanced students in primary work. It includes a brief survey of the objectives of primary work, purposes, and principles underlying supervision, technic of supervision, observation and analysis of lessons, materials of instruction, assigned readings, and discussion of modern trends in the primary field.

116. SECONDARY EDUCATION. Four hours.

This is an orientation course in secondary education. The topics considered include: The recent rapid growth of American secondary education; physical and mental growth of high school pupils; variation and selection of pupils; aims and functions of secondary education; relationships to elementary and higher education; size and distribution

*Given also by extension.

of high schools; the rural high school problem; the program of studies; methods and psychology of secondary education; guidance, school activities, community relationships, the high school staff, the school plant, and costs.

***117. EXTRA-CURRICULAR ACTIVITIES AND GUIDANCE (Formerly Ed. 110). Four hours.**

This course will discuss school councils and government, athletics, debating, literary and social clubs, the school newspaper and magazine, musical and dramatic activities, and civic clubs and projects that relate to pupil participation. It will consider the purposes and values of such activities in forming proper habits, attitudes, and ideals, and will attempt to show wherein such activities are necessary and a valuable part of the school curriculum. An evaluation of the movement will be made. This course also aims to acquaint the student with the various agencies and methods for guiding pupils in their school work and in regard to the choosing and preparation for a vocation.

117a. CITIZENSHIP EDUCATION IN THE PRIMARY GRADES (Formerly Ed. 110d). Two or four hours.

117b. CITIZENSHIP EDUCATION IN THE INTERMEDIATE GRADES (Formerly Ed. 110b). Two or four hours.

117c. CITIZENSHIP EDUCATION IN THE SECONDARY SCHOOLS (Formerly Ed. 110c). Two or four hours.

This course will deal with the implications of citizenship education in the junior and senior high school. It will canvass the present status of both the reading materials in the social sciences and the activity materials; each claiming citizenship as a main outcome. It will deal with the nature of social relationships. It will discuss the investigational technics in the field and suggest detailed objectives to be set up in a reconstructed citizenship program.

118. GUIDANCE WORK OF DEANS AND ADVISERS OF GIRLS (Formerly Ed. 140). Two hours.

This course will deal with the activities of girls' advisers in high school and is designed to equip teachers to assume such responsibilities.

120-220. INDIVIDUAL EDUCATIONAL RESEARCH FOR SENIOR COLLEGE-GRADUATE STUDENTS (Formerly Ed. 123). Two or four hours.

Registration for this course is permitted only after conference with the head of the department. This course is a seminar or conference course for qualified senior college-graduate students. Students with definite problems will carry on research under the direction of the instructor in whose field the problem lies. Investigations in kindergarten-primary education, intermediate education, high school education, psychology, guidance, supervised study, administration, etc.

***125. GENERAL PSYCHOLOGY (Formerly Psych. 110). Four hours.**

The content of this course is very similar to that which is found in most of the texts in general psychology. The following topics are discussed: the nature of psychology; its problems and methods; its relation to the other sciences; the nature and kind of reactions and their psychological basis; the nervous system; tendencies to reaction and their relation to motives and purposes; distinction between native and acquired traits; the nature of instincts and emotions; discussion of the various kinds of instincts and emotions; the nature of feeling; the elementary sensations of the different senses with some discussion of the nature of the sense-organs mediating them; the nature and laws of attention; the nature of memory with some discussion of economy in memorizing; mental imagery; the nature and laws of association; the nature and kinds of perception, reasoning, imagination; the will and personality.

***126. TEACHERS' CLASSROOM TESTS (Formerly Psych. 108c). Four hours.**

This course deals with types of teachers' classroom tests; their deficiencies and advantages; types of objective tests such as the simple recall, completion, true-false, multiple choice and its variants, judgment, rearrangement, and matching; practice in the construction of the different types of objective tests; criticism, administration, and scoring of these types; interpretation of the results of objective tests; using the results in teaching and in making diagnoses, promotions, and reclassifications.

*Given also by extension.

- *127. THE PSYCHOLOGY OF HIGH SCHOOL SUBJECTS (Formerly Psych. 105. Summer quarter only). Two or four hours.

This course covers the psychological characteristics of the high school pupil; the essential difference between the new and the old high schools from a psychological point of view; the psychology of study as applied to high school subjects; the psychology of methods employed in the teaching of the various subjects in high school; the psychology of motivation and appreciation in high school; the psychological analysis of the several subjects in this course.

128. MENTAL HYGIENE (Formerly Psych. 115). Two hours.

This course deals with the origin and development of mental hygiene; the psychological and psychiatric background of mental hygiene; delinquency and mental health; mental health of infancy, early childhood, the elementary school child, adolescence, and the adult period; mental hygiene and religion, recreation, business, and public opinion.

129. ABNORMAL PSYCHOLOGY (Formerly Psych. 115). Two hours.

The topics of this course include: Meaning of abnormality; common types of abnormalities, i. e., of sensation, perception, association, belief, memory, and emotion; hysteria; personality disorders of regression, compensation, and periodic fluctuations from depressive maniac states; functional and organic psychoses and neuroses; prevention and treatment of abnormal behavior.

- 130-230. RECENT DEVELOPMENTS IN RURAL LIFE. Four hours. (No credit if Ed. 80 has been taken.)

A course dealing with the reorganization and commercialization of rural industries; changes in rural living; the new rural life; expansion and overdevelopment; cityward migration and its social significance; commercialized large scale farming and its influence on national and international economic conditions; decreasing rural population; the advance of power farming and its effects on rural life.

- *135. HISTORY OF EDUCATION WITH SPECIAL REFERENCE TO MODERN TIMES (Formerly Ed. 133. Summer quarter only). Two or four hours.

This course will be a general survey of the history of education. After a brief study of the contributions of the Greeks, the Romans, and the medieval church, the following topics will be discussed and evaluated in terms of their influence upon modern times: The Renaissance, the Reformation, the rise of science, the development of vernacular schools, the influence of the educational reformers—Comenius, Rousseau, Pestalozzi, Herbart, Froebel, and Dewey—upon recent educational theory and practice. Finally, a comparative study of the educational systems of the chief countries of the world will be made.

- *136. HISTORY OF EDUCATION IN THE UNITED STATES (Formerly Ed. 134). Four hours.

Beginning with a brief treatment of the Old World background, the course will trace the development of free public education in America up to the present time. Special emphasis will be given to a consideration of how the school subjects came to be what they are, the development of methods of teaching in terms of children's interests and capacities, and the influence of recent educational tendencies, such as the widened concept of citizenship training, the scientific study of education, and the economy of time movement. Contemporary educational problems will be used as the basis of explaining the educational and cultural history of the United States.

137. COMPARATIVE EDUCATION (Formerly Ed. 136. Summer quarter only). Two hours.

140. PLATOON SCHOOL ORGANIZATION (Formerly Ed. 145. Summer quarter only). Two hours.

141. ADMINISTRATION OF VILLAGE AND CONSOLIDATED SCHOOLS (Formerly Ed. 142). Four hours.

This course develops the general principles of school administration. Since it is intended for those relatively inexperienced in the field, most of the practical examples will be drawn from the small school systems

*Given also by extension.

and applied to the administration of village and consolidated systems. Brief consideration will be given to the relation of the federal government to schools, state and county organization, and school support. More detailed consideration will be given to the following topics: Selection, organization, and functions of boards of education; the election, qualifications, and duties of principals and superintendents; qualifications, selection, salaries, in-service training, and tenure of teachers; building management; supplies, transportation; budgeting and control of local finances; administrative control of the curriculum; and community relationships. Graduate students and those with administrative experience take Ed. 142-242, 143-243, or 144-244.

142. SCHOOL ADMINISTRATION (First Course)—(Formerly Ed. 242). Four hours.

(Administration majors may earn up to twelve hours in this field by taking Ed. 142-242, 143-243, and 144-244.)

Prerequisite, junior standing.

This course will outline a general philosophy of school control. Topics to be given special consideration are the following: the United States government in education—land and money grants for education; the Office of Education and other federal educational agencies, arguments for and against a federal Department of Education; the state as the fundamental educational unit, organization of state departments of education, with the legal and administrative control exerted by the state; local units for school control; duties and powers of the school board; duties and powers of the superintendent; the administrative organization for local school control.

143-243. SCHOOL ADMINISTRATION (Second course)—(Formerly Ed. 243). Four hours.

Prerequisite, junior standing.

This course will consider: the school census, attendance, pupil accounting records and reports; business administration; preparation and use of the budget; cost accounting and fiscal control; indebtedness, short time borrowing, and bonds.

144-244. SCHOOL ADMINISTRATION (Third course)—(Formerly Ed. 244). Four hours.

Prerequisite, junior standing.

This course will consider: selection, tenure, pay, and promotion of teachers; selection of school sites; planning buildings; architectural and educational features of school buildings; school building management, maintenance, and operation; auxiliary agencies.

***145-245. TECHNIC OF MAKING THE SCHOOL CURRICULUM (Formerly Ed. 208). Four hours.**

(A student may earn up to twelve hours in the curriculum field by taking Ed. 145-245, 146-246, and 147-247.) Ed. 145-245 substituted for Ed. 50 for senior college students.

Prerequisite, junior standing.

This course is an advanced course in curriculum construction. It will deal with the sources of curriculum materials and with methods of investigation and evaluation of school courses in terms of impersonal or objective standards. Each student will be required to make a study or investigation of some aspect of the curriculum in order that he may more thoroughly understand the technic of curriculum construction.

146-246. ADVANCED CURRICULUM CONSTRUCTION (Formerly Ed. 209). Four hours.

Prerequisite, junior standing.

This course will deal in detail with curriculum making in the major fields of activity—health, economic life, home and family relationships, citizenship, recreation, and moral education. It will permit the student to deal in detail with the reconstruction of materials in these fields in a similar way to that developed in 110-210, 111-211, and 112-212.

***147-247. EDUCATIONAL VALUES (Formerly Ed. 210). Four hours.**

Prerequisite, junior standing.

This course will discuss the various values of education. Criteria for the inclusion of activities and materials of education will be suggested, and subject matter evaluated in terms of its functions and values in helping pupils engage efficiently in life's activities.

*Given also by extension.

155. ADVANCED OBSERVATION. Two hours.

(Limited to experienced teachers; registration only by approval of the proper training school head.)

156. ADVANCED STUDENT TEACHING IN THE ELEMENTARY TRAINING SCHOOL (Formerly Ed. 102). Four hours.**157. STUDENT TEACHING IN THE SECONDARY TRAINING SCHOOL (Formerly Ed. 103). Four hours.**

An additional quarter may be taken as 157a.

This course will include conferences, observation, supervision, and teaching under the direction of the training teacher.

158. STUDENT SUPERVISION IN THE ELEMENTARY TRAINING SCHOOL (Formerly Ed. 102a). Four hours.**159. STUDENT SUPERVISION IN THE SECONDARY TRAINING SCHOOL (Formerly Ed. 103a). Four hours.****160. THE PRE-SCHOOL (Formerly Ed. 151). Four hours.**

This course includes a study of the physical and mental growth of the child from two to four years of age. When possible, each student will make a careful observation of the development and personality of several children. The history and growth of the pre-school movement will be followed through the reading of recent educational publications.

161. RECENT THEORY AND PRACTICE IN KINDERGARTEN EDUCATION (Formerly Ed. 155). Two or four hours.

This course deals with scientific studies of the social and learning needs of kindergarten and pre-school pupils.

162. CREATIVE EDUCATION (Formerly Ed. 156). Four hours.

This course will attempt to appraise the place and contribution of the theory of children's interests in education. This theory is one of two important modern theories of education. The course will deal in detail with: (1) "The New Articles of Faith"; (2) curricula in child-centered schools; (3) the contributions of (a) the arts, (b) rhythm, (c) music, (d) writing, (e) the theater, (f) the forum, (g) assemblies, (h) play, and (i) extra-curricular activities; and (4) criticism and appraisal.

163. ORGANIZATION AND ADMINISTRATION OF THE ELEMENTARY SCHOOL (Formerly Ed. 115. Summer quarter only). Two or four hours.

This course is intended for supervisors and principals of elementary schools. It will deal with the administrative and supervisory activities of such elementary school officers.

165. JUNIOR HIGH SCHOOL ADMINISTRATION AND SUPERVISION (Formerly Ed. 213). Two or four hours.

Prerequisite, junior standing.

This course will consider the problems of the junior high school from the administrative and supervisory standpoint. Topics considered are: Administration; the special purposes of the junior high school; the history of reorganization; present extent of the junior high school movement; administrative forms; admission requirements; administration of the program of studies; ability grouping, departmentalization, plan of promotion, the advisory system, and guidance; disciplinary organization; social organization; activities; staff; housing; equipment; the training of the principal and the staff; supervisory organization; directed or supervised study; teaching pupils how to study; projects; socialization; individual instruction; measuring pupil achievement will be considered.

166-266. HIGH SCHOOL ADMINISTRATION (Formerly Ed. 216). Four hours.

Prerequisite, junior standing.

This course will discuss the high school principalship; high school population; vocational education in the high school; classification; the marking system; records and record forms; social and disciplinary organization; staff problems; the schedule and registration; the high school plant; costs; community relationships and publicity; high school systems and standards; and professional growth.

167-267. HIGH SCHOOL SUPERVISION (Formerly Ed. 217). Four hours.

Prerequisite, junior standing.

This course will deal with delimitation of the field of supervision; problems in the technic of supervision; teaching how to study; supervised study; socialization; project and contract; selection of texts; measurement in supervision; surveys and diagnostic testing for supervisory purposes; teacher rating; and faculty meetings.

175. ELEMENTARY STATISTICAL METHODS (Formerly Psych. 117). Four hours.

This course will include a discussion of the value of statistical methods; common errors in the use and interpretation of statistics; the collection and classification of data; graphic and tabular expression of statistical facts; measures of central tendency such as the median, the mode, and the arithmetical mean; measures of variability, such as the quartile deviation, the mean deviation, and the standard deviation; measures of relationship, such as the product-moment method, the method of rank differences, the method of mean square contingency, the eta correlation and biserial r ; probable errors of measurement and the use of probability tables; the meaning, interpretation, and uses of the types of measurement enumerated above.

176. THE PSYCHOLOGY AND PATHOLOGY OF SPEECH (Formerly Psych. 111. Summer quarter only). Four hours.

The topics of this course embrace: The psychological and physiological aspects of speech; the evolution of speech; functions and development of speech; elements in the production of tone; the use of phonetic symbols in language development; speech and personality; classification of speech defects; their social, pedagogical, vocational, and personal handicaps; their prevalence; their causes and methods of correcting them; classroom demonstrations in diagnosing and treating some types of defects.

177. CHILD DEVELOPMENT (Formerly Psych. 3). Two or four hours.

See description of Ed. 77.

178. PSYCHOLOGY OF DELINQUENCY (Formerly Psych. 114. Summer quarter only). Two or four hours.

The work in this field covers the nature of delinquency; the causes of delinquency; suggested methods of treatment for each cause or combination of causes; illustrative cases; classification of delinquent acts. The causes or conditions favorable to delinquency are classified under the general headings of heredity, environment, physical development, physical ailments, degree of intelligence, instincts and emotions, general emotionality, sentiments and complexes, and neuroses.

179. CRITICISMS OF CURRENT PSYCHOLOGIES. Two hours.

Prerequisites, Ed. 75, 76, or Ed. 125 or their equivalent.

This course is designed to acquaint the advanced student with the following topics: Purposive psychology; association psychology; functional psychology; structural psychology; configuration psychology; the Russian psychologies; reaction psychology; dynamic psychology; the "factor" school of psychology; the analytical psychologies; behavioristic psychologies; and problems fundamental to all schools of psychology.

190. THE TEACHERS COLLEGE AND THE PROFESSIONAL EDUCATION OF TEACHERS. Two hours.

This course is for students interested in positions in normal schools and teachers colleges. The course will deal with general administration and control; executive officers and their duties; the teaching staff and their qualifications and duties; selection, admission, and supervision and control of students; records and reports; placement; finance in teachers colleges, budgets, costs, sources of revenue; curriculum; educational research and relationship with other educational institutions.

192. THE TRAINING SCHOOL AND THE PROFESSIONAL EDUCATION OF TEACHERS. Two hours.

The following topics are treated: The relation of theory and practice in the training of teachers; an activity analysis of student teaching; the present status of student teaching in teachers colleges; observation as a factor in student teaching; methods of improving student teaching; the organization and administration of student teaching; the preparation of training teachers; the results of student teaching on the pupils taught.

*Given also by extension.

***195-295. PHILOSOPHY OF EDUCATION (Formerly Ed. 111). Four hours.**

Open only to seniors and graduate students.

This course deals with the philosophy of education as a method of analyzing such problems as the meaning of education, educational aims and values, education and democracy, the development of ideals, the nature of thinking, the nature of method and of subject matter.

The course is designed to show that education is a process of forming one's fundamental dispositions toward mankind, a process by which an individual grows through gaining new meanings in his environment, a process by which social groups maintain their continuous existence, and how the degree of civilization sets the standard for the educational ideal which in turn becomes a motive for social progress and a measure of its change.

196. THE PROJECT METHOD OF TEACHING (Formerly Ed. 104. Summer quarter only). Two hours.

The purpose of this course is to study and define the project and project method from a critical point of view and to discuss the reorganization of the curriculum on the project basis. A study and criticism of current definitions of a project will be made as well as the historical development of the project method.

***198-298. CRITICISMS OF CURRENT EDUCATIONAL THEORY (Formerly Ed. 129). Two or four hours.**

This course will consist of critical interpretations of recent books and magazines in the light of the more important modern movements in each of the major fields of education.

III. COURSES FOR GRADUATE STUDENTS AND QUALIFIED SENIOR COLLEGE STUDENTS WITH CONSENT OF THE INSTRUCTOR**210. IMPROVEMENT OF INSTRUCTION IN SPELLING AND READING—First Advanced Course in Elementary Education (Formerly Ed. 258). Four hours.**

See description of Ed. 110.

210a. PRACTICUM IN ELEMENTARY EDUCATION (First Course). Two hours.

With the approval of the professor of elementary education two hours of special field research work may be taken in the field of spelling and reading.

211. IMPROVEMENT OF INSTRUCTION IN THE CONTENT SUBJECTS—Second Advanced Course in Elementary Education (Formerly Ed. 259). Four hours.

See description of Ed. 111.

211a. PRACTICUM IN ELEMENTARY EDUCATION (Second Course). Two hours.

With the approval of the professor of elementary education two hours of special field research work may be taken in the field of the content subjects.

212. IMPROVEMENT OF INSTRUCTION IN HANDWRITING, COMPOSITION, AND ARITHMETIC—Third Advanced Course in Elementary Education (Formerly Ed. 260). Four hours.

See description of Ed. 112.

212a. PRACTICUM IN ELEMENTARY EDUCATION (Third Course). Two hours.

With the approval of the professor of elementary education two hours of special field research work may be taken in the field of handwriting, composition, and arithmetic.

213. EDUCATIONAL SUPERVISION. Four hours.

Prerequisite, Ed. 110-210, 111-211, or 112-212.

See description of Ed. 113.

*Given also by extension.

220. INDIVIDUAL EDUCATIONAL RESEARCH FOR SENIOR COLLEGE-GRADUATE STUDENTS (Formerly Ed. 123). Two or four hours.

See description of Ed. 120.

222. INDIVIDUAL STUDIES IN EDUCATION. Two or four hours.

223. GRADUATE THESIS RESEARCH IN EDUCATION. Four hours.

To be taken in first quarter of graduate work.

This course is a required seminar and conference course for graduate students in all departments who are working on their masters' theses. The director of educational research will meet the graduate thesis seminar four times each week and will confer with individual students upon appointment when necessary. In seminar the proper technic to be used in educational investigations and allied topics is considered, and opportunity is given each student to report upon and discuss the details of his study.

224. GRADUATE THESIS RESEARCH IN EDUCATION. Four hours.

This is the thesis course for masters' candidates in education in their second quarter of graduate work.

225. GRADUATE THESIS RESEARCH IN EDUCATION. Two hours.

This is the thesis course for the master of arts candidates in education in their third quarter of graduate work.

226. CLINICAL PSYCHOLOGY (Formerly Psych. 106). Four hours.

This course will deal with the following topics: The methods and objectives of clinical psychology; the kind of data which should be collected for the purpose of making mental diagnoses, prognoses, and recommendations for treatment; blanks suitable for collecting and recording such data; types of retardation and acceleration; the causes of retardation; a knowledge of subnormal children as a partial preparation for clinical work; the mental and physical traits of the subnormal; the causes, prevalence, and learning capacity of the subnormal; the social and racial significance of subnormality; the disposal, treatment, and training of the subnormal; clinical studies of several children for demonstration purposes.

***227. EDUCATIONAL MEASUREMENTS IN THE ELEMENTARY GRADES AND JUNIOR HIGH SCHOOL (Formerly Psych. 108a). Four hours.**

This course includes the history of the development of educational tests and measurements; nature and classification of tests and measurements; general values of educational measurements; the importance and requirements of general accuracy in educational measurements; the limitations and improvement of teachers' marks and examinations; standardized tests as substitutes for teachers' examinations; limitations of standardized tests; general discussion of objective tests; criteria for selecting standardized tests; instructions for giving tests; using the results of educational measurements for such purposes as educational guidance, reclassification of children, making promotions and diagnoses, and measuring the efficiency of the schools; the use of tests as a teaching device; written description of several tests in which the student is especially interested.

***228. EDUCATIONAL MEASUREMENTS IN THE SENIOR HIGH SCHOOL (Formerly Psych. 108b). Four hours.**

This course will include a discussion of: An historical sketch of the development of educational tests and measurements; why better measurement in high school; limitations of the traditional type of examination; methods of improving examinations; the newer informal types of examination with their advantages and use in high school instruction; standardized tests for teachers of English, mathematics, science, language, social science, physical education, and miscellaneous tests; criteria for the choice of tests; norms and standards; derived scores; measurement of conduct; prognosis tests; prediction of success in high school; use of tests in guidance; promotion; ability grouping; marks and marking systems.

229. MENTAL TESTS AND MEASUREMENTS (Formerly Psych. 107). Four hours.

The topics of this course embrace the history of the testing movement; classification of mental tests and measurements, including tests of intelligence and personality traits; the meaning of intelligence; the prin-

*Given also by extension.

ciples of intelligence testing; the possibility of improving intelligence; the influence of intelligence upon achievement; the construction of intelligence tests; criteria for selecting tests for practical purposes; preparation for giving intelligence tests; tabulating and interpreting the results of tests; the value of tests for educational and vocational guidance; the uses of intelligence tests in the practical work of schools and colleges; differences in intelligence among individuals, races, occupational groups, and between sexes and city and rural school children; the relation between intelligence on the one hand and crime and physical traits on the other.

230. RECENT DEVELOPMENTS IN RURAL LIFE. Four hours.

For description of course see Ed. 130.

241a. PRACTICUM IN SCHOOL ADMINISTRATION. Two or four hours.

By special arrangements with the Greeley Public Schools, advanced students in administration may be assigned to carry on a project in the city schools under the joint direction of the city superintendent and the College. Observation of the administration in the city schools and the completion of selected projects in which the student is interested will be required. Registration permitted only after conference with the professor of school administration.

241b. PRACTICUM IN SCHOOL ADMINISTRATION. Two or four hours.

Teachers in public school systems who may be assigned some special administrative duties in their own school and who will work on assigned administrative problems in the school system may enroll for this course. The work will be carried on under the joint direction of the superintendent and the College. Registration permitted only after conference with the professor of school administration.

242. SCHOOL ADMINISTRATION (First Course). Four hours.

For description of course see Ed. 142.

243. SCHOOL ADMINISTRATION (Second Course). Four hours.

For description of course see Ed. 143.

244. SCHOOL ADMINISTRATION (Third Course). Four hours.

For description of course see Ed. 144.

245. TECHNIC OF MAKING THE SCHOOL CURRICULUM (Formerly Ed. 208). Four hours.

For description of course see Ed. 145.

246. SEMINAR IN ADVANCED CURRICULUM CONSTRUCTION (Formerly Ed. 209). Four hours.

For description of course see Ed. 146.

247. EDUCATIONAL VALUES (Formerly Ed. 210). Four hours.

For description of course see Ed. 147.

265. JUNIOR HIGH SCHOOL ADMINISTRATION AND SUPERVISION (Formerly Ed. 213). Two or four hours.

For description of the course see Ed. 165.

266. HIGH SCHOOL ADMINISTRATION (Formerly Ed. 216). Four hours.

For description of course see Ed. 166.

267. HIGH SCHOOL SUPERVISION (Formerly Ed. 217). Four hours.

For description of course see Ed. 167.

275. ADVANCED STATISTICAL METHODS (Formerly Psych. 217). Four hours.

This course will cover the following: Computing coefficients of correlation by different forms of the product-moment method; partial and multiple correlations of different orders; different forms of the regression equation for three or more variables; interpreting results of partial correlations; the path coefficient technic and its relation to the regression equation; the elements of curve fitting; the application of statistical methods to the construction of performance and quality scales and to test results.

***276. PSYCHOLOGY OF ELEMENTARY SCHOOL SUBJECTS (Formerly Psych. 104. Summer quarter only). Four hours.**

This course deals with an analysis of the abilities involved in each school subject as a basis for discovering what needs to be learned, what is adapted to the child's learning capacity, and what kind of assistance the individual child is most in need of; the influence upon learning the school subjects of such environmental factors as light, paper, and print, and such native factors as intelligence, age, sex, instincts and emotions, likes and dislikes, and special aptitudes; the methods and values of utilizing the most important laws of learning such as association, repetition, multiple response, and satisfaction; the deficiencies of textbooks from the standpoint of the laws of learning; the results of experimental investigations; individual differences in learning the school subjects and their significance.

277. PSYCHOLOGY OF ADOLESCENCE (Formerly Psych. 103. Summer quarter only). Four hours.

This course embraces the nature of adolescence—saltatory or continuous development; physical characteristics; intellectual characteristics and needs; emotional characteristics and emotional stabilization; the development of social consciousness and responsibility for a place in the social order; sex phenomena and the mental hygiene of the adolescent; individual differences in adolescent interests and the needs of the adolescent in these respects.

278. ADVANCED PSYCHOLOGY OF LEARNING (Formerly Psych. 214). Four hours.

This course includes a study of some of the psychological methods and experimental technic involved in the development of educational psychology; the nature and varieties of learning; animal learning; associative learning in man; analytical learning; selective thinking and reasoning; the nature of mental functions; learning curves; the improvement of mental functions; the amount, rate, and limits of improvements; the factors and conditions of improvement; forgetting; the spread of improvements of the transfer of training; fatigue; curves of work; heredity; differences in individuals, families, sexes, and races.

279. EXPERIMENTAL TECHNIC AND ITS APPLICATION (Formerly Psych. 222). Two or four hours.

This course will involve: Names, reasoning and induction in experimentation; four historical methods of experimental inquiry; recent methods of experimentation in education; planning an educational experiment; selection of technic; finding the subjects; relevant and irrelevant variables; experimental measurements; the statistics of experimentation; interpretation of experimental data; the reliability of conclusions reached; report and publication of the results of an experiment; thoughtful reading of experimental literature; selection, making, and scoring of tests and examinations; principles of graphic and tabular representation; classification of pupils; educational diagnosis; educational and vocational guidance.

