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COLORADO STATE TEACHERS COLLEGE

BULLETIN



CATALOG AND YEAR BOOK
1929-1930

GREELEY

SERIES XXIX

APRIL

NUMBER 1

COLORADO STATE TEACHERS COLLEGE
BULLETIN

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CATALOG
AND
YEAR BOOK

COLORADO STATE TEACHERS COLLEGE

1929—1930

GREELEY, COLORADO
PUBLISHED BY THE COLLEGE
APRIL, 1929

1929—THE COLLEGE CALENDAR—1930

The Summer Quarter, 1929, begins June 15 and ends August 24
First half, June 15-July 20—Second half, July 22-Aug. 24

FALL QUARTER 1929

<i>Sept. 26,</i>	<i>Thursday</i>	Freshman Week begins, 10:30, Little Theater
<i>Sept. 30,</i>	<i>Monday</i>	Registration of Freshmen
<i>Oct. 1,</i>	<i>Tuesday</i>	Registration of Upper Classmen
<i>Oct. 2,</i>	<i>Wednesday</i>	Classes begin
<i>Nov. 11,</i>	<i>Monday</i>	Armistice Day (Holiday)
<i>Nov. 28-29,</i>	<i>Thursday, Friday</i>	Thanksgiving (Holiday)
<i>Dec. 14,</i>	<i>Saturday</i>	Advance Registration for Winter quarter
<i>Dec. 19-20,</i>	<i>Thursday, Friday</i>	Final Examinations
<i>Dec. 22,</i>	<i>Sunday</i>	Christmas Vacation begins

WINTER QUARTER

<i>Dec. 30,</i>	<i>Monday</i>	Registration of New Students. Classes begin
1930		
<i>Jan. 1,</i>	<i>Wednesday</i>	New Year's Day (Holiday)
<i>Feb. 22,</i>	<i>Saturday</i>	Washington's Birthday (Holiday)
<i>Mar. 8,</i>	<i>Saturday</i>	Advance Registration for Spring quarter
<i>Mar. 14-15,</i>	<i>Friday, Saturday</i>	Final Examinations
<i>Mar. 16,</i>	<i>Sunday</i>	Spring Vacation begins

SPRING QUARTER

<i>Mar. 24,</i>	<i>Monday</i>	Registration of New Students. Classes begin
<i>May 2,</i>	<i>Friday</i>	Insignia Day
<i>May 30,</i>	<i>Friday</i>	Memorial Day (Holiday)
<i>June 5-6,</i>	<i>Thursday, Friday</i>	Final Examinations
<i>June 7,</i>	<i>Saturday</i>	Commencement Day

SUMMER QUARTER

<i>June 14,</i>	<i>Saturday</i>	Registration
<i>June 16,</i>	<i>Monday</i>	Classes begin
<i>July 4,</i>	<i>Friday</i>	Independence Day (Holiday)
<i>July 19,</i>	<i>Saturday</i>	First Half ends (Registration for second half quarter)
<i>July 21,</i>	<i>Monday</i>	Second Half begins
<i>Aug. 23,</i>	<i>Saturday</i>	Summer Convocation

Fall Quarter 1930 Begins September 29

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Professor of History
A.B., McKendrie College; A.M., Teachers College, Columbia University;
B.D., Drew Theological Seminary; Ph.D., University of Illinois.

 THE LIBRARY

- ALBERT FRANK CARTER, A.B. *Head Librarian*
- GRACE LILLIAN CUSHMAN *Assistant Librarian;*
Instructor in Library Administration
Diploma, Colorado State Teachers College.
- ANNE MAXVILLE, A.B. *Assistant Librarian*
A.B., Colorado State Teachers College.
- WILLIAM BIDWELL PAGE, M.D. *Assistant Librarian*
M.D., University of Michigan.
- ELIZABETH SCHILPP *Children's Librarian*
Diploma, Carnegie Institute of Technology.
- CORA MAY THOMAS *Classifier and Cataloger*
Diploma, Colorado State Teachers College.
- IVA CATHERINE WATSON, B.S. *Reference Librarian*
Diploma, Colorado State Teachers College; B.S., Colorado Agricultural
College; Certificate, New York State Library School and New York
University.

THE CONSERVATORY OF MUSIC

***J. DEFOREST CLINE**

*Professor of Public School Music;
Director of the Conservatory of Music*

Graduate in Music, Washington State College; Graduate Student, Columbia University; Voice with Kuria Strong, and Percy Rector Stephens; Composition, Arthur Edward Johnstone, New York City.

EUGENE SHAW CARTER

Instructor in Violin

Violin Student, Leon Sametini, Chicago Musical College; Carl-Frederic Steckelberg, University School of Music (Lincoln, Nebraska); Albert Zoellner, Jacques Gotlieb, Earl Pfouts, Sol Marcossou, Frederic Mac-Murray.

J. ELBERT CHADWICK

Instructor in Piano

Graduate of Syracuse University, College of Fine Arts; Piano with Iliff Garrison, Organ with Harry L. Vibbard, Theory with Dr. William Berwald; Graduate Student of Dr. Adolf Frey, Syracuse University; Premier Prix d'Orgue at Fontainebleau, France, 1921; Studied with Charles Marie Widor and Henri Libert.

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.

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.

BLANCHE BENNET HUGHES

Instructor in Piano

Student, College of Music, Cincinnati; Student with Alexander Andre, Armin Doerner, Everett H. Steele.

ESTELL ELGAR MOHR

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 Kiesewetter, Madame Aslanoff, Percy Rector Stephens, Dean Harold Butler, Syracuse University.

LESTER EDWIN OPP

Assistant Professor of Music

Mus. B., 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

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. MacDougall; Piano with Alexander Lambert, V. Eduardo in Milan, and Gustave Lazarus in Berlin; Student, University of Berlin.

JAMES J. THOMAS

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.

*On Leave.

SPECIAL FACULTY AND GENERAL LECTURERS

SUMMER QUARTER 1929

In addition to the regular faculty, a number of outside lecturers and teachers, leaders in their respective fields, conducted courses in the different departments. This supplemental faculty included among others the following:

- DR. FREDERIC D. CHEYDLEUR, Professor of Romance Languages, University of Wisconsin. Courses in Romance Languages, and Lecturer.
- DR. LIGHTNER WITMER, Head of the Department of Psychology, University of Pennsylvania. Courses in Psychology.
- DR. HAROLD RUGG, Professor of Educational Psychology, Teachers College, Columbia, and Educational Psychologist, Lincoln School, Teachers College, Columbia University. Courses in Education.
- DR. EDWARD HOWARD GRIGGS, Author and Lecturer on Literature and Philosophy. Lecturer.
- DR. I. L. KANDEL, Professor of Education, Teachers College, Columbia University; Assistant Director International Institute. Courses in Education, and Lecturer.
- MR. ALLAN ABBOTT, Professor of English, Teachers College, Columbia University. Courses in Literature and English.
- DR. FRANKLIN G. EBAUGH, Director of Colorado Psychopathic Hospital. Courses in Psychology, and Lecturer.
- MISS CAROLYN ELIZABETH GRAY, Lecturer in Nursing Education; Author and Hospital Nurse Superintendent. Courses in Nurse Teacher Training.
- DR. MERLE PRUNTY, Principal Central High School, Tulsa, Oklahoma. Courses in Education.
- MR. MARQUES E. REITZEL, Professor of Fine Arts, Rockford College; Director of the Rockford Art Museum, Rockford, Illinois. Courses in Fine Arts.
- MR. CLARK M. FRASIER, Director of Training, Lewiston State Normal School, Lewiston, Idaho. Courses in Education.
- DR. W. D. REEVE, Professor of Mathematics. Teachers College, Columbia University. Courses in Mathematics.
- MR. A. L. TRELKELD, Superintendent of Schools, Denver, Colorado. Courses in Education, and Lecturer.
- DR. J. A. O. LARSEN, Associate Professor of History, Ohio State University. Courses in History.
- MISS MAUDE MARY MCBROOM, Principal Elementary School. State University of Iowa. Courses in Education.
- REV. DR. LAWRENCE WILSON, Pastor Mission Hills Congregational Church, San Diego. Courses in Religious Education, and Lecturer.

- DR. JOHN W. WITHERS, Dean of the School of Education, New York University. Courses in Education, and Lecturer.
- MR. H. W. WOOD, Superintendent of Schools, Munising, Michigan, Courses in Parent Teacher Association Work.
- MR. J. H. RISLEY, Superintendent School District No. 1, Pueblo, Colorado. Courses in Education.
- MR. N. E. BUSTER, Principal of William James Junior High School, Fort Worth. Courses in Education.
- MR. W. B. DOBSON, Supervisor of Elementary Grades, Public Schools of Forth Worth. Courses in Education.
- MR. R. L. HUNT, Superintendent of Schools and director of secondary education, Eastern State Teachers College, Madison, South Dakota. Courses in Education.
- MR. I. E. STUTSMAN, Superintendent of City Schools and Logan County High School, Sterling, Colorado. Former President, Colorado Education Association. Courses in Education.
- MISS BLANCHE O'HARA, New York. Specialist in Hand Writing Methods. Courses in Penmanship.
- MISS FRANCES R. DOULL, Columbus, Ohio. Formerly Supervisor of Penmanship in the Denver Public Schools. Specialist in Penmanship Supervision and Teaching Methods. Courses in penmanship methods.

PART II
GENERAL INFORMATION

COLORADO STATE
TEACHERS COLLEGE
Greeley, Colo.

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 4,567 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 twelve 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 science building and a model heating plant. The latter will be erected on the new plot of ground east of the campus. It will be located close to the Union Pacific tracks and steam will be piped to a distributing plant on the campus. It also is proposed to build an addition to the library as soon as funds are available. The buildings which at present comprise the physical plant are:

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 67,000 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.

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.

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.

GYMNASIUM—The newest building on the campus is Gunter Hall of Health, a name of far greater significance for the college gymnasium of today. 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 45x88.6 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 the gymnasium.

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.

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 90" 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 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 \$25.00, \$27.00 and \$28.00 per 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 head of the housing bureau 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.

EQUIPMENT

The institution is well equipped in the way of laboratories, libraries, gymnasiums, playgrounds, an athletic field, art collection, museums, and a school garden. The library has 67,000 volumes. There is ample opportunity to work out subjects requiring library research.

THE GREELEY WATER

The water supply of Greeley is obtained from the canon of the Cache la Poudre, forty miles from Greeley, in the mountains. The water is passed through settling basins and filters until all foreign matter is

removed. The supply is clear, pure, and ample for all needs of the city. The system was constructed at an expense of \$400,000.00 and is owned by the city.

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 of home economics, industrial arts, fine and applied arts, training school teachers, teachers of defective and atypical children, teachers for adult night schools, etc.

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 per 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**—\$8.00 per quarter

This fee includes all incidental costs of students for one quarter.

3. **LIBRARY FEE**—\$2.00 per quarter

Gives the student the use of excellent library facilities, including 320 magazines each month and 67,000 books. All the income from this fee is used for this purpose.

4. **PHYSICAL EDUCATION AND HEALTH FEE**—\$2.00 per quarter

This fee entitles students to free medical attention on the campus (the college employs two full time physicians and two registered nurses). It also includes free use of the gymnasiums, swimming pool, etc.

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.)

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 head of the housing bureau in the office of the dean of women for a list of approved rooms. No student should rent her room by mail. Prospective students are urged to come a few days before the opening of the quarter to personally select their rooms. The housing bureau does not take the responsibility of reserving rooms except in the dormitories.

All housing accommodations for women must be approved by the dean of women before permanent registration. The office of the dean of women is open during the month of September for the sole purpose of consulting with women students and placing them in approved houses.

It is advised that students attending College for the first time come several days or even a week before the beginning of the fall quarter that they may be satisfactorily located. No rooming houses will be allowed on the approved list if they do not have single beds and comfortable bathing and heating facilities.

All students and householders are asked to sign a contract covering arrangements concerning rent, moving, and the regulations as to 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 head of the housing bureau.

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 \$25.00 to \$28.00 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
Matriculation fee	5.00
Physical Education and Health fee	2.00
Incidental fee	8.00
Library fee	2.00
Student Association fee	5.00
Total for a quarter (12 weeks)	<u>\$127.00</u>

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

THE SUMMER QUARTER

The summer quarter of 1930 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 twenty 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 expecting 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.

EXTENSION DEPARTMENT

To enable teachers in active service to continue their professional education while teaching, the College maintains an Extension Department which, through its three plans of work, now enrolls four thousand students each year.

1. **EXTRA-MURAL CLASSES**—Classes are conducted by members of the College faculty in centers that can be reached conveniently. These classes meet once a week for seventeen weeks for a period of ninety minutes.

2. **EXTENSION CLASSES**—These classes are organized in more distant centers, and are taught by superintendents, principals, and teachers appointed by the director of the Extension Department. These instructors to be eligible for appointment must possess educational qualifications equivalent in all respects to those qualifications required of resident faculty members. The outline of the course is made by the College instructor who gives the residence course. Seventeen meetings of ninety minutes each.

3. **CORRESPONDENCE COURSES**—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.

Not more than one-half of the total number of quarter hours of extension credit as indicated in the above paragraph may be completed by correspondence.

These limitations will not be retroactively applied to any student who has completed (in accordance with regulations printed in the college catalogue 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 these limitations may apply all extension credits earned before that date to meet graduation requirements.

Extra-mural courses taken 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 may not count on present graduation 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 so that advance 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.

DEPARTMENT BULLETIN—The department publishes a bulletin giving in detail the regulations governing extra-mural, extension class, and correspondence courses, and listing all the many courses open to teachers through this service. This bulletin may be had upon request.

TEACHER PLACEMENT BUREAU

The College maintains a bureau to serve graduates seeking positions and school boards and superintendents seeking teachers. There is no charge for this service beyond a small one to cover in part the cost of assembling data concerning nominees. 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. Between October 1, 1927, and October 1, 1928, there were 518 graduates of the College who obtained positions through the placement bureau. These positions were in twenty-seven states of the Union. One graduate obtained a position in Brazil.

PART III
THE TRAINING SCHOOLS

THE TRAINING SCHOOLS

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 a sufficient 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.

The Training Schools maintain a complete elementary and secondary school system from the pre-school and kindergarten to the twelfth year. Students are required to take one quarter of observation (Ed. 2a) and one quarter of student teaching (Ed. 2b) in the Elementary or the Junior High School some time during their second year in Colorado State Teachers College. A second quarter of teaching may be elected, and in most cases is very advisable. Student teaching in the Training Schools includes conferences, observations, supervision, lesson plans, and teaching on the part of the College students. Scheduled group conferences are held every Tuesday at four o'clock.

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 course in pre-teaching observation (Ed. 2a) 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.

During the period of student teaching (Ed. 2b) 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.

Assignments for work are made through conferences with the principal of the College Elementary School.

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. A minimum of one quarter of student teaching is required of students in the senior college who expect to take their Bachelor of Arts degree. 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. When not teaching, the student teacher is held responsible for preparation and participation in the discussion of the recitation just as any other member of the class.

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 preteaching 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 two school systems off the campus as teacher-training centers. One is the Big Bend school eight miles from Greeley and the other is the Gilcrest school three miles farther south. 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. 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 his application for student teaching. The required amount of student teaching for the two year course shall be one quarter. No credit will be given for less than a full quarter of teaching.
2. As a prerequisite to one quarter of student teaching (Ed. 2b) each student shall be required to spend one quarter in a systematic scheduled class in observation (Ed. 2a) with the training teacher with whom he is to teach the following quarter.

3. Each student shall be required to pass satisfactorily an achievement test and make a grade not less than "C" in Ed. 2a, as prerequisites to student teaching (Ed. 2b).

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. The required amount of student teaching in the senior college for the degree shall be one quarter taken in either the elementary school (Ed. 102) or the high school (Ed. 103) provided the teaching requirements in the junior college have been met.

6. One additional quarter of student teaching may be elected in the junior college and one in the senior college.

7. 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 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.

PART IV
GRADUATE WORK

GRADUATE WORK

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

ADMISSION TO THE GRADUATE SCHOOL

1. Application for admission to graduate study for either of the purposes named above must be made to the registrar of the College. Formal blanks for this purpose will be furnished by his office.
2. The requirements for admission are:
 - a. The Degree of 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. Official credentials to be filed with registrar giving (1) a record of the high school work, (2) a transcript of the undergraduate, college or university grades
 - c. Satisfactory classification test scores to be filed with the registrar as a matter of record

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 head of his major department 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.

After satisfying the registrar in regard to his admission to the Graduate School, the student shall at once plan with the head of his major department a tentative three-quarter program of courses.

1. 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 of 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.

ADMISSION TO CANDIDACY FOR THE MASTER OF ARTS DEGREE

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. 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

- e. He must have demonstrated during his first week in departmental Research 223 a proficiency in organizing and expressing thought in writing. If the student shows an inability to do this, he is required to take English 20 *without credit* during his first quarter of graduate work.
 - f. He must have shown his personal fitness to become a candidate
 - g. The head of the student's major department 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
3. A candidate may be required by the head of his major department to pass either a written or an oral preliminary examination before he is recommended to the Graduate Council for admission to candidacy.
 4. Graduate students will not be permitted to engage in more than one extra curricular activity per quarter and then only when they reach a 50 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.

EXTENSION WORK

No graduate credit is given for correspondence work. Graduate credit will be given for extra-mural classes of graduate rank. In order to register for graduate credit in extra-mural classes, the following procedure should 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; he shall, also, indicate the department in which he desires to major
Upon receipt of such proof
 - a. The registrar shall promptly notify him of his admission to the Graduate School
 - b. He further shall notify him that it will be necessary for him to arrange a program of studies with his major adviser and shall indicate who this adviser is to be
 - c. He shall further advise such student that the specific course he plans to take in extra-mural classes may or may not fit into the program of studies leading to the master's degree, and that the student can determine that only by consultation with his major adviser

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 as much 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 will 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 members of the Teachers College faculty. 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 nine hours credit may be granted for this research.
3. Data for a thesis study may be collected in absentia without credit if approved in advance by the head of the student's major department. The thesis, however, must be written while the student is in residence.
4. Every student must register for Research 223 in his major department during his first full quarter of regular graduate work.
5. The student must have at least sixty-four quarter hours of undergraduate and graduate work in his major or closely related subjects.
6. He must have not less than thirty-two hours of undergraduate work.
7. No graduate credit will be given for courses numbered under 100, or for scattered and unrelated courses. All courses numbered under 200 require additional work for graduate credit. The undergraduate rule as to load applies to the Graduate School. In determining the maximum amount of work, research upon thesis must be included within the limit stated.
8. At least four weeks before the date upon which the degree is to be conferred, three copies of his thesis must be filed with the head of his major department for examination by the Thesis Reviewing Committee before going to the Graduate Council for final approval.

The Thesis Reviewing Committee shall consist of the head of the student's major department, a representative of the Graduate Council appointed by the chairman, and the instructor who is the thesis adviser, provided he is other than the head of the student's major department.
9. At least two weeks before the date upon which the degree is to be conferred, the complete thesis in final form must be approved and two copies, properly signed, filed with the Graduate Council, one of which must be an original copy. Also two dollars to bind these copies must be deposited with the business agent by the student.

10. The thesis must conform to definite standards. It must be typewritten on paper of good quality, size 8½ by 11 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)

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

Approved by:

Thesis Adviser

Department

Thesis Reviewing Committee

.....

Department

.....

Department

Chairman of the Graduate Council

.....

Before final approval for the degree, the student may be held for an oral examination by the Graduate Council, assisted by the head of his major department.

One week before graduation date, a brief typewritten digest of the thesis should be filed with the head of the major department, with the director of research, and one with the business agent to be bound with the copy of the thesis prepared for the library.

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

FELLOWSHIPS, SCHOLARSHIPS, AND LOAN FUNDS FOR 1929-30

TEACHING FELLOWSHIPS

Ten graduate teaching fellowships will be available for the school year 1929-30. 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, 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 1929-30. 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 ap-

pointed 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 D. BALL PRIZE

Twenty dollars in gold, the award of James D. 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 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 \$18,000, 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 his 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 STUDENT 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.

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. AND Y. M. 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 and the Young Men'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. All three of the 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 28, 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.

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.

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 and 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 for all in the questioned area. 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 four 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 or sixteen 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 twenty 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 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 teaching aptitude test
 - d. 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 1929

FRESHMEN ENROLLMENT—All freshmen enrolling for the first time in this College are required to report at half past ten o'clock Thursday, September 26, 1929, 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 30. Those who are accepted for entrance into the College will then complete their registration in classes during Monday, September 30. Upper class registration will take place on Tuesday, October 1, and classes will begin on Wednesday, October 2.

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 30, stating which section he or she is assigned to.

Students in Section A have their courses coming in a certain sequence; those in Section B in another sequence; and those in Section C still another. In the diagram of the curriculum at the beginning of each departmental section in this catalog 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, 1929. Warned." 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 sixteen-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 given by the vice-president.

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

Civ. 1	3 hrs	grade B=	12	
Biol. 1	3 hrs	grade C=	9	
Art. 14	4 hrs	grade A=	20	The total is 52.
Nat. St.	2 hrs	grade D=	4	Divided by 16 the re-
Eng. 4	3 hrs	grade F=	3	sult is 3.25
Phys. Ed.	1 hr	grade B=	4	
			<hr/>	
	16		52	

Typical Example: Martha B. White

Civ. 2	3 hrs	grade C=	9	
Ed. 2a	5 hrs	grade D=	10	
Music	2 hrs	grade B=	8	The total is 41.
Ed. 3c	3 hrs	grade D=	6	Divided by 17 the re-
Psych 2b	3 hrs	grade F=	3	sult is 2.41
Phys. Ed.	1 hr	grade A=	5	
			<hr/>	
	17 hrs		41	

Failure under the ten hour rule or withdrawal on account of an average below 2.5 does not prevent the student from continuing his or her work in another college. The registrar will issue a transcript of the student's record with the following note: "Colorado State Teachers College has no objection to this student's being admitted to any other college."

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 vice-president, 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 shall 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 as at present constituted provided said course is completed before Sept. 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 or acceptable work, a Life Certificate to teach in the elementary schools of the state will be issued to holders of the Limited Certificate.

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 57, 58 for details).

IV. THE MASTER OF ARTS DEGREE

See Part IV "Graduate Work," pages 39-42.

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 vice-president 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 four 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 four 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. This extension of time is made to take care of those who must teach between the years of resident work. 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 completed in "quarter-hours." The term "quarter-hours" means a subject given one day a week through a quarter for 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.

ENROLLMENT

The college enrolls students under the following classifications:

1. **RESIDENCE**—In this type of enrollment, 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**—In this type of enrollment, students are enrolled in classes not taught upon the campus, but taught by faculty members.
4. **EXTENSION**—These students are enrolled in classes taught by extension instructors duly approved by the College.
5. **CORRESPONDENCE**—These students are enrolled in correspondence courses.

MAXIMUM AND MINIMUM HOURS OF CREDIT—A student registers usually for fifteen, sixteen, or seventeen hours, exclusive of a physical exercise course, each quarter. The average shall be not more than sixteen hours for any three consecutive quarters dating from the first quarter's work, or forty-eight 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 sixteen hours regularly must take one of the standard classification tests. Following the test, the student may carry seventeen or eighteen hours 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. This does not apply to majors in physical education.

Not more than six hours will be accepted in the junior college.

PART VI
THE COURSE OF STUDY

THE COURSE OF STUDY

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

Art	Educational Psychology
Biology	English and Literature
Chemistry	Foreign Languages
Commercial Education	Geology, Physiography, and Geog-
Education	raphy
Superintendents	History and Political Science
Principals for	Home Economics
Elementary Schools	Industrial Arts
Junior High Schools	Mathematics
Senior High Schools	Music
Supervisors and Teachers for	Physical Education and Athletics
Kindergarten-Primary	for Women
Intermediate	Physics
Upper Grades	Sociology and Economics
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 may, however, begin his course as a major in one of the four curricula 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 certificate with a major, for example, 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 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 degree curriculum.

LENGTH OF COURSE—The degree course is planned to occupy twelve quarters. Upon the completion of the course 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, occupy six quarters. Upon completion of three additional quarters and two years successful teaching experience the Life Certificate to teach in the elementary schools will be granted. A quarter is approximately twelve weeks in length.

THE COURSE OF STUDY IN DETAIL

◦ THE PROFESSIONAL CORE

Each of the courses differs somewhat from the others in the subjects required by the department, but each course contains the following subjects:

FIRST YEAR: Science 1 and 2, English 0 and 4 (unless excused for proficiency), Hygiene 1, Education 1, Civilization 1, Music 25, Art 1, and a physical exercise course each quarter.

SECOND YEAR: Psychology 2a and 2b, Education 2a and 2b (pre-teaching observation and student teaching), Education 10, English 21 and 22, and a physical exercise course each quarter.