280. GRAPHIC METHODS OF PRESENTING FACTS (Formerly Psych. 113. Summer quarter only). Four hours.

This is a practical drawing course which deals with popular methods of presenting statistical data in graphic form, and with the principles and merits of various forms of graphic arrangement.

***295. PHILOSOPHY OF EDUCATION (Formerly Ed. 111). Four hours.**

For description of this course see Ed. 195.

296. A HISTORY OF PHILOSOPHY (Formerly Ed. 230). Four hours.

This course presents a study of three great schools of thought—naturalism, idealism, and pragmatism. Particular emphasis is placed upon the educational implications and significance of these three schools of philosophy.

As representative of naturalism a brief study is made of Bacon and Spencer; among the idealists, Socrates, Plato, Aristotle, Rousseau, Kant, Fichte, Pestalozzi, Froebel, Hegel, Royce, and Gentile; among the pragmatists, James, Dewey, and Bode.

*Given also by extension.

297. CONCEPTION OF MIND IN EDUCATIONAL THEORY (Formerly Ed. 211). Four hours.

This course will study the doctrines of mind that have exercised a determining influence upon educational theory, method, and practice. It will attempt to show that our conception of the nature of the mind determines in part the aims of education; furthermore, it will trace the historical development of the three major conceptions of mind and the relation of each to the aims of education. The status of intelligence and its influence on theory and practice will be discussed, and the difference between mechanical and intelligent behavior will be pointed out, as well as the implications for education.

*298. CRITICISMS OF CURRENT EDUCATIONAL THEORY (Formerly Ed. 129). Two or four hours.

See description for Ed. 198.

FIELD STUDIES FOR THE PH.D. DEGREE

322. RESEARCH PRELIMINARY TO FIELD STUDY.

Required of candidates for the Doctor of Philosophy degree in their first residence summer quarter, preparatory to field study research.

323a } GRADUATE RESEARCH CREDIT FOR FIELD STUDY No. 1
323b } Each course four hours—maximum twelve hours for Field
323c } Study No. 1.

324a } GRADUATE RESEARCH CREDIT FOR FIELD STUDY No. 2
324b } Each course four hours—maximum twelve hours for Field
324c } Study No. 2.

325a } GRADUATE RESEARCH CREDIT FOR FIELD STUDY No. 3
325b } Each course four hours—maximum credit twelve hours for
325c } Field Study No. 3.

EDUCATIONAL RESEARCH

The Department of Educational Research is a service department for the use of the faculty and the students of Colorado State Teachers College. It undertakes fact-finding investigations suggested by the administration of the College and cooperates with faculty committees, the Graduate Council, and the Faculty Senate in the solution among other problems of those arising in the selection and organization of the curriculum and its teaching. The assistance to students centers about the research seminar required of all students during the first quarter of their graduate year when work on the masters' investigations is begun. Both faculty and students come to the research office often for conferences, and many studies are planned and carried through with individuals. In addition to these professional contacts, the department offers also routine service made possible because of the office force and the statistical machines and devices available. This consists, as a rule, in the classification of educational data, its checking in original form, its organization, and the determination of point, validity, and relationship measures needed.

The Department of Educational Research is in cooperation with many research agencies, state and national, outside the College. It serves also in city and state curriculum projects and in public school surveys.

Res. 223. RESEARCH IN EDUCATION—Every quarter. Four hours.

To be taken by candidates for the master's degree in the first quarter of their graduate work. This is a required seminar and conference course for graduate students in all departments granting the degree of Master of Arts. The director of educational research will meet the graduate seminar four times each week and will confer with individual students by appointment. In seminar, proper procedures and techniques to be used in educational investigations as well as allied topics are considered, and op-

*Given also by extension.

portunity is given each student to report upon and discuss the details of his study so far as time will permit. Among the topics dealt with are: The scientific method; education as a science; educational research; types of research problems; the selection of a problem; the bibliography; methods of investigation; the master's study as a process of ordered thinking; the agendum of procedures with necessary technics; the collection, classification, presentation, and interpretation of educational data; practicums in the organization, interpretation, and reporting of educational material; etc.

ENGLISH AND LITERATURE

The English courses are planned so as to be complete and sufficient for all the needs of public school teachers, elementary and secondary.

Courses in composition, in oral English, public speaking, dramatic art and play production, in the teaching of English in the elementary and the secondary school, in grammar and the teaching of grammar, and in the cultural phases of literature are offered as electives for students who expect to become grade teachers or who are pursuing some other group course than English and wish to elect these from the English department as minors.

Some of the elective courses for third and fourth year students will be offered once every two years. Majors in English should plan their work in such a way as to take the fullest advantage of the alternating courses.

The College requires all its students to take an examination in the fundamentals of written English. Those who score in the lower third on the English test are advised against becoming English majors. Those whose scores in the test fall in the lowest third are required to take English 0 without credit. Those in the middle third are exempt from English 0 but are required to take English 4 with credit. Those with scores in the upper third are exempt from both English 0 and English 4.

A FOUR-YEAR CURRICULUM IN ENGLISH AND LITERATURE

DEPARTMENTAL REQUIRED COURSES—In addition to the courses required of all students (the "Core subjects") listed on page 65, all English majors are required to take the following English courses: (Group I) Eng. 36, 38, 39, and 40; Eng. 110 and 111; Eng. 121 or 122; Eng. 125 or 126; Hist. 105; Ed. 116, and Ed 141 (for men).

Those expecting to become teachers of English and literature are required to select thirty-six hours from the following English courses: (Group II) Eng. 130, 131, 132, 133, and 134; Eng. 140, 141, and 142; Eng. 147, 148, and 149.

Those expecting to become oral English teachers are required to select thirty-six hours from the following courses: These take the place of Group II and constitute Group III. Eng. 12, 13, 14, 16, 18, and 19; Eng. 112 and 114; Eng. 134; Eng. 140, 141, and 142.

Any other English course may be taken as a free elective, and oral English students may elect from Group II if they like. Any English major may elect from Group III.

THE SPEAKING AND READING VOICE—The speaking and reading voice of Americans is said by foreign critics to be harsh and sharp. It lacks resonance, mellowness, clearness of enunciation, and accuracy as to pronunciation. All English majors are urged to elect English 16 and 17 if they have been in any way made aware of a need of voice training.

MINORS—English majors are required to take twenty-four hours in a minor subject. They may select two minors of from twelve to twenty-four hours each. As minors, Latin or another foreign language, history, social

science, library science, oral English are suggested for English majors, but the student is free to choose his minor or minors.

English majors expecting to take the limited certificate at the end of the second year should defer English 38, 39, and 40 till the third year and fill in all the spaces marked "minor" and "elective" with the courses prescribed for graduation from the intermediate or junior high curricula. These will be the minor required by the curriculum.

English majors selecting junior high school as their minor should consult the recommendations of the Department of Education, page 89, as a guide to the selection of minor subjects.

0. FUNDAMENTALS OF ENGLISH. No credit.

This course and English 4 are required of all students whose grades in the English exemption test place them in the lowest third of the freshman class. The work covers the fundamentals in the mechanics of expression, both oral and written.

4. SPEAKING AND WRITING ENGLISH. Four hours.

Required of all students whose scores in the English exemption test place them in the middle third of the class.

Minimum essentials of oral and written composition. Theory and practice of composition of college grade.

12. ORAL EXPRESSION. Two hours.

This basic course in the art of oral expression teaches the fundamental laws of interpretation and the manifestation of these principles through natural expression. Appreciation of the author's meaning is stressed. This course also embodies the subject of public speaking; the types including exposition, narration, and extemporaneous talks. Good speech habits are stressed, drills being given for clear-cut, accurate articulation, flexibility, freedom, and expressiveness of voice. This course is prerequisite to English 14.

13. STORY TELLING. Four hours.

The technic of story telling is first given. Then students have opportunities of applying these principles to the main types of narrative.

14. DRAMATIC ART. Four hours.

Prerequisite, English 12.

This course embraces all the basic principles of dramatic art. Bodily, facial, and vocal expression is developed in impersonation, special emphasis being placed upon abandon of the character in the role portrayed. Definiteness in stage business is developed. Balance, color harmony, and stage design are studied for appreciation. The course is designed to meet the needs of students producing plays in the junior and senior high schools. Direction of short plays by the student is carried on under the supervision of the instructor. This course is prerequisite to English 105.

16. PHONETICS. Two hours.

An introduction to the study of American pronunciation. An analysis of speech sounds, the means of recording speech differences, the physical aspects of speech, and the study of dialects comprise the chief divisions of the course. Especially recommended for majors and minors in speech, English, and foreign languages.

17. VOICE TRAINING. Two hours.

This course is designed to assist students in need of training the use of the voice in reading and speaking. It is individual instruction to overcome harshness, sharpness, blurred enunciation, nasal quality and other unpleasant qualities of voice. It is elective and naturally follows English 16. Either course may be taken independently of the other.

18. DEBATING. Two hours.

A practice course in debating open to any student interested in inter-class and intercollegiate debating. The teams for the intercollegiate debates are chosen at the end of the quarter largely from the students enrolled in this group.

19. DEBATING. Two hours

Those students who were selected for the intercollegiate debate teams will comprise the classes in English 19, one for men and one for women. The work will consist of the preparation for the debates. Four hours additional credit may be earned as Eng. 118 and 119.

*Given also by extension.

***36. AMERICAN LITERATURE (Formerly Eng. 6). Four hours.**

A course in American literature following the plan of courses 8, 9, and 10 in English literature. The work is professionalized by the consideration of the selection of material for the schools.

***38. A SURVEY OF ENGLISH LITERATURE 700-1625 (Formerly Eng 8). Four hours.**

This is a comprehensive reading course dealing with the beginnings of English literature and following the development of ideas through the early poetic and prose forms to the more definite expression in the later seventeenth century. The course consists of readings supplemented with the historical background of the periods extending to the "Age of Milton," 1625.

***39. A SURVEY OF ENGLISH LITERATURE 1625-1798 (Formerly Eng. 9). Four hours.**

This comprehensive reading course begins with the "Age of the Cavalier and the Puritan" and includes the Period of Classicism. The same plan is followed as that indicated for English 8.

***40. A SURVEY OF ENGLISH LITERATURE 1798-1900 (Formerly Eng. 10). Four hours.**

This course follows the plan of 8 and 9 and deals with English literature from 1798 through the Victorian Age to 1900.

41. AN OUTLINE OF LITERATURE (Formerly Eng. 21). Four hours.

Readings in the literature of those nations whose dramas, epics, lyrics, letters, histories, novels, stories, essays, etc., have influenced the thought and culture of the world. It is intended in this course and the one following to give the freshman students a connected story of literature and also to give them a sufficient amount of reading in the form of selections and complete units of the literature itself to assure the college that its graduates will be well informed in the field of literature and cultivated men and women to the extent that a general reading of literature may contribute to their culture.

This course briefly tells the story of the development of literature in the orient (China, Japan, India, Persia, and Palestine) with a limited amount of reading of interesting pieces in good English translations. Then it passes to Greek literature with ampler readings. Latin literature follows. The course concludes with readings in the medieval European literature that is the beginning of the literature of modern Europe and America, extending into the modern period as far as time will permit.

42. AN OUTLINE OF LITERATURE (Continued). (Formerly Eng. 22). Four hours.

A continuation of Course 21. The story of literature illustrated with extensive readings in translation of as many of the great modern pieces of literary art as time will permit. The literature of France, Italy, Germany, Russia, the Scandinavian countries, England, Ireland, and the Americas will be included. Always the readings will be of complete pieces, not illustrative extracts, of those great literary productions that have been significant in the development of civilization and of interest to the general reader.

100. JOURNALISM. Four hours.

A beginning course in journalism; designed primarily for those who desire to teach journalism in the high school or who may be called on to act as advisers to high school students in the publication of the school paper. It pre-supposes a knowledge of English and grammar. Much of the time is devoted to a study of news values, with particular emphasis on such values as applied to news for the high school paper. The mechanical and technical phases of school papers are also treated in this course. The foundation for further work in journalism, including extended writing based upon the requirements of newspapers and magazines, is laid in this course. English 100 must be taken before one may register for either 101 or 102.

101. JOURNALISM. Four hours.

A continuation of English 100. This course affords opportunity for more writing than might be obtained in ordinary English composition classes. Students are given opportunity for practice in reporting and interviewing, and writing for print.

*Given also by extension.

102. JOURNALISM. Four hours.

A continuation of English 101. An advanced course in composition, dealing with editorials, dramatic and literary reviews, newspaper and periodical policies, newspaper make-up, editing, and head-writing.

***110. ADVANCED COMPOSITION (Formerly Eng. 20). Four hours.**

Prerequisite, English 0 and 4.

This departmental required course is designed to give individual practice in writing and to prepare students for the teaching of written composition.

***111. THE ENGLISH LANGUAGE FOR TEACHERS (Formerly Eng. 11). Four hours.**

Required of intermediate majors and of junior high school majors choosing English as a minor subject. Required of English majors.

A professionalized course in the English language. This course consists of three parts: (a) the story of the origin and development of language and the history of the English language; (b) English grammar from the professional point of view; and (c) the teaching of composition.

112. CHILDREN'S THEATER. Four hours.

Instruction concerning the selection of plays for intermediate and junior high school children. Directing the players, stage settings, scenery, costumes, etc. All the technic of children's dramatics from choosing the play to presenting it before an audience.

114. PLAY PRODUCTION. Four hours.

Prerequisite, English 14.

A lecture and laboratory course designed primarily for teachers and students who intend to engage in the work of play production in the schools, the Little Theater, or the Children's Theater. Building on the fundamentals of dramatic art as given in English 14, this advanced course includes such phases of theatrical technic as staging, lighting, costuming, and make-up. Puppetry and shadow shows are studied. Choice of materials for amateur theatricals is considered. Special emphasis is laid on the actual production of plays, including casting and directing.

***121. LITERATURE FOR THE ELEMENTARY SCHOOL—Intermediate Grades (Formerly Eng. 1). Four hours.**

Required of intermediate and English majors.

A survey of children's literature appropriate for use in grades three to six, inclusive. A survey of children's literature and a study of motivation in the field of reading, oral and silent, for children; the consideration of principles governing the choice of literature in these grades; practice in the organization and presentation of type units, including dramatization and other vitalizing exercises. A flexible course, affording opportunity for intensive work within the scope of any one or more of the grades four, five, or six, according to the individual need or preference.

***122. LITERATURE FOR THE JUNIOR HIGH SCHOOL (Formerly Eng. 2). Four hours.**

Required of English majors and of junior high school majors choosing English as one of their two special subjects.

A survey of children's literature appropriate for use in the seventh, eighth, and ninth grades. A survey of children's literature and a study of motivation in the field of reading, oral and silent, for children; the consideration of principles governing the choice of literature in these grades; practice in the organization and presentation of type units, including dramatization and other vitalizing exercises. A flexible course, affording opportunities for intensive work within the scope of any of these three grades, according to the individual need or preference.

125. ORAL ENGLISH IN THE HIGH SCHOOL (Formerly Eng. 105). Two hours.

Prerequisites, English 12 and 14.

The discussion of practical problems concerning the direction of oral English in the secondary school, oral composition, literary society and debating activities, dramatics, etc.

*Given also by extension.

***126. THE TEACHING OF ENGLISH IN THE HIGH SCHOOL (Formerly Eng. 106). Four hours.**

Principles for the selection of literature for senior high school pupils considered critically; illustrative studies in the treatment of selective pieces; study of types of composition work for high schools, with illustrative practice in writing.

130. CONTEMPORARY LITERATURE (Formerly Eng. 16). Four hours.

An appreciation course dealing with the literature of the twentieth century. Most teachers of literature leave the impression that literature must age like fiddles and wine before it is fit for use. Such is not the case. Much good literature is being produced every year. After students leave school, it is just this current literature that they will be reading, if they read at all. This course helps them to form a discriminating taste for reading and to acquire a liking for reading, so that after they leave college they will be alive to what the world is thinking, feeling, doing, and saying.

***131. THE SHORT STORY (Formerly Eng. 31). Four hours.**

A study of typical modern short stories to observe the technical methods of modern short story writers and the themes they have embodied in the magazine fiction of the present.

***132. THE DEVELOPMENT OF THE NOVEL. Four hours.**

The development, technic, and significance of the novel.

***133. THE RECENT NOVEL. Four hours.**

The reading of ten typical novels of the past five years for the purpose of observing the trend of serious fiction and of studying the social, educational, and life problems with which the novelists are dealing.

***134. MODERN DRAMA. Four hours.**

Reading and class discussion of plays that best represent the characteristics, thought-current, and the dramatic structure of our time.

140. LYRIC POETRY (Formerly Eng. 120). Four hours.

A comparative study of types, theme, spirit, and technic of standard English lyrics with an attempt to estimate the significance of contemporary tendencies in poetry.

141. EARLY NINETEENTH CENTURY POETRY (Formerly Eng. 121). Four hours.

A study of English poetry from Wordsworth to Tennyson, including Coleridge, Byron, Shelley, Keats, and the lesser writers from 1798 to 1832.

142. VICTORIAN POETRY (Formerly Eng. 122). Four hours.

Tennyson and Browning, and the general choir of English poets from 1832 to 1900.

***146. NINETEENTH CENTURY PROSE (Formerly Eng. 126). Four hours.**

Consideration of the serious prose writing, chiefly critical and literary, of the leaders of thought in the nineteenth century.

***147. SHAKESPEARE'S COMEDIES (Formerly Eng. 127). Four hours.**

The life of Shakespeare and a literary study of his comedies, with a proper amount of attention to the method of teaching Shakespeare in high schools.

148. SHAKESPEARE'S HISTORICAL PLAYS (Formerly Eng. 128). Four hours.

A continuation of the study of Shakespeare begun in English 127.

149. SHAKESPEARE'S TRAGEDIES (Formerly Eng. 129). Four hours.

The completion of the year's work in Shakespeare.

150. ELIZABETHAN DRAMA EXCLUSIVE OF SHAKESPEARE (Formerly Eng. 130). Four hours.

A knowledge of the dramatic literature of the early seventeenth century is incomplete without an acquaintance with the contemporaries and successors of Shakespeare from about 1535 to the closing of the theaters in 1642. The principal dramatists, with one or more of the typical plays of each are studied in this course.

*Given also by extension.

160. LITERATURE OF THE NEW TESTAMENT (Including the Life and Teachings of Jesus. Formerly Eng. 60). Four hours.

This course is a literary study of the four gospels, from an historical point of view. It also includes an intensive study of the teachings of Jesus, in the light of the background out of which He came.

161. THE HISTORY, LITERATURE, AND RELIGION OF THE OLD TESTAMENT (Formerly Eng. 160). Four hours.

This course is a study of the Old Testament from the viewpoint of its historical development. A study is also made of the religion of the Hebrews as it is reflected in their literature. The course includes the early poetical, legal, biographical writings, and the prophets before the Exile period.

162. THE HISTORY, LITERATURE, AND RELIGION OF THE OLD TESTAMENT (Formerly Eng. 161). Four hours.

This course, continuous with English 160, consists of the consideration of important productions, from the Exile period, through the second century B. C.

207. COMPARATIVE LITERATURE—Greek and Latin (Formerly Eng. 107). Four hours.

A survey of the main contributions of classical culture to world literature. The reading in English translation of Homeric epics and the dramas of Aeschylus, Sophocles, and Euripides. Courses 107, 108, and 109 cover the same ground as English 21 and 22 but they are senior college or graduate courses with intensive readings of only a few of the great pieces of literature of the world.

208. COMPARATIVE LITERATURE—Italian, Spanish and French (Formerly Eng. 108). Four hours.

A study of literary elements and influences deriving from Medieval and Renaissance cultures; a review of the trends of modern romance literature; a careful reading in translation of outstanding classics, notably Dante's "Divine Comedy."

209. COMPARATIVE LITERATURE—German, Scandinavian, and Russian (Formerly Eng. 109). Four hours.

A comparison of Teutonic epic material with Greek and Romance epic; a survey of the significant contributions in the literature of Germanic and Russian peoples; the careful study of Goethe's "Faust."

210. OLD ENGLISH. Four hours.

A beginning course in the grammar and reading of Old English (Anglo-Saxon).

211. CHAUCER AND MIDDLE ENGLISH. Four hours.

A study of the English language of the fourteenth century to show its development after the Norman Conquest and preceding the Elizabethan period. The observations upon the development of the language are made mostly through a careful study of Chaucer. The course is the natural follower to English 210, but may be taken independently.

222. INDIVIDUAL STUDIES IN ENGLISH. Two or four hours.

223. RESEARCH IN EDUCATION. Four hours.

Taken in the first quarter of graduate work.

This is a required seminar and conference course for graduate students who are working on their masters' investigations. The director of educational research meets the group three times each week and confers with individual students in the research office. Small group conferences are held when needed. Each student meets his thesis adviser regularly.

224. RESEARCH IN ENGLISH. Four hours.

This is a graduate seminar provided to take up problems in the teaching of English such as require investigation by graduate students working upon theses in the department of English and Literature. The amount of credit depends upon the work successfully completed.

225. RESEARCH IN ENGLISH. Two hours.

This is a continuation of English 224.

FOREIGN LANGUAGES

This department offers courses in French, German, Latin, Spanish, and Italian, and in the teaching of foreign languages. Because of the small demand for Latin and German, one course is offered each year in German and two in Latin. German 1, 2, and 3 alternate with German 5, 6, and 7. French 105 and French 205 are both called advanced French and will be offered in alternate years. Either course may be taken first. Foreign language 51, 52, and 53 are primarily for music majors, but anyone interested may take the course. Foreign Language 131 and 132 will be given in alternate years.

All majors in French or Spanish will be required to have two years of high school or one year of college Latin.

Spanish 1, 2, 3 is offered in the summer quarter, five days each week, classes meeting twice daily, for those who wish to receive a year's credit in beginning foreign language. College credit for beginning foreign language will be given toward graduation only upon the completion of a year's work in the language.

Courses are offered leading to the Bachelor of Arts degree and Master of Arts degree in French, Spanish, and Romance Languages.

A FOUR-YEAR CURRICULUM IN FOREIGN LANGUAGES

In addition to the core subjects listed on page 65, the following courses are required of majors in this department: French or Spanish 1, 2, 3, 5, 6, 7, 105, 106, 107, 131, 132, Latin 1, 2, 3 (if not taken in high school), Ed. 116, and Ed. 141 (for men).

The department requires for the bachelor's degree forty-four hours in the language of the major, and a minor of twelve to twenty-four hours outside the department. A student may select an additional minor of twenty-four hours within the department. Foreign Language 131 and 132 are required as part of the forty-four hours for the major. However, students who have had no Spanish may be excused from the course because Spanish is stressed. In addition to the foreign language requirements, the department requires that the candidate for the Bachelor of Arts degree be proficient also in the English language. The following courses are required of majors in the foreign languages: English 110 and 111, Education 116 and 125.

51. FOREIGN LANGUAGE—Italian. Two hours.

For music majors and students desiring ability in oral Italian. Principles of orthography and pronunciation with drill in oral reading and pronunciation. Musical terms and expressions studied.

52. FOREIGN LANGUAGE—German. Two hours.

For music majors and students desiring ability in oral German. Principles of orthography and pronunciation, with drill in oral reading and pronunciation.

53. FOREIGN LANGUAGE—French. Two hours.

For music majors and students desiring ability in oral French. Principles of orthography and pronunciation, with drill in oral reading and pronunciation.

131. THE TEACHING OF ROMANCE LANGUAGES. Four hours.

Discussion of the place of modern languages in American secondary and college education; a consideration and selection of the most effective methods of teaching modern languages; curriculum, course making, selection of texts and materials; methods of teaching pronunciation; phonetics, grammar, reading, rapid reading, and conversation. Discussion of conduct of the recitation and classroom management.

132. PROBLEMS IN THE TEACHING OF ROMANCE LANGUAGES. Four hours.

Not offered in 1931-32.

Discussion of difficult phases of grammar and syntax, and review of elements of French and Spanish as to presentation in classroom. Study of the technic of teaching literary courses, and the selection of texts for graded classes. The history of the teaching of foreign languages, and a study of methods used in Europe, in comparison with methods used in college and secondary schools in the United States.

222. INDIVIDUAL STUDIES IN FOREIGN LANGUAGES. Two or four hours.**223. RESEARCH IN FOREIGN LANGUAGES. Four hours.**

Taken in the first quarter of graduate work.

This is a required seminar and conference course for graduate students who are working on their masters' investigations. The director of educational research meets the group three times each week and confers with individual students in the research office. Small group conferences are held when needed. Each student meets his thesis adviser regularly.

224. RESEARCH IN FOREIGN LANGUAGES. Four hours.

A graduate seminar for students working on the master's thesis. Research problems of interest in the field of modern languages and the teaching of modern languages are studied.

225. RESEARCH IN FOREIGN LANGUAGES. Two hours.

A continuation of Foreign Language 224.

FRENCH

1. ELEMENTARY FRENCH. Four hours.

Principles of grammar and easy reading.

2. ELEMENTARY FRENCH. Four hours.

Grammar, reading, conversation.

3. ELEMENTARY FRENCH. Four hours.

Reading and conversation.

***5. INTERMEDIATE FRENCH. Four hours.**

A review course in the elements of French. Carnahan's Short Review Grammar.

***6. INTERMEDIATE FRENCH. Four hours.**

A brief survey of French history as a basis for French literature. Lavis's *Histoire de France*.

***7. INTERMEDIATE FRENCH. Four hours.**

The short story. Buffum's *Contes Francais*.

105. ADVANCED FRENCH (Not given 1931-32). Four hours.

Classical tragedy. Corneille's *Le Cid*, Moliere's *Tartuffe*, Racine's *Andromaque*. Readings and lectures on the literary history of the period.

106. ADVANCED FRENCH (Not given 1931-32). Four hours.

A continuation of the Classical Theater.

107. ADVANCED FRENCH (Not given 1931-32). Four hours.

Seventeenth Century prose writers.

150. FRENCH POETRY (Offered on Request). Two hours.

A survey of French lyric poetry from Charles d' Orleans and Villon to contemporary poets, including the Belgian.

205. ADVANCED FRENCH. Four hours.

French 105, 106, 107 not a prerequisite. A study of the works of Voltaire and Rousseau.

206. ADVANCED FRENCH. Four hours.

Nineteenth century novel. Balzac and Sand studied in class, and Flaubert and Hugo outside.

*Given also by extension.

207. **ADVANCED FRENCH.** Four hours.

Twentieth century novel. A study of Anatole France in class, with collateral reading of novels by Bourget, Loti, Rolland, Bazin, and Bordeaux.

209. } Those who have had Advanced French with a different course
 210. } content may take additional French as 209, 210, 211.
 211. }

SPANISH1. **ELEMENTARY SPANISH.** Four hours.

Hills and Cano's *Cuentos y Leyendas* and an elementary grammar.

2. **ELEMENTARY SPANISH.** Four hours.

A continuation of the study of grammar. Reading from *Cuentos Contados* by Pittarro and Green.

*3. **ELEMENTARY SPANISH.** Four hours.

Finish grammar. Reading from and conversation on Padre Isla's *Gil Blas*.

1, 2, 3. **ELEMENTARY SPANISH.** Twelve hours.

The same course content as during the year. The class meets twice daily during the summer quarter, covering the first year's work in college Spanish.

*5. **INTERMEDIATE SPANISH.** Four hours.

A review in the elements of Spanish. Seymour and Carnahan's *Short Review Grammar. Cuentos Humoristicos Españoles*.