THIRD YEAR: History 125 and 126.

FOURTH YEAR: Sociology 105, Education 111, and a course in pre-teaching observation and student teaching.

The order of subjects shown above will vary some according to the section to which a student is assigned. The student should consult the diagram under the department in which he is majoring.

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

In the descriptions of the courses offered by each department will be found a diagram showing the sequence of the required courses within that department. In addition to the core and the departmental subjects for the A.B. 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	60	History and Political Science.....	137
Athletics and Men's Physical		Home Economics.....	144
Education	67	Industrial Education.....	151
Biology	72	Library Science.....	157
Chemistry	78	Mathematics	160
Commercial Education	85	Music	164
Education (all divisions).....	97	Physical Education and Athletics for Women.....	170
Educational Psychology.....	111	Physics	178
English and Literature.....	119	Sociology, Anthropology and Eco- nomics	181
Foreign Languages.....	126		
Geology, Physiography, and Geography	132		

COURSE OF STUDY

ART

FIRST YEAR
Sec. B

Sec. A

Sec. C

Fall	Art 3 Art 3a Civ'l. 1 Ed. 1 Phys. Ed. Sci. 1	Art 1 Art 3a Eng. 4 Hyg. 1 Mus. 25 Phys. Ed.	Art 3a Civ'l. 1 Ed. 1 Eng. 0 Phys. Ed.	Fall	
	Art 1 Art 4 Art 16 Mus. 25 Phys. Ed. Sci. 2	Art 3 Art 4 Civ'l. 1 Phys. Ed. Sci. 1	Art 3 Art 4 Eng. 4 Hyg. 1 Phys. Ed.		Winter
	Art 17 Hyg. 1 Observ. 1 Phys. Ed. Psych. 2a	Art 16 Art 17 Ed. 1 Phys. Ed. Sci. 2	Art 1 Art 16 Art 17 Mus. 25 Phys. Ed. Sci. 1		

SECOND YEAR
Sec. B

Sec. A

Sec. C

Fall	Art 5 Art 10 Phys. Ed. Psych. 2b Teaching 1	Art 5 Art 10 Observ. 1 Phys. Ed. Psych. 2a	Art 10 Ed. 10 Eng. 21 Phys. Ed. Sci. 2	Fall	
	Art 11 Art 12 Ed. 10 Eng. 21 Phys. Ed.	Art 11 Art 12 Phys. Ed. Psych. 2b Teaching 1	Art 11 Eng. 22 Observ. 1 Phys. Ed. Psych. 2a		Winter
	Art 4a Elective or Minor Eng. 22 Hist. 125 Phys. Ed.	Art 4a Ed. 10 Elective or Minor Eng. 21 Phys. Ed.	Art 4a Elective or Minor Phys. Ed. Psych. 2b Teaching 1		

THIRD YEAR
Sec. B

Sec. A

Sec. C

Fall	Art 101 Art 107 Elective or Minor Hist. 126	Art 101 Art 107 Eng. 22 Hist. 125	Art 5 Art 101 Art 107 Ed. 10	Fall	
	Art 109 Elective or Minor Elective or Minor	Art 109 Elective or Minor Elective or Minor Hist. 126	Art 12 Art 109 Elective or Minor Hist. 125		Winter
	Art 106 Art 120 Elective Observation 2	Art 106 Art 120 Elective Minor	Art 106 Art 120 Elective or Minor Hist. 126		

FOURTH YEAR
Sec. B

Sec. A

Sec. C

Fall	Art 108 Ed. 116 Teaching 2 Elective or Minor	Art 108 Ed. 116 Electives Observation 2	Art 108 Ed. 116 Observation 2 Soc. 105	Fall	
	Elective or Minor Elective or Minor Psych. 104 Soc. 105	Teaching 2 Elective or Minor Elective or Minor Psych. 104	Teaching 2 Elective Minor Psych. 104		Winter
	Art 100 Art 103 Ed. 111 Elective or Minor	Art 100 Art 103 Ed. 111 Soc. 105	Art 100 Art 103 Ed. 111 Elective or Minor		

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 bigger realization of the need for leadership in art among the youth of today.

A FOUR-YEAR COURSE OF STUDY IN ART

Majors in Art are required to distribute their core subjects according to the diagram on page 59. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following courses are required of majors in the department: Art 3, 3a, 4, 4a, 5, 10, 11, 12, 16, 17, 100, 101, 103, 106, 107, 108, 109, 120.

Courses in interior decoration, dress appreciation, bookbinding, art metal, printing, mechanical drawing, physics of color, slide-making, English composition, or music are suggested as valuable units in the equipment of an art teacher.

The arrangement in the diagram requires eighty hours of core subjects, seventy hours of art, and forty-eight hours for minors and free electives—total 198 hours.

1. ART APPRECIATION—Every quarter. 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—Every quarter. 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—Every quarter. 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.

ART 3. FREEHAND DRAWING I—Fall, winter, and summer quarters. Four hours.

The purpose is to develop the student's power in graphic expression. The content includes orientation, why we draw, aims and objectives, analysis of problem of form, analysis of modes of representation, differing conventions and consistent viewpoints, principles of art structure, approach through composition, which shall motivate technical study in eye and hand coordination; plan and procedure in drawing, importance of vision, seeing significantly, seeing relatively, proportion, eye-measurements and judgments; essentials of perspective, constructive drawing, expressive drawing, technical qualities, variety of mediums, drawing from still life arrangements, from life model, student poses, outdoor sketching, and creative compositions.

3a. ART STRUCTURE I—Fall quarter. Four 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—Winter, spring, and summer quarters. Four hours.

Prerequisites 3, 3a.

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.

4a. TEXTILE DESIGN AND PROCESSES—Spring and summer quarters. Four 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.

5. WATER COLOR PAINTING—Every quarter. 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. FINE ARTS METHODS—Fall quarter. 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. INDUSTRIAL ART METHODS—Winter quarter. 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.

12. COLOR THEORY AND COMPOSITION—Winter and summer quarters. Four hours.

Prerequisite Art 4b.

The purpose of the course is to make an extensive study of the field of color as one of the major elements in plastic expression. The content includes physical aspect of color, Munsell's measurements, the color sphere as an aid to thinking in terms of color, color composition, design principles underlying, major schemes for hue combination, complementary colors, analogous hues and complements, split complements, saturated scale experiments, color sequences, experiments in related harmonies, experiments within one of the major schemes, color notation, the color score card, transposition.

13. INDUSTRIAL ARTS METHODS FOR KINDERGARTEN PRIMARY—Winter quarter. 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.

14. INDUSTRIAL ARTS METHODS FOR INTERMEDIATE GRADES AND JUNIOR HIGH SCHOOL—(Not given 1929-30.) Winter quarter. 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.

16. FREEHAND DRAWING II—Winter, spring, and summer quarters. 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, slices from life including the figure. Charcoal and pencil are the media used.

17. LETTERING I—Fall, spring, and summer quarters. Four 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.

100. SUPERVISION OF ART EDUCATION—Spring and summer quarters. 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—Fall quarter. 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 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.

103. ART STRUCTURE II—Spring and summer quarters. 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—Fall quarter. On request. Four 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—Winter quarter. 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—Spring and summer quarters. Four hours.

For description of course see Art 4a.

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

105. WATER COLOR PAINTING—Fall and summer quarters. 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—Spring quarter. 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.

107. CONSTRUCTIVE DESIGN—Fall and summer quarters. 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.

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

All designs and patterns are originated or adapted by the students.

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

108. POTTERY—Fall quarter. Four 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, matts and Majolica glazes, and in casting and firing.

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

109. HISTORY OF ART—Winter and summer quarters. 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—Winter quarter. Four hours.

For description of course see Art 11. Senior college students will be required to do advanced problems in addition to the work outlined for Art 12.

116. FREEHAND DRAWING III—Winter and summer quarters. 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—Fall, spring and summer quarters. Four 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 PAGEENTRY—Winter and summer quarters. Four 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—Winter and summer quarters. Four 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—Winter and spring quarters. 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—Winter and summer quarters. On request. Four 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.

220. ADVANCED OIL PAINTING—Given on request.

223. RESEARCH IN ART EDUCATION—Every quarter. 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—Every quarter. 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—Every quarter. Two hours.

A continuation of Art 224.

ATHLETICS

FIRST YEAR			
	Sec. A	Sec. B	Sec. C
Fall	Ath. 40 Ath. 44 Civ'l. 1 Ed. 1 Elective Sci. 1	Art 1 Ath. 40 Ath. 44 Elective Eng. 4 Hyg. 1 Mus. 25	Ath. 40 Ath. 44 Civ'l. 1 Ed. 1 Elective Eng. 0
Winter	Ath. 3 Ath. 73 Hyg. 1 Mus. 25 Sci. 1 Second Major	Ath. 43 Ath. 50 Civ'l. 1 Sci. 1 Second Major	Ath. 3 Ath. 73 Eng. 4 Hyg. 1 Second Major
Spring	Ath. 37 Ath. 74 Hyg. 1 Observ. 1 Psych. 2a	Ath. 52 Ath. 60 Ath. 75 Ed. 1 Sci. 2 Second Major	Art 1 Ath. 37 Ath. 74 Mus. 25 Sci. 1 Second Major
SECOND YEAR			
	Sec. A	Sec. B	Sec. C
Fall	Ath. 52 Ath. 67 Ath. 72 Psych. 2b Second Major Teaching 1	Ath. 52 Ath. 67 Ath. 72 Observ. 1 Psych. 2a Second Major	Ath. 52 Ath. 67 Ath. 72 Ed. 10 Eng. 21 Sci. 2
Winter	Ath. 50 Ath. 53 Ath. 70 Ed. 10 Eng. 21 Second Major	Ath. 3 Ath. 73 Psych. 2b Second Major Teaching 1	Ath. 50 Ath. 53 Ath. 70 Eng. 22 Observ. 1 Psych. 2a Second Major
Spring	Ath. 52 Ath. 60 Ath. 75 Eng. 22 Hist. 125 Second Major	Ath. 37 Ath. 74 Ed. 10 Eng. 21 Second Major	Ath. 52 Ath. 60 Ath. 75 Psych. 2b Second Major Teaching 1
THIRD YEAR			
	Sec. A	Sec. B	Sec. C
Fall	Ath. 165 Ath. 180 Elective Hist. 126 P. E. 122	Ath. 165 Ath. 180 Eng. 22 Hist. 125 F. E. 120	Ath. 165 Ath. 180 Ed. 10 Elective P. E. 120
Winter	Ath. 122 Biot. 101 Elective P. E. 121 Second Major	Ath. 122 Biot. 101 Elective Hist. 126 P. E. 121	Ath. 122 Biot. 101 Elective Hist. 125 P. E. 121
Spring	Ath. 168 Elective Eng. 100 Observ. 2 Second Major	Ath. 168 Ath. 170 Eng. 100 Second Major	Ath. 168 Elective Eng. 100 Hist. 126 Second Major
FOURTH YEAR			
	Sec. A	Sec. B	Sec. C
Fall	Ath. 171 Ath. 172 P. E. 120 Soc. 105 Teaching 2	Ath. 171 Ath. 172 Elective Observ. 2 P. E. 122 Psych. 105	Ath. 171 Ath. 172 Elective F. E. 122 Second Major
Winter	Ath. 166 Ed. 116 Elective Second Major	Ath. 166 Ed. 116 Elective Soc. 105 Teaching 2	Ath. 166 Ed. 116 Elective Observ. 2 Psych. 105
Spring	Ath. 169 Ath. 170 Ed. 111 Elective Psych. 105	Ath. 169 Ed. 111	Ath. 169 Ath. 170 Ed. 111 Soc. 105 Teaching 2

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 each 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 him.

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 COURSE OF STUDY IN ATHLETICS

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

Majors in Athletics are required to distribute their core subjects according to the diagram on page 66. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following athletic courses are required of majors in this department: Ath. 3, 37, 40, 43, 44, 50, 52, 53, 60, 67, 70, 72, 73, 74, 75, 122; 165, 166, 168, 169, 170, 171, 172, 180.

THEORY COURSES IN HEALTH EDUCATION FOR MAJORS

Hyg. 1. INDIVIDUAL AND SOCIAL HYGIENE (for men)—Every quarter. 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—Winter quarter. 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—Fall quarter. Four hours.

See page —

P. E. 121. KINESIOLOGY—Winter quarter. Two hours.

See page —

P. E. 122. APPLIED PHYSIOLOGY—Fall quarter. Four hours.

See page —

122. PHYSIOLOGY OF EXERCISE—Winter quarter. Four periods. Four hours.

Prerequisite, Ath. 2.

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—Fall quarter. Three periods. One hour.

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

31. TOUCHBALL—Fall quarter. Three periods. One hour.

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

32. HANDBALL—Fall, winter, and spring quarters. Three periods. One hour.

A recreational game for all men students.

33. VOLLEYBALL—Winter quarter. Three periods. One hour.

A recreational game for all men students.

36. TENNIS (Rec.)—Fall and spring quarters. Three periods. One hour.

A recreational course for all men students.

37. PLAYGROUND BASEBALL—Spring quarter. Three periods. One hour.

A recreational game for all men students.

40. ELEMENTARY SWIMMING—Every quarter. Three periods. One hour.

A course for the beginner in swimming.

43. CUBS' BASKET BALL—Winter quarter. One hour.

44. FRESHMAN FOOTBALL—Fall quarter. 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—Winter quarter. 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—Fall quarter. Three periods. One hour.

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

52. MAT WORK—Every quarter. Three periods. One hour.

Tumbling and elementary mat work.

53. ADVANCED MAT WORK—Winter quarter. Three periods. One hour.

BOXING—Winter quarter. Three periods. One hour.

Fundamentals for class and individual work.

55. WRESTLING, ELEMENTARY—Winter quarter. Three periods. One hour.

Fundamentals and personal proficiency.

57. CORRECTIVE GYMNASTICS—Every quarter. 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. PLAYS AND GAMES—Spring quarter. Three periods. One hour.

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

67. MASS ATHLETICS—Winter and spring quarters. 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—Fall quarter. 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.

Varsity Sport:

70 to 80

70. SWIMMING—Every quarter. Daily. One hour.

71. GYM—Winter quarter. Daily. One hour.

72. FOOTBALL—Fall quarter. Daily. One hour.

73. BASKETBALL—Winter quarter. Daily. One hour.

74. BASEBALL—Spring quarter. Daily. One hour.

75. TRACK—Spring quarter. Daily. One hour.

76. TENNIS—Spring quarter. Daily. One hour.

77. WRESTLING—Winter quarter. Daily. One hour.

Theory Courses in Coaching

165. FOOTBALL COACHING—Fall and summer quarters. Two periods. Two 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—Winter and summer quarters. Two periods. Two 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—Spring and summer quarters. 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—Spring and summer quarters. 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—Spring quarter. Two periods. Two 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—Fall quarter. Two periods. Two hours.

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

172. OFFICIATING AND MANAGEMENT—Fall quarter. 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—Fall quarter. 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.

COURSE OF STUDY

BIOLOGY

FIRST YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Bot. 1 or Zool. 1 Civ'l. 1 Ed. 1 Elective (4 hours) Phys. Ed.	Art 1 Bot. 1 or Zool. 1 Eng. 4 Hys. 1 Mus. 25 Phys. Ed.	Bot. 1 or Zool. 1 Civ'l. 1 Ed. 1 Eng. 0 Phys. Ed.	Fall
Winter	Art 1 Bot. 2 or Zool. 2 Elective (8 hours) Mus. 25 Phys. Ed.	Bot. 2 or Zool. 2 Ed. 1 Elective (8 hours) Phys. Ed.	Bot. 2 or Zool. 2 Eng. 4 Elective (4 hours) Hys. 1 Phys. Ed.	Winter
Spring	Bot. 3 or Zool. 4 Elective (2 hours) Hys. 1 Phys. Ed. Zool. 3 Psych. 2a	Bot. 3 or Zool. 4 Civ'l. 1 Elective (6 hours) Phys. Ed. Zool. 3	Art 1 Bot. 3 or Zool. 4 Elective (6 hours) Mus. 25 Phys. Ed. Zool. 3	Spring

SECOND YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Chem. 1 Elective (4 hours) Phys. Ed. Psych. 2b Zool. 1 or Bot. 1	Chem. 1 Elective (4 hours) Phys. Ed. Psych. 2a Zool. 1 or Bot. 1	Chem. 1 Ed. 10 Eng. 21 Phys. Ed. Zool. 1 or Bot. 1	Fall
Winter	Chem. 2 Ed. 10 Eng. 21 Phys. Ed. Zool. 2 or Bot. 2	Chem. 2 Elective (4 hours) Phys. Ed. Psych. 2b Zool. 2 or Bot. 2	Chem. 2 Eng. 22 Phys. Ed. Psych. 2a Zool. 2 or Bot. 2	Winter
Spring	Chem. 3 Eng. 22 Hist. 125 Phys. Ed. Zool. 4 or Bot. 3	Chem. 3 Ed. 10 Eng. 21 Phys. Ed. Zool. 4 or Bot. 3	Chem. 3 Elective (4 hours) Phys. Ed. Psych. 2b Zool. 4 or Bot. 3	Spring

THIRD YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Hist. 126 Physics 1 Zool. 107	Eng. 22 Hist. 125 Physics 1 Zool. 107	Ed. 116 Physics 1 Zool. 107	Fall
Winter	Bact. 100 Bot. 103 or Zool. 103 Ed. 116 Physics 2	Bact. 100 Bot. 103 or Zool. 103 Hist. 126 Physics 2	Bact. 100 Bot. 103 or Zool. 103 Hist. 125 Physics 2	Winter
Spring	Biol. 102 Observ. 1 Physics 3	Biol. 102 Observ. 1 Physics 3	Biol. 102 Hist. 126 Physics 3	Spring

FOURTH YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Biot. 100 Bot. 102 Elective Teaching 1	Biot. 100 Bot. 102 Ed. 116 Teaching 1	Biot. 100 Bot. 102 Observ. 1 Sec. 105	Fall
Winter	Biot. 101 Psych. 105 Soc. 105 Teaching 2	Biot. 101 Elective Psych. 105 Teaching 2	Biot. 101 Elective Teaching 1 Psych. 105	Winter
Spring	Ed. 111 Electives (12 hours)	Ed. 111 Electives (8 hours) Soc. 105	Ed. 111 Electives (8 hours) Teaching 2	Spring

BIOLOGY

The first aim of the department is to prepare teachers of biological subjects for the public schools of the state. It also endeavors to provide such training in the general principles of biology as will give students an adequate background for other professional courses, and prepare them for the common activities of life.

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.

A FOUR-YEAR COURSE OF STUDY IN BIOLOGY

Majors in Biology are required to distribute their core subjects according to the diagram on page 71. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following biology courses are required of majors in this department: Bot. 1, 2, 3, 102, 103, Zool. 1, 2, 4, 103, 107, Bact. 100, Biotics 100, 101, Biol. 102.

Biology majors are required to elect two minors of twelve-twenty-four hours each. In the selection of minors the following suggestions may be helpful. Most frequent demands are made for those who can teach some combination of biology, chemistry, physics, or mathematics. Occasional calls are made for a combination of science with other fields such as educational administration or physical education. All men students majoring in biology should elect some field of athletics since many of the men students are asked to coach some branch of major athletics.

The suggested arrangement as found in the program requires sixty-eight hours of core subjects, fifty-eight hours of departmental requireds, a twelve hour minor in chemistry, a twelve hour minor in physics. In order to be well fitted to meet conditions in high school biology teaching, the student should elect courses in radio, astronomy, and geology.

BIOLOGY

101. **BIOLOGY SEMINAR**—Every quarter. Two hours.

For biology majors.

102. **TEACHING OF BIOLOGY**—Spring quarter. Four hours.

Fee, \$1.00. Prerequisites, Botany 1, 2, and 3; Zoology 1, 2, and 3.

A consideration of the science movement in secondary schools and why it has failed to produce the expected educational results. A study is made of the fundamental laws of thinking as applied to science teaching. Opportunity will be given for examination of the research literature in the field of science instruction. Materials, texts, and reference books are considered and a suggested course in high school biology is compiled. Methods of instruction are treated, together with the laboratory equipment and supplies.

201. **BIOLOGY SEMINAR**. Every quarter. Two hours.

For graduate biology majors.

223. RESEARCH IN BIOLOGY—Every quarter. 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—Every quarter. 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—Every quarter. Two hours.

A continuation of Biological Research 224.

BOTANY**1. GENERAL BOTANY—Fall quarter. Four hours.**

Fee, \$1.00. 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; the structure of flowers and fruits and their relation 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—Winter and summer quarters. Four hours.

Fee, \$1.00. 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, and 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—Spring quarter. Four hours.

Fee, \$1.00. Three hours laboratory.

A study of ferns, cycads, conifers, and flowering plants. 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. The purpose of this is to prepare the student to become acquainted with the flowers and plants in the region where he may be teaching.

101. SYSTEMATIC BOTANY—Summer quarter. Four hours.

Fee, \$1.00. 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.

102. BOTANICAL TECHNIC AND HISTOLOGY—Fall quarter. (Not given in 1929.) Four hours.

Fee, \$1.50. 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. Some methods of preserving unmounted botanical materials are also considered.

103. PLANT PHYSIOLOGY—Winter quarter. Four hours.

Fee, \$1.50. Three hours laboratory. Prerequisite, Botany 1.

The purpose of this course is to give the student a working knowledge of such physiological activities as absorption, 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. When feasible the student is encouraged to plan and carry out his own experiments. Constant stress is laid upon sources of error and modifying conditions.

201. TAXONOMY—Summer quarter. Four hours.

Fee, \$1.00. 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.

223. RESEARCH IN BOTANY—Every quarter. 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. BOTANICAL RESEARCH—Every quarter. Four hours.

Fee, \$3.00.

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. BOTANICAL RESEARCH—Every quarter. Two hours.

Fee, \$1.00.

A continuation of Botanical Research 224.

BIOTICS

100. PRINCIPLES OF BIOTICS—Fall and summer quarter. 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 imprisonment of preexisting forms. 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—Winter and summer quarters. 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.

201. GENETICS AND EUGENICS—Winter and summer quarters. Four hours.

This course is for graduate students. It covers the same ground as course 101, but additional and more advanced work is required.

ZOOLOGY

1. GENERAL ZOOLOGY. Fall and summer quarters. Four hours.

Fee, \$1.00. 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 dis-

covery 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; earth-worms; 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.

2. GENERAL ZOOLOGY—Winter quarter. Four hours.

Fee, \$1.00. 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.

3. BIRD STUDY—Spring and summer quarters. Two hours.

Fee, \$1.00. Field trips arranged.

This course is intended to create interest in living things and to add to 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.

***4. ECONOMIC ZOOLOGY—Spring quarter. 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, the clothes moth, plant lice, and other common insect problems. Attention will now be devoted to a study of the common problems of the backboneed 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, codfish as food, 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; the value of the deer as meat and how the supply can be increased. Throughout the entire course conservation of wild life will be stressed.

101. INVERTEBRATE ZOOLOGY—Spring quarter. (Not given 1929-30.) Four hours.

Fee, \$1.00. 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.

102. VERTEBRATE ZOOLOGY—Spring quarter. (Not given 1929-30.) Four hours.

Fee, \$1.00. 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.

103. ZOOLOGICAL TECHNIC AND ANIMAL HISTOLOGY—Winter quarter. (Not given 1929-30.) Four hours.

Fee, \$1.50. 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.

107. ELEMENTARY ENTOMOLOGY—Fall quarter. Four hours.

Fee, \$1.00. 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 pre-

*Given also by extension.

paring 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.

201. MORPHOLOGY OF THE VERTEBRATES—Winter quarter. Four hours.

Fee, \$1.00. 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.

223. RESEARCH IN ZOOLOGY—Every quarter. 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. ZOOLOGICAL RESEARCH—Every quarter. Four hours.

Fee, \$3.00.

Individual research course preliminary to the thesis. Students should register for this course only after consultation with departmental staff.

225. ZOOLOGICAL RESEARCH—Every quarter. Two hours.

Fee, \$1.00. Continuation of course Zoological Research 224.

BACTERIOLOGY

100. GENERAL BACTERIOLOGY—Winter and summer quarters. Four hours.

Fee, \$1.50. 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 relationship 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.

ELEMENTARY SCIENCE

1. ELEMENTARY SCIENCE—Fall, spring, and summer quarters. Four hours.

Fee, \$1.00. 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.

GENERAL SCIENCE

1. GENERAL SCIENCE—Every quarter. Four hours.

Fee, \$1.50.

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.

2. GENERAL SCIENCE—Winter quarter. Four hours.

Fee, \$1.00.

This course is a continuation of General 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.