*6. **INTERMEDIATE SPANISH.** Four hours.

Reading in Don Juan Manuel's *El Conde Lucanor* and the Quintero brothers' *Dona Clarines*.

*7. **INTERMEDIATE SPANISH.** Four hours.

Julio Camba's *La Rana Viajera* and Larra's *Partir a Tiempo*.

*105. **THIRD YEAR SPANISH.** Four hours.

Romantic drama. Echegaray's *El Gran Galeoto*, Hartzénbusch's *Los Amentes de Teruel*, and Tamayo y Baus's *Un Drama Nuevo* in class with collateral reading in the period outside.

*106. **THIRD YEAR SPANISH.** Four hours.

Modern drama. Benavente's *La Noche del Sabado*, Martinez Sierra's *Sueno de una Noche de Agosto*, and a play of the Quintero brothers in supplementary readings in the period outside.

*107. **THIRD YEAR SPANISH.** Four hours.

Modern prose and poetry. A study of the works of Ruben Dario, Azorin, and Valle Inclan.

150. **SPANISH POETRY** (Offered on request). Two hours.

A study of the most important poetical works of the nineteenth and twentieth centuries. Recommended to students taking Spanish 105 or 205.

205. **FOURTH YEAR SPANISH.** Four hours.

Nineteenth century prose. A study of the period with readings from Mesonero Romanos, Larra, Galdos, Valdes, Fereda, and Pio Baroja.

206. **FOURTH YEAR SPANISH.** Four hours.

Golden Age Drama. Plays of Calderon, Lope de Vega, and Alarcon, with lectures and readings on the literary history of the period.

207. **FOURTH YEAR SPANISH.** Four hours.

Golden Age prose and non-dramatic poetry. Lazarillo de Tormes, Cervantes' *Cuentos Ejemplares*, Flores de Poesia de xvi y xvii. The *Abencerraje* to be read outside of class.

209. } Graduate Spanish, the same as 205, 206, 207. Because the
 210. } course content will be varied in successive years, Seniors may
 211. } take additional Graduate Spanish as 209, 210, 211.

*Given also by extension.

GERMAN

1. ELEMENTARY GERMAN (Not offered 1931-32). Four hours.
Vos's Essentials of German.
- *2. ELEMENTARY GERMAN (Not offered 1931-32). Four hours.
Vos's Essentials of German and Betz's Modern German Reader.
- *3. ELEMENTARY GERMAN (Not offered 1931-32). Four hours.
Purin and Rose's Deutsche Kulturkunde.
5. INTERMEDIATE GERMAN. Four hours.
Pope's Writing and Speaking German.
6. INTERMEDIATE GERMAN. Four hours.
Nineteenth century novelle.
7. INTERMEDIATE GERMAN. Four hours.
German lyric poetry.

LATIN

1. ELEMENTARY LATIN. Four hours.
2. ELEMENTARY LATIN. Four hours.
3. ELEMENTARY LATIN. Four hours.
- *5. THIRD YEAR LATIN. Four hours.
Prerequisite, two years of Latin. Nepos' Lives.
6. THIRD YEAR LATIN. Four hours.
Prerequisite, two years of Latin. Two of Cicero's Orations: Against Catiline, For Archias.
7. THIRD YEAR LATIN. Four hours.
Prerequisite, two years of Latin. Ovid's Metamorphoses.

GEOGRAPHY

In addition to providing subject matter for the teacher of our elementary school or high school, geography is to be thought of as a cultural subject as well. It furnishes a needed background for history, sociology, and English, and even for music and art. A variety of courses in the department offers not only this cultural side but also the method side of the subject as well. We in the United States, far distant from any large or important country, are inclined to be provincial unless the school offers some subject that brings to us first hand other people and their ways. Geography is one subject that accomplishes this aim.

A FOUR-YEAR CURRICULUM IN GEOGRAPHY

In addition to the core subjects listed on page 65, majors in the Geography Department are required to take forty-eight hours of geography. All students must take the following courses: Geog. 7, 8, 103, 130, 132, 194, 199, and one of these groups, Geog. 10 and 11, Geog. 15 and 50, Ed. 116, and Ed. 141 (for men). The remaining hours of the forty-eight may be selected from any other courses offered by the Geography Department. A minor of twenty-four hours must be selected. History and sociology are suggested minors that may be elected with geography.

*Given also by extension.

***7. BUSINESS GEOGRAPHY. Four hours.**

This course is primarily designed for commercial education majors but will be of value as an elective for those engaged in elementary or secondary school work. It covers a wide field, including such problems as production areas, trade routes, commercial reasons for the location of cities, and the displacement of river by railway traffic.

The effect of climate, health, social traditions, race, and nationality upon the business development of the various parts of the world will be emphasized.

All of the subject matter of this course will be professionalized and regarded from the viewpoint of the use that is to be made of it later by the students who take it.

8. HUMAN GEOGRAPHY. Four hours.

The great divisions of mankind from the racial standpoint will be taken up. After a short discussion of primitive man with special reference to prehistoric relics of the same in America, the great major divisions of mankind are taken up.

The negro is the first of these considered. The negro race is divided into five main groups: (1) Guinea negro; (2) African bushman; (3) African pygmy; (4) Negro of the East Indies; (5) Melanesian.

The second main group considered will be that of the Mongol. The Mongol race is divided into (1) the Northern Mongol; (2) the Southern Mongol; (3) Oceanic Mongol or Malay; (4) Boreal Mongol, or Eskimo; (5) American Mongol or Indian. The Mestizo, or half-breed problem, in Latin American countries will be discussed.

The white group is divided into (1) Nordic race; (2) Mediterranean race; (3) Alpine race; (4) Dinaric race; (5) Armenian race; (6) Ainu race; (7) Polynesian race.

A study will be made of the various blends of the above races that make up the various European nationalities. The problems of pro-Nordic propaganda; American immigration, and the racial geography of United States will be discussed.

This course is of value to those directly interested in the social sciences and to others as a general cultural course. It will be a lecture course interspersed with discussions in class and library readings.

10. METHODS AND MATERIALS IN GEOGRAPHY FOR THE INTERMEDIATE GRADES. Four hours.

The purpose of this course is three fold: first, to give the student a knowledge of the geography of North America; second, to familiarize the student with the best methods of teaching North America; third, to analyze books, globes, maps, etc., which are essential or needed in the teaching of North American geography in the intermediate grades.

This is not merely a methods course. It covers in a professionalized manner much of the subject matter that is ordinarily taught in the intermediate grades but in a much more intensive form. Principles and laws of geography are stressed and unimportant details omitted.

11. METHODS AND MATERIALS IN GEOGRAPHY FOR THE INTERMEDIATE GRADES. Four hours.

This is a continuation of Geography 10. The course proposes to cover Europe, Asia, Australasia and Africa in much the same way that Geography 10 covers North America. South America is touched upon.

***15. METHODS AND MATERIALS FOR TEACHING JUNIOR HIGH SCHOOL GEOGRAPHY. Four hours.**

This course stresses namely the social science aspects of the subject. Some of the main topics treated are: Europe before the Industrial Revolution; industrial Great Britain and its Origin; the Industrial Revolution in the United States; France, a balanced manufacturing and agricultural country; Germany, an industrial and technical leader; Europe 1914 to today; relation of the geography of Europe to its industries; China in change; Japan, a nation with an ancient culture and a modern industrial civilization; the ancient Indian and the modern Latin America; changing civilization in the modern world, and the interdependence of nations.

50. HOME GEOGRAPHY. Two hours.

This course is designed for primary majors and aims to give them the proper background and materials for teaching home geography as a means of introducing the child to the field of geography. Emphasis is placed upon the method of comparing the home environment with other typical localities. Extensive field trips are taken in the immediate locality.

*Given also by extension.

51. PRINCIPLES OF GEOGRAPHY. Two hours.

Many people unacquainted with the geographic field think of geography merely as a descriptive subject. This is an attempt to bring to these people a consciousness of geography as a causal subject.

102. THE CHANGING WEATHER. Two hours.

A course in the study of weather and its effect upon human activities. An attempt will be made to base this course upon observational and map work rather than upon the textbook. Thermographic and barographic observations will be kept. The Denver and Washington weather maps as well as the Australian weather map will be studied. Out-of-doors study of clouds and other meteorologic phenomena will be made.

If possible, the class will make one trip to the Denver weather bureau to familiarize themselves with the technic of the weather bureau and the instruments used. Each member of the class will keep, during the course, an observation sheet recording temperatures, precipitation, wind direction, relative humidity and state of sky. Observational work on conditions with reference to particular types of storms, like chinook, norther, etc., will be made.

103. CLIMATE AND MAN. Two hours.

In this course the climates of the world are classified, characteristics studied, and causes for their existence explained in terms of latitude, winds and topography. The existence of similar climates in widely separated areas is explained and special vegetative, animal and human adjustments are dwelt upon. Characteristic products and crops are studied. The possibilities and limitations of the various climatic provinces are featured. Maps are studied intensively. This course aims to give the student a broad survey of the world as viewed especially from a climatic standpoint.

130. PHYSICAL GEOGRAPHY. Four hours.

The work in this course is divided between topographic work which embraces a study of topographic and geologic maps, and, so far as possible, field trips to type regions. Three weeks of the twelve are devoted to the rudiments of mathematical geography and meteorology necessary for an understanding of physiography. This course covers phases of geographic geology not treated in Geography 100, as for instance (1) a study of commoner minerals and rocks; (2) glaciation; (3) stream action; (4) work of ground water; (5) work of volcanoes.

This course is a good foundation for much of the work given in elementary science and furnishes an excellent background for history and other geography courses.

132. GEOLOGY. Four hours.

The historical geology is taken up primarily from the angle of the geographic conditions of the past geologic ages. Every geologic region is treated from the standpoint of its geographic evolution through these ages. In discussing this evolution, the various theories of the earth's origin are discussed.

135. FIELD TRIP IN PHYSICAL GEOGRAPHY. One hour.

This course is a trip up the Big Thompson Canon following lectures at the College which are in preparation for the trip. The work in the field is carefully outlined so that the mountains and foothills become the textbook for the course.

151. REGIONAL GEOGRAPHY OF NORTH AMERICA. Four hours.

This course divides the continent of North America into human use regions and attempts to explain why such adjustments have been made. The effect of glaciation, length of growing season, amount and seasonal character of the rainfall, location with respect to surrounding areas, presence of minerals, character of the population, and early history are some of the factors seen to contribute to the present geographic personalities of the regions. Enough place geography will be given to form the framework of the course. Students may not secure credit for both Geography 10 and Geography 151.

152. PROBLEMS OF SOUTH AMERICAN GEOGRAPHY. Four hours.

A course emphasizing the political and economic aspects of South American geography. This course fits in well with Latin-American History (History 216). It is a valuable course for geography, history, and commercial majors.

***160. FIELD GEOGRAPHY OF RAINIER NATIONAL PARK AND ALASKA**
(Given by extension only). Four hours.

The party leaves Denver for the northwest, and en route studies the lava flows of Washington and adjacent states. It sails from Seattle by the inland passage as far as Juneau. Then the group crosses the Gulf of Alaska on the open Pacific, visiting the region where the Alaskan National railroad reaches the coast.

162. GEOGRAPHY OF THE TROPICS. Two hours.

The following are some of the topics treated in this course: (1) insolation and the tropics; (2) tropical temperatures—daily, seasonal and aperiodic; (3) rainfall zones in the tropics; (4) soils of the tropics; (5) tropical plant life with reference to variety of species and provinces; (6) tropical animal life; (7) native races of the tropics; (8) selective influences upon native races; (9) tropical diseases and progress toward their elimination; (10) tropical products used in the temperate zones; (11) problems of white exploitation of the tropics; (12) acclimatization of the white man in the tropics; (13) Australia's experiment with white men in the tropics; (14) the tropics as a future frontier for the temperate zone; (15) laboratory products as substitute for tropical products; (16) governmental problems in the tropics; (17) religious questions of the tropics; (18) the tropics and missionaries. Following are some of the resources called upon to illuminate the work of this course: magazines, daily newspapers, museum specimens, zoological and commercial; pictures, greenhouse, campus vegetation in spring and summer, school garden.

170. GEOGRAPHY OF POLAR REGIONS AND ALASKA. Two hours.

Some of the topics considered in this course are: the mathematical geography of the polar region circles; length of day and night; seasons; Arctic Ocean basin; factors governing the climate of polar regions; plant life of land in polar regions; plant life of sea in polar regions; animal life of land and sea; human life as a response to land conditions (Lapland); human life as a response to sea conditions (Greenland); mineral resources of polar lands; food resources of polar lands; polar lands as a future resource—coal power; polar lands and aviation routes; regional discussion of polar regions.

190. RACIAL GEOGRAPHY OF THE UNITED STATES. Four hours.

A course upon the racial stocks past and present that have entered into the composition of the population of the United States. The early stocks of New England and Virginia, the Pennsylvania German, the Dutch in New York, the French in New Orleans and the St. Lawrence Region, the Scotch Irish of the Appalachian Region, as well as the more recent national stocks, will be discussed with references to their distribution in the United States and their contribution to the American stock as a whole.

191. GEOGRAPHY AND WORLD POWER. Four hours.

A course designed to bring out the role geography has played in the struggle for world dominion in the past. Some topics considered are: Geographic backgrounds of (1) Egypt, (2) Babylonia, (3) Greece, (4) Rome, (5) Carthage, (6) Spain at the apex of its glory, (7) Portugal, the first Atlantic power, (8) the Aztec and Maya realms in Mexico, (9) the Inca Empire in Peru, (10) the past development of China through the ages as controlled by her geography.

This gives an excellent background not only for geography students but those interested in history and sociology as well.

194. GEOGRAPHIC INFLUENCES IN AMERICAN HISTORY. Four hours.

This course takes up the geographic factors that have controlled, to a certain degree, the trend of American history. The drowned river valleys of the eastern coast, the fall line, the Appalachians and their water gaps, the Mississippi and Ohio, the Great Plains, the Rockies, the Great Basin, and Puget Sound will be some of the units treated from this viewpoint.

195. BASIS OF GEOGRAPHY. Four hours.

This course, after sketching the climatic and geologic backgrounds of man's stage, the earth, builds upon these his slow adaptation to his complex geographic environment, as that adaptation takes place from primitive groups to more complex civilized groups.

196. GEOGRAPHY OF THE AMERICAN INDIAN. Four hours.

The isolation of American Indian groups, which completely detached them from the cultures of other continents, furnishes in them ideal ma-

*Given also by extension.

terial for the study of the relation of man to his geographic surroundings. Children bring to the study of the Indian a keen natural interest, which interest makes him an ideal subject for study in the elementary school.

197. INFLUENCE OF SOIL ON AMERICAN HISTORY. Two hours.

The course is designed to explain the effect of the various soils in the United States upon the settlement of the country. Certain stocks preferred certain soils and topographic sites that were similar to those with which they were familiar in Europe. This phase of geographic control has not been stressed until recently.

199. CONSERVATION OF NATIONAL RESOURCES. Four hours.

Among the topics considered under this head are water power, soil, metallic mineral deposits, non-metallic mineral deposits, coal and its by-products, giant power and coal, conservation of fresh-water life, conservation of shore life in salt water, conservation of wild life, conservation of forests, conservation of valuable national traits of character, conservation of natural beauty.

There are extensive library readings and the class work is of lecture-discussion type.

210. SPECIAL PROBLEMS IN GEOGRAPHY.

This course is designed especially for graduate students who are interested in working out individual problems in the field of geography. Two hours credit a quarter. No student should register in this course without permission of the geography department. The department will make an assignment as to time and place of meeting.

This course may be taken for two additional quarters as 211 and 212.

222. INDIVIDUAL STUDIES IN GEOGRAPHY. Two or four hours.

223. RESEARCH IN GEOGRAPHY. Four hours.

To be taken in first quarter of graduate work.

A course designed for those working on their master's theses.

This work is a required seminar and conference course for graduate students in all departments who are working on their masters' theses. The director of educational research will meet the graduate thesis seminar four times each week and will confer with individual students upon appointment when necessary. In seminar the proper technic to be used in educational investigations and allied topics is considered, and opportunity is given each student to report upon and discuss the details of his study.

224. RESEARCH IN GEOGRAPHY. Four hours.

This is the thesis course for masters candidates in their second quarter of graduate work. Open for field studies for other qualified graduate students with the consent of the head of the department.

225. RESEARCH IN GEOGRAPHY. Two hours.

This is the thesis course for masters candidates in their third quarter of graduate work. Open for field studies for other qualified graduate students with the consent of the head of the department.

HISTORY AND POLITICAL SCIENCE

This department offers courses in the two fields, history and political science, of such nature that they meet the needs of teachers in elementary and high schools. The courses are arranged to cover the materials and methods which are most helpful in presenting the subjects of history, civics, and the social sciences. The new courses in social science are based very largely upon history and political science. Opportunities for election are ample to give superior preparation for the teaching of such courses.

The increasing interest in civics and citizenship training is marked. All phases of governmental activity are growing in importance. These features of our experience are reflected in the school programs. The courses offered are all chosen from fields that are of most value to teachers in the public schools. The new and growing subjects are represented as well as the more traditional selections of subject matter.

A FOUR-YEAR CURRICULUM IN HISTORY AND POLITICAL SCIENCE

In addition to the core subjects listed on page 65, the following courses are required of majors in the department: Hist. 1, 2, 3, 5, 6, 7, 102, 117. Pol. Sci. 101, 102, 151, 152; Ed. 116, and Ed. 141 (for men), Ed. 110 or 214, and twelve hours of history and political science selected by the student to meet his own anticipated need.

Variations from this program will be necessary in cases of students who expect to take the Limited Certificate before completing the requirements for the degree. Such variations and substitutions must be approved by the department. Ordinarily history majors will not be required to take History 25 and 26 which are listed as core requirements in case they have followed the above course. Those who plan to teach before the end of the junior year should elect History 136.

In addition to the above a total of sixteen hours of sociology, economics and geography should be elected. Such elections should be made in consultation with the student's departmental adviser.

Students will also be expected to select at least one minor in addition to political science in which they should secure a minimum of twelve hours. This should be in some subject regularly taught in the junior or senior high school and should be outside of the field of the social subjects.

HISTORY

*1. FOUNDATIONS OF AMERICAN NATIONALITY, 1600-1800—Four hours.

Social and economic conditions at the close of the first century of colonization; types of colonial government; relations with the mother country; the development of self-government; conquest of French North America; new schemes of imperial control; causes of the Revolution; finances; the loyalists; formation of a permanent government; establishing the new government.

*2. DEVELOPMENT OF AMERICAN NATIONALITY, 1800-1865. Four hours.

Consolidation of the new West; the tariff controversy; financial readjustment; removal of the Indians beyond the Mississippi; westward expansion; Jacksonian democracy; the slavery controversy; secession and civil war; saving the Union; foreign relations; economics of the Civil War.

*3. RECENT AMERICAN HISTORY, 1865 to the present time. Four hours.

Problems of reconstruction; radical ideas in Congress; the negro problem in the south; carpet bag rule; rebuilding of political parties; railroad and commercial expansion; the United States as a world power; the new era of industrial consolidation; regulating industry; Roosevelt and Wilson Americanism; the World War; financial, economic and social reconstruction.

*5. EARLY MODERN EUROPE. Four hours.

Phases of the later medieval period that vitally affected the development of the nations of western Europe. The development of important nations and the commercial revolution. The Reformation with its results upon both catholic and protestant churches. National and religious rivalry in the seventeenth and eighteenth centuries. Growth of democratic ideas of government. Causes leading to the French revolution. The revolutionary and Napoleonic eras in Europe with their resultant political, social, and economic changes.

*6. MODERN EUROPEAN HISTORY. Four hours.

This is a continuation of Course 5. The Congress of Vienna and its attempt to restore Europe to what it was before the French revolution. The new balance of powers. Continued growth of democracy. Social and political results of the spread of the industrial revolution. New spirit of radical socialism. Conflict between the new and the old ideas of science and religion. Continued growth of political democracy. Rise of Russia, Prussia, and Italy as important national states. Renewed colonial expansion, and the national rivalries that resulted from it. The Balkans and their problems. Break-up of the balance of power.

*Given also by extension.

***7. RECENT EUROPEAN HISTORY. Four hours.**

This is a continuation of courses 5 and 6. Some of the main topics considered are: Colonial imperialism with its expansion into Asia and Africa; rivalry for markets, growth of international labor organizations; realignment of powers; the break-up of Turkey; the world war; the series of conventions, and treaties following the war; the new nations of Europe; the League of Nations and World Court; economic, industrial, social, and political readjustments; Europe's present relations with the United States.

***10. SOCIAL AND INDUSTRIAL HISTORY OF THE UNITED STATES. Four hours.**

This course traces first of all the economic and industrial development of the United States from colonial times to the present. In addition, it includes a description of the changes in home life, in industry, in modes of transportation, and in general social conditions that have accompanied the economic changes. Some of the topics treated in considerable detail are: the natural resources; the influence of cheap land; the effect of invention, machinery, and science; the development of agriculture and manufacture; the rise of the great industries; capitalism, business combination, and labor organization; the efforts of labor to better conditions; economic and social adjustment since the World War. A survey course of the whole American history.

13a, 13b. TEACHING OF HISTORY AND CIVICS IN THE ELEMENTARY SCHOOL. Two hours.

These courses are similar in general plan; 13a is planned for the primary and 13b for the intermediate grades. Each course deals with the historical development of history instruction: the aims and values of history in the schools; materials and methods of handling them in the various grades; various types of presentation; testing of results; the relation of history and civics to other subjects.

In 13a special attention is given to a detailed study of the materials for history instruction in grades 1 to 4; in 13b the material commonly found in grades 4 to 6.

25. CONTRIBUTIONS OF THE ANCIENT AND MEDIEVAL WORLD TO MODERN CIVILIZATION. Four hours.

This is an orienting course of junior college grade. It seeks to explain to students how the ancient and medieval worlds existed, their ideals, their customs, their outstanding personalities, and their permanent influence upon later civilization. Lectures, discussions, reports, and extensive reading.

26. THE EXPANSION OF EUROPEAN CIVILIZATION IN MODERN TIMES. Four hours.

This is a continuation of 25. It seeks to explain how the modern nations have come to develop in the particular form that they have, their national aspirations and ambitions for the future. The development overseas in America, Asia, and Africa of European civilization and the problems that have arisen as a result of such expansion. Emphasis will be laid upon leading personalities and upon those elements of European civilization that have left permanent contributions for the modern world or permanent ulcers for the world to attempt to cure.

27. CONTEMPORARY HISTORY. Two hours.

This course deals with the world problems that have developed since the World War. Topics are selected that are of current interest and studied in the light of their historical development. These topics vary from year to year. Each year brings in some new problems that are pressing for solution and sees others eliminated that have temporarily been adjusted. Topics are selected from events in the United States, in South America, in Asia, and in Europe that touch the Americans in some important way. Much use will be made of current periodicals.

***101. COMMERCIAL AND FINANCIAL HISTORY OF THE UNITED STATES (Not given in 1931-32). Four hours.**

English commerce, its ideals, its regulation, and its effect upon colonial development on the continent of America. Chief characteristics of colonial commerce. Effect of the Revolution upon American trade. Encouragement of commerce by the new national government. Currency and banking reforms and their effect upon the trade of the United States. Effect of foreign relations upon the growth of shipping, foreign trade, and domestic commerce. The Civil War and its effect upon manufacturing, foreign commerce, currency and banking, and our carrying trade. Consolidation and govern-

*Given also by extension.

ment supervision. New adjustments that came with the World War and the commercial consequences that have followed. This course is especially designed to meet the needs of those who are expecting to teach commercial courses and who desire a background course in the history that has accompanied important commercial changes.

102. ANCIENT SOCIAL HISTORY. Four hours.

This is a survey of the development of society among ancient peoples. Examples will be chosen from the social and legal codes of the Hebrews, the Assyrians, and the Egyptians. Special attention will be given to houses, temples, religious ideas, clothing, furniture, social customs, slavery, and the position of women in the above nations and in Greece and Rome. The Greek colonies. Reasons for a conflict between Greece and Persia. Athenian and Spartan civilization. Social and educational conditions at Athens at the time of Pericles. The Alexandrian conquests and the spread of Greek civilization and culture. The post-Alexandrian Greek culture. The rise of Rome. Its control over the Mediterranean regions. Occupations, religious ideas, effect of slavery, methods of taxation, roads, commerce, marriage, divorce, and general social life of the early Roman Empire. Some of the causes of national decay. This course deals especially with concrete material that high school instructors find most difficult to teach in the courses in Ancient History and World History. It also includes material most largely drawn upon for courses in the grades.

103. THE LITERATURE OF AMERICAN HISTORY. Two hours.

A survey of the materials available for the study of American history in the public schools: the chief collections of source materials, the more important general accounts; biography; bibliographical aids; special and local histories; textbooks and their authors; the selection of a good working library.

104. WESTERN AMERICAN HISTORY. Four hours.

The westward movement as an historical process. Causes which led to migration from the eastern states. The occupation of the region between the Alleghenies and the Mississippi. The land policy of the United States. Reaction of the west upon national policies. Expansion into Florida, Louisiana, and the Oregon country. Acquisition of Texas and California. Discovery of gold in California and Colorado and the resultant gold rush. Settlement of Utah, and special features of the history of Colorado. Coming of the new west and passing of the old frontier conditions. This course may be substituted for History 2 by students of senior college standing.

105. ENGLISH HISTORY. Four hours.

This course is designed especially to meet the needs of majors in English. It will supply an interesting background for those who desire a course of this kind for general cultural purposes. The course will be based largely upon Trevelyan's "History of England" and will combine narrative and social phases. The personal element will be emphasized. Enough political history will be included to give an adequate setting to those great reforms in government and custom and the crises in empire that have been the direct or indirect inspiration of the great permanent blocks of English literature.

117. THE TEACHING OF HISTORY AND CIVICS IN JUNIOR AND SENIOR HIGH SCHOOLS. Four hours.

The development of instruction in these subjects in high school; their place in the high school program; aims and values of instruction; problems connected with the teaching of these subjects; the relation between history and civics teaching. Modern courses of study; modern tests, their use and absence; written work; illustrative work; the working library. Special attention will be given to the organization of material for teaching purposes. Prerequisite, one course in history.

203. THE REFORMATION. Four hours.

This is one of the most illuminating periods in modern history. No other course explains so many things and controversial questions that are still acute among modern churches. Some of the topics covered are: actual conditions in the medieval catholic church at the close of the fifteenth century; the abuses and the need for reform; the earlier critics of the church; the religious effect of the Renaissance in Germany; the growth of a sense of nationalism in Germany; the rise of national churches; Luther and his attack upon indulgences; popularity of the revolt and its appeal to various classes in Germany; attempts to compromise the issue; theological contributions of Calvin and Zwingli; the reformation in England, France, and Scandinavia; efforts of the papacy and the empire to remove the worst abuses in the church; the Council of Trent and its definition of doctrine and its reform decrees; the new spirit at Rome; the Jesuits and other reforming and missionary organizations; the Index and the

Inquisition; the rise of puritanism; the growth of modern protestant sects and their relation to the Reformation; frequent reference will be made to the phases of the Reformation that are still in progress.

205. MEDIEVAL LIFE AND INSTITUTIONS. Four hours.

This course deals with those phases of medieval life that have been most permanent, are of most interest to teachers in the public schools, and are most difficult for teachers to master unaided. Some of the topics included will be social and industrial life; relations of lords to each other, to their serfs, and to their overlords; rise of cities; beginning of commerce; the medieval church; medieval learning, schools and colleges; administration of justice; art and architecture.

206. THE FRENCH REVOLUTION. Four hours.

This is a detailed study of the great revolutionary epoch in European history. Some of the important topics considered are: the monarchy under Louis XVI; the various classes of nobles and clergy with their special privileges; the bourgeoisie or middle class of the towns; the peasants and their burdens; the methods of taxation and feudal exactions; the growth of criticism and revolutionary literature; the bankruptcy of the monarchy and the calling of the Estates General; the assumption of power by the Third Estate; the struggle for control of the monarchy; the Paris mob and its influence; the effect of attempted foreign intervention; the reign of terror; constitutional changes and the democratic revolution; the contest with monarchial Europe; explosive influence of the Revolution in other portions of Europe; French governmental, social, political, and educational reconstruction; the advent of Napoleon; changed direction of the Revolution; the republic becomes an empire.

207. THE GREAT COLONIAL EMPIRES OF THE TWENTIETH CENTURY. Four hours.

This course deals especially with the colonial empires of England, France, Italy, Holland, Belgium, and Germany. It seeks to explain how these empires have arisen, the relations of the colonies to the mother countries, the importance of their commerce and industry to world relations, the efforts to weld these various imperial organizations into coherent wholes, and the relations of such colonial empires to international rivalry.

208. THE AMERICAN REVOLUTION. Four hours.

This course will include a careful study of the relationship—governmental, social, economic, and political—existing between the American colonies and the British government; the development of self-government; the beginning of a permanent Indian policy; judicial procedure and the judicial disallowance of colonial legislation; the commercial legislation affecting the colonies; colonial and British ideas of representation; the causes of the Revolution. Much use will be made of source materials.

209. SLAVERY, SECESSION, CIVIL WAR, AND RECONSTRUCTION, 1850-1870. Four hours

This is a detailed library course, the general conditions of slave life and the slavery system. The great compromises made in 1850. Operation of the Fugitive Slave Law. Effect of the slavery agitation upon political parties. Repeal of the Missouri Compromise. The Dred Scott Decision and its effect upon political ideas. Lecomptonism and the fight of Douglas to retain his leadership in the Democratic party. The election of 1860. Secession. Problems of the war; getting a fleet, foreign relations, financial troubles, emancipation, developing our man-power, effects of the blockade. Conditions in the south after the war. The ideas of freedom among the negroes. Problems of reconstruction. State labor legislation in the south. Conflict between the executive and congress. Carpet bag rule and what it meant. Actual processes of reconstruction. Resumption of white supremacy in the governments of the southern states.

***216. LATIN-AMERICAN HISTORY. Four hours.**

A course designed to furnish a background for understanding the growing relations between the United States and the republics to the south. In tracing the experiences of the Latin-American people, attention is given to the work of Spain, to the securing of independence, to the social, political, and economic growth, to international relations and the Monroe Doctrine, to the interests of the United States in the Caribbean and to the new Pan-Americanism.

*Given also by extension.

217. TEACHING OF SOCIAL SUBJECTS OTHER THAN HISTORY. Four hours.

This is a course in civic education. It includes a consideration of the historical development of civic instruction in the United States, how the present courses in the social studies came to be, and the main trends and materials in community civics, economics, sociology, advanced civics, and problems of democracy. Attention is given to typical courses in operation in various parts of the country, to library and laboratory equipment, to special methods of procedure, to extra-curricular activities, and to the selection and organization of units of instruction in the fields named above. Selected units of instruction are treated in detail. The utilization of social-science materials for instruction in oral and written English is discussed and illustrated. Special effort is made to present materials so as to enable teachers and supervisors to adapt the work to classroom needs.

221. HISTORY OF THE FAR EAST. Four hours.

This course is designed to enable teachers to understand the problems of the Far East. It includes a survey of the modern history of Japan and China; the growth of western ideas; the development of Japan as a first-class power; the conflict of interest in China; Japan's ambitions and their relation to our own interests. The development of self-government in China and its difficulties. It also includes a survey of British occupation in India; the relation of the British to the native races; economic, industrial and educational reforms in India and their results; the growth of self-government; and the national aspirations of the people of India. Throughout this course, the relation of these various problems to the United States is emphasized.

222. INDIVIDUAL STUDIES IN HISTORY. Two or four hours.**223. RESEARCH IN HISTORY. Four hours.**

Taken in the first quarter of graduate work.

This is a required seminar and conference course for graduate students who are working on their master's investigations. The director of educational research meets the group three times each week and confers with individual students in the research office. Small group conferences are held when needed. Each student meets his thesis adviser regularly and is directly responsible to him for the detailed agenda for his master's thesis.

224. RESEARCH IN HISTORY. Four hours.

Students doing graduate work in the fields of history or political science may arrange for time and topics as may be desired. Research problems of interest to such students both in the field of subject matter and methods of instruction will be taken up for consideration. Students working on masters' theses in the department will enroll for this course.

225. RESEARCH IN HISTORY. Two hours.

A continuation of 224.

300. SEMINAR IN THE TEACHING OF HISTORY. Offered on application. Two or four hours.

This course will offer opportunity for the special study and investigation of selected topics in the teaching of history in elementary schools, high schools, and teacher-training institutions. Open only to graduate students.

301. SEMINAR IN HISTORICAL TECHNICS. Two hours.

This course deals with the technics of historical investigation as used by scientific historians. An analysis will be made of the sources used by and the conclusions reached by outstanding historians. Practical exercises will be given in attacking historical problems, locating sources of information, and organizing historical evidence. Open only to graduate students. Given from time to time on demand. Materials will be selected from American history. The course will include individual work and group discussions as they are needed and students are ready for them.

POLITICAL SCIENCE

***101. GOVERNMENT OF THE UNITED STATES. Four hours.**

A detailed study of the origin of the federal government; the selection and powers of the president; congress, and its relations to the other departments; the federal judiciary; conduct of elections; the actual work of the national government; foreign relations; the preservation of peace and the enforcement of law; the police power and social legislation; relations to the state and local governments.

***102. STATE GOVERNMENT. Four hours.**

The relation of state government to the national government. Common features of state constitutions. The field of state legislation. Operation of the state government and its importance to the individual. The enforcement of laws. Local government and its significance to the individual. State and local finances. Popular participation in governmental activities. Sources of information for a study of state and local government. Plans for making state and local government more efficient. Colorado government will be used constantly for illustrative purposes, although the work will be equally valuable to students from other states.

103. MUNICIPAL GOVERNMENT. Four hours.

The growth of cities; their relation to trade and industry; state control over cities; the development of the American city; services to the people; city planning; the commission form of government; the city manager; other recent movements.

***151. HISTORY OF THE FOREIGN POLICIES OF THE UNITED STATES. Four hours.**

Few Americans are well informed on the foreign relations of their own country. In the past, such relations were not an important part of current political discussion. That day is past. Now there is a growing demand for information upon this subject. Americans are not going to remain longer ignorant of such a vital part of their history. In the near future, school courses in American history will be revised so as to give much more space to this phase of our national experience. With the present agitation for good relations with all nations, this course acquires unusual value. Teachers should know the real contributions of the United States to a better international world order. They should also understand the great foreign problems of their country in the immediate future. Some of the important topics treated are:

Foreign relations under the Federalists; establishment of an American foreign policy; Jefferson and the acquisition of Louisiana; arbitration of boundary disputes; the Monroe Doctrine; the open-door policy; co-operation with other powers in the settling of international problems in Asia, Africa, and Europe; control of immigration; the Hague Conferences; diplomatic organization and procedure; the recognition of new governments; the World Court; the League of Nations; the Washington Conference.

152. INTERNATIONAL RELATIONS. Four hours.

This course deals first with the principles of international laws as they have been embodied in the common practices of nations in the past, included in treaties and applied by courts. Then there is taken up for careful study the modern attempts to establish cooperation among nations, common public opinion, and formal machinery for handling common international problems. Such efforts as the Hague Tribunal, the World Court, the League of Nations, the Pan American Union, the Kellogg Pact and other proposals will be considered.

203. POLITICAL SCIENCE THEORY. Four hours.

This is an introduction to the principles governing the various political organizations. The theories and forms of government, constitutions, and ideals of citizenship are included. The course should be of special interest and value as explanatory of the current political thought relative to democracy and to the radicalism that is expressed in bolshevism and communism and the various phases of internationalism.

*Given also by extension.

HOME ECONOMICS

In cooperation with other departments it is the purpose of this department to train students in daily living, and to prepare them to teach the subject to others.

To this end there are offered courses that relate to the family, to the house, its furnishing and management, to food and nutrition, to textiles and clothing.

Further, there are courses that have to do with questions relating to teaching home economics.

Courses that should be of interest to those who wish to minor in home economics are: 5, 7a, 7b, 7c, 8, 21, 24, 106, 107, 108, 125.

A FOUR-YEAR CURRICULUM IN HOME ECONOMICS

In addition to the core subjects listed on page 7, the following courses are required of majors, 7b, 7c, 21, 22, 23, 24, 27, 100, 102, 103, 104, 106, 107, 123, 125, 140, Ed. 116. If 124 is to be taken students are required to have two years of chemistry previously. Otherwise they will minor in art.

THE FAMILY

8. SOCIAL CUSTOMS AND MANNERS. Two hours.

A course that will discuss good form, as recognized by most civilized people. Demonstrations of accepted procedure in social life.

106. HOME CARE OF THE SICK. Four hours.

This course is open to all senior college students. The aim of the course is to teach girls to adapt the means, usually at hand in homes, to meet emergencies of illness and accident. The essentials of prevention of disease, as well as the care of a patient are taught. Standards as to heat, light, ventilation, and care of a room are included. The making and application of home appliances and remedies are taught. The preparation and serving of correct diets are demonstrated.

108. THE EDUCATION OF THE CONSUMER. Four hours.

A course presenting some of the everyday problems of the consumer, and suggested solutions to these problems, both from current literature and from investigations made by various agencies. The personnel of the class will determine somewhat the line of study to be followed.

109. FAMILY RELATIONSHIPS. Two hours.

The purpose of this course is to discuss the fundamental problems of family life as influenced by the organization and administration of the modern home as contrasted with earlier homes. Some case studies of causes and effects in family stability and instability.

125. CHILD CARE AND CHILD WELFARE. Four hours.

Aims: (1) to give an appreciation of the significance and responsibilities of parenthood; (2) to give a subject matter foundation for the physical care of infants and children; (3) to point out the larger social aspects of the child welfare movement; (4) to discuss methods for conducting child welfare work in home, school and community.

Content: (1) parental and pre-parental education; (2) significance of heredity and eugenics; (3) prenatal care; (4) infant care; (5) child care; (6) nutrition work in schools; (7) problems in organizing and conducting school lunches; (8) organizations, agencies, and legislation concerned with child welfare work; (9) child care courses in elementary and secondary schools.

126. NUTRITION WORK WITH CHILDREN. Two hours.

Causes of malnutrition will be studied and cases observed. Proper standards and correct methods of improving the conditions of under nourished children will be taught. This course will be open to all concerned with the health problems of children.

THE HOME

This division of the subject will include the house, built, bought or rented; its social and economic value and responsibility. It will also include the equipment, arrangement, furnishing, and administration of the house.

7a. EQUIPMENT FOR THE HOME. Two hours.

A course offering practical experience in the testing of various types of labor-saving and labor-expediting appliances. Where consignments of equipment cannot be secured, trips to stores will supply the necessary articles to be studied.

7b. HOUSEHOLD MANAGEMENT THEORY. Two hours.

The study of convenient house plans as they affect the work of the housewife. Routinizing of work, schedules, menus, and market lists are made.

7c. HOUSEHOLD MANAGEMENT. Two hours.

Class limited to twelve. Any student who has completed 7a, 7b, 21 and 22 may live in the cottage and secure this valuable experience. A resident instructor is present to advise, but the entire planning and running of the cottage is in the hands of the students.

104. HOUSING AND HOUSE SANITATION. Two or four hours.

The purpose of this course is (1) to give an appreciation of the importance of good housing in relation to citizenship; (2) to develop ideals of what constitutes a safe and livable house; (3) to recognize the individual's responsibility in demanding houses whose standard will measure up to other American ideals. Emphasizing problems of heating, lighting, ventilating, and disposing of waste in the house is the latter half of this course.

The brief history of the house and housing is meant to insure an appreciation of present conveniences and comforts. A comparison is made of rural and town conditions, with suggestions of ways and means of bettering the country problem. The cost of owning and operating a standard house as compared with renting a similar structure is made vivid by collection of local costs and comparison. The restrictive and constructive local laws relating to property are examined and analyzed. Houses are visited, and score cards are filled with observations and differences. Problems relating to heat, light, ventilation, plumbing and refrigeration are studied and demonstrated. Costs and care are studied.

107. HOME DECORATION. Four hours.

This course includes the problems met with in homes of moderate or small means. Suggestions are given of how one may develop good taste and judgment in the selection and arrangement of furnishings, even though they are simple. This work is further emphasized by a trip to Denver, where leading decorators of the stores demonstrate for the class the latest ideas in arrangement of furniture, draperies and other essentials.

132. THE HOME. Two or four hours.

Not every house is a home, but every home must have a house or shelter.

The purpose: (1) to distinguish a home from a house; (2) to set up some minimum essentials for the successful homemaker; (3) to analyze the complex problems that every family faces and see if there is not some help available in studies of these problems; (4) the American home in the near future; (5) values to be retained; (6) how can we retain them. A study of sources of help available to every family. Case studies of family relationships and analysis of their problems. Remedies suggested by philosophers, educators, and economists. The American's god (\$) compared to simple living with a purpose. Setting up ideals of home worthy of our age and our country.

FOOD AND NUTRITION

21. FOODS AND COOKERY. Four hours.

Special emphasis is placed on the selection and principles involved in the preparation of many types of foods; food preservation; familiarization with the use and care of laboratory equipment and with all available fuels and cooking equipment as gas, electric and kerosene ranges, the fireless and pressure cookers.

22. FOODS AND COOKERY. Four hours.

More complicated cooking processes are undertaken; emphasis is placed on the economic phases of food problems. Food legislation is studied.

23. COOKERY AND SERVING. Four hours.

The types of food prepared in this course include more difficult combinations and require a greater degree of manipulative skill. Practice is given in the planning and serving of well-balanced meals at given costs per capita. The social and aesthetic phases of food service are stressed.

24. ELEMENTARY NUTRITION. Four hours.

Purposes: (1) to give the student a background of the subject matter of nutrition; (2) to train students so that they will be more able to recognize and deal with nutritional problems that might arise in their future teaching; (3) to develop an appreciation of the contribution of food to the diet; (4) to give the student the fundamentals of the school lunch problem; (5) to acquaint the student with the treatment of certain diseases thru diet; (6) to train in methods of teaching nutrition to children.

Topics: assimilation of food in the body; the use of food to give heat and energy, as a body builder, as a body regulator; contribution to the diet made by various types of food materials; construction of an adequate diet for the growing child and the normal adult; methods of training children's good habits; planning the school lunch; methods of teaching nutrition to children; use of food as a prophylactic; dietary treatment of certain diseases.

25. COOKERY AND TABLE SERVICE FOR HOMEMAKERS. Four hours.

A course for non-majors. No prerequisites.

Aims of course: (1) to give some knowledge of the fundamental processes of cookery through the preparation of typical dishes, chosen on the meal basis plan; (2) to give instruction in table service.

Content: dishes suitable for the various meals are prepared with emphasis upon the nutritive needs of the family group. Practice is given in the preparation and service of meals.

121. EXPERIMENTAL COOKERY—Open to graduate students in Home Economics. Two hours.

Prerequisites: H. E. 21, 22, and 23.

Aims: (1) to give the student an appreciation of the field of food research work; (2) to give some training in the technic of food research problems; (3) to make comparative studies of fuels in a quantitative way; (4) to study the efficiency of various types of kitchen equipment; (5) to study and compare the value of cookery processes and methods; (6) to make comparative studies of some standard food products.

Content: Discussions and laboratory work to carry out the above aims.

123. DEMONSTRATION COOKERY. Two hours.

Prerequisites: H. E. 21, 22, and 23.

Aims: (1) to broaden the student's experience by affording an extensive range of applications; (2) to increase skill in technic; (3) to increase self-confidence; (4) to fit students to do community work as demonstrators.

Content: (1) types of demonstrations; (2) opportunities in field of demonstration; (3) characteristics and training essential to demonstrator; (4) problems the demonstrator has to face; (5) observation of demonstrations; (6) practice in demonstrations.

124. DIETETICS. Four hours.

The completion of chemistry is prerequisite. Aims, to consider (1) the nutritive values of carbohydrates, fats, proteins, ash constituents, and vitamins; (2) the digestive process; (3) metabolism; (4) physiological requirements of individuals throughout all age periods; (5) principles which govern the choice of food under varying conditions such as age, occupation, health, and disease; (6) to give practice in planning and preparing dietaries for individuals and for family groups.

Content, a study of the subject matter included in the above aims. Dietaries are planned and prepared to meet the needs of individuals from infancy through old age, also family dietaries which fulfill the requirements of each member with consideration as to cost.

TEXTILES AND CLOTHING**1. PATTERN DESIGNING. Two or four hours.**

At least two hours are required of all freshmen majors.

Purpose: (1) to enable students to cut any pattern they need; (2) to teach the modification of any bought pattern either for different sizes of figures or for varying styles of ornamentation; (3) to assist students in costume cutting; (4) to teach the correct effects versus the grotesque effects of lines in garments as caused by pattern cutting; (5) to insure

economy of goods by use of exact patterns (Paper costs less than silk goods); (6) to develop latent talent for design in students; (7) prerequisite to dressmaking.

The course begins with a study of the dress forms, and the planes of the body whose measurements determine bust, waist, hips, etc. The vertical measurements and prevailing silhouette are made plain. Student measures are taken. Patterns are cut for ideal figures and for individual figures. The work is taught in such a manner as to serve the most practical uses. Correct position of waist lines, becoming length of skirts, and neck lines to suit the face of the wearer are all observed. Patterns from this course are saved to use in the course following.

2. TEXTILES. Four hours.

Required as a prerequisite to all of the clothing work for majors. Other students are welcomed into the course, which is worthwhile to all who must select household fabrics of any kind. The hygienic qualities of various fabrics are stressed.

This course provides opportunity to study all of the commonly used fibers, and to examine critically fabrics that are found in every household and in most of our wardrobes. "Your money's worth" in fabrics may mean more money for other necessities. The study of ways of producing fabrics helps determine the quality, finish, possible adulteration, and relative costs. The course includes lectures, laboratory, and field work. Twenty-four is a full class.

3. GARMENT MAKING. Four hours.

H. E. 2 should precede this course. The fundamentals of plain sewing are taught as they should be presented in senior high school. Undergarments or sleeping garments are completed in the first half of the quarter; a light weight, wool flannel dress, the second half of the quarter. This course also consists of a study of the proper methods of storage of clothing, underwear, hats, shoes, gloves, and dresses; seasonal storage of furs; how to take care of clothes; cleaning various fabrics; ways of removing stains; mending and darning of all wearing apparel; suggestions for remodeling clothes; the plan for a workable clothing budget for a college girl; shopping tours in which shopping manners are practiced, showing courtesy and consideration to the clerks; homemade versus ready-made garments; rules for home sewing, including alteration of pattern, cutting, basting, and fitting garments with application of types of seams to garments; finishing and pressing garments. Illustrative material for teaching is made in this course.

4. ELEMENTARY DRESSMAKING. Four hours.

This course is open to those who can do simple sewing. Limited to twenty.

The purpose of the course is (1) to give the student some knowledge of the teaching of clothing; (2) to distinguish between fashion and style; (3) to recognize real needs as opposed to imaginary needs; (4) to analyze, from all angles, exact needs, and to buy accordingly; (5) to appreciate the steps in production of a good garment; (6) to count the cost of individual time spent at home in making a garment as compared to cost of similar ready-made garment; (7) to develop standards of workmanship; (8) to develop enough skill to aid in economy and appreciation of clothing; (9) the correct dress of a teacher.

Steps taken: (1) selection of color, line, and fabric; (2) adapting pattern to material; cutting garment; (3) the making of a tailored sport dress in suitable silk fabric (this is entirely a machine problem); (4) the teaching of the use of all attachments of the sewing machine, and the preparation of illustrative material for teaching. This course proves to students their ability to select and make as chic a garment as they can buy, and still have money left for other uses.

5. DRESS APPRECIATION. Four hours.

This course gives a practical working knowledge of the following points concerning clothing: (1) the clothing needs of a young woman on entering college; (2) the allowance justified; (3) the choice of fabrics suited to climate, season, use, circumstances, and individual; (4) testing fabrics for value; (5) shopping trips to compare prices; (6) psychology of dress given as preliminary to several lessons; (7) the part dress plays in self confidence, social advancement, business success, conduct, and activity; (8) the cost of producing a good ready to wear garment; (9) the wholesale marketing of garments; (10) the retail marketing of garments; (11) the cost of producing a homemade garment; (12) substitutions to be made for economy's sake—cotton for linen, woollens for worsted, artificial silks for silks, cotton underwear for silk; (13) the art of wearing clothing—charm, grace, and beauty; (14) clothing for various occasions; (15) colors to choose, and to avoid; (16) line for the individual; (17) accessories of dress; (18) finesse in buying clothes, and the value of a budget as a check on extravagance.

100. MILLINERY. Four hours.

The object of this course is (1) to teach the selection and appreciation of appropriate, comfortable, and becoming millinery; (2) to teach discrimination in values; (3) to enable students to make or alter hats for economy's sake; (4) to prepare to teach such principles of hat making as the high school students would need to know.

The course includes (1) a study of shapes as related to faces, figures, fabrics, and uses; (2) a study of color as suited to individuals, uses, seasons, etc.; (3) the measuring, cutting, shaping, and adapting of designs to members of the class; (4) making of simple, soft hats of fabrics in season and in style—such as felt, velvet, and braids; (5) the construction of molds, making bows, platings, cabochons, buckles, and other types of trimming. Renovation of materials.

102. CHILDREN'S CLOTHES AND APPLIED DESIGN. Two or four hours.

This course stresses the importance of the selection or adoption of appropriate designs to the garment or household linens under discussion. Color, texture, price, and fashion all enter into the problems undertaken.

All household linens with questions relative to their finishes and ornamentation are taught. Designs are made for specific pieces and are started in class, to be completed at leisure. Children's clothes are planned and made of popular fabrics with correct applied designs.

103. COSTUME DESIGN. Four hours.

Purpose: (1) to teach the application of art principles to the choice and making of clothes; (2) to lead students to consider carefully the expenditure of their own means; (3) to study silhouettes, as well as features and coloring in determining what they shall wear; (4) to determine the effects of certain lines, colors, fabrics and finishes in their own and others' costumes; (5) to learn what should be worn for such occasions as they are likely to attend; (6) to consider the costume as a whole, not neglecting minute details; (7) to prepare them to teach others some part of the problem. The course includes a brief survey of costumes of all times as they have influenced or expressed the morals and manners of all ages. The present types of dress and their designers are considered and compared with the most artistic of all times. Line, color, fabric, accessories and their effects are applied to individual problems. Specific problems are sought and solved. Designs are made to suit the members of the class, and to suit various occasions. The wardrobes for various ages and stations in life are planned.

105. ADVANCED DRESSMAKING. Four hours.

The purpose of this course is to increase the student's confidence in her ability to make one of her best dresses at a cost that is less than half she would have to pay for a similar garment that does not compare in quality. Into this work she brings the training of all her previous courses of design and sewing. Care is taken that the costume as a whole is planned with accessories to match so as to insure unity throughout.

Because the garment in question does not offer an opportunity to learn a number of the customary finishes to fine dresses, a preliminary practice on these finishes is given in materials that enable the student to copy almost any type of dress. The practice materials are valuable as illustrative materials in her teaching.

OBSERVATION AND METHODS**27. OBSERVATION AND METHODS FOR THE ELEMENTARY CLASSES IN HOME ECONOMICS. Two hours.**

A course presenting methods of teaching elementary home economics. Organization of subject matter, planning lessons, and observing actual teaching with subsequent comments and discussions. Special methods for specific problems. Illustrative materials developed and worked into lesson plans.

140. METHODS OF TEACHING HIGH SCHOOL HOME ECONOMICS. Four hours.

This course is open only to home economics majors.

The purpose: to familiarize students with the best sources of help in the work; to discuss problems common to the work and suggest means of solution; to review the ground covered by the pathfinders and subsequent workers, pointing out possible developments in future; to familiarize them with general and specific objectives as well as means of securing these in their teaching; to teach methods of curriculum construction—working out a definite course of study that will apply to a given locality; to consider the related subjects of a curriculum as a means of clarifying their subject; to consider professional growth as an obligation to a teacher; to visit classes and schools as a source of suggestion and questions. These goals are approached by means of lectures, reports, surveys, discussions, reading and trips to schools and classes.

INDUSTRIAL EDUCATION

The aim of the department is to prepare teachers for the public schools, teachers colleges and supervisors in the field of industrial education.

The curriculum is varied, giving the student an understanding of practical and technical phases in the field of his major interest and the broader historical and philosophical background for the better understanding and interpretation of the teaching processes.

Emphasis is placed on the major industrial interests that have found a place in the curricula of the public schools of the nation. The college has a superior complete public school unit, in which college students may observe and teach industrial work, under supervision. The department has a complete shop equipment and teachers for technical courses listed on the following pages.

A FOUR-YEAR CURRICULUM IN INDUSTRIAL EDUCATION

In addition to the core subjects listed on page 65, the following courses are required of majors in the department: Industrial Education 5, 6, 104, 108, 119, 126, Ed. 116, and Ed 141 (for men), and at least eight hours in each of the following industrial fields: drafting, metal working, wood-working, printing, and bookbinding.

All students majoring in the department are required to select a minor of at least twelve quarter hours in some other department, a departmental major of twenty to twenty-four hours and a departmental minor of sixteen to twenty hours from the fields listed below.

DRAFTING

Industrial Education 10, 11, 12, 13, 105, 117, 118.

METAL WORKING

Industrial Education 8a, 8b, 109a, 109b, and 4 hours in art.

WOODWORKING

Industrial Education, 1, 2, 14, 19, 103, 107, 121.

BOOKBINDING

Industrial Education 41, 42, 43, 44, 143, 144, 145.

PRINTING

Industrial Education 31, 33, 34, 36, 132, 133, 136.

1. CONSTRUCTIVE WOODWORKING I. Four hours.

This course is so arranged as to fill the needs of both majors in industrial education and those taking the work as an elective. The course embraces both theoretical and practical phases of the subject.

2. CONSTRUCTIVE WOODWORKING II. Four hours.

This course is a continuation of Constructive Woodworking I and leads the student into more advanced problems, both practical and technical.

5. HISTORY OF INDUSTRIAL EDUCATION. Two hours.

Early outstanding examples of attempts to organize industrial courses in principal European countries. Reasons why such courses were planned, types of people for whom organized, and the courses of study and objectives. Particular emphasis on the influence of particular European countries on industrial schools and courses in the United States.

6. TEACHING IN JUNIOR HIGH SCHOOL. Two hours.

This course is planned to cover four rather definite, but not hard and fast, items in teaching. What are we going to teach, what are we going to teach with, how are we going to teach, and how are we going to measure the student's progress in the field.