CHEMISTRY

FIRST YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Civ'l. 1 Chem. 1 Ed. 1 Phys. Ed. Sci. 1	Art 1 Chem. 1 Eng. 1 Hyg. 1 Mus. 25 Phys. Ed.	Chem. 1 Civ'l. 1 Ed. 1 Eng. 0 Phys. Ed.	Fall
Winter	Art 1 Chem. 2 Mus. 25 Phys. Ed. Sci. 2	Chem. 2 Civ'l. 1 Eng. 4 Phys. Ed. Sci. 1	Chem. 2 Eng. 4 Hyg. 1 Phys. Ed.	Winter
Spring	Chem. 3 Hyg. 1 Observ. 1 Phys. Ed. Psych. 2a	Chem. 3 Ed. 1 Phys. Ed. Sci. 2	Art 1 Chem. 3 Mus. 25 Phys. Ed. Sci. 1	Spring

SECOND YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Chem. 7 Chem. 110 Phys. Ed. Psych. 2b Teaching 1	Chem. 110 Observ. 1 Phys. Ed. Psych. 2a	Chem. 110 Ed. 10 Eng. 21 Phys. Ed. Sci. 2	Fall
Winter	Chem. 7b Chem. 111 Ed. 10 Eng. 21 Phys. Ed.	Chem. 7 Chem. 111 Phys. Ed. Psych. 2b Teaching 1	Chem. 111 Eng. 22 Observ. 1 Phys. Ed. Psych. 2a	Winter
Spring	Chem. 113 Eng. 22 Hist. 125 Phys. Ed.	Chem. 7b Chem. 113 Ed. 10 Eng. 21 Phys. Ed.	Chem. 7 Chem. 113 Phys. Ed. Psych. 2b Teaching 1	Spring

THIRD YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Chem. 114 Electives and Minor Hist. 126	Eng. 22 Electives and Minor Hist. 125	Chem. 7b Chem. 114 Ed. 10 Elective or Minor	Fall
Winter	Chem. 114b Electives and Minor	Chem. 114 Electives and Minor Hist. 126	Chem. 114b Electives and Minor Hist. 125	Winter
Spring	Electives and Minor Observ. 2	Chem. 114b Electives and Minor	Electives and Minor Hist. 126	Spring

FOURTH YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Chem. 115 Electives and Minor Teaching 2	Chem. 115 Electives and Minor Observ. 2	Chem. 115 Electives and Minor Soc. 105	Fall
Winter	Chem. 116 Soc. 105 Electives and Minor	Chem. 116 Electives and Minor Teaching 2	Chem. 116 Electives and Minor Observ. 2	Winter
Spring	Chem. 117 Ed. 111 Electives and Minor	Chem. 117 Ed. 111 Electives and Minor Soc. 105	Chem. 117 Ed. 111 Electives and Minor Teaching 2	Spring

CHEMISTRY

It is the aim of this department to offer a schedule of courses which will fill the needs of the following students:

1. Students taking Chemistry as a requirement of other departments of the College. Such students will find the Chemistry requirements outlined under their department.
2. Students desiring to specialize in Chemistry in order to enter the teaching profession.
3. Students taking other courses with Chemistry as a minor subject. In cooperation with their faculty advisers, such students will make the desired selection from the program outlined on page—

Minors in Chemistry will usually be chosen from the first courses in their order.

A FOUR-YEAR COURSE OF STUDY IN CHEMISTRY

Majors in Chemistry are required to distribute their core subjects according to the diagram on page 77. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following chemistry courses are required of majors in this department: Chem. 1, 2, 3, 7, 7b, 110, 111, 113, 114, 114b, 115, 116, 117.

1. GENERAL CHEMISTRY—Fall, winter and summer quarters. Two or four hours.

Four hours for chemistry majors.

Fee, \$1.00 for each quarter hour of laboratory work.

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—Winter quarter. Two or four hours.

Four hours for chemistry majors.

Fee, \$1.00 for each quarter hour of laboratory work.

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—Spring quarter. Two or four hours.**

Four hours when taken as a departmental requirement.

Fee, \$1.00 for each quarter hour of laboratory work.

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 per week, and two with the laboratory work which covers two double periods per week.

***3b. HOUSEHOLD CHEMISTRY—Spring quarter. Two or four hours.**

Fee, \$1.00 for each quarter hour of laboratory work.

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 per week and two for the laboratory work which covers two double periods per week.

7. QUALITATIVE ANALYSIS—Every quarter. Two or four hours.

Fee, \$2.00 or \$4.00 according to the hours of credit.

Prerequisites, Chemistry 1 and 2.

This course consists of one lecture each week and in addition a double laboratory period per 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—Every quarter. Two or four hours.

Fee, \$2.00 or \$4.00, according to the hours of credit.

Prerequisites, Chemistry 1, 2, and 9.

This course consists of individual conferences and laboratory work. The minimum amount of time put in the laboratory is equal to two double periods per 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.

*Given also by extension.

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.

8. JUNIOR COLLEGE CHEMISTRY—Fall quarter. 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.

9 and 109. PHYSIOLOGICAL CHEMISTRY—Winter quarter. 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 107, which is the same as 7 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—Fall and summer quarters. Two or four hours.

Fee, \$1.00 for each hour's credit in laboratory work.

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 are 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—Winter quarter. Two or four hours.

Fee, \$1.00 for each quarter hour of laboratory work.

Prerequisites, 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 princi-

*Given also by extension.

ples 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—Spring quarter. Two or four hours.**

Fee, \$100 for each quarter hour work in the laboratory.

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 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—Every quarter. Four hours for each course.

Fee, \$4.00 for each course.

Prerequisites, Chemistry 1, 2, 3, and 9.

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, acidimetry, oxidation, and iodimetry. Types of determinations are selected which involve calculations of normal strength and litre of different solutions and by such means estimating percentages of constituent parts.

***115. INDUSTRIAL CHEMISTRY—Spring quarter. (Not given 1929-30.) Four hours.**

Fee, \$2.00. Prerequisites, six hours of Chemistry 1 and 2.

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

*Given also by extension.

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—Fall quarter. Four hours.

Fee, \$2.00. Prerequisites, six hours of Chemistry 1 and 2.

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 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.

117. THE TEACHING OF CHEMISTRY—Fall quarter. (Not given 1929-30.) 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—Every quarter. (Not given 1929-30.) Two or four hours.

Fee, \$2.00 or \$4.00. Prerequisites, Chemistry 1, 2, 9, 9b, 114, 114b, 110, 111 and 112.

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—Every quarter. (Not given 1929-30.) Two or four hours.

Fee, \$2.00 or \$4.00. Prerequisites, Chemistry 1, 2, 9, 9b, 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.

***221. ADVANCED INORGANIC CHEMISTRY—Winter quarter. Two or four hours.**

Fee, \$1.00 per hour for each hour's credit enrolled for in laboratory work. Prerequisites, Chemistry 1, 2, and 9.

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 9; 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, liquification 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.

***222. ADVANCED INORGANIC CHEMISTRY—Spring quarter. Two or four hours.**

Fee, \$1.00 per hour for each hour's credit enrolled for in laboratory work. Prerequisites, Chemistry 1, 2, and 9.

This course is a continuation of chemistry 221. 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.

223. RESEARCH IN CHEMISTRY—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 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 agenda 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.

*Given also by extension.

COMMERCIAL ED.

		FIRST YEAR					
		Sec. A	Sec. B		Sec. C		
Fall	Winter	Spring	Civ'l. 1 Com. Ed. 11 Ed. 1 Phys. Ed. Sci. 1	Art 1 Com. Ed. 11 Eng. 4 Hyg. 1 Mus. 25 Phys. Ed.	Civ'l. 1 Com. Ed. 11 Ed. 1 Eng. 0 Phys. Ed.	Fall	Winter
			Art 1 Com. Ed. 12 Com. Ed. 4 hours Mus. 25 Phys. Ed. Sci. 2	Com. Ed. 12 Com. Ed. 4 hours Civ'l. 1 Phys. Ed. Sci. 1	Com. Ed. 12 Com. Ed. 4 hours Eng. 4 Hyg. 1 Phys. Ed.		
			Com. Ed. 13 Com. Ed. 14 Hyg. 1 Observ. 1 Phys. Ed. Psych. 2a	Com. Ed. 13 Com. Ed. 14 Ed. 1 Elective Phys. Ed. Sci. 2	Art 1 Com. Ed. 13 Com. Ed. 14 Elective Mus. 25 Phys. Ed. Sci. 1		

		SECOND YEAR					
		Sec. A	Sec. B		Sec. C		
Fall	Winter	Spring	Com. Ed. 1 Phys. Ed. Psych. 2b Teaching 1	Com. Ed. 1 Electives (6 hours) Observ. 1 Phys. Ed. Psych. 2b	Com. Ed. 1 Ed. 10 Eng. 21 Phys. Ed. Sci. 2	Fall	Winter
			Com. Ed. 2 Com. Ed. 4 hours Ed. 10 Eng. 21 Phys. Ed.	Com. Ed. 2 Com. Ed. 4 hours Phys. Ed. Psych. 2b Teaching 1	Com. Ed. 2 Elective (2 hours) Eng. 22 Observ. 1 Phys. Ed. Psych. 2a		
			Com. Ed. 3 Com. Ed. 4 Eng. 22 Hist. 125 Phys. Ed.	Com. Ed. 3 Com. Ed. 4 Ed. 10 Eng. 21 Phys. Ed.	Com. Ed. 3 Com. Ed. 4 Phys. Ed. Psych. 2b Teaching 1		

		THIRD YEAR					
		Sec. A	Sec. B		Sec. C		
Fall	Winter	Spring	Com. Ed. 150 Com. Ed. 4 hours Hist. 126 Minor	Com. Ed. 150 Com. Ed. 4 hours Eng. 22 Hist. 125	Com. Ed. 150 Com. Ed. 4 hours Ed. 10 Minor	Fall	Winter
			Com. Ed. 151 Com. Ed. 4 hours Ed. 116 Elective Minor	Com. Ed. 151 Com. Ed. 4 hours Ed. 116 Hist. 126	Com. Ed. 151 Com. Ed. 4 hours Hist. 125 Minor		
			Com. Ed. 152 Com. Ed. 157 Observ. 2 Psych. 116	Com. Ed. 152 Com. Ed. 157 Elective Minor	Com. Ed. 152 Com. Ed. 157 Com. Ed. 4 hours Hist. 126		

		FOURTH YEAR					
		Sec. A	Sec. B		Sec. C		
Fall	Winter	Spring	Com. Ed. 138 Elective Teaching 2 Minor	Com. Ed. 138 Elective Minor Observ. 2 Psych. 116	Com. Ed. 138 Ed. 116 Elective Soc. 105	Fall	Winter
			Com. Ed. 4 hours Elective Soc. 105 Minor	Elective Com. Ed. 4 hours Teaching 2 Minor	Com. Ed. 4 hours Minor Observ. 2 Psych. 116		
			Com. Ed. 4 hours Ed. 111 Elective Minor	Com. Ed. 4 hours Ed. 111 Elective Soc. 105	Com. Ed. 4 hours Ed. 111 Minor Teaching 2		

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 courses 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 a general nature and would be desirable courses for students majoring in other departments. Some of the elective courses for third and fourth year students will be offered once only every two years. Majors in this department should plan their courses so as to take full advantage of these electives.

Students who have had courses similar in content to any of those 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 C. E. 1, 2, 11, and 12 for credit.

A FOUR-YEAR COURSE OF STUDY IN COMMERCIAL EDUCATION

Majors in Commercial Education are required to distribute their core subjects according to the diagram on page 84. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following Commercial Education courses are required of majors in the department: Com. Ed. 1, 2, 3, 4, 11, 12, 13, 14, 138, 150, 151, 152, 157.

Majors in Commercial Education are required to take one twenty-four hour minor in Commercial Education and at least one minor of from twelve to twenty-four hours in some other department. Minors in athletics, foreign language, geography, history, music, and sociology are suggested, but the student is free to choose his elective minor. The program of subjects constituting a minor in the department should be arranged by consulting the head of the department or the faculty adviser.

The arrangement which follows requires eighty hours of core subjects, seventy hours of Commercial Education, and leaves forty-eight hours open for a minor outside the department and free electives. Total 198 hours.

1. SHORTHAND I—Fall, spring, and summer quarters. Four hours.

This course, which covers the first ten lessons 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—Winter and summer quarters. Four hours.

Prerequisite, C. E. 1 or the equivalent.

This course covers the last ten lessons in the Gregg Manual and is a continuation of C. E. 1.

3. SECRETARIAL PRACTICE I—Spring quarter. Four hours.

Prerequisite, C. E. 2 or the equivalent.