All four of the items listed involve an investigation of what has been taught in particular fields and what work seems to lend itself best as a teaching unit in industrial education work, the selection of illustrative materials and equipment, how problems have been and are being attacked and devices and plans for measuring abilities and progress of individual pupils.

8a. ART METAL I. Two or four hours.

This course is planned as an introductory course in copper and brass work as it may be introduced into the public school. The work is planned so as to suggest minimum and more extensive equipment and point out some of the possibilities of such a course in public schools. The purpose of the technical phases of the course is to make clear methods and processes that may be applied in the working out of simple artistic problems. In general, the problems of equipment, materials, and their use in design, etching, piercing, bending, shaping, planishing, and raising are considered.

8b. ART METAL II. Two or four hours.

The general topics discussed and technically worked out are similar to those worked out in the first course. Emphasis is placed on the correlation of metal work and design showing the possibilities and limitations of design as applied to soft metals. A discussion of the commercial forms of copper and alloys of copper such as brass, aluminum, bronze, german silver and their possibilities in craft work. The technical work involves simple problems in etching, soft soldering, lapping, bending, saw-piercing, annealing, seaming, raising, planishing, outline chasing, recessing, hard-soldering, and coloring.

10. PRINCIPLES OF DRAFTING. Two or four hours.

The course is planned to show that drawing is a language to express and record ideas and information necessary for the building of machines and structures by outline alone, giving exact and positive information regarding the work to be executed. The course is planned to present the technic of expression through the use of drawing instruments in the accurate laying out and executing of problems in lettering, geometric construction, orthographic projection, pictorial representation, developed surfaces, dimensioning, and working drawing.

11. PROJECTION, SHADE, AND SHADOW. Two or four hours.

The purpose of this course is to give a working knowledge of the fundamentals of orthographic projection, that is, the planes of projection, the projection of points, lines, surfaces and solids on the coordinate and auxiliary planes. The subject of shade and shadow as an application of orthographic projection, in the use of conventional pictorial methods, showing its advantages, disadvantages, and limitations in drawing.

12. PRINCIPLES OF ARCHITECTURAL DRAWING I. Two or four hours.

The characteristics of architectural drawing, kinds of drawings, preliminary sketches, and display drawings, as embodied in a working drawing of a simple frame structure, which includes the general considerations, plan of site, floor plans, framing plans, laying out of plans, methods of sectioning, detailed drawings, details of building construction, different forms of foundation, floor, and wall construction for buildings with and without basement; special features, the use of symbols, the correct dimensioning of drawings as used in building construction, notes and specifications, and the types of lettering commonly used in architectural drawings are some of the problems commonly discussed and technically worked on in this course.

13. PRINCIPLES OF ARCHITECTURAL DRAWING II. Two or four hours.

This course is a continuation of Principles of Architectural Drawing I, but deals with the designing of buildings for public purposes and includes framing for larger building, detail of plans for large opening, slow burning and fireproofing structures, ventilation, heat, light, general arrangement of the building for the purpose intended; city ordinance demands regarding walls, door openings, fire escapes; specification and a pictorial representation in pencil of the structure proposed.

14. CARE AND MANAGEMENT. Two or four hours.

This course is designed to train students to care for, repair, and adjust hand and power tools used in woodworking.

19. WOODTURNING. Four hours.

The aim of this course is to give the students a knowledge of the woodworking lathe, its care, use, and possibilities. Different types of problems will be solved, that is, cylindrical work, working to scale, turning duplicate parts, and assembling, the making of handles and attaching them to the proper tools. Special attention will be given to the making of drawings of a kind used in woodturning.

31. ELEMENTS OF PRINTING I. Two or four hours.

Courses 31 and 32 are consecutive courses and are planned to give the student the technical background upon which all type composition rests. This course covers the use of the various tools, equipment, materials, and the fundamentals of plain type composition. The student sets simple jobs and carries them through the different stages from composition to making ready and printing on the press. Methods of teaching these elements are also stressed.

32. ELEMENTS OF PRINTING II. Two or four hours.

A continuation of Course 31. The student is given further work in the fundamental technic involved in producing printed matter. More complicated jobs involving the use of rule and tabular work, borders, and ornamental materials are set.

33. PRINCIPLES OF PRINTING DESIGN. Two or four hours.

This course is a continuation of Course 32 in that it builds upon the student's knowledge of and ability in the use of type, tools, and materials, in teaching him the elements of good design in printing. Proportion, balance, simplicity, harmony of shape and tone, ornamentation, etc., are specifically dealt with as the student designs, sets, and prints complete pieces of work.

34. INTERMEDIATE PRINTING I. Two or four hours.

Courses 34, 35, and 36 aim to give intensive work in job composition. This course offers advanced technical work in the fundamental mechanical processes in printing. It stresses the principles of good design and workmanship. Practical work with tickets, cards, letterheads, labels, etc., form the basis for the student's work.

35. INTERMEDIATE PRINTING II. Two or four hours.

A continuation of Course 34, to cover the design and printing of title pages, cover pages, posters, menus, programs, etc. The student is introduced to the use of color and the make-up of color forms more fully than in any of the preceding courses.

36. INTERMEDIATE PRINTING III. Two or four hours.

While this course gives further training in the designing and producing of the various types of work dealt with in courses 34 and 35, it lays particular stress upon the composition of difficult and extensive pieces of job composition and the efficient laying out and planning of such work. More press work is done than in previous courses.

41. ELEMENTARY BOOKBINDING AND LEATHERCRAFT. Four hours.

This course aims to introduce all the tools and equipment necessary in elementary bookbinding and leathercraft, also the terminology of materials used, the making of some articles in leathercraft and binding of small volumes.

42. ELEMENTARY BOOKBINDING AND LEATHERCRAFT. Four hours.

Full buckram magazine bindings and care and repair of books. Beginning hot and cold tooling—a continuation of leathercraft. Pattern making for leathercraft and tooling. Use of air brush.

43. INTERMEDIATE BOOKBINDING AND LEATHERCRAFT. Four hours.

Half and full leather bindings in morocco, calf, and cow hides. Leather tooling and design. Elementary gold stamping on lettering machine. This course deals with the preparation and organization of problems, planning of technical work, carrying out designs, and selection of all types of materials and methods of construction. Simple book edgings.

44. INTERMEDIATE BOOKBINDING AND LEATHERCRAFT. Four hours. On request.

This course takes up the binding of extra large volumes requiring special sewing and make-ready necessary in the building of large volumes. Deals with advanced steps in half and full leather bindings, tooling, stamping, and titling.

100. WOOD SHOP PROBLEMS. Four hours.

Fee.

This course is designed to furnish an opportunity for students to become acquainted with the more advanced phases of technical shop practice as they are worked out in the school or factory.

103. METHODS IN WOODWORKING. Four hours

This course deals with methods in the handling of school woodworking from the construction and equipping of the shop to the actual work done through the grades, junior high, and high school classes.

104. DEVELOPMENT OF VOCATIONAL EDUCATION. Two hours.

A course dealing with the vocational problems that have come to the front because of the reorganization of the old plans for the education of the young people of the country. It deals in a somewhat general way with new phases of education fostered by federal, state, and private funds.

105. PRINCIPLES OF ARCHITECTURAL DRAWING III. Four hours.

This course is designed to give some understanding of outstanding historic building units handed down through the ages and applications in modern building. The technical work in sketches and measured drawings of columns, capitals, arches, vaults, buttresses, windows, etc., and their application in modern building. The work is extensive rather than intensive in its fundamental aspects.

106. SCHOOL AND SHOP EQUIPMENT CONSTRUCTION. Four hours.

This course has for its base the construction of various types of equipment both for the woodworking laboratory and other departments of the school. In this course, machine work prevails wherever possible.

107. WOODWORKING CLASS PROJECTS. Two or four hours.

The purpose of this course is to train the student in planning, designing, and carefully working out suitable projects to construct in elementary, junior high, and high school classes.

108. TEACHING VOCATIONAL SUBJECTS. Two hours.

The problems in this course deal with new types of teachers, new types of education, new kinds of schools. For example, the adolescent school, the vocational school, and the training of teachers for positions in schools of less than college grade that prepare for particular vocations.

109a. ART METAL AND JEWELRY I. Four hours.

Planned for the further study of problems of the type developed in Art Metal II, and the making of jewelry in more precious materials. Many attractive designs of the old crafts may be adapted or applied in the making of products in the schools. No other craft calls for such fine practice in design and handling of materials used. Some of the topics presented in the course are precious metals, semi-precious stones, stone setting, and the processes of designing, sawing, filing, embossing, and soldering.

109b. ART METAL AND JEWELRY II. Four hours.

A continuation of 109a, Art Metal and Jewelry I, and involves advanced processes in stone setting, including shaping, doming, measuring for a bezel, soldering of bezel and assembly soldering. Further problems in wire work, settings, enameling, and casting with sand and other materials.

110. SHEET METAL. Four hours.

This course is planned to give practice in the fundamental technical experiences common to sheet metal shops.

Good design and the application of sheet metal drafting in the fields of mathematics and mechanical drafting are emphasized. Prerequisites are Industrial Education 8a, 10, and 11. This course may be continued for four additional hours as Industrial Education 111.

117. MACHINE DRAWING I. Four hours.

Involves, in the practical application of the language of drawing, the need for the representation of fastenings and the methods of fastening parts together with permanent and removable fastening and a knowledge of the fundamental forms of these fastening parts and familiarity with the conventional methods of their representation in drawings. Technical exercises include sketches, tracings, and drawings of parts and assembled drawings.

118. MACHINE DESIGN II. Four hours.

A study of the transmission of motion by belts, pulleys, gears, and cams. The technical work involves the solution of problems in the fields enumerated above.

119. APPLIED ORNAMENT. Two hours.

Attempts to bring before the students a few of the most prominent styles of ornament which are closely related to each other in which certain general laws seem to reign independent of the individual characteristics of each. We hope that such a course may aid in arresting the unfortunate tendency in some industrial courses to be content with copying poor or even good design. Examples are to be taken from materials found in the great arts that have contributed to the comfort and wellbeing of peoples. Such illustrative materials will be taken from furniture, rugs, china, metal work, and jewelry. Lecture recitation, projectoscope, and slides. Open to all students of the College.

120. ADVANCED WOODTURNING. Four hours.

The topics emphasized in this course will include woods best suited for various work; glue, varnish, shellac, dowels, draft, shrinkage, and finish. The practical work will consist of patterns for hollow castings, building up and segment work.

121. ADVANCED CABINET MAKING. Four hours.

The course is planned to cover advanced phases of cabinet work, including paneling, dovetailing, secret nailing, and key joining. These technical processes will be worked out on individual projects.

124. MACHINE WORK. Four hours.

This course is designed to give the student a general knowledge of the care and operation of woodworking machinery. The setting of cutters and their manipulation embraces the general basis of this course.

125. CLASS MANAGEMENT IN WOODWORKING. Four hours.

The purpose of this course is to give the student a thorough knowledge of the handling of an advanced class in woodworking and also give him an opportunity to gain a better understanding of the handling of high grade material than could be gained by working in elementary or secondary classes. Hours to be arranged with individual students.

126. HISTORY OF ARCHITECTURE. Two hours.

A nontechnical course preparatory to further technical study for those so desiring.

Civilization and human progress have, in the main, followed the course of the sun. In the East arose those nations and cities from which other nations have derived a part of their civil institutions, their religion, and culture. This course is planned to study architecture largely from the standpoint of world history, reading into their great monuments the feelings and aspirations of the people who erected them.

Technically, we will trace various forms and structural phases of architecture as they have appeared from the early past down to the present, noting the fundamental considerations that have played a superior part in the building of great monuments. Illustrated with lantern slides. Open to all students of the College.

132. ADVANCED PRINTING I. Four hours.

This course assumes that the student through previous courses has acquired technical skill with type and a thorough understanding of the principles of good design in printing. He now proceeds to put these into practice in large printing projects. The aim is to produce work of considerable artistic merit. Discussion and criticism of jobs are features of the course. An intensive study of papers and inks is made.

133. ADVANCED PRINTING II. Four hours.

An intensive study of cuts and the cutting and printing of linoleum blocks are stressed in this course. Advanced press work in the printing of blocks and cuts has a prominent place. Hand lettering and its application to the printed page are also dealt with.

135. COST ACCOUNTING IN PRINTING. Two hours.

This course is intended to familiarize the student with the costs involved in printing. Practical work in estimating and figuring jobs is featured.

136. SHOP MANAGEMENT IN PRINTING. Two hours.

This course stresses the business side of equipping and managing the school shop. Practical experience is given in the keeping of records and accounts, the purchase of materials, and the planning and laying out of equipment. Students are encouraged to work out original ideas, intended to increase the shop's efficiency from both a commercial and teaching viewpoint.

137. PRINT SHOP PROBLEMS. Four hours.

A course designed for the student who wants to get a deeper practical insight into actual problems of care, management, and instruction confronted by the teacher of printing. Practical experience in assisting the instructor in dealing with such problems is given the student.

138. SUPERVISORY PRINTING. Four hours.

An over-view course designed for those who desire to get not only a speaking acquaintance with type, tools, processes, equipment, and materials of a print shop, but who want to know something of the function, place, and proper conduct of the school shop in a school system. A general, rather than a detailed technical knowledge of the shop is stressed.

143. TEACHING OF BOOKBINDING. Four hours.

A practical course in classroom management and fundamentals of teaching binding and leathercraft, care of equipment, and materials. Laboratory and lecture.

144. ADVANCED OVER-VIEW IN BINDING AND LEATHER WORK. Four hours.

Takes up all types of folder, novelty, and specialty problems in leather, fabricoid, or buckram. An over-view of all work showing the possibilities of the equipment from numerous angles, fitting the student for both high school and college teaching.

145. SHOP ACCOUNTING AND MATERIALS IN BOOKBINDING. Four hours. On request.

Science of shop accounting, purchasing of materials and equipment for the classroom. Production estimating, cost and upkeep expense. Department floor plans. Laboratory and lecture.

146. HISTORY OF BOOKBINDING. Two hours. On request.

This course deals with the methods applied and materials used in ancient, medieval, and modern bindings. Takes up hand lettering, tooling, and designs in gold, the making of gold edges, and also the art of marble and wax edge making. Laboratory and lecture.

150. AUTOMOTIVE MACHINERY I. Two or four hours.

An actual shop experience course including overhauling and repairing cars. This is a cooperative course, work being carried on in commercial repair shops of the first class. Opportunity for practice work in general repair and the overhauling of automobiles.

201. SEMINAR IN INDUSTRIAL EDUCATION. Four hours.

This course has for its purpose individual research in the field of industrial education. Problems to be selected upon consultation with instructor in charge. Conference hours to be arranged. This course may be continued for four additional hours as Industrial Education 203.

204. DEVELOPMENT OF VOCATIONAL EDUCATION. Two hours.

A continuation of Industrial Education 104.

208. TEACHING VOCATIONAL SUBJECTS. Two hours.

A continuation of Industrial Education 108. The problems in this course deal with new types of teachers, new types of education, new kinds of schools. For example, the adolescent school, the vocational school, and the training of teachers for positions in schools of less than college grade that prepare for particular vocations.

222. INDIVIDUAL STUDIES IN INDUSTRIAL EDUCATION. Two or four hours.**223. RESEARCH IN INDUSTRIAL EDUCATION. Four hours.**

Taken in the first quarter of graduate work.

This is a required seminar and conference course for graduate students who are working on their masters' investigations. The director of educational research meets the group three times each week and confers with individual students in the research office. Small group conferences are held when needed. Each student meets his thesis adviser regularly.

224. RESEARCH IN INDUSTRIAL EDUCATION. Four hours.

This course is intended primarily for graduate students working on their masters' theses.

225. RESEARCH IN INDUSTRIAL EDUCATION. Two hours.

A continuation of Industrial Education 224.

LIBRARY SCIENCE

The main Library of the College contains about 67,500 volumes with a large picture collection and all equipment for a very complete library. There is also a children's branch containing about 5,000 volumes for the use of the Training Schools. Good facilities are offered for classes in library training.

Library Science is not offered as a major course. The classes are given as supplementary to the general work of the teacher, and would be of particular value to the teacher in the high school. These courses may be taken as electives by any student. The following courses are now offered:

102. THE LIBRARY AND ITS USE. Four hours.

A general outline of study intended to familiarize students with elementary library methods, and with sources for advantageous use of any library.

104. REFERENCE WORK. Four hours.

The subject covers a study of the standard works of reference, such as the principal encyclopedias, dictionaries, atlases, and reference manuals of various kinds. Periodicals as reference material. Periodical indexes and aids. Bibliographies and reading lists. Selection of public documents and their use for reference.

106. CHILDREN'S LITERATURE AND JUVENILE LIBRARY SERVICE. Four hours.

A survey of the field of literature for children, and its selection for juvenile libraries. History of children's literature. Modern illustrators. School libraries and equipment.

MATHEMATICS

All courses are given strictly from the professional point of view. In those which emphasize subject matter the material is presented in such a way as both to illustrate the best methods of teaching and to give a real mastery of the most important parts of the subject under consideration. In the courses that emphasize methods subject matter still plays a part, for no instruction in method can be effective unless it is based upon a genuine knowledge of the subject matter to be taught.

It has been found that freshmen desiring to major in mathematics fall into two groups: those who have had two and a half, or more, years of high school mathematics, and those who have had a less amount. These two groups are divided during their first year. Those who have a good knowledge of elementary algebra are encouraged to take general mathematics, while those who have had only about one year of elementary algebra are encouraged to take a year in algebra and trigonometry before taking up general mathematics.

A FOUR-YEAR CURRICULUM IN MATHEMATICS

In addition to the core subjects listed on page 65, the following courses are required of majors in the department: Math. 1, 2, 3, (unless excused), 5, 6, 9, 101, 102; Physics 1; Ed. 116, and Ed. 141 (for men), and four hours from the following: 104, 105, 107, 108, 109, 110.

Each student must select a department in which to minor, and take at least twelve hours in that department.

***1. COLLEGE ALGEBRA. Four hours.**

This course is designed to give a real understanding of the most useful parts of algebra. It emphasizes the fact that algebra is an understandable and sensible subject. The student is led to think his way through each topic. At the same time the professional viewpoint is constantly kept in mind. The subject matter covered includes the fundamental operations, formulas, the equation, the graph, exponents and the solution of problems, all treated on a higher level than that of the high school course.

***2. TRIGONOMETRY. Four hours.**

This course deals with the definition of the trigonometric functions, their use in the solution of right triangles, the use of the natural values of the functions, and the use of logarithms, general formulas, and the solution of oblique triangles.

***3. COLLEGE ALGEBRA. Four hours.**

This course is a continuation of Mathematics 1 and is conducted on the same plan. It treats of quadratics, logarithms, higher equations, the progressions, combinations and permutations.

4. TRIGONOMETRY. Four hours.

A continuation of Mathematics 2. It deals with applications of the solution of the right and oblique triangle to problems obtained from field measurements. The surveyor's transit and steel tape are used to secure real problems, thus giving a vitality to the course that is lacking when it is made purely a textbook study. Students are encouraged to use the slide rule throughout the course.

***5. GENERAL MATHEMATICS. Four hours.**

Courses 5 and 6 are designed to give the student a comprehensive view of the field of elementary mathematics and its application to the problems of real life. They treat mathematics as a unit rather than as a series of separate and distinct subjects. Freshmen who have had a year and a half or two years of high school algebra are advised to take general mathematics instead of Mathematics 1 and 2. Mathematics 5 deals with functions and graphs, trigonometric functions, exponents and logarithms, straight line formulas, quadratic functions, and an introduction to the theory of equations.

***6. GENERAL MATHEMATICS. Four hours.**

A continuation of Mathematics 5. It treats of the use of determinants, the elements of differentiation and integration, polar coordinates, progressions, interest formulas, and the binomial theorem.

8. SURVEYING. Four hours.

This course gives a real knowledge of the applications of trigonometry to the problems of indirect measurement and a clear understanding of computation from measurements actually made in the field. It deals with the use of surveyor's instruments, running grades, land surveying, city surveying and related problems.

***9. ANALYTIC GEOMETRY. Four hours.**

This course is designed to give the student a broader and more thorough knowledge of the analytical method as applied to geometrical problems than he has been able to get from his course in general mathematics or elsewhere. It deals with equations and their graphs, the straight line, the circle, the other conic sections, transformation of coordinates, polar coordinates, and tangents and normals.

10. MATERIALS AND METHODS OF ARITHMETIC IN THE GRADES. Two hours.

This course is designed for those who expect to teach arithmetic in the first six grades. It treats the subject matter of arithmetic from the professional point of view. The student becomes familiar with the actual subject matter she will have to teach, best methods of presenting it and the psychological and educational problems that bear upon the teaching problem.

11. MATERIALS AND METHODS OF ARITHMETIC IN THE GRADES. Two hours.

A continuation of Math. 10.

*Given also by extension.

12. SOLID GEOMETRY. Four hours.

This course is designed for those who expect to teach solid geometry in high school. It treats of the ordinary propositions and exercises of the subject but places emphasis upon the way to make the material vital and interesting.

***101. DIFFERENTIAL CALCULUS. Four hours.**

A knowledge of the calculus is necessary to anything like a real appreciation of the power of mathematics. This course gives the student an introduction to this powerful branch of the subject he plans to teach. It takes up the meaning of the derivative, the value and development of the formulas, the application to problems involving slopes, maxima and minima, and mechanics.

***102. INTEGRAL CALCULUS. Four hours.**

A continuation of Mathematics 101. It introduces the problem of integration and applies it to areas, volumes and other practical matters. Both 101 and 102 help the prospective teacher to see what parts of elementary mathematics play a really important part in higher mathematics and its applications.

***103. THEORY OF EQUATIONS. Four hours.**

This course deals with the function and its graph, complex number and its graphic representation, cubic and quartic equations, symmetric functions, and determinants.

***104. THE TEACHING OF ARITHMETIC IN PRIMARY GRADES. Two hours.**

This course and Mathematics 105 are designed primarily for those who have a good knowledge of the subject matter of arithmetic and who wish to give their time largely to consideration of actual problems of how the subject may be most effectively taught. They treat of questions concerning the course of study, analysis of skills into their component parts, development of skill through drills, methods of teaching the various facts and skills, methods of securing interest, and diagnostic testing and remedial teaching.

***105. THE TEACHING OF ARITHMETIC IN THE INTERMEDIATE GRADES. Two hours.**

This course deals with the best methods of teaching Arithmetic in the fourth, fifth, and sixth grades just as 104 deals with those of the first three grades.

106. DESCRIPTIVE ASTRONOMY. Four hours.

This course gives an introduction to the old but always interesting science of astronomy. It makes the student familiar with the principal astronomical facts about the earth and the other planets and their satellites, enables him to find the principal constellations and to point out their most interesting features, and gives him a new respect for the greatness of this universe of which our little globe is so insignificant a part.

***107. TEACHING JUNIOR HIGH SCHOOL MATHEMATICS. Four hours.**

In this course the student is made familiar with the subject matter he will be expected to teach to children in the upper grades or the junior high school, especially the part involving arithmetic. He takes up such subjects as percentage and interest from an adult's point of view but considers at the same time how these subjects may best be taught to the child in the seventh or eighth grade. The aim of the course is to give him a better grasp on the subject matter than he ever had before and at the same time to show clearly how the material studied may be made most valuable to boys and girls not only in their present stage of development, but in their later lives as well.

108. TEACHING OF JUNIOR HIGH SCHOOL MATHEMATICS. Four hours.

A continuation of Mathematics 107. It centers attention upon the problem of teaching that body of algebraic and geometric material which is now being taught to children in the seventh, eighth and ninth grades. The geometry is mostly intuitive in its nature while the algebra deals with formulas, equations, graphs and signed numbers.

***109. THE TEACHING OF ALGEBRA. Four hours.**

Algebra has probably suffered more from poor teaching than any other branch of mathematics. This course aims, first, to give the student a clear knowledge of what algebra is all about, and second, to help him

*Given also by extension.

to see how it can be made vital and interesting to the average boy or girl. It treats of the subject matter needed in an up-to-date algebra course and presents that subject matter in a way calculated to make it thought provoking and understandable.

***110. GEOMETRY FOR TEACHERS. Four hours.**

This is another professionalized subject matter course. It aims to deal with real geometry but to treat it from the standpoint of the prospective teacher. It tries to develop real power in handling geometric material, to exemplify best methods of conducting a class, and to show what geometry may be expected to do for the pupils.

***111. THE HISTORY OF MATHEMATICS. Two hours.**

This course is designed to give the prospective teacher of mathematics a knowledge of the interesting story connected with the development of mathematics from its earliest known beginnings up to the present time. It emphasizes especially those items that can be used to stimulate interest in the subject on the part of students. It covers such topics as the development of our number system, the growth of mathematical symbols, how our forefathers computed, and items from the lives of great mathematicians.

112. THE SLIDE RULE AND OTHER MATHEMATICAL INSTRUMENTS. Two hours.

This course gives the student a knowledge of the theory of the slide rule as well as enough practice with it to enable him to use it with profit and ease. It also deals with such other instruments as the micrometer, the sextant, the transit and the level.

***200. ADVANCED CALCULUS. Four hours.**

This course gives opportunity for an extension of the knowledge of calculus gained in 101 and 102. It deals mostly with applications of differential and integral calculus to problems arising in geometry, mechanics and physics.

***201. DIFFERENTIAL EQUATIONS. Four hours.**

This course leads to an understanding of the differential equations, its solution and its simpler applications.

222. INDIVIDUAL STUDIES IN MATHEMATICS. Two or four hours.

223. RESEARCH IN MATHEMATICS. Four hours.

Taken in the first quarter of graduate work.

This is a required seminar and conference course for graduate students who are working on their masters' investigations. The director of educational research meets the group three times each week and confers with individual students in the research office. Small group conferences are held when needed. Each student meets his thesis adviser regularly.

224. RESEARCH IN MATHEMATICS. Four hours.

This course is intended primarily for graduate students working on their masters' theses.

225. RESEARCH IN MATHEMATICS. Two hours.

A continuation of Mathematics 224.

MUSIC

The Department of Music is maintained primarily in order that teachers may be thoroughly trained to teach music in the public schools. The student life of the College is influenced directly by the large part music plays in all the student activities. It is necessary to maintain a large and highly trained music faculty in order properly to educate the public school music supervisor. Thus, it becomes possible to offer high-class instruction to those who are interested in the study of vocal and instrumental music.

Student recitals are given which provide the students an opportunity to appear in public. During the school year an oratorio is given by the College chorus, and the glee clubs of the institution give an opera each spring.

*Given also by extension.

The Greeley Philharmonic Orchestra is a symphony orchestra of fifty members, comprised of talent of the school and city, which gives monthly concerts. The standard symphonies are studied and played. Advanced students capable of playing music used by the organization are eligible to join upon invitation of the director.

The College orchestra and band offer excellent training for those interested.

Music club meeting is held weekly. All music majors are required to attend.

The course of study is planned on a four-year basis. College credit is given for applied music under the following conditions:

1. An examination must be passed by all students who desire credit for applied music to show that they have completed the work of the second grade of the instrument in which they apply for further work. Second grade work must be equal to the following standard: sonatinas and pieces from Kuhlau, Kullak, Clementi, and Bach; twelve little preludes and pieces suited to the individual student. All forms of technical exercises, scales, drills, trills, chords, arpeggios, double thirds, and octaves; knowledge of tone production, phrasing, rudiments of harmony, use of pedal, and sight playing; compositions by Mozart, Haydn, Bach, Beethoven.

2. A full year's work (three quarters) must be taken before credit shall be allowed.

3. College credit will be given for proper work in all instruments except the following: Ukelele, banjo, guitar, mandolin, fife, and single percussion instruments.

4. Beginning work in any instrument, except those mentioned in 3, will receive college credit when the examination in piano is passed to show the completion of two grades of work.

5. One hour of credit is given for not less than one lesson a week with practice under the instruction of a member of the music department of the College faculty. Two lessons a week in the same instrument shall not receive additional credit.

A FOUR-YEAR CURRICULUM IN MUSIC

In addition to the core subjects listed on page 65, the following courses are required of majors in the department: Music 1b, 1c, 1d, 2, 3, 4, 5, 10, 11, 20, 21, 22, 23, 45, 103, 104, 105, 106, 107, 110, Ed 116, and Ed. 141 (for men).

FOR MAJORS IN MUSIC

Examination must be taken in piano before graduation.

The maximum credit in applied music will be twenty-four hours.

Attendance at Music Club is required.

Three quarters of Music 45 (Orchestral Instruments) are required.

Twelve hours in Applied Music are required.

Seventy-four hours of credit in music are required for a degree in music. In addition to this the student is required to take the core subjects listed on page 65 and select a minor of twelve to twenty-four hours outside the department. Music majors are not permitted to take Music 25 for credit.

FOR NON-MAJORS IN MUSIC

The maximum credit in applied music is three hours a year.

The five requirements applied to all students who wish to take lessons in applied music do not preclude beginning work in voice or piano or any other instruments, but in general they remove college credit from elementary work.

Band and orchestral instruments are rented at \$5.00 per quarter.

Music majors are required to do four quarters of student teaching.

All public school music majors are required to become members of the College chorus and orchestra or band each quarter. All majors in the public school music course must pass a third grade test on the piano and must be able to sing with an agreeable quality by time of graduation. Consult the head of the department.

1a. RUDIMENTS AND METHOD. Four hours.

Required of kindergarten, primary and intermediate majors. This course is designed for the purpose of equipping the grade teacher with the necessary musical skills, and methods for teaching the daily music lesson in the classroom. The materials and methods covered are those for: Sight-singing, notation, musical terms, appreciation, rote-singing, games, etc. This course is sectioned according to majors.

1b. SIGHT-SINGING (Four hours a week). Two hours.

This course is required of music majors. Rudiments of music and beginning sight-singing.

1c. SIGHT-SINGING (Four hours a week). Two hours.

Required of music majors. Prerequisite Music 1b. Continuation of Music 1b. The student will acquire speed and accuracy in hearing and sounding difficult intervals.

1d. SIGHT-SINGING (Four hours a week). Two hours.

A continuation of Music 1c.

2. THEORY OF MUSIC. Four hours.

This course is designed to give a thorough ground work in melodic, harmonic, and rhythmic elements and is a preparatory course for harmony.

3. HARMONY. Four hours.

This is a course consisting of the construction, classification and the progression of chords, and is put into practical use in the harmonization of melodies. Required of music majors. Prerequisite Music 2.

4. HARMONY. Four hours.

Continuation of Music 3. Required of music majors.

5. HARMONY. Four hours.

A continuation of Music 4, taking up discords and modulations. Required of music majors.

10. METHODS FOR TEACHING MUSIC (Lower Grades). Four hours.

This course is devoted to the study and demonstration of material and methods for the kindergarten and first four years in music. Fundamental principles and devices for training in such musical skills as pitch, rhythm, reading, writing and theory. Special attention is given to the presentation of the different problems as they are taken up in successive years.

Music majors only. Required. Prerequisites Music 1b, 1c, 1d.

11. METHODS FOR TEACHING MUSIC (Upper Grades). Four hours.

This course is devoted to the study and demonstration of material and methods for the upper grades in music. The work of each year is taken up in detail and the problems which confront the grade teacher are carefully considered.

Required for music majors. Prerequisite Music 10.

***20. HISTORY OF ANCIENT AND MEDIEVAL MUSIC. Four hours.**

A cultural course which deals with the development of ancient and medieval music and musicians up to and including Beethoven, through the presentation of music by these composers. Required of music majors.

***21. MODERN HISTORY. Four hours.**

A continuation of Music 20. The lives and music of the great masters since Beethoven will be studied. Through the aid of the phonograph the student will become acquainted with the different styles of these composers' compositions. Required of all music majors. Prerequisite, Music 20.

*Given also by extension.

22. MUSIC APPRECIATION METHODS. Two hours.

This course is designed for the teaching of Music Appreciation based upon the listening program. The course aims at the developing of fundamental principles in listening; conducting the classroom appreciation lesson; type lessons for children at all stages of musical development such as (1) creative rhythmic activity, (2) toy orchestra, (3) melodic recognition, (4) instrument recognition, (5) poetry and music, (6) pictures and music, (7) national music, (8) biographical studies, etc.

23. MUSICAL LITERATURE (Two hours a week). Two hours.

A listening course in which the student is taught to distinguish between the various forms of composition. A thorough knowledge of dance forms, song forms, etc., will be obtained.

25. AN OUTLINE OF MUSIC (Four hours a week). Two hours.

The story of the development of music amply illustrated through the use of, and by the rendition of music through the use of orchestral instruments, the piano, the organ and phonograph records of music recorded by the world-famous musical artists; talks about the characteristics of the great musical compositions and hearing the pieces played and sung; the form used in constructing a piece of music, such as the minuet, gavotte, fugue, waltz, polonaise, symphony, etc.

The chief aim of the course is to present a common stock of knowledge to the student who does not expect to become a music major, and who aspires to be classed with those teachers who want to be regarded as cultured persons.

30. INDIVIDUAL VOCAL LESSONS. One hour.

Fee, \$24.00. Student teacher, \$12.00.

Correct tone production, refined diction and intelligent interpretation of songs from classical and modern composers.

31. INDIVIDUAL PIANO LESSONS. One hour.

Fee, \$24.00 and \$18.00. Student teacher, \$12.00.

High class instruction is offered to both beginners and advanced students using the standard technical works of Czerny, Clementi and others as well as the compositions of Beethoven, Bach, Schumann, Chopin and other classical and modern composers.

32. INDIVIDUAL VIOLIN LESSONS. One hour.

Fee, \$24.00. Student teacher, \$12.00.

The work will be outlined according to the ability of the student. Only the best of teaching material is used and the bowing and finger technic are carefully advised.

33. INDIVIDUAL PIPE ORGAN LESSONS. One hour.

Fee, \$24.00.

Work is given in pipe organ to those students who have had enough piano instruction to be able to play Bach Two Part Inventions. The instruction starts with a thorough foundation in organ technic followed by study of Bach organ works. Mendelssohn Sonatas, Guilman, Rheinberger, Widor and other organ composers of like standing in the musical world.

34. CLASS PIANO METHODS. One hour.

Fee, \$6.00.

A course designed for the prospective teacher in piano classes.

35. INDIVIDUAL LESSONS FOR BRASS AND REED INSTRUMENTS. One hour.

Fee, \$15.00.

Each instrument is carefully taught by a competent instructor. Special attention is given to beginners.

36. INDIVIDUAL 'CELLO LESSONS. One hour.

Fee, \$24.00.

Modern methods are used and a thorough course is given presenting the best music literature for the 'cello.

41. MEN'S GLEE CLUB. One hour.

Entrance upon examination. This club prepares a program and makes an extended tour of Colorado and near-by states.

42. SCHUMANN'S GLEE CLUB. One hour.

Entrance upon invitation after examination. This club is composed of forty female voices and takes a prominent part in the presentation of the annual oratorio and opera. A concert is given each spring quarter.

43. ADVANCED ORCHESTRA. One hour.

Only those are admitted to this orchestra who have experience. Entrance upon examination only. All members must be present when called upon to play at College activities.

44. ADVANCED BAND. One hour.

The College Band is maintained in order that experienced band men may have an opportunity to continue rehearsing under able direction. The College band plays for all College activities and all members are expected to be present when the band is called upon to perform.

45. ORCHESTRAL INSTRUMENTS (Four times a week). Two hours.

A course in instrument study for the supervisors. Three quarters required of every music major.

This course is taken for additional credit as Music 45a and 45b.

101. COLLEGE CHORUS. One hour.

Worth while music and standard choruses are studied. This chorus assists in giving the annual oratorio. Open to all students. Required of music majors.

103. BEGINNING COUNTERPOINT. Two hours.

The rules of harmony are here applied to polyphonic writing. Required of majors in music. Prerequisite, Music 4.

104. ADVANCED COUNTERPOINT. Two hours.

Continuation of Music 103. Required of music majors.

105. BEGINNING INSTRUMENTATION. Two hours.

A study is made of the several instruments of a symphony orchestra. Their pitch and quality of tone are studied singly and in combination. Beginning arranging for orchestra is begun. Prerequisite, Music 104.

106. ADVANCED INSTRUMENTATION. Two hours.

Continuation of Music 105. Required for a degree in music.

107. FORM ANALYSIS. Two hours.

Analysis will be made of the smaller forms in music, also of symphonies from Haydn down to the present. Prerequisites, 104 and 106. Required of music majors.

108. ADVANCED FORM ANALYSIS. Two hours.

Continuation of Music 107. Required of music majors.

110. PRINCIPLES OF MUSICAL EDUCATION. Four hours.

A brief study of the history of Music Education in the United States. Principles of aesthetics that apply to music as an art. Principles that are fundamental to all the work done in the public school such as appreciation, skill development and song-singing. Required of Music Majors. Prerequisites, Music 10 and 11.

111. CONDUCTING BY ASSIGNMENT. Two hours.**114. METHODS IN CONDUCTING (Four hours a week). Two hours.**

The technic of the baton is obtained through use of the same. Music in all forms is studied with special reference to the directors' problems.

122. APPRECIATION (For the Concertgoer). (Not given in 1931-32). One hour.**123. APPRECIATION OF OPERA. One hour.**

Monteverde to modern times. Classroom work will consist of lectures and the actual singing of the principal airs by the class. Librettos used as textbooks.

130. INDIVIDUAL VOCAL LESSONS AND METHODS. One hour.

Fee, \$24.00.

A method of approach in tone building will be discussed with special reference to the teachers' problems.

131. INDIVIDUAL PIANO LESSONS AND METHODS. One hour.

Fees, \$18.00 and \$24.00.

An advanced course in piano playing with suggestions and helps for teaching the instrument.

132. INDIVIDUAL VIOLIN LESSONS AND METHODS. One hour.

Fee, \$24.00.

Teaching problems will be discussed and classified, teaching material will be suggested, making this a valuable course to the student preparing himself for teaching the violin.

133. INDIVIDUAL PIPE ORGAN LESSONS AND METHODS. One hour.

Fee, \$24.00.

An advanced course in organ playing combined with instruction in teaching the instrument.

134. INDIVIDUAL 'CELLO LESSONS AND METHODS. One hour.

Fee, \$24.00.

Discussions will be held with special regard to the methods pursued in teaching the 'cello.

NURSING EDUCATION

The courses in Nursing Education are planned to prepare qualified registered nurses for teaching, supervision, and administration in nursing.

The courses are arranged on a three-year basis leading to a Bachelor of Science degree. Those who can not arrange to take the entire program in the time designated may, with counsel, elect those subjects which will be of immediate value and use. Students who have had courses similar in content to any of those required in this department will be exempt from taking the same work again upon satisfying the departmental representatives and the registrar of the College that they have had equivalent work.

The student may elect her electives in the particular field for which she wishes to prepare herself. The field experience for all courses is given in connection with either the local hospitals and clinic, the local public health and social agencies, the Schools of Nursing of the Colorado University Hospital, Children's Hospital, and the Denver General Hospital, also the Public Health agencies in Denver.

Requests are constantly received from all parts of the country for school nurses who have had some fundamental educational preparation for their work. The subjects fundamental to public health nursing offered by the College and Department of Nursing are as follows, but the department is not ready to develop a program for public health nurses: One year of class work would include Biology 101; Food and Nutrition 24 or 124; English; Language; Nursing Education 100; 101; 102 or 103, and 106; Ed. 108; Mental Hygiene; choice of Sociology 90 (Rural Sociology), 165 (The Family), or 105 (General Sociology); and Ed. 75, or Ed. 177 (Child Development).

A diagram of the three year program appears on page 147. The core subjects for the degree have been considered in the organization of the program. A suggested list of electives has also been appended to the program.

100. HISTORY OF NURSING AND CONTEMPORARY PROBLEMS. Four hours.

This course traces the historical development of nursing under the religious, military and secular forms of organization from its early beginnings to modern times. Special emphasis is placed upon the modern development of nursing in the direction of educational and public health activities.

101. PRINCIPLES OF PUBLIC HEALTH NURSING. Four hours.

The history, organization and policies of public health nursing will be studied. This course is designed to give to the nurse a picture of the mod-

ern public health movement and of the relation of the nurse to official and non-official agencies in the community. Excursions are included in the course.

102a. THE CURRICULUM AND PRINCIPLES OF TEACHING IN SCHOOLS OF NURSING. Four hours.

Planned for head nurses, supervisors, teachers and principals of nursing. A study of the construction of curricula for schools of nursing, the selection and arrangement of subject matter, the principles involved in teaching, the sequence of classes, the planning of lessons and demonstrations.

102b. OBSERVATION AND PRACTICE TEACHING. Hours to be arranged.

Choice of Schools in Denver; Children's Hospital, University of Colorado School of Nursing and Presbyterian Hospital.

103a. WARD MANAGEMENT AND WARD TEACHING. Four hours.

Class and group discussions of the underlying principles and methods of ward administration, with special emphasis on the principles and methods underlying effective clinical instruction.

103b. OBSERVATION AND FIELD WORK IN HOSPITALS. Hours to be arranged.

104. METHODS OF SUPERVISION AND CASE STUDY IN SCHOOLS OF NURSING. Four hours.

This course is designed for those who need a knowledge of the principles of supervision and their application to the problems in the hospital, schools of nursing and public health organization. It includes (a) a study of the principles on which successful supervision is based, (b) the professional problems involved, (c) and methods of case study.

104a. OBSERVATION AND FIELD WORK. Hours to be arranged.

Opportunity will be given for observation and participation in ward supervision.

105. ADMINISTRATION IN SCHOOLS OF NURSING. Four hours.

Principles of administration and organization as applied to the schools of nursing, factors governing the relationship between schools of nursing and hospitals, means of support, budget, personnel, etc.

105a. OBSERVATION AND FIELD WORK. Hours to be arranged.

Under the supervision of the Directors of the Schools of Nursing arranged for Field Work.

PHYSICAL EDUCATION FOR WOMEN

All first and second year students are required to take one active course in physical education each quarter in residence. Phys. Ed. 30 will be substituted for an active course upon presentation of a request from the medical adviser of the school. Excuses from any other doctor must be referred to her.

A physical examination by the College medical adviser is required of every woman in college once each year. Each woman is given an appointment for this at the time of registration. Anyone failing to keep such appointment without having first canceled same with the approval of the medical adviser will be charged the sum of \$1.00 to pay for the examination when given. If taken at the scheduled time no fee will be charged.

Regulation costumes are required for the physical education work and should be purchased in Greeley in order to conform to the requirements.

A deposit of \$1.00 will be charged for the locker padlock, which will be refunded when lock is returned.

General students who are especially skilled in physical education work may take major classes with special permission of the instructor.

REQUIREMENTS FOR THOSE WISHING TO MINOR IN PHYSICAL EDUCATION

Any student wishing to minor in physical education for women must take all courses numbering from P. E. 11 to P. E. 18 inclusive, six of which may be used to meet the general physical educational requirements for all junior college students.

In addition to the above, the following courses must be taken in this department:

Junior college: Ath. 3, P. E. 37, P. E. 38, P. E. 50.

Senior college: P. E. 102, 103, 135, 137.

FOUR-YEAR CURRICULUM IN PHYSICAL EDUCATION FOR WOMEN

A four-year course is required of all physical education majors. Physical education students desiring certificates at the end of two years should make primary, intermediate, or junior high school education their minor.

Any student majoring in the department who after admission is found to be deficient in any of the major practice courses may be required to take any of the general activity courses without credit.

Majors in the department are required to take P. E. 12, 14, 16, 18, 27, and 28 to meet the core requirements of six hours of physical education during freshman and sophomore years. Majors must have had sufficient training in P. E. 13, 15, 17, 19, and 26 during high school work to prepare them for the more advanced work given in major courses or else take them in college for no credit.

In addition to the core subjects listed on page 65, the following physical education courses are required of majors in the department: P. E. 36, 37, 38, 39, 40, 50, 100, 101, 102, 103, 104, 120, 121, 122, 129, 130, 132, 133, 135, 136, 137, and three quarters of teaching. Physical education majors must take one of their three quarters of teaching in their minor. Courses offered in other departments required for majors in physical education are: Chem. 1 and 2, Zool. 11 and 12, Ath. 3, Ed. 116, Biot. 101.

Physical education majors are required to take one quarter of teaching in their sophomore year for four hours credit and one quarter in

their junior or senior year at the extra-mural training centers for eight to twelve hours credit.

It is advisable for physical education majors to minor in intermediate grades or junior high school. The science courses required for physical education majors will give a good basis for one interested in science as a minor. A minor of at least twelve hours must be selected.

Suggested electives outside of the Physical Education Department which should be of special value to the physical education major are: Household Science 4, Music 1a, Piano, English 12, 13, and 14, Ed. 16, 16a, Chem. 9, and Ath. 125.

1. CLOG AND ATHLETIC DANCING. One hour.

This course will contain jigs, clogs, and athletic dances which are especially good for boys and girls in junior high school. Technic will consist of threes, fives, and athletic steps.

1a. ADVANCED CLOG AND ATHLETIC DANCING. One hour.

This course is a continuation of the work offered in P. E. 1. which is a prerequisite course for this one. This course offers more work in the fives and introduces the sevens. Some work in tap dancing will also be offered.

2. NATURAL DANCING. One hour.

The purposes of this course are to develop control of the body, to stimulate imagination, to learn to portray emotional self-expression by various movements.

3. NATURAL DANCING. One hour.

A continuation of P. E. 2 giving more advanced steps, more individual work, beginning scarf work and more advanced exercises which require better coordination.

5. FOLK DANCING. One hour.

Simple dances for beginners in folk dancing. Material depends upon the skill of the class.

6. FOLK DANCING. One hour.

Prerequisite P. E. 5 or its equivalent. This course will present folk dances, especially suited, to high school students.

11. PLAYS AND GAMES. One hour.

This course is primarily for primary and intermediate majors and presents both active and singing games in graded form, together with a brief review of the psychological age of the child.

12. SOCCER. One hour.

A course organized to develop a knowledge of the rules of the game and skill in technic.

13. BEGINNING TENNIS. One hour.

This course will consist of a study of the rules of tennis and practice in the game. Special attention will be given to the service and forearm and backhand drives.

13a. INTERMEDIATE TENNIS. One hour.

The prerequisite for intermediate tennis is P. E. 13 with an average grade. The course will include more advanced tactics on court position, and playing strategy, and the technic of strokes including the lob, volley, half-volley, overhead smash, and chop.

14. BASKETBALL. One hour.

This course will consist of a study of the rules of basketball and the development of skill in the technic.

15. BASEBALL. One hour.

This course will consist of a study of the rules of baseball and the development of skill in it.

16. HOCKEY. One hour.

The rules of the game will be studied and skill in technic developed.

17. VOLLEY BALL. One hour.

A game that can be played in the intermediate grades and junior high schools.

18. FIELD AND TRACK. One hour.

This course will give practice in the different field and track events that are desirable for girls to participate in, such as dashes, running high jump, discus throw, javelin, and hurdles.

26. BEGINNING SWIMMING. One hour.

This course will take up the easier fundamental strokes of swimming, the way of regaining a standing position from either face submerged or floating position, rolling from face to back and vice versa, and beginning diving.

27. INTERMEDIATE SWIMMING. One hour.

A course in swimming, taking up the side stroke, with the fine technic of arm and foot action. Continuation and advancement in plain spring diving. P. E. 26 or its equivalent is a prerequisite.

28. ADVANCED INTERMEDIATE SWIMMING. One hour

A more advanced course, with technical instruction of the crawl strokes and advanced diving. P. E. 26 and 27, or their equivalent are prerequisites.

30. INDIVIDUAL GYMNASTICS. One hour.

Open only to those students bearing an admittance slip from the medical adviser. Individual work for individual needs will be given.

31. DANISH GYMNASTICS (Not given 1931-32). One hour.

This course will present the different types of Danish gymnastics. Special emphasis will be laid on flexibility, strength and agility exercises, stall bars, couple exercises, and apparatus.

ACTIVITY COURSES FOR MAJORS OF JUNIOR COLLEGE RANK.

The following classes are so arranged that juniors may take their work with the seniors without having taken the courses in junior practice. This has been done because at present the enrollment in the department is too small to warrant giving both courses each year. Juniors will take senior practice courses when offered. This arrangement may be changed to separate classes for each by the departmental staff at any time the need arises.

36. FRESHMAN PRACTICE. Two hours.

The work of this quarter will be training in Danish gymnastics. The course aims to (a) develop flexibility, strength and agility in the student; (b) give the student a classification of exercises according to difficulty, progression, and parts of the body exercised.

37. FRESHMAN PRACTICE. Two hours.

This practice course is one in beginning folk dancing. The material in the course will depend largely on the previous training of the majors enrolled. The main purpose of the course is to familiarize the student with dances typical of each country, the chief characteristics of each, and to develop skill, rhythm and coordination in the student.

38. SOPHOMORE PRACTICE. Two hours.

This practice course presents material in beginning athletic and clog dancing. It will take up in its technic the threes, fives, and sevens. The exact material used depends on the ability of the students enrolled, but the dances chosen are especially adapted for use in the upper grades of the elementary school and the junior high school.

39. SOPHOMORE PRACTICE. Two hours.

The work of this course consists of tumbling, apparatus work, and pyramid building. The material will cover individual and group work on the mats, parallel bars and horse. The main purpose of the course will be to give such material as can be used in grades and high schools with the least possible equipment.

40. SOPHOMORE PRACTICE. Two hours.

This course has to do with fundamental exercises which help develop control of the body, fundamental steps of dancing later carried over into the student's own interpretation of music; simple dramatic sketches, group dances, and individual dances. The purposes of the course are: (a) to develop control of the body, (b) to stimulate imagination, (c) to learn to portray emotional self-expression by various movements of the body.

50. THEORY OF PLAYGROUND ORGANIZATION. Two hours.

This is a course outlined to (a) give knowledge of necessary playground material; (b) study cost, amount and description of playground equipment; (c) give outstanding age group characteristics; (d) present methods for conducting small and large groups; (e) promote leadership; (f) present games for children of different age.

THEORY COURSES IN HEALTH EDUCATION FOR JUNIOR COLLEGE AND MAJOR STUDENTS

HYG. 1. PERSONAL HYGIENE (for women). Four hours.

A first year course covering the essentials of personal hygiene. The aims are: to secure better personal health habits among teachers and to give methods of teaching better health habits in the public schools.

HYG. 2. MATERIALS AND METHODS IN HEALTH EDUCATION. Two hours.

The philosophy underlying various methods of teaching will be briefly considered. Texts and reference books will be examined. Opportunity will be given for each student to construct a teaching program to meet the needs of his situation.

ACTIVITY COURSES FOR MAJORS OF SENIOR COLLEGE RANK

100. JUNIOR PRACTICE (Not given 1931-32). Two hours.

Natural Dancing. A continuation of beginning natural dancing with more advanced steps being given, more individual work, beginning, scarf work, and more advanced exercises which require better coordination.

101. JUNIOR PRACTICE (Not given 1931-32). Two hours.

Advanced Natural Dancing, Continuation of natural dancing in regard to steps, fundamental exercises, and scarf work. A study of the dance will be made, such problems as the public performance will be stressed, how to teach beginning dancing and the study of progression, a presentation of dancing material, music, themes, etc.

102. JUNIOR PRACTICE (Not given 1931-32). Two hours.

This course is designed to meet the teaching needs of major and minor students of physical education. Methods of presentation of dancing technic will be discussed and demonstrated. In addition each student will be required to do original work in dances, present such dances to the group and figure out dance directions written by others.

103. SENIOR PRACTICE. Two hours.

This course will discuss the characteristic figures and steps of different countries, give different types of character dances and present national dances of all countries.

104. SENIOR PRACTICE. Two hours.

This course is made up of the following two divisions:

(a) Advanced swimming for majors. Three days. The course consists of the different strokes of swimming, diving, life-saving, and gives practice in the teaching of swimming. Time will be given to the thorough study of the different methods of instruction in swimming and diving. Students who have done exceptionally good work in P. E. 26 to P. E. 28 inclusive may enroll for this work with special permission from the instructor.

(b) Two days. This course deals with the theory of Danish Gymnastics. Programs will be made for different groups. Types of exercises will be discussed and opportunity will be given for practice and teaching.

110. ADVANCED NATURAL DANCING. Two hours.

This course is offered for those people who are interested in advanced interpretation of dancing themes. Opportunity for original themes put to music will be stressed. If possible P. E. 100, 101, and 102, should be pre-requisites.

THEORY COURSES FOR PHYSICAL EDUCATION MAJORS OF SENIOR COLLEGE RANK

129. COACHING METHODS. Two hours.

This course is designed to meet the teaching needs of major and minor students of physical education for their activity groups. This course will consist of: (a) the theory and practice of advanced technics; (b) methods

of organizing and presenting sport material; (c) participation in refereeing and officiating in actual games; (d) references from which students may find adequate material. The sports which will be presented for study are hockey, soccer, speedball, and basketball.

130. COACHING METHODS. Two hours.

This course is a continuation of 129. The material will be presented with the same aims in mind, but from the standpoint of baseball, track, tennis, and archery.

131. PAGEENTRY. Two hours.

This work is an elective course for majors and is designed to give an appreciation of the art as developed through motor activities. Pantomimes, pageants and festivals, stage lighting, costuming, and make-up will be discussed and opportunity given for practice in the above. Original work will be required.

132. THEORY OF INDIVIDUAL GYMNASTICS. Four hours.

The purposes of this course are: (a) to give the student a thorough knowledge of the values of posture and the faults of posture most commonly found in growing children; (b) to know deformities which appear in later life, their characteristics and treatment; (c) thorough study of the technic of massage, what it is used for and its results; (d) study the organization of corrective work in elementary, high school, and college; (e) how to organize a posture drive; (f) complete study of how to give thorough posture examination.

133. INDIVIDUAL GYMNASTICS APPLIED. Two hours.

P. E. 132 prerequisite. A laboratory period which gives the student an opportunity to actually see and work with the different cases which comprise a corrective class.

135. HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION (Not given 1931-32). Four hours.

This course deals with (1) the play activities of man and physical education among civilized races in the light of their general progress; (2) the comparison of the formal and natural physical education program in the light of their aims, objectives, results, and their value in accordance with the modern philosophy of education; (3) the types of work to be included in the program; (4) the administration of such a program from the standpoint of buildings, grounds, equipment, and staff.

136. PLAYGROUND SUPERVISION. Two hours.

This course deals with the organization of play for all ages of children who stay on the school ground during the noon hour.