This course offers a review of the principles of Gregg shorthand and it is a beginning course in shorthand dictation. It will include the taking of dictation with more emphasis on speed than was attempted in C. E. 2. Transcriptions will be made of dictated material and some attention will be given to the arrangement of special forms. Special methods of presenting shorthand and conducting beginning dictation classes will be considered.

† 4. METHODS OF TEACHING SHORTHAND—Spring quarter. Two hours.

Prerequisite, C. E. 2 or equivalent.

The chief aim of this course is to suggest special methods of teaching Gregg shorthand. Some attention is given to the materials used in shorthand.

10. OFFICE APPLIANCES AND SPECIAL EQUIPMENT—Every quarter, Four hours.

This course aims to familiarize the student with modern office machines and equipment. It provides actual practice on the following machines and equipment: mimeograph, mimeoscope, multigraph, dictaphone, and a variety of calculating machines and filing equipment. It also provides the taking of dictation and the handling of actual correspondence. A minimum amount of work will be assigned to students in other departments on the campus. Students are required to do two hours of practice work daily for four days a week.

*11. TYPEWRITING I—Fall and winter quarters. Four hours.

Fee, \$1.00.

This class meets four times a week. It is required of all secretarial majors except those who have had at least one year of typing in high school. Students who have had some training in typing should arrange with the instructor or head of the department to be excused from this course.

This course deals with memorizing the names of the operative parts of the typewriter and their correct use and memorizing the keyboard by the touch system.

Special attention is given to correct habit formation relative to operating the machine, memorizing the keyboard, position of the hands over the keyboard and general posture of the body at the machine. Beginning typewriting shall receive credit only on completion of the typewriting work of the second quarter.

*12. TYPEWRITING II—Winter and spring quarters. Four hours.

Fee, \$1.00.

Prerequisite, C. E. 11 or the equivalent. A continuation of C. E. 11. Required of all secretarial majors unless excused by the instructor. Students who have had some training in touch typewriting either in high school or business school should consult the instructor or head of department before enrolling for this course.

The course deals with a thorough review of the operative parts of the typewriter and their correct use; with International Typewriting rules for checking papers; with letter forms, addressing envelopes, rough drafts, telegrams, etc. Special attention is given to acquiring speed in typing with accuracy.

*13. TYPEWRITING III—Fall, spring, and summer quarters. Two hours.

Fee, \$1.00. Prerequisite, C. E. 12 or the equivalent.

This course includes a review of the names and uses of operative parts of the typewriter, a review of the International Rules for correcting papers, with an introduction to the preparation of manuscripts, tabulation and billing, and to law and business papers. Accuracy in typing is stressed throughout the course. Speed tests are given at regular intervals with an opportunity given to win the awards as given by the different typewriter manufacturing companies. This course is required of all candidates for the Bachelor of Arts Degree.

(14. METHODS OF TEACHING TYPEWRITING—Fall, spring, and summer quarters. Two hours.

Prerequisite, C. E. 12 or the equivalent. Class meets twice a week.

The purpose of the course is to give prospective teachers in typewriting a knowledge of the equipment that is necessary to teach typing successfully. It also deals with the different texts on the market and special and different methods of procedure. Students are required to know the names and uses of all the operative parts of at least all the different makes of typewriters in the department, they must be able to write on the typewriter accurately at a moderate rate of speed.

*15. BUSINESS REPORTS AND COMPOSITIONS—Winter quarter. Two hours.

Prerequisite, Eng. 0 or Eng. 4 or the equivalent.

This course attempts to give the teacher of business English in high school a better background. The principles of literary composition will be applied to commercial correspondence, reports, and compositions. Business

*Given also by extension.

situations will be analyzed, letters classified into type forms, and the requisites of each class will be exemplified by models. The psychology of the good sales letter will be analyzed, and principles derived from this analysis will be applied to practice compositions. Special consideration will be given to letters of application, letters of complaint, sales letters, follow-up letters, letters of collection, and other special correspondence.

16. MATERIAL AND METHODS FOR TEACHING FILING—Winter quarter. Two hours.

Fee, \$1.00.

The purpose of this course is to outline the material and the methods necessary for a semester course in filing suitable for the secondary school curriculum. 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.

The practice work is not extensive but sufficient to give the student a working knowledge of the various systems, devices and kinds of equipment. Emphasis will be placed upon the variety of material and the organization and presentation of this material to high school students.

17. SECRETARIAL BOOKKEEPING—Spring quarter. Two hours.

This course attempts to present a plan of keeping the records necessary for the average professional man such as a doctor, lawyer, or engineer, without going into detail in the development of accounting principles. A short practice set will be written up by the student illustrating the necessary books and records that might be kept and the kinds of transactions that would ordinarily be handled. All of the theory involved is based on good accounting principles but presented in the simplest possible way.

***36. HANDWRITING METHODS—Fall, winter, and summer quarters. Two hours.**

This course combines practice and special methods of teaching penmanship for teachers and supervisors of handwriting. 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—Fall, spring, and summer quarters. Four hours.**

The principal aim of this course is to give the commercial teacher a better mathematical background for the subject of commercial arithmetic in high school. It correlates very closely with all courses in accounting, auditing, and the income tax law. The course begins with a very brief review of percentage, using simple applications. Mercantile discounts, problems of buying and selling merchandise, interest, bank discount, compound interest, periodic or installment payments, insurance, commission, taxes and problems or trading concerns are treated.

41. MATERIAL AND METHODS FOR JUNIOR BUSINESS TRAINING—Spring and summer quarters. Two hours.

This course attempts to survey the content of textbooks now being used for classes in commercial education in junior high schools and to suggest material that is available for such courses. The whole problem of commercial education in the junior high school will be discussed. Some of the topics treated in this course are: 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 that should be emphasized; try-out courses in commercial education; textbooks and material available.

***42. ADVERTISING—Spring quarter. Two 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 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 subject are held constantly in mind as the course develops. Considerable attention is given to the analysis of advertisements selected from current periodicals. Some attention will be given to the materials available for the teaching of advertising in secondary schools.

***53. SALESMANSHIP—Winter quarter. Four hours.**

This course attempts to reconcile sound economics with practical business procedure. Personal selling is essentially an economic activity, direc-

*Given also by extension.

ted, therefore, toward the satisfaction of economic wants. The personal selling which effectively serves those wants is socially and economically desirable. In the approach to 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 effort. 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 first part of the course is based on a more detailed analysis of personal selling processes as applied to buyers in general, and is adapted to practically all classes of buyers. The second part of the course deals with the problems and relationships of the salesman and his employer in the direction of personal selling as a business activity.

105. SECRETARIAL PRACTICE II—Fall quarter. Four hours.

Prerequisites, C. E. 3 and 13 or their equivalents.

This course is a continuation of C. E. 3. Special emphasis will be put upon speed both in taking dictation and in transcribing. The handling of correspondence and filing will receive attention. Methods and devices for acquiring speed in handling correspondence will be presented and discussed. The chief aim of this course is to bring to the attention of the prospective teacher the problems of acquiring speed on the part of students in high school classes in dictation.

106. SECRETARIAL SCIENCE I—Spring and summer quarters. Four hours.

The aim of this course is to familiarize the prospective teacher with the requirements of business offices insofar as these apply to the teaching of commercial subjects in the high schools where courses are being given. The course covers the field from a practical angle and is planned to help teachers to unite school and community interests. This includes a study of business graphs of all sorts, editing, proofreading, briefing, charting, detailed activity studies, and allied subjects. The material handled deals directly with the presentation of such work to pupils.

***138. COMMERCIAL LAW I—Fall quarter. Four hours.**

This course treats the subjects of contracts and negotiable instruments. It is a treatment of the common law principles that apply to these subjects. The Colorado Statutes are studied to the extent that they apply to the topics treated. Cases and hypothetical problems are used in conjunction with the lectures and class discussions. The course begins with the nature and classification of contracts; the essential elements of a valid contract, various forms of, discharge, and remedies. The following topics are treated under the heading of negotiable instruments: bills of exchange; promissory notes; checks; form and interpretation; indorsements; defenses and presentment. The course correlates very closely with all courses in accounting, economics, and management.

***139. AN INTRODUCTION TO BUSINESS—Fall quarter. (Not offered 1929-30.) 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 associations, and 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. This course should be of special interest to teachers interested in vocational guidance and it will be very helpful to the student contemplating the selection of a field of specialization in business.

***140. INVESTMENTS—Winter and summer quarters. (Not offered 1930.) Four hours.**

This course attempts to cover the entire field of investments in a clear, concise, non-technical manner. The tests by which a sound investment are analyzed are treated together with the methods of applying these tests to securities. A study of the information available on the financial page of the daily papers in order that it may be utilized in buying or selling securities. The mechanics of the purchase and sale of securities and principles back of judicious investments are considered. Technical terms are avoided as much as possible. A careful distinction is made and maintained throughout the course between investment and

*Given also by extension.

speculation. The following aims are set forth for the course: to discourage a tendency toward speculation; to create a tendency toward thrift and saving; to help the average person find suitable investment possibilities; and, to prepare teachers to teach the same subject in secondary schools.

***144. COMMERCIAL LAW II—Winter quarter. Four hours.**

Prerequisite, C. E. 138 or the equivalent.

This is an advanced course in commercial law. It treats the law of corporations, real property, bailments and bankruptcy. Considerable time will be devoted to a study of the legal forms and procedure in connection with these topics. Colorado statutes pertaining to corporations will be studied.

***150. ACCOUNTING I—Fall and summer quarters. Four hours.**

This course is designed to serve as an introduction to the entire field of accounting. It is intended to give the student an understanding of the steps that compose what may be called the accounting process, and of that process as a whole. The financial reports, balance sheet, and statement of profit and loss are considered, and from them is developed the need for the ledger account as a means of classifying the information needed for these reports. In turn the construction and interpretation of particular accounts, and the steps necessary in preparing the reports at the end of a period, in adjusting the accounts to show an agreement with the reports, and in "closing" the ledger are taken up. Books of original entry, such as the special journals, are discussed and illustrated. The principles considered are developed by class discussion and illustrative laboratory exercises.

***151. ACCOUNTING II—Winter and summer quarters. Four hours.**

Prerequisite, C. E. 150 or the equivalent. This course is a continuation of C. E. 150.

Various types of business papers are considered in their relation to the records and to the routine of the business. Summary statements of different kinds are discussed and illustrated. Types of accounting records and their development, especially as regards the partnership business, are taken up in detail. The principles considered are developed by means of class discussion, lectures, and illustrative laboratory material. A complete set of partnership books with a minimum of bookkeeping detail are written up by the student as homework in connection with the course.

***152. ACCOUNTING III—Spring quarter. Four hours.**

Prerequisites, C. E. 150 and 151 or the equivalent.

This course is designed to cover the more advanced principles of accounting, emphasizing especially some of the problems of corporation accounting. The proper evaluation of balance sheet items, as regards depreciation and the maintenance of fixed assets, receives special attention. A complete set of corporation books with a minimum of bookkeeping detail are written up by the student as homework with this course. Principles considered are developed by lectures, discussion and illustrative laboratory problems.

***155. THE ECONOMICS OF RETAILING—Fall quarter. 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 development of the retail business and methods of distribution of goods. Some of the problems of retailing that are treated in the course are: securing good salespeople; education for retail salespeople; the wages of salespeople; location and rent in the retail business; the fixing of retail prices; the expenses of retailing.

The following kinds of retail stores and their relation to our system of distribution are studied: the department store; the chain-store systems; the mail order house; general stores and specialty shops. Other topics treated are: the failure rate in the retail business; public regulation of the retail business, and the ideal retailing system.

157. METHODS OF TEACHING BOOKKEEPING—Spring and summer quarters. Two hours.

This course attempts to present special methods for the teaching of bookkeeping and accounting. The materials necessary for the teaching of each of the above subjects are also considered. The aim of the course is to furnish concrete, practical suggestions on the methods employed by successful teachers in presenting the commercial subjects listed above.

*Given also by extension.

158. PROBLEMS IN COMMERCIAL EDUCATION—Spring quarter. Four hours.

For seniors and graduate college students only. This course provides for the treatment by research and study of some of the most important problems in commercial education. The following topics will be treated: state and city supervision; the commercial curriculum; the establishment of school and community cooperation in business training; job analysis, of the kind of positions that are to be filled with high school students; the kind of training expected by the business man; the relation of the department of commercial training in the high school to the school of commerce or college of business administration in the university; present tendencies in commercial education; the content of the commercial subjects ordinarily offered in our secondary schools.

159. AUDITING—Winter quarter. Four hours.

Prerequisite: C. E. 152 or the equivalent.

This course is offered for the benefit of teachers of bookkeeping and accounting as a final summary of the principles of accounting and the relationship of accounts. Only fundamental principles of auditing are developed and a sufficient amount of laboratory work is provided to furnish an opportunity to apply these principles. Teachers of bookkeeping and accounting are often called upon to make simple audits in the community where they are teaching and this course should prepare the teacher to do this kind of work. It will also aid the teacher in the planning of systems of accounts for local concerns that may ask for such advice.

160. BANKING PRACTICE—Winter quarter. (Not given 1930.) Four hours.

Prerequisite, C. E. 152 or the equivalent.

This course includes a study of the principles of money and banking, state and national banking laws, the Federal Reserve banking system, loans and discounts, commercial paper, and savings banks. The course provides for some practice work in handling the books and records of a bank. Popular accounting machines are demonstrated in connection with the course. This course aims to prepare the prospective teacher to teach bank bookkeeping, the principles of banking, or to organize a school bank.

***161. COST ACCOUNTING—Fall quarter. Four hours.**

Prerequisite, one year of bookkeeping or accounting or the equivalent.

A study of accounting principles, books and records suitable for and adaptable to the keeping of accurate costs of making things. It is a study of "cost of production" as well as of cost accounts. A high order of professional skill and experience is required to work out the details of a satisfactory cost system for a concern of any considerable size, where the manufacturing processes are at all complicated. Cost accounting is, therefore, given a somewhat fuller explanation in this course than would otherwise be necessary, although the discussion is directed to the records and book-keeping features of the subject rather than those that relate to shop organization, shop management, labor efficiency, and cost installation, although these topics are given some incidental attention.

***165. BUSINESS ADMINISTRATION—Spring quarter. (Not given 1929-30.) Four hours.**

This course treats the problems of business administration in an introductory way. It is intended to be a basic course in business administration. The course attempts to discover some of the business problems of the executive or administrator and then to discover some of the control policies or devices of the manager. The course attempts to show the problems of business administration as an interrelated whole and to indicate the lines of study which will presumably lead to solution of those problems. Some of the topics treated are: the administration of personnel; the administration of market problems; the administration of finance; the administration of production; the administration of risk bearing; the form of the business unit; basic features of administration; and an analysis of a business case.

212. COMMERCIAL EDUCATION IN SECONDARY SCHOOLS—Fall and summer quarters. Two hours.

A study of the commercial curriculum for the junior and senior high school. The content of courses, the year in which they should be offered, and the objectives of each will be treated. The educational qualifications and training of commercial teachers required by different states for certification will be studied. Some of the other topics that will be treated are: the necessity for academic training along with commercial education; the present status of commercial education in secondary schools and the noticeable trends; the expansion of the commercial curriculum for the purpose of offering more opportunities for specialization; the inclusion of a definite program of subjects for the student who does not care to specialize

*Given also by extension.

but who wants some business training; placement and follow-up of graduates; the status of commercial subjects as offerings for college entrance requirements, and many other topics that cannot be mentioned for want of space.

213. **COMMERCIAL EDUCATION CURRICULA**—Winter and summer quarters. Two hours.

This is a course dealing with the growth and development of commercial education in the United States with particular attention given to the program of courses offered by different educational institutions of secondary rank and also some attention to the courses offered by institutions of higher learning. An attempt will be made to discover the aims and purposes of each institution and the relationship that exists between them. The following topics will be treated: the history of commercial education in the United States; the present status of commercial education in secondary schools; the curriculum of the private business school, the junior high school, the senior high school, the school of commerce, the teacher training institution, the college and the university; the relation of the secondary school commercial curriculum to each of the other curricula.

223. **RESEARCH IN COMMERCIAL EDUCATION**—Every quarter. (Taken in the first quarter of graduate work). Four hours.

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 COMMERCIAL EDUCATION**—Every quarter. Four hours.

Prerequisite, 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**—Every quarter. Two hours.

This course is a continuation of C. E. 24.

CONTEMPORARY CIVILIZATION

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, nontechnical in its treatment, is the purpose of the Department of Contemporary Civilization. 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 contemporary life and its problems.

COURSE OF STUDY

1. **CIVILIZATION—INTRODUCTION TO CONTEMPORARY CIVILIZATION**—Fall and winter quarters. Four hours.

Required of all first year students.

This course presents an organization of materials around four significant topics: (1) The Social World, emphasizing the socio-biological view of human nature and treating the social environment; (2) What We Are, in which the general phases of human development and the organization of intellectual life are discussed; (3) The Social Complexes, in which social routines, values, and innovations are treated; and (4) Contemporary Ways of Life, in which the family, religion, industry, art, and science are emphasized as fundamental social modes.

*Given also by extension.

KINDERGARTEN-PRIMARY MAJORS
FOUR-YEAR CURRICULUM

FIRST YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Civ'l. 1 Ed. 1 Geog. 50 Phys. Ed. Sci. 1	Art 1 Eng. 4 Geog. 50 Hyg. 1 Mus. 25 Phys. Ed.	Fall
Winter	Art. 1 Ed. 3a Ed. 3b Mus. 25 Phys. Ed. Sci. 2	Art 2 Civ'l. 1 Elective Phys. Ed. Sci. 1	Winter
Spring	Art 2 Hist. 13a Hyg. 1 Observ. 1 Phys. Ed. Psych. 2a	Ed. 1 Elective Phys. Ed. Sci. 2	Spring
		Art 2 Civ'l. 1 Eng. 1 Eng. 0 Phys. Ed.	
		Elective Eng. 4 Geog. 50 Hyg. 1 Phys. Ed.	
		Art 1 Ed. 3a Ed. 3b Mus. 25 Phys. Ed. Sci. 1	

SECOND YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Ed. 3c Elem. Sci. 1 Phys. Ed. Psych. 2b Teaching 1	Ed. 3a Ed. 3b Hist. 13b Observ. 1 Phys. Ed. Psych. 2a	Fall
Winter	Ed. 10 Elective Eng. 21 Mus. 1a Phys. Ed.	Ed. 3c Mus. 1a Phys. Ed. Teaching 1	Winter
Spring	Elective (8 hours) Eng. 22 Hist. 125 Phys. Ed.	Ed. 10 Elective Elem. Sci. 1 Eng. 21 Phys. Ed.	Spring
		Ed. 10 Elem. Sci. 1 Eng. 21 Phys. Ed.	
		Ed. 10 Eng. 22 Hist. 13b Observ. 1 Phys. Ed. Psych. 2a	
		Ed. 3c Mus. 1a Phys. Ed. Psych. 2b Teching 1	

THIRD YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Ed. 150 Ed. 258 Elective Hist. 126	Ed. 150 Ed. 258 Eng. 22 Hist. 125	Fall
Winter	Art 13 Ed. 259 Ed. 210 Elective	Art 13 Ed. 210 Ed. 259 Hist. 126	Winter
Spring	Ed. 260 Elective (6 hours) Observ. 2 Psych. 108c	Ed. 260 Elective (8 hours) Psych. 108c	Spring
		Ed. 150 Elective Psych. 108c	
		Art 13 Ed. 210 Elective Hist. 125	
		Ed. 260 Elective. Hist. 126 Psych. 104	

FOURTH YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Ed. 134 Electives or Minor Teaching 2	Ed. 134 Electives or Minor Observ. 2	Fall
Winter	Biot. 101 Electives or Minor Soc. 105	Biot. 101 Electives or Minor Teaching 2	Winter
Spring	Ed. 111 Electives or Minor Psych. 104	Ed. 111 Electives or Minor Psych. 104 Soc. 105	Spring
		Ed. 134 Ed. 258 Electives or Minor Soc. 105	
		Biot. 101 Ed. 259 Electives or Minor Observ. 2	
		Ed. 111 Electives or Minor Teaching 2	

*See footnote on page 96.

INTERMEDIATE MAJORS—FOUR-YEAR CURRICULUM

		FIRST YEAR					
		Sec. A	Sec. B		Sec. C		
Fall	Winter	Civ'l. 1	Art 1		Civ'l. 1	Fall	
		Ed. 1	Eng. 1		Ed. 1		
		Hist. 10	Eng. 4		Eng. 0		
Winter	Spring	Phys. Ed.	Hyg. 1		Mus. 1b	Spring	
		Sci. 1	Mus. 25		Phys. Ed.		
			Phys. Ed.				
Spring	Fall	Art 1	Civ'l. 1		Art 2a	Fall	
		Ed. 4a	Elective		Elective		
		Eng. 1	Hist. 10		Eng. 4		
Fall	Winter	Mus. 25	Phys. Ed.		Hyg. 1	Winter	
		Phys. Ed.	Sci. 1		Phys. Ed.		
		Sci. 2					
Winter	Spring	Elective	Art 2a		Art 1	Spring	
		Hist. 13b	Ed. 1		Ed. 4a		
		Hyg. 1	Mus. 1b		Hist. 10		
Spring	Fall	Observ. 1	Phys. Ed.		Mus. 25	Fall	
		Phys. Ed.	Sci. 2		Phys. Ed.		
		Psych. 2a			Sci. 1		
		SECOND YEAR					
		Sec. A	Sec. B		Sec. C		
Fall	Winter	Art 2a	Ed. 4a		Ed. 10	Fall	
		Elective	Elective		Elem. Sci. 1		
		Phys. Ed.	Hist. 13b		Math. 10		
Winter	Spring	Fsych. 2b	Observ. 1		Phys. Ed.	Spring	
		Teaching 1	Phys. Ed.		Sci. 2		
			Psych. 2a				
Spring	Fall	Ed. 10	Elective		Eng. 1	Fall	
		Elective	Geog. 10		Elective		
		Geog. 10	Phys. Ed.		Hist. 13b		
Fall	Spring	Mus. 1b	Psych. 2b		Observ. 1	Spring	
		Phys. Ed.	Teaching 1		Phys. Ed.		
					Psych. 2a		
Spring	Fall	Elem. Sci. 1	Ed. 10		Elective	Fall	
		Geog. 11	Elem. Sci. 1		Geog. 10		
		Hist. 125	Geog. 11		Phys. Ed.		
Fall	Spring	Math. 10	Math. 10		Psych. 2b	Spring	
		Phys. Ed.	Phys. Ed.		Teaching 1		
		THIRD YEAR					
		Sec. A	Sec. B		Sec. C		
Fall	Winter	Ed. 150	Ed. 150		Ed. 150	Fall	
		Ed. 258	Ed. 258		Eng. 21		
		Electives	Eng. 22		Geog. 11		
Winter	Spring	Hist. 126	Hist. 125		Psych. 108c	Spring	
Spring	Fall	Art 14	Art 14		Art 14	Fall	
		Ed. 210	Ed. 210		Ed. 210		
		Ed. 259	Ed. 259		Eng. 22		
Fall	Spring	Eng. 21	Hist. 126		Hist. 125	Spring	
Spring	Fall	Ed. 260	Ed. 260		Electives	Fall	
		Eng. 22	Elective		Hist. 126		
		Observ. 2	Eng. 21		Psych. 104		
Fall	Spring	Psych. 108c	Psych. 108c			Spring	
		FOURTH YEAR					
		Sec. A	Sec. B		Sec. C		
Fall	Winter	Ed. 134	Ed. 134		Ed. 134	Fall	
		Electives	Electives		Ed. 258		
		Teaching 2	Observ. 2		Electives		
Winter	Spring		Eng. 22		Soc. 105	Spring	
Spring	Fall	Biot. 101	Biot. 101		Biot. 101	Fall	
		Electives	Electives		Ed. 259		
		Soc. 105	Teaching 2		Electives		
Fall	Spring				Observ. 2	Spring	
Spring	Fall	Ed. 111	Ed. 111		Ed. 111	Fall	
		Electives	Elective		Ed. 260		
		Psych. 104	Fsych. 104		Electives		
Fall	Spring		Soc. 105		Teaching 2	Spring	

†See footnote on page 96.