137. MATERIALS AND METHODS IN PHYSICAL EDUCATION. Four hours.

Purposes: (a) to give the student training in methods of presentation of material to the various age groups; (b) characteristics of the different ages; (c) to give them knowledge of material which is suitable for the different grades; (d) to discuss the problem of the supervision of physical education; (e) to know how to prepare a general course of study for the average school system; (f) to give the student an opportunity to judge good teaching and to know how to self-criticise; (g) to give the student actual practice in teaching.

222. INDIVIDUAL STUDIES IN PHYSICAL EDUCATION. Two or four hours.

223. RESEARCH IN PHYSICAL EDUCATION. Four hours.

Taken in the first quarter of graduate work. This is a required seminar and conference course for graduate students who are working on their masters' investigations. The director of educational research meets the group three times each week and confers with individual students in the research office. Small group conferences are held when needed. Each student meets his thesis adviser regularly.

224. RESEARCH IN PHYSICAL EDUCATION. Four hours.

This is the thesis course for masters' candidates in physical education in their second quarter of graduate work.

225. RESEARCH IN PHYSICAL EDUCATION. Two hours.

This is the thesis course for masters' candidates in physical education in their third quarter of graduate work.

SENIOR COLLEGE COURSES IN HEALTH EDUCATION FOR MAJORS

120. APPLIED ANATOMY. Four hours.

This course deals with the structure of the human body and with the principles and mechanism of bodily movements. Most of the time will be spent on the application they have to physical education.

121. KINESIOLOGY. Two hours.

This course deals with the action of muscles in exercises of different kinds. It deals with the bones as levers and the neuro-muscular system as power. The material is presented with special reference to the use of this system in acquiring and maintaining good posture and in its bearing on the correction of postural defects.

122. APPLIED PHYSIOLOGY. Four hours.

This course deals with the functional processes of the different systems of the body and the effect of exercise upon these systems in its direct bearing on physical education. The different systems studied in the course are: muscular, circulatory, respiratory, digestive, sensory, and nervous systems. Laboratory work is required.

123. PHYSICAL EXAMINATION AND NORMAL DIAGNOSES (Not given 1931-32). Two hours.

This course is elective for majors. It takes up the study of physical examination in regard to the points to be examined, the type of card used, and the proper method of examining. Practical work in examining will be given. A study will be made of the signs and symptoms of different diseases common to the school child—the incubation and quarantine periods.

SCIENCES

The primary aim of the departments of Biology, Chemistry, and Physics is to prepare science teachers for the public schools of the state. They also endeavor to provide such training in the general principles and content of the sciences as will give students in other fields an adequate background for their professional courses and prepare them for the common activities of life.

Formerly the courses in these respective departments for the most part were organized for the purpose of preparing specialized teachers in these fields. Investigations in the Rocky Mountain region and elsewhere, however, have revealed that, with the exception of the largest schools, what is demanded is teachers of science rather than teachers of any specific branch of it. Even in the North Central States where a denser population might be expected to demand specialization it is found that eighty-five percent of the science teachers in secondary schools are required to teach two or more subjects.

In order to meet this need and also because they consider this knowledge of the related sciences necessary for the student who may wish to specialize later in a single field, the departments have changed their requirements. They now require a major in science instead of one in chemistry, or physics, or biology as has been done heretofore.

To this end, in addition to the professional core subjects listed on page 65, science majors must take the science core subjects listed below. Moreover, to prepare them to teach a particular science in the larger high schools, should the opportunity present itself, or in college should they choose to continue their training, they are expected to take a second major in one of the specific fields of chemistry, physics, or biology.

Science Core—required of all majors in the science departments

Biology 1, 2, 3, 11, 12, 117, 131a, and 131b.

Chemistry 1, 2, 3, 7, and 130a.

Physics 1, 2, 3, 103, 130b.

FOR MAJORS IN THE FIELD OF BIOLOGY

No one can be a safe leader in educational theory and practice who does not have some conception of the place the study of nature should have in the normal development of the child; who does not realize the

large application of the principle of organic evolution to educational procedure, and who fails to appreciate the power of heredity in determining the natural capacities and abilities of the pupil.

The courses in botany and zoology are planned to combine laboratory and field work with classroom study wherever this is possible and desirable, for it is only through this procedure that students gain both a scientific knowledge and a large appreciation of life forms.

BIOLOGY

In addition to the professional core subjects listed on page 65, and the science core subjects listed on page 153, the following biology courses are required for majors in this department: 13, 14, 101, 102, 105 or 113, 114, 120, Unspecialized Sci. 5; Ed. 116, and Ed. 141 (for men).

In the field of science, the following electives are suggested: Math. 106—Descriptive Astronomy; Physics 104—The Principles of Radio Transmission; Physics 107—Modern Physics; Physics 118—Photography.

1. GENERAL BOTANY. Four hours.

Three hours laboratory.

This is an elementary study of the structure and function of flowering plants and their relation to man. Students who can elect but one botany course for its cultural value are advised to take this one. The course includes a study of the structure, character, and functions of roots; the structure and functions of stems and their industrial applications, such as the color of woods and grain in lumber; the nature and functions of leaves; and the relation of these plant parts to mankind. The whole aim of this course is to give students not only a scientific knowledge of the structure and function of our common plants, but also an appreciation of the large place which they hold in serving man and beautifying the earth.

2. GENERAL BOTANY. Four hours.

Three hours laboratory.

This course includes a study of the thallophytes and the bryophytes. The blue green algae, the green algae, the brown algae, and the red algae are studied. Local forms are used when available. Field collections of material are made and cultures grown either in the laboratory or greenhouse. In the fungal group bread molds, yeasts, rusts, smuts, mushrooms, puffballs, and other forms, are considered. Type forms of liverworts and mosses are studied. Constant emphasis is placed upon the relation of the thallophytes and the bryophytes to man.

3. GENERAL BOTANY. Four hours.

Three hours laboratory.

A study of pteridophytes and spermatophytes. Ferns, cycads, conifers, and flowering plants are studied. The first part of the course is designed to acquaint the student with these different groups of plants as to their structures, functions, and economic relations. As soon as the weather will permit, a large part of the work is done in the field where the student is taught how to identify plants by the use of a manual. The purpose of this is to prepare the student to become acquainted with the flowers and plants in the region where he may teach.

4. FORESTRY (Given at Camp Olympus). Four hours.

The forests of the mountain slopes furnish a good laboratory. The study periods will be spent in the field making observations and reports on various problems pertaining to trees and forestry. Field trips will be made in conjunction with the course in elementary science, the time being divided between nature study and forestry.

The daily lecture period will be in the morning and will prepare the way for the field work. In these lectures various problems of forestry that are not available for direct, local observation will also be discussed. The entire course will be planned and presented from the popular rather than the technical standpoint, and the subject matter can be applied to teaching in the public schools.

11. GENERAL ZOOLOGY. Four hours.

Three hours laboratory.

This is a beginning course which treats of principles of structure and function, inter-relations of animals, geographical distribution and the origin and development of animal life. The following subjects will be

studied: The history of the development of biological thought; the discovery of protoplasm, its structure and function; classification of animals; the single celled organisms; theories of the origin of many-celled animals; the sponges, tapeworms, hydra, jellyfishes and closely related animals; starfishes, basket-stars, sea-urchins, sand dollars, sea cucumber; earthworms, snails, fresh-water mussels, the chambered nautilus, and related forms, insects, crawfish, and the American lobster. Methods of reproduction will be stressed during the study of these forms.

12. GENERAL ZOOLOGY. Four hours.

Three hours laboratory. A continuation of Zoology 1, and should be preceded by it.

This study will be devoted to the vertebrates and the theories of their origin and development from lower forms. Stress will be laid on comparative structure and function. Time will be given for a discussion of adaptation to environment and of the inter-relations of the vertebrates to a given environment. The course will close with a discussion of geographical distribution, and its effects on animal life.

13. BIRD STUDY. Four hours.

Field trips arranged.

This course is intended to create interest in living things and to add to the appreciation of natural environment. A study will be made of the birds of the vicinity and their relationship to large groups of birds. Means of identification in the field, food relations, seasonal distribution, migrational activities, the importance of protection, and their relation to man, will be emphasized. The course will close with a study of the means of attracting useful birds.

14. ECONOMIC ZOOLOGY. Four hours.

A survey of the animal kingdom with special emphasis on their relation to man. A study is made of forms which aid man either directly or indirectly and of those forms which are distinctly a disadvantage. A study will be made of such problems as Texas fever in cattle, Rocky Mountain spotted fever commonly known as tick fever, the parasitic worms and their effect on man and his domestic animals; oyster culture; the manufacture of pearl buttons; some insect pests and their control such as the house fly, clothes moth, plant lice, and common insect problems. Attention will now be devoted to a study of the common problems of the backboned animals: The place of the common toad in the vegetable garden, how to know a poisonous snake, how to treat a snake bite, the value of fish as food, the salmon industry, artificial propagation of fish and how it has been an aid to man. Consideration will be given to the value of birds as insect destroyers and the true relation of the hawks and owls to man; the rabbit, the fox, and the coyote as fur bearers. Throughout the entire course conservation of wild life will be stressed.

100. EVOLUTION. Four hours.

The purpose of this course is to furnish the student with the facts and evidences which point toward gradual development of the universe and living things. A study will be made of the universe; the relation of our own solar system to other solar systems; of the probable development of our solar system, of the method of formation of the earth; of the conditions necessary to support living organisms; of the changes in the earth's surface; and the fossilized preexisting forms of plant and animal life. Attention will now be turned to the successive development of living organisms and the factors involved in their modification. Some time will be devoted to a discussion of the various theories which attempt to explain, and to those which attempt to refute, the evolutionary idea.

101. GENETICS AND EUGENICS. Four hours.

In the first half of this course the following topics are considered: The physical basis of heredity, the principles of gamete formation, fertilization, and the Mendelian laws; such modifications and extensions of the Mendelian laws as interacting factors, linkage, crossing over and interference, together with a study of sex inheritance, variation, and the question of the transmission of acquired characters.

In the second half, time is spent in the consideration of the inheritance of natural abilities and capacities, the present eugenic trend of the American people, how to eliminate the defective strains of germ plasm and what measures may be taken to preserve the superior strains. The educational implications of all these problems are constantly emphasized.

102. PLANT PHYSIOLOGY. Four hours.

Three hours laboratory. Prerequisite, Botany 1.

The purpose of this course is to give the student a working knowledge of such physiological activities as translocation, photosynthesis, digestion, respiration, and transpiration. The experimental method is used largely, and constant emphasis is placed upon the economic relations of these

plant processes. Constant stress is laid upon sources of error and modifying conditions.

The course is supplemented with approximately thirty laboratory exercises.

104. MOUNTAIN FLORA (Given at Camp Olympus). Four hours.

In this course emphasis will be placed on mountain flora. Study periods will be spent in the field with flowers in their natural environment, determining their family characteristics and classification by means of an analytical key. Morning lectures will give a foundation for the field work and assist in the interpretation of various problems that arise. Great opportunity is given here for comparison of vegetation in the different climatic zones of northern United States and Canada to far polar regions by means of field trips into the alpine regions.

105. BOTANICAL TECHNIC AND HISTOLOGY. Four hours.

Three hours laboratory. Prerequisite, Botany 1.

A course in which the science of killing, staining, and making of botanical material into permanent slides is combined with the study of plant tissues. The tissues are studied as to origin, differentiation, and organization. Instruction in freehand methods is followed by a study of the paraffin method of preparation of sections.

106. SYSTEMATIC BOTANY. Four hours.

Three hours laboratory.

This course is carried on in the laboratory and field. Its purpose is to give the student a knowledge of the characteristics and relations of the different flowering plants. It enables the student to use the botanical manual with ease and to classify plants with considerable facility. It is especially helpful to teachers of nature study and biology who wish to become better acquainted with types of plants in any community.

108. EMBRYOLOGY. Four hours.

A course planned to furnish the citizen with a fundamental understanding of the development of the human embryo. The work is arranged so that the student will be able to see the various stages of development of some of the vertebrates. The course will open with a study of the early stages of development from the single cell. The study will then follow cell differentiation until the major organs of the body have been developed.

111. INVERTEBRATE ZOOLOGY. Four hours.

Four hours laboratory. Prerequisites, Zoology 1 and 2 or equivalent.

A study of the anatomy, physiology, and life history of a selected series of the invertebrates. This course will provide a more complete series than Zoology 1 and a more detailed study will be made.

112. VERTEBRATE ZOOLOGY. Four hours.

Prerequisites, Zoology 1 and 2, or equivalent.

A much more detailed study of selected types of the vertebrates than can be given in a general course. In addition to assigned readings, lectures and discussions on embryology, anatomy, and physiology of the entire group, the student is required to make careful dissection of a fish, an amphibian, a bird, and a mammal.

113. ZOOLOGICAL TECHNIC AND ANIMAL HISTOLOGY. Four hours.

Three hours laboratory. Prerequisites: Zoology 1 and 2 or equivalent.

A course in which the methods of fixing, staining, and preparing material for class use is combined with the study of the differentiation and organization of animal tissues. The student will have opportunity here to prepare material which will be of value for demonstration in high school teaching.

114. ELEMENTARY ENTOMOLOGY. Four hours.

Prerequisites: Science 1 and 2 or equivalent.

A study will be made of the more common insects of the region, their classification and life histories. Methods of collecting, mounting, and preparing insect material for study will be given attention. Students will be given opportunity to prepare a reference collection of the more common species. Field observations will constitute a part of the work. Lectures, discussions, assigned readings, and laboratory.

117. HUMAN PHYSIOLOGY. Four hours.

The purpose of this course is to give the student a knowledge of how the body functions. The following subjects will be treated: digestion; circulation and heart activity; respiration; muscular activity, and glandular

functions. As much as is possible, the student will be led to analyze his own bodily functions. The student will perform laboratory experiments to verify class discussion whenever possible.

120. GENERAL BACTERIOLOGY. Four hours.

Three hours laboratory. Prerequisites: Science 1 and 2, or equivalent.

This course treats of the morphology and classification of bacteria, yeasts, and molds, their effects on food and their relation to man. Especial emphasis is placed upon the relation of molds and yeasts to foods and cookery, and upon disease producing effects of micro-organisms. A study is made of the bacterial count of milk and water, and methods by which they are contaminated. This course is organized into units. Each unit includes assigned readings, laboratory, and investigational work.

131a. PRINCIPLES OF SCIENCE TEACHING. Two hours.

This is a course designed to acquaint the students with the fundamental principles underlying the teaching of science and to prepare them for their work in Chemistry 130a, Physics 130b and Biology 131b.

131b. TEACHING OF BIOLOGY. Four hours.

This course is designed to acquaint the major in science with present trends in the field of high school biology, the generalizations and concepts that should be taught, and the subject matter necessary to develop these generalizations and concepts. Materials, texts, and reference books are considered, and the large units in a suggested course in high school biology are worked out. Methods of instruction are treated, together with laboratory equipment and supplies needed for successful work.

201. GENETICS AND EUGENICS. Four hours.

This course is for graduate students. It covers the same ground as course 101, but additional and more advanced work is required.

206. TAXONOMY. Four hours.

Three hours laboratory. Desirable prerequisites, Botany 2 and 3.

This is a graduate course but is open to all students who have had the prerequisite courses. The purpose of the course is to give the advanced student an understanding of the morphological relations of plants and the principles underlying their classification. The work is carried on largely in the field and results in a rather wide knowledge of local wild plants and flowers. Graduate students are required to work out a special problem in addition to the regular work of the course.

211. MORPHOLOGY OF THE VERTEBRATES. Four hours.

Prerequisites, Zoology 1, 2, and 102 or equivalent.

A more detailed study of the systems of organs of the vertebrates from the comparative viewpoint. The student is expected to trace the differentiation of the organs and systems from the simple vertebrates to their complex condition in the mammals. Dissections will be made of amphioxus, the dogfish shark, cryptobranchus, and the cat. Lectures, discussions, library references, and laboratory.

222. INDIVIDUAL STUDIES IN BIOLOGY. Two or four hours.

For graduate biology majors.

223. BIOLOGICAL RESEARCH FOR BIOLOGY, BOTANY AND ZOOLOGY. Four hours.

taken in the first quarter of graduate work.

This is a required seminar and conference course for graduate students who are working on their masters' investigations. The director of educational research meets the group three times each week and confers with individual students in the research office. Small group conferences are held when needed. Each student meets his thesis adviser regularly.

224. BIOLOGICAL RESEARCH FOR BIOLOGY, BOTANY AND ZOOLOGY. Four hours.

An individual research course in connection with the graduate thesis. This is a conference course designed to guide students in the selection of problems, method of procedure in the solution of them, and the interpretation of results. Students should register for this course only after consultation with the head of the department.

225. BIOLOGICAL RESEARCH FOR BIOLOGY, BOTANY AND ZOOLOGY. Two hours.

A continuation of Biological Research 224.

FOR MAJORS IN THE FIELD OF CHEMISTRY

In addition to the professional core subjects listed on page 65, and the science core subjects listed on page 72, the following courses are required of majors in this department: Chem. 7b, 109, 110, 111, 114, 114b, 116; Ed. 116, and Ed. 141 (for men).

1. GENERAL CHEMISTRY. Two or four hours.

Four hours for chemistry majors.

The purpose of this course is (a) to give the student some knowledge of the more simple terms used in general chemistry; (b) to make the student acquainted with some of the properties of the more familiar elements and compounds in nature; (c) to arouse an interest in some of the commercial processes applied in the preparation of some of the most important utilities of life.

The topics covered include general introduction which brings in such differentiations as, those between element and compound, compound and mixture, mixture and solution, atom and molecule, symbol and formula, and physical change and chemical change. Some fundamental laws are stated and illustrated, such as the law of definite proportions, the law of multiple proportions, the laws pertaining to gas volume, the laws relating to reacting volumes and weights, and some of the principles underlying chemical changes. The atomic theory and the valence of atoms, atomic weight and molecular weights are explained. The elements oxygen and hydrogen are studied as separate elements and in their relation to each other. Then water is studied as a compound of these elements. Nitrogen is studied with special stress on the modern commercial methods of obtaining nitrogen from the air. The important compounds of nitrogen are studied in such a way as to make the student acquainted with their properties and to illustrate the systems of nomenclature.

Students may receive two hours credit for doing the lecture work, or four hours for doing both lecture and laboratory work.

2. GENERAL CHEMISTRY. Two or four hours.

Four hours for chemistry majors.

The purpose of the course is (a) to extend the student's knowledge of the common terms used in general chemistry; (b) to furnish the student a knowledge of the most important of the nonmetallic elements; (c) to get the student started in the practice of putting together symbols in writing formula and balancing equations according to the theory of ionization.

The topics include an application of the study of acids, bases, salts, normal salts, acid salts, basic salts, and their systems of nomenclature, and an application of the laws so far learned including the laws of mass action, equilibrium, and ionization. Sulphur and its compounds, chlorine and its compounds, and other familiar nonmetallic elements and their compounds are studied in so far as they involve these fundamental laws and principles. The periodic table is introduced with its bearing on, the classification of the elements in their relation to atomic weights and atomic numbers, and the grouping of the elements according to their similarities in properties. Members of the carbon family and the nitrogen family and their familiar compounds are studied as they are related to the principles of inorganic chemistry.

Students electing two hours take only the textbook work, which is given twice a week. The four-hour course includes two double periods of laboratory work.

3. GENERAL CHEMISTRY. Two or four hours.

Four hours when taken as a departmental requirement.

Prerequisites, Chemistry 1 and 2.

The course is aimed to furnish the student a knowledge of the most common metallic elements and their important compounds, to make him acquainted with the relationships existing among these metallic elements, and to make him acquainted with their reactions with each other; to teach the student general principles involved in the separation of metals from their ores, and to make certain characteristic tests for the metals in their salts.

The alkali metals are studied from standpoints of methods of preparation, properties and uses. The alkaline earth metals are dealt with in the same way, and their compounds such as enter into the industries like glass making, cement making, etc. are studied in a practical as well as a theoretical way. The noble metals are studied in relation to their action with the reagents liable to cause tarnishing or corrosion, and consequently their commercial application. Some attention is given to a few of the rarer metals which are now finding industrial applications.

Two quarter hours of credit go with the textbook work which is given twice a week, and two with the laboratory work which covers two double periods a week.

***3b. HOUSEHOLD CHEMISTRY. Two or four hours.**

Prerequisites, six hours of Chemistry 1 and 2.

This course is designed especially for home economics students. It offers a practical knowledge of fuels, lighting systems, sanitation, foods, and textiles.

Study is made of the elements and compounds required to make up a good fuel; the chemistry of the elements of lighting systems and the comparative efficiency of different types of light; the chemical examination of water, softening agents, soaps, and cleansing agents. Foods of animal origin and vegetable origin are studied from a viewpoint of food constituents and purposes to be served in the body. Textiles are classified according to the chemical composition, and the methods of determining their various constituents. Dyes and bleaching agents are studied in a practical way.

Two quarter hours are given for the recitation work which occurs twice a week and two for the laboratory work which covers two double periods a week.

7. QUALITATIVE ANALYSIS. Two or four hours.

Prerequisites, Chemistry 1 and 2.

This course consists of one lecture each week and in addition a double laboratory period a week put into laboratory work for each hour's credit given. The purpose of the course is to give the student a knowledge of the fundamental principles underlying the classification of the metals and nonmetals into classes according to general group tests, and to give him practice in applying individual tests and thus identifying the different metallic and nonmetallic elements and groups.

For the first two quarter hours the student is given a minimum number of solutions belonging in each of the five tables of metals. He must identify the metal in each of these and do more if time permits. For the second two quarter hours his assignment is likewise for the five acid tables.

7b. QUALITATIVE ANALYSIS. Two or four hours.

Prerequisites, Chemistry 1, 2, and 7.

This course consists of individual conferences and laboratory work. The minimum amount of time put in the laboratory is equal to two double periods a week for each credit hour enrolled for. The purpose of the course is to give the student a knowledge and training in making complete qualitative analysis of dry solid substances.

The first two hours of credit in the course are given for making complete analysis of a minimum number of salts, whose bases can be found by means of the tables for detecting the metals, and whose nonmetals can be detected by the tables for detecting the nonmetals. A definite number of these salts are simple salts and a definite number of them are mixed salts. If time allows several salts are given which have to be run through the table which tells what groups are represented, then the group table which tells what elements or radical in the group is used to identify such element or radical. The second two hours are given for making complete analyses of a minimum number of dry compounds according to the tables for dry analysis.

8. JUNIOR COLLEGE CHEMISTRY. Four hours.

This class meets four times a week. The work consists of lectures, discussions, and demonstrations. The theoretical and the practical phases of elementary chemistry will be intermingled in such a manner as to keep the student interested in the fundamental principles by means of the practical phases of the subject.

Some very familiar substances such as oxygen, hydrogen, and water are studied in such a way as to give the student a knowledge of the terms necessary in the study of chemistry. Some more elements and compounds such as chlorine, sulphur, nitrogen, and ammonia are studied not only with the view to making the student acquainted with more of the terms and some of the fundamental laws of chemistry, but furnishing knowledge of the chemical properties and industrial applications of these elements and their compounds. Carbon and the remainder of the nonmetallic elements are studied with especial reference to fuels, foods, and commercial products. Some of the most familiar metals are studied in relation to their practical applications.

This course cannot be substituted for any major course in this department.

*Given also by extension.

9 AND 109. PHYSIOLOGICAL CHEMISTRY. Four hours.

Prerequisites, Chemistry 1 and 2 for 9 and Chemistry 1, 2, 110, and 111 for 109.

This course is designed for nurses, physical education majors, and home economics majors. Home economics majors minoring in chemistry will take course 109, which is the same as 9 except that about twelve hours extra work will be put in the laboratory or library.

The topics in this course will include a brief study of the classes of foods as they are developed in plants and animals. Water and inorganic salts will be studied from a standpoint of physiological function regulation and food values. Animal and energy and their relation to chemical reactions will be considered briefly. Enzymes and their relation to the digestion of food will be studied, as will salivary digestion, including a study of the chemistry of saliva, the reaction of saliva with certain foods, and the importance of their reactions; stomach digestion, including a study of the reactions of the ingredients of the gastric juice; and intestinal digestion, including the chemical reactions among the secretions themselves and between the enzymes and the food materials. Absorption as it occurs with the different classes of foods will be considered. Circulation in so far as it involves chemistry will be studied. The chemistry of the excretory organs and the excretions as they are related to healthful living will be considered. Metabolism as it relates itself to the different tissues of the body will be studied.

***110. ORGANIC CHEMISTRY. Two or four hours.**

Prerequisites, six hours of Chemistry 1 and 2.

The purpose of this course is to get the student acquainted with the manner of grouping of the elements making up the organic compounds; to give the student practice in arranging symbols in a graphic way so as to show the structure of organic groups and organic molecules; to furnish the student with a knowledge of the relations of the simplest hydrocarbons to their important derivatives and of the relations existing among the different derivatives as they are built on one another and as they increase in complexity from the simplest up the series.

Some new terms pertaining only to organic chemistry are introduced. Some general principles of classification of organic compounds are expounded. The simplest hydrocarbons, methane and ethane, are studied, then follows a consideration of their most important and most useful halogen derivatives. The oxygen derivatives of these two hydrocarbons, such as alcohols, aldehydes, acids, and ethers are studied. The sulphur derivatives are given brief attention. Nitrogen derivatives are treated rather fully. The higher members of the paraffin series, those containing three or more carbon atoms, are treated in the same way as those of methane and ethane. Mixed compounds of these members are studied. The most important unsaturated compounds are considered.

The practical uses of the outstanding carbon compounds are discussed.

111. ORGANIC CHEMISTRY. Two or four hours.

Prerequisite, six hours of Chemistry 1 and 2 and Chemistry 110.

This course deals with the benzene series of hydrocarbons and their derivatives. The purpose is to teach the student the fundamental principles related to this new and different structure, to make him acquainted with different classes of derivatives which can be built on the benzene ring as a basis of a distinctive type of compounds.

The benzene hydrocarbons, as they may be classified according to the combinations of ring and side chains, are studied. The halogen, oxygen, sulphur, and nitrogen derivatives of each of the important combinations are studied. Combinations consisting of two or more benzene rings linked to different side chains are considered in their relation to some outstanding dye products and drugs. The important glucosides and plant alkaloids are studied briefly.

Throughout the benzene series there are many very common, very interesting, and very useful compounds that have a highly organized structure. The trend of this course takes the student from the simple structure, step by step, to highly organized structure, and then gives the interesting information as to the commercial importance of the compound.

***112. FOOD CHEMISTRY. Two or four hours.**

Prerequisites, six hours of Chemistry 1 and 2, and six hours of Chemistry 110 and 111.

This course consists of lectures and discussions twice a week and double laboratory periods twice a week throughout the quarter. The lectures may be taken for two hours credit and the lectures and laboratory

*Given also by extension.

work may be taken for four hours credit. The course is designed to give the student a knowledge of the chemical composition of the chief human food materials, to show him the relation of these materials to the digestive secretions of the body, and show him how these materials function in body processes.

A study is made of the carbohydrates with reference to their food value, their digestibility and the purpose they serve in the body functions. The fats are studied as to their sources in human foods, their vitamine content and all of their purposes in the body. The proteins are studied as to their sources, composition, and growth promoting constituents. The chemical changes occurring in the processes of digestion, absorption and assimilation are studied with reference to body building and body repair.

114 AND 114b. QUANTITATIVE ANALYSIS. Four hours for each course.

Prerequisites, Chemistry 1, 2, 3, and 7.

These are laboratory and consultation courses. The student works in the laboratory a double period per week for each hour's credit. The purpose of the course is to give the student training in the technic of accurate weighing and measuring; to develop a skill in the manipulation of apparatus; to cultivate a deeper knowledge of chemical reactions as far as ion concentrations, solubility products, and end points are concerned, and to teach the student the methods of making the necessary calculations involved in volume and weight relations existing in chemical reactions.

As an introduction to either the gravimetric or volumetric work, the student learns to calibrate weights and to manipulate the analytical balances. In the gravimetric work, the student makes some determinations, which call for precipitations, filtrations, ignition of precipitates, taring of crucibles, drying and weighing of products, and calculation of percentages of constituent parts. In the volumetric work, the student learns to calibrate pipettes, burettes, and graduated flasks. Some determinations are made which involve alkalinity, acidity, oxidation, and iodimetry. Types of determinations are selected which involve calculations of normal strength and litre or different solutions and by such means estimating percentages of constituent parts.

*115. INDUSTRIAL CHEMISTRY. Four hours.

Prerequisites, six hours of Chemistry 1 and 2 and four hours of Chemistry 7.

The course consists of two recitations and two double laboratory periods per week. This course serves especially well to give the student an appreciation of the wide extent to which chemistry in the industries serves to foster the forces of civilization. The student learns how the fundamental principles of chemistry are applied in the various fields of industry. The student preparing to teach chemistry obtains many suggestions as to how the practical side of chemistry may be presented in teaching elementary work.

First, the machinery and appliances necessary in industrial plants given to the chemical operations are given a general study. The general phases of metallurgy and the preparation of the metals for their commercial uses are studied to some extent. Building materials, such as cement, bricks, mortar, stucco, plaster, terracotta and like materials are touched upon. The modern road-building materials are discussed briefly. The chemistry of glass-making is taken up. Paints and varnishes are considered from the viewpoints of natural source, artificial preparation, proper application, etc. Cellulose products, such as paper, bakelite, etc., are given brief consideration.

116. AGRICULTURAL CHEMISTRY. Four hours.

Prerequisites, six hours of Chemistry 1 and 2 and four hours of Chemistry 7.

The course consists of two lectures per week and two double laboratory periods. The purpose of the course is to give the student an appreciation of the wide application of the principles of chemistry to the different phases of agriculture; to give to the chemistry teacher a training which will enable him to be of practical assistance to the agriculturist of any community; to prepare the prospective chemistry teacher to more effectively present the practical side of chemistry in his general teaching.

The chemistry involved in the relations of air and soil, water and soil, and fertilizers and soil, is given a general consideration. Some of the chemistry of soil and its relation to plant life is studied, as are some of the chemical reactions in the growth of plants that have to do with animal foods. Animal foods and animal nourishment are taken up in a general way.

The two hours of laboratory work connected with this course consists of soil analysis and plant analysis. The soil is analyzed with reference to

*Given also by extension.

its alkalinity, acidity, organic matter; phosphorus, calcium, potassium, and sodium contents. An animal food may be analyzed with reference to its percentages of carbohydrates, proteins, etc.

130a. THE TEACHING OF CHEMISTRY. Two or four hours.

This course consists of lectures, discussions, papers written from library references, and practices in setting up apparatus and demonstrating experiments. The course is designed to give the student a knowledge of the problems connected with equipping laboratories, handling apparatus and materials, organizing students into groups for laboratory work, selecting and organizing lists of experiments for courses of study, and the methods of instructing in the laboratories.

The psychology of teaching chemistry is discussed briefly. The relative importance of laboratory work and classroom work is considered. The relative value of different types of experiments and the order of their position in laboratory courses are discussed. The manner of conducting student laboratory work in such a way as to make it most valuable to the student is considered. The systems of keeping laboratory notes, and the educational value of different types of note-keeping is given attention. Lesson plans and the order of topics in an elementary course are studied. The number and kind of mathematical problems to be solved in an elementary chemistry course are considered. The application of different types of examination questions is studied in their particular relation to the subject of chemistry.

COURSES FOR GRADUATE STUDENTS

Graduate students may do senior college courses and get graduate credit. In such cases there will be extra requirements.

212. FOOD ANALYSIS. Two or four hours.

Prerequisites, Chemistry 1, 2, 7, 7b, 110, 111, 112, 114, and 114b.

This is a laboratory and consultation course. The student works in the laboratory one double period per week for each hour's credit. The purpose of this course is to train the student in the methods of making complete analysis of food materials, and to train him in detecting and determining food adulterants in foods.

An analysis of a food such as oatmeal, determining its water, fat, protein, carbohydrate, crude fiber, and mineral contents. Such food preservatives as sulphites, borates, salicylates, and benzoates are tested for. Illegitimate artificial colors are sought for in certain foods. Maple sugar products, flavoring extracts, etc., may be analyzed with a view to determining the percentage of the genuine article in them.

215. INDUSTRIAL CHEMISTRY. Two or four hours.

Prerequisites, Chemistry 1, 2, 7, 7b, 114, 114b, and 115.

This is a laboratory and consultation course. A double laboratory period is required for each hour's credit in the course. This course is designed to give the student a fundamental knowledge of the general technic connected with certain industrial analyses. Its purpose is also to give the student a deeper insight into the theoretical chemistry related to some of the technical processes involved in industrial chemistry.

The student may enter upon any one or more of the following chemical industries: steel, oil, water, gas, fertilizers, cement, dyes, sugar, etc.

218. ADVANCED INORGANIC CHEMISTRY. Two or four hours.

Prerequisites, Chemistry 1, 2, and 7.

This course is designed for the purpose of taking the student deeper into the fundamental principles of chemistry than he could go in courses 1, 2, and 7; and also for the purpose of giving the student an extended margin of information regarding the application of these principles in the many different fields of chemistry, which will enable him to be a better teacher of chemistry. Incidentally this course takes the student deeper into the problems of estimating proper quantities for complete reactions, and the balancing of equations.

Topics covered include the laws of matter and energy, such as the laws of conservation, chemical change, combining weights, definite proportion, multiple proportion, Law of Gay-Lussac, Avogadro's Law, the laws of dissociation, the laws of gas volume; and the laws of diffusion, liquifaction and solution. Some fundamental application such as how to determine molecular weights, atomic weights, and equivalent weights; a

study of hydrogen, oxygen and the halogens with their relations to each other, a study of sulphur and the other members of the family, a study of nitrogen and the other members of its family, and also their compounds; a study of carbon as an element in its different allotropic forms and a study of its inorganic compounds, such as the oxides, sulphides, carbonates and cyanides; and a study of the other members of the carbon family.

219. ADVANCED INORGANIC CHEMISTRY. Two or four hours.

Prerequisites, Chemistry 1, 2, and 7.

This course is a continuation of chemistry 218. The topics have to do with the metallic groups. The purpose in this course is not so much to take the student deeper into the fundamental principles as to give him an organized and systematized fund of information regarding the metallic elements as they are related to the groupings in the periodic table. Some fundamental principles such as oxidation and reduction, and the principles underlying displacement are studied more widely than in any previous course.

The alkali metals are studied with reference to their properties, sources, and reactions involved in their preparation, and the preparation of their important products. The copper, silver, and gold group is studied in respect to metallurgical processes, and reactions involved in the making of their chief commercial products. The alkaline earths are considered in regard to their natural formations and the preparation of their important compounds. The noble metals are taken up according to their family groups. Metallurgical processes are compared. The manufacture and commercial use of many of their compounds are studied in more or less detail. Many of the rare metals, which are finding commercial use now are studied.

222. INDIVIDUAL STUDIES IN CHEMISTRY. Two or four hours.

223. RESEARCH IN CHEMISTRY. Four hours.

To be taken by candidates for the master's degree in the first quarter of their graduate work. This is a required seminar and conference course for graduate students in all departments granting the degree of Master of Arts. The director of educational research will meet the graduate seminar three times each week and will confer with individual students upon appointment. In seminar the proper technic to be used in educational investigations and allied topics is considered and opportunity is given each student to report upon and discuss the details of his study so far as time will permit. Among the topics dealt with are: The scientific method; education as a science; educational research; types of research problems; the selection of a problem; the bibliography; methods of investigation; the master's study as a process of ordered thinking; the agendum of procedures and technics; the collection, classification, presentation, and interpretation of educational data; practicums in the organization, interpretation, and reporting of educational material; etc.

224. RESEARCH IN THE TEACHING OF CHEMISTRY. Four hours.

This course is intended primarily for graduate students working on their masters' theses.

225. RESEARCH IN THE TEACHING OF CHEMISTRY. Two hours.

A continuation of Chemistry 224.

FOR MAJORS IN THE FIELD OF PHYSICS

The courses in Physics have primarily the object of preparing teachers of physics for the secondary schools and colleges. On account of the fact that teachers are usually expected to teach more than one science, preparation for the teaching of biology and chemistry is also required as shown in the science core.

In addition to the core subjects listed on page 65, and the science core subjects on page 153, the following courses are required of majors in physics: Phys. 11, 12, 13, 104, 107, 121; Math 1; Ed. 116, Ed. 141 (for men). Majors in this department should have a working knowledge of logarithms and trigonometry. Minors in physics should elect as a minimum the following courses: : Physics 1, 2, 3, 103.

***1. ELEMENTARY COLLEGE PHYSICS. Four hours.**

The quarter is divided roughly into three units of study. The work of the world, man's mastery over machines, and the fundamental nature

of things. The topics are treated from a humanistic rather than a technical viewpoint. The technical side is not avoided, but rearranged in such a way as to provide the student with an appreciation of the development of man's mastery over matter and energy. The course will consist of lectures, demonstrations, reading assignments, and laboratory experiments arranged about the units mentioned above.

***2. ELEMENTARY COLLEGE PHYSICS. Four hours.**

This quarter is a continuation of the work of the fall quarter. The work is divided roughly into three units of study: The nature and structure of the atom, the transmission of energy through space, and the relation of sound, light, and radio waves. The same methods are followed as in the first quarter.

3. ELEMENTARY COLLEGE PHYSICS. Four hours.

The work during the spring quarter is a continuation of the fall and winter quarters and is arranged around three units of study; radiant energy, the utilization of energy, and electricity, the servant of man.

10. ELEMENTARY HOUSEHOLD PHYSICS. Four hours.

A course based upon the questions raised by the problems within the home. Considerable attention is given to the discussion and demonstration of problems in heat, light, and electricity.

11. GENERAL COLLEGE PHYSICS. Four hours.

This course is based upon the problems raised in Millikan's text, "Mechanics, Molecular Physics, and Heat." The laboratory experiments are preceded and supplemented by lectures and demonstrations of the principles involved. The student is required to make an accurate report of the experiments and problems. The student should have a working knowledge of logarithms and understand elementary trigonometry.

12. GENERAL COLLEGE PHYSICS. Four hours.

A continuation of Physics 11. This course is based on a text by Millikan and Mills, "Electricity, Sound, and Light." The same methods and procedure are followed as in the previous course. The discussion and laboratory problems, however, are centered about electricity.

13. GENERAL COLLEGE PHYSICS. Four hours.

A continuation of Physics 12, but devoted to the study of light and sound.

103. THE PRINCIPLES OF RADIO RECEPTION. Four hours.

This course consists of lectures, demonstrations, and experiments based upon three units of study: The reproduction and amplification of sound; the vacuum tube, and the modern radio receiver. The purpose of the course is to prepare science teachers to handle the problems raised by pupils in the secondary schools concerning radio. The student electing the course should have had a course in elementary electricity.

104. THE PRINCIPLES OF RADIO TRANSMISSION. Four hours.

This course deals with the principles underlying radio transmission. It will consist of lectures, demonstrations, and experience in the operation of a broadcasting station. The purpose of the course is to prepare students for teaching the principles underlying radio transmission, which are basic and fundamental in modern physical science.

105. HIGH FREQUENCY PHENOMENA. Two hours.

A course based upon the experiments and literature in the field of high frequencies or short waves. It is in this field that most of the experiments in radio television and trans-oceanic telegraphy and telephony are being conducted. This course should be preceded by Physics 103 or 104.

107. MODERN PHYSICS. Two hours.

This course is a popular review of the development in the field of physics beginning with 1895. It will consist of illustrated lectures and demonstrations and will involve the study of radio activity, the nature and structure of the atom, space, time, and gravitation. It will include a review of the literature in the field of modern physics.

*Given also by extension.

111. PHYSICS OF THE AUTOMOBILE (Not given 1931-32). Four hours.

A study will be made of the principles common to all automobiles. The course will be conducted chiefly on the basis of excursions to various salesrooms where the automobile can be studied first hand. The different makes of automobiles will be compared and the physical principles involved and common to all of them discussed.

114. PHYSICS OF MUSICAL INSTRUMENTS. Four hours.

A course offered especially for music majors, but valuable to all interested in the nature of sound and sound producing instruments. It will consist chiefly of illustrated lectures and demonstrations. The principles of sound, musical instruments, amplification and reproduction sound as well as acoustics will be discussed. There are many phenomena of sound met with in everyday life which are not understood by most people. The course is non-technical in character.

115. LIGHT AND COLOR (Not given 1931-32). Four hours.

A non-technical course offered especially for art students involving the principles of light, shade, and color. It will consist of illustrated lectures and demonstrations.

118. PHOTOGRAPHY. Four hours.

This course is arranged especially for science teachers and teachers of other subjects interested in making use of photography in their classes. The course will consist largely of laboratory instruction in the art of taking pictures, developing, preparing chemicals, printing, lantern slide making and coloring, and enlargement. Considerable attention will be given to copying so that teachers may take advantage of the wealth of illustrative material found in books and magazines. It is possible for a student to prepare and work out visual materials for a given course. A technical knowledge of physics is not required.

121. DIRECT AND ALTERNATING CURRENTS (Not given 1931-32). Four hours.

An advanced course in the theory of direct and alternating currents with the main emphasis upon alternating currents. It will consist of problems, lectures, and demonstrations, as well as a survey of the local problems of generation, distribution, and measurement.

123. LABORATORY PROBLEM COURSE FOR ADVANCED STUDENTS. Hours dependent upon the amount of work done.

Purpose: To provide opportunity for advanced students to make a more exhaustive and intensive study of problems of especial interest to them.

Suggested fields of study: Radio transmitters, receivers, short wave transmitters and receivers, radio wave field intensities, vacuum tube characteristics, X-ray, radio activity, atomic structure, piezo electricity, photography, light, heat, sound, acoustics, and others which may be suggested in conference.

130b. METHODS OF TEACHING HIGH SCHOOL PHYSICS. Two hours.

A review of the literature in the field and experience in the organization of subject matter, experiments and demonstrations according to accepted principles. The purpose of the course is to prepare the teacher in a professional way to meet the problems of teaching physics. Considerable attention will be given to laboratory and demonstration equipment, costs, sources of materials, tests, bibliography, etc.

222. INDIVIDUAL STUDIES IN PHYSICS. Two or four hours.**223. RESEARCH IN PHYSICS. Four hours.**

Taken in the first quarter of graduate work.

This is a required seminar and conference course for graduate students who are working on their masters' investigations. The director of educational research meets the group three times each week and confers with individual students in the research office. Small group conferences are held when needed. Each student meets his thesis adviser regularly.

224. RESEARCH IN PHYSICS. Two hours.

An individual research course in connection with the graduate thesis. This is a conference course designed to guide students in the selection of

problems, method of procedure, and interpretation of results. It should be elected only after consultation with the head of the department.

225. RESEARCH IN PHYSICS. Two hours.

This is a continuation of Physics 224.

UNSPECIALIZED SCIENCES

1. BIOLOGICAL ELEMENTARY SCIENCE. Four hours.

Required of Kindergarten, Primary, and Intermediate majors.

This course involves the study of butterflies, moths, and other insects in relation to man. It includes the study of native and common trees, our most common birds, their habits and their songs. Attention is given to the aims in teaching elementary science, methods of presentation, and ways of collecting, preserving, and using materials. The course is presented in units. Each unit includes assigned readings and field study.

2. PHYSICAL ELEMENTARY SCIENCE. Four hours.

This course is a continuation of Science 1 and may be elected by students who wish advanced work in this field. It deals primarily with physical phenomena, such as simple problems in electricity, magnetism, geology, meteorology, and astronomy. Laboratory demonstrations and field observations constitute a major part of the work.

3. INTRODUCTION TO SCIENCE. Four hours.

The purpose of this course is to provide the student with some important information related to the various sciences; to make life richer to him because he sees deeper into the mysteries of the universe and is able to satisfy some curiosities as to the relation of causes and effects, and to see the reasons for some common phenomena, and to serve the student as an orientation course as well as a cultural course.

The course includes topics dealing with the earth and its relation to other bodies in the universe, forces which hold the earth and other bodies in certain relations to each other, the development of the earth and other planetary bodies, the materials in the earth's crust and their transformation into plant and animal life, and the relation of climatic conditions to such life.

4. INTRODUCTION TO SCIENCE. Four hours.

This course is a continuation of Science 3. The general purpose is the same, but this course carries through the development from the inorganic material of the earth to the highest type of life.

Foods, vitamins, hormones, the energy relations of life, and the metabolic processes of the human body are stressed; the theories as to how changes and development occur; the laws of heredity as applied to plants and animals; a study of man in his relation to his environments, and how he has modified the development of plants and animals; and man's relation to his physical and chemical environment, and how he has gained increasing control over these.

5. GENERAL SCIENCE. Four hours.

This is primarily a professionalized course emphasizing the aims and the methods used in selecting and organizing the subject matter for a general science course. The student will be required to acquaint himself with appropriate textbooks; results of investigations made in the teaching field; and with the details of formulating units for a general science course of study.

100. UNIT COURSES. Four hours.

Students who desire may elect any one or more of the units without the others.

A course designed both for science majors and for students specializing outside this field. It will be broken up into four units, the first of which treats of the modern principles in the teaching of science; the second of evolution both organic and inorganic; the third the marvels of modern physics—new conceptions of the structure of matter and radioactivity; and the service of science in prolonging human life.

101. SCIENCE INSTRUCTION. Four hours.

This course will acquaint the student with the accepted recent methods of instruction in science and the selection and organization of subject matter. The course has been prepared for supervisors, administrators, and teachers who wish a clearer knowledge of the principles underlying science instruction.

SOCIOLOGY AND ANTHROPOLOGY

This department offers courses in two related fields, namely sociology and anthropology. The courses are designed to meet the professional needs of teachers, supervisors, and administrators in elementary and secondary schools. Each course attempts to reflect the fundamental relationship of the department to the work and purpose of the College as a teacher-training institution. In all of this, the department is not unmindful of its task specifically to prepare its majors to teach sociology and anthropology. Thus, there are two very definite training tasks which the department is obligated to perform.

Fundamentally, the school is a social agency, and those who direct its activities are social servants, the agents of society. This certainly makes clear the fact that teachers and other workers in public education should have accurate knowledge of the science of society, and should know the relation and application of this science to education. One of the bases upon which safe leadership in educational theory and practice rests is this knowledge.

In addition to the core subjects listed on page 65, the following courses are required of majors in the department: Sociology 50, 90, 95, 125, 130, 135, 140, 145, 150, 160, 165, and 170; Biology 101; Education 116, 126, and Ed. 141 (men); Geography 8 and 190 or 191; History 208 or 209; Political Science 151.

Sociology majors are required to elect a minor of from twenty to thirty-two hours. The minor should be determined as early as possible and in conference with the department head whose approval is necessary. Majors are urged to minor in fields related to sociology, preferably the social studies.

1. INTRODUCTION TO THE SOCIAL WORLD. Four hours.

Required of all first year students.

A college education should give students a better understanding of contemporary life and its complexity of problems and issues. This understanding can be obtained best through a helpful interpretation of human activity. To give such an interpretation, non-technical in its treatment, is the purpose of this course. This interpretation is in fundamental agreement with the results of recent studies in anthropology, sociology, and related fields. It is felt that these fields offer intelligent people of today certain leading principles and a considerable array of specific data that can help them to a better understanding of the social world and its problems.

*50. INTRODUCTORY SOCIOLOGY. Four hours.

This course is an elementary study of social principles and problems which are found in human relations as expressed in social organization and institutions. It is a basic course for freshmen and sophomores who contemplate majoring in sociology. It is also open to other freshmen and sophomores who are interested in taking an introductory course dealing with the factual materials of the subject as well as the methods of studying cultural change and social relations. This course is prerequisite to all courses in sociology.

*90. RURAL SOCIOLOGY. Four hours.

This course presents rural life as a phase of the general social life. The social situation in rural America is treated from the standpoint of its striking complexities and the causes thereof. The various forces that are operating to remake the occupation of agriculture and the community life of rural people are discussed. Some attention is given to the problems that are peculiar to selected country institutions, especially religious, educational, civic, and recreational.

95. URBAN SOCIOLOGY. Four hours.

Urban sociology is a study of the conditions and trends in modern city life. The tendency at present is to think of the urban community as a living, growing organism. There have been many detached movements in the American city, such as the public-health, playground, parent-teachers association, social service, social center, Americanization, better government, etc. This course attempts to find the underlying and unifying principles

*Given also by extension.

by means of which all that is best and most significant in these distinct movements may be correlated and utilized in effective efforts at urban improvement.

***105. GENERAL SOCIOLOGY. Four hours.**

Required of all juniors and seniors.

This course treats in detail the major sociological concepts. And, too, it presents a study of the nature, history, scope, methods, and principles of sociology. It emphasizes the scientific point of view in dealing with social phenomena.

120. COMPARATIVE RELIGION. Four hours.

A study of the world's principal living religions, such as Buddhism, Confucianism, Hinduism, Mohammedanism, and Christianity, with due attention to their founders, principal doctrines, rites, and ceremonies.

***125. MODERN SOCIAL PROBLEMS. Four hours.**

This course embodies the critical consideration of significant social problems arising through all sorts of factors. It attempts to throw a helpful light upon both the causes and the possible amelioration of conditions and maladjustments. It thus serves as an introduction to applied sociology.

130. GENERAL ANTHROPOLOGY. Four hours.

A general and comparative elementary study of primitive peoples, their physical characteristics, beliefs, customs, arts, industries, forms of government, and religion. This course is illustrated by concrete materials, relating particularly to the primitive inhabitants of North and South America. It is an introduction to and preparation for the courses immediately following as well as for all the more advanced courses in sociology.

135. THE ORIGIN, DEVELOPMENT, AND ANTIQUITY OF MAN AND HIS SUPERSTITIONS. Four hours.

A presentation of the knowledge that has been accumulated with respect to early man and the earlier human cultures, with such scientific inferences as seem to be warranted by the facts thus far discovered.

140. EARLY CIVILIZATION IN EUROPE AND AMERICA. Four hours.

A study of the peopling of Europe and of North and South America, devoting particular attention to the early civilization of the Peruvians, Mexicans, and the Southwest Indians of the United States. The course is illustrated by lantern slides and a fine collection of material exemplifying early American art and industry.

145. SOCIAL EVOLUTION. Four hours.

How the society of today has developed, chiefly by a natural process, from the primitive groups of our remote ancestors—the clan, the tribe, etc.—the causes or conditions that have produced such development, a description of social life at its various levels, and a study of the means and methods whereby its further development may be hastened and directed.

150. RACES, RACE CONTACT, AND RACE PROBLEMS. Four hours.

The origin, development, distribution and differentiation of races, their chief characteristics; the effects of race contact and the problems arising from it; the question of race inferiority; the Nordic question, etc. These are the principal topics discussed in this course.

155. THE SOCIAL THEORY OF EDUCATION. Four hours.

A philosophy of education based upon the doctrine of organic, psychic, and social evolution. It is a study of the manner in which nature educates, and endeavors to show how the principles and laws of education are derived from a study of nature's methods, with the application of these principles, methods and laws in artificial education. It compares the aim of educational effort, the school as a social instrument, and the relation of education to social progress.

***160. PERSONALITY AND SOCIAL BEHAVIOR. Four hours.**

This course gives critical attention to the social attitudes and to their development and modification under social pressure. Significant patterns of group behavior and the interactions of individuals and groups are treated. Attention is also given to the implications of social psychology for modifications in education.

*Given also by extension.

***165. THE FAMILY. Four hours.**

This course treats of the development of the family as a social institution. Its changed status in present-day social economy is discussed from several points of view. Its significance to society in socializing the individual and fixing those major attitudes which determine his social adjustment is emphasized. Critical attention is given to major contemporary problems that confront the family as an institution.

***170. EDUCATIONAL SOCIOLOGY. Four hours.**

In this course an attempt is made to relate the principles of sociology to the problems of education. A study is made of the bearing of certain sociological concepts on educational theory and practice. Attention is given to the influence of types of group life upon the work of the school. School problems are treated from the social and sociological point of view.

175. THE SOCIOLOGICAL ASPECTS OF PATRIOTISM, PEACE, AND WAR. Four hours.

In this course an attempt is made to conduct the student through an intensive and scientific study of the subjects mentioned, stressing the benefits as well as the evils of war, the effects of peace and the proposed methods of securing it, and the nature and kind of patriotism that should be taught in the schools, with the most approved methods of such teaching.

180. THE HISTORY OF SCIENCE. Four hours.

The story of the origin and development of science, its nature, methods, great discoveries, dramatic episodes, leading promoters, contributions to progress, and its relations with philosophy and religion.

185-205. THE DEVELOPMENT OF SOCIAL THEORY. Four hours.

Movements in social thought are presented in this course through the teachings of outstanding representatives who will be interpreted in their cultural, economic, ideological, political, and religious settings. It presents an analytical survey and critical treatment of the development of social theory.

190-210. CONTEMPORARY SOCIOLOGICAL THEORIES. Four hours.

This is a course for graduate students pursuing the study of sociology as either a principal or subordinate subject for a higher degree. Lectures, reports, and discussions based upon the study of leading sociological sources in the field of general and advanced theory. Considers the relation of sociology to other social sciences, and examines its philosophical implications.

195-215. TECHNIQS OF SOCIAL RESEARCH. Four hours.

Hope for the advancement of sociology lies in the testing of sociological principles by a patient accumulation of observed data, scientifically classified and generalized. This course deals with such reliable technics as are available for the collection and treatment of data in social research.

200. SEMINAR. Four hours.

The work of the seminar, which involves independent, scientific investigation under the direction of the instructor, and to which only graduate students are admitted without his special permission, consists in the investigation of a selected sociological problem, or the intensive study of the doctrine of one or more of the leading sociologists of the world, present or past. The course may be continued for eight additional hours of credit as Sociology 201 and Sociology 202.

222. INDIVIDUAL STUDIES IN SOCIOLOGY. Two or four hours.**223. RESEARCH IN SOCIOLOGY. Four hours.**

This is a required seminar and conference course for graduate students who are working on their masters' theses. The director of educational research meets the group of such students three times each week and confers with individual students in his office. Small group conferences are held occasionally. Each student is expected to meet his thesis adviser regularly. It is expected that this course will be taken in the first quarter of graduate work.

*Given also by extension.

224. RESEARCH IN SOCIOLOGY. Four hours.

This is a thesis course for master's candidates in sociology in the second quarter of their graduate work.

225. RESEARCH IN SOCIOLOGY. Two hours.

This is a continuation of Sociology 224.

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