UPPER GRADE—JUNIOR HIGH SCHOOL CURRICULUM

		FIRST YEAR					
		Sec. A	Sec. B		Sec. C		
Fall	Fall	Civ'l. 1	Art 1		Civ'l. 1	Fall	Fall
		Ed. 1	Eng. 4		Ed. 1		
		Elective	Hyg. 1		Eng. 0		
Winter	Winter	Phys. Ed.	Mus. 25		Phys. Ed.	Winter	Winter
		Sci. 1	Phys. Ed.		Elective		
		Art 1	Elective				
Spring	Spring	Elective	Civ'l. 1		Ed. 113	Spring	Spring
		Mus. 25	Phys. Ed.		Eng. 4		
		Phys. Ed.	Sci. 1		Hyg. 1		
Spring	Spring	Sci. 2	Electives		Phys. Ed.	Spring	Spring
		Ed. 113	Ed. 1		Art 1		
		Elective	Phys. Ed.		Mus. 25		
Spring	Spring	Hyg. 1	Sci. 2		Phys. Ed.	Spring	Spring
		Observ. 1	Electives		Sci. 1		
		Psych. 2a			Electives		
Spring	Spring	Phys. Ed.				Spring	Spring

		SECOND YEAR					
		Sec. A	Sec. B		Sec. C		
Fall	Fall	Ed. 15	Ed. 110		Ed. 10	Fall	Fall
		Ed. 110	Electives		Elective		
		Elective	Observ. 1		Eng. 21		
Winter	Winter	Phys. Ed.	Phys. Ed.		Phys. Ed.	Winter	Winter
		Psych. 2b	Psych. 2a		Sci. 2		
		Teaching 1					
Spring	Spring	Ed. 10	Ed. 15		Ed. 110	Spring	Spring
		Electives	Phys. Ed.		Electives		
		Eng. 21	Psych. 2b		Eng. 22		
Spring	Spring	Phys. Ed.	Teaching 1		Observ. 1	Spring	Spring
		Electives	Electives		Phys. Ed.		
		Eng. 22			Psych. 2a		
Spring	Spring	Hist. 125	Ed. 10		Electives	Spring	Spring
		Phys. Ed.	Ed. 113		Phys. Ed.		
			Eng. 21		Psych. 2b		
Spring	Spring		Phys. Ed.		Teaching 1	Spring	Spring
			Electives				

		THIRD YEAR					
		Sec. A	Sec. B		Sec. C		
Fall	Fall	Electives and Minor	Electives and Minor		Electives and Minor	Fall	Fall
		Hist. 126	Eng. 22		Psych. 108c		
			Hist. 125				
Winter	Winter	Ed. 210	Ed. 210		Electives and Minor	Winter	Winter
		Electives and Minor	Electives and Minor		Hist. 125		
			Hist. 126				
Spring	Spring	Electives and Minor	Electives and Minor		Electives and Minor	Spring	Spring
		Observ. 2	Psych. 108c		Hist. 126		
		Psych. 108c					

		FOURTH YEAR					
		Sec. A	Sec. B		Sec. C		
Fall	Fall	Electives and Minor	Electives and Minor		Ed. 210	Fall	Fall
		Teaching 2	Observ. 2		Electives and Minor		
					Soc. 105		
Winter	Winter	Electives and Minor	Electives and Minor		Electives and Minor	Winter	Winter
		Soc. 105	Teaching 2		Observ. 2		
Spring	Spring	Ed. 111	Ed. 111		Ed. 111	Spring	Spring
		Electives and Minor	Electives and Minor		Electives and Minor		
			Soc. 105		Teaching 2		

**See footnote on page 96.

RURAL CURRICULUM—FOUR YEARS

FIRST YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Civ'l. 1 Ed. 1 Hist. 10 Phys. Ed. Sci. 1	Art 1 Eng. 1 Eng. 4 Hyg. 1 Mus. 25 Phys. Ed.	Fall
Winter	Art 1 Ed. 4a Ed. 21 Mus. 25 Phys. Ed. Sci. 2	Civ'l. 1 Ed. 23 Ed. 4a Phys. Ed. Sci. 1	Winter
Spring	Elective Hist. 13b Hyg. 1 Observ. 1 Phys. Ed. Psych. 2a	Art 2a Ed. 1 Mus. 25 Phys. Ed. Sci. 2	Spring

SECOND YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Art 2a Elem. Sci. 1 Phys. Ed. Psych. 2b Teaching 1	Ed. 4a Elective Hist. 13b Observ. 1 Phys. Ed. Psych. 2a	Fall
Winter	Ed. 10 Ed. 23 Eng. 21 Mus. 25 Phys. Ed.	Ed. 21 Geog. 10 Phys. Ed. Psych. 2b Teaching 1	Winter
Spring	Eng. 22 Geog. 10 Hist. 125 Math. 10 Phys. Ed.	Elem. Sci. 1 Geog. 10 Phys. Ed. Psych. 2b Teaching 1	Spring

THIRD YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Ed. 150 Ed. 258 Electives Hist. 126	Ed. 150 Ed. 258 Eng. 22 Hist. 125	Fall
Winter	Art 14 Ed. 210 Eng. 1 Geog. 10	Ed. 210 Geog. 11 Hist. 10 Hist. 126	Winter
Spring	Ed. 20 Ed. 260 Electives Observ. 2 Psych. 108c	Ed. 20 Ed. 260 Elective Psych. 108c	Spring

FOURTH YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Ed. 134 Electives Teaching 2	Ed. 134 Electives Observ. 2	Fall
Winter	Biot. 101 Electives Soc. 105	Art 14 Biot 101 Ed. 259 Teaching 2	Winter
Spring	Ed. 111 Ed. 127 Electives	Ed. 111 Ed. 127 Elective Soc. 105	Spring

††See footnote on page 96.

EDUCATION

The two-year courses (junior college) outlined herewith are primarily intended for students who plan to teach in the kindergarten-primary, intermediate, rural, or upper grades. The senior college courses are primarily intended for experienced teachers who wish further training for teaching in the elementary grades or who wish to prepare themselves for supervisory work or for a principalship or superintendency. Inexperienced senior college students who wish administrative work ultimately are urged to prepare themselves for teaching some grade or subject. Students without experience completing the work in education for the upper grades and desirous of completing the four years bachelor's work for high school teaching are urged to select a major in subject matter for their third and fourth year work.

Two-year freshman students in education should note requirements for various elementary levels—kindergarten-primary, intermediate, rural, and upper grades—and advise either with the Director of Freshman Studies or the head of the Department of Education early in their first quarter as to choice of major.

Some courses are given that are basic to all students in a professional teacher-training institution. In the junior college two core subjects are required: Education 1 (to be taken in the freshman year), Introduction to Education, an orientation course designed to emphasize the technic of teaching and classroom management, and Education 10 (to be taken in the sophomore year), Problems of Education, a course designed to survey in a more critical way method and subject matter to be taught in the entire school system. Many other courses are specialized, as for example the methods courses for various levels of grade teaching, courses in administration, and courses upon special movements and technics such as individual instruction, platoon school organization, rural methods, or supervised study. All students should consult advisers when submitting programs concerning specialized course not required as core or departmental subjects.

*Limited certificate students (two years) complete two-year course as prescribed. To obtain life certificate candidate must satisfy requirement in the third year outlined herewith. To secure the bachelor's degree, complete four-year requirements.

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 secure three subject minors of sixteen hours each but including core and departmental courses in the field.

†Limited certificate students (two years) complete two-year course prescribed. To obtain life certificate candidate must satisfy requirements in the third year. To secure the bachelor's degree, complete fourth year requirements.

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 secure three subject matter minors as suggested earlier.

**In addition to the course herewith select two minors from the list suggested for upper grade majors and take at least four of the exact courses outlined in the first two years of each minor selected. Complete the remaining courses in the third year. Advise with 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 a quarter, take P. E. 5; other four quarters to be selected by student.

††Limited certificate students (two years) complete two-year course as prescribed. To obtain life certificate candidate must satisfy requirements in the third year. To secure bachelor's degree, complete four-year requirements.

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 secure subject matter minors as suggested earlier.

A FOUR-YEAR COURSE OF STUDY IN EDUCATION

Majors in Education are required to distribute their core subjects according to the diagrams on pages 92, 93, 94, 95. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following education courses are required of majors in this department:

Kindergarten-Primary—Ed. 3a, 3b, 3c, 134, 150, 210, 258, 259, 260.

Intermediate Majors—Ed. 4a, 134, 150, 210, 258, 259, 260.

Upper Grade-Junior High—Ed. 15, 110, 113, 210.

Rural—Ed. 4a, 4b, 20, 21, 23, 127, 134, 150, 210, 258, 259, 260.

Superintendents—Ed. 108, 116, 134, 142, 143, 144, 150, 210.

Elementary Principals and Supervisors—Ed. 108, 134, 142, 150, 210, 258, 259.

High School Principals—Ed. 108, 116, 134, 142, 150, 210, 216, 143.

Training Work in Teachers Colleges—Ed. 102a, 108, 150, 190, 192, 210, 258, 259, 260.

COURSE OF STUDY

Students majoring in kindergarten-primary or intermediate or rural teaching should utilize electives designed in their four-year curriculum to complete at least three subject matters 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 14 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. 94), and take exact courses listed. For third and fourth year a subject matter major should probably be chosen, for example, history or industrial arts.

Senior college Education majors pursuing curricula outlined for administration or supervision are urged to use electives to obtain two subject matter minors of at least sixteen hours each (cores and departmental subject matter courses to count) in (1) English; (2) science; (3) foreign language; (4) mathematics; (5) social science; (6) industrial arts; or (7) commercial education.

(Subject matter minors for upper grades—Two to be selected)

Courses itemized below to be taken:

SOCIAL SCIENCE		SCIENCE	
Hist. 1	Pol. Sci. 1 or 2	Gen. Sci. 1 (Soph. yr.)	Phys. 4
Hist. 2	Geog. 15	Gen. Sci. 2 (Soph. yr.)	Zool. 4 hrs. elective
Hist. 5	Soc. 150	Chem. 8	Bot. 4 hrs. elective
ENGLISH		MATHEMATICS	
Eng. 22	Eng. 2	Math. 10	Math. 111
(per 15)	Eng. 12	Math. 107 (Soph. yr.)	
Eng. 11	Eng. 20	Electives, 12 hrs. in Math.	
Eng. 16 or 112			
ART		HOME ECONOMICS	
Art 17	Art 4b	H. E. 4	H. E. 10
Art 14	Art 4a or 16	H. E. 5	H. E. 112
Art 3	Art 7	H. E. 7	H. Econ. 101

MUSIC

Music 1b	Music 11	Ind. Ed. 1	Ind. Ed. 5
Music 1c	Music 20	Ind. Ed. 2	Ind. Ed. 10
Music 10	Music 21	Ind. Ed. 8a	Ind. Ed. 12

INDUSTRIAL ARTS

COMMERCIAL EDUCATION

(Take a and one of b, or c, or d.)

- | | |
|--------------------------|-----------------------------|
| a. Typewriting | c. Junior Business Training |
| C. E. 11, 12, 13, and 14 | Com. Ed. 37, 41, and 150 |
| b. Shorthand | d. Bookkeeping |
| C. E. 1, 2, 3, and 4 | Com. Ed. 150, 151, 152, 157 |

SENIOR COLLEGE PROFESSIONAL COURSES

For Superintendents
(All in senior college)

Ed. 142	Ed. 108	Biot. 101
Ed. 143	Ed. 116 or 213	Ed. 150
Ed. 144	Ed. 210	Ed. 134

(Two subject matter minors of sixteen hours each in any of the following: English, science, foreign language, mathematics, social science, industrial arts, or commercial education.)

For Elementary Principals and Supervision

Ed. 258	Ed. 108	Ed. 134
Ed. 259	Ed. 210	Biot. 101
Ed. 142	Ed. 150	Psych. 104

(Two subject matter minors of sixteen hours each in any of the following: English, science, foreign language, mathematics, social science, industrial arts, or commercial education.)

For High School Principals

Ed. 116	Ed. 108	Ed. 134
Ed. 216 or 143	Ed. 210	Biot. 101
Ed. 142	Ed. 150	Psych. 105

(Two subject matter minors of sixteen hours each in any of the following: English, science, foreign language, mathematics, social science, industrial arts, or commercial education.)

For Training School Work and Teachers of Education and Psychology in Teachers Colleges

Ed. 258	Ed. 108	Ed. 150	Ed. 103
Ed. 259	Ed. 210	Ed. 190	Psych. 104
Ed. 260		Ed. 192	Biot. 101

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

I. COURSES PRIMARILY FOR JUNIOR COLLEGE STUDENTS

*1. INTRODUCTION TO EDUCATION—Every quarter. Four hours.

Required of all first-year students.

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 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.

*Given also by extension.

2a. PRE-TEACHING OBSERVATION IN THE ELEMENTARY SCHOOL—Every quarter. 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 observation 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.

2b. STUDENT TEACHING IN THE ELEMENTARY AND JUNIOR HIGH SCHOOL—Every quarter. Four hours.

Required of all junior college students. A full quarter of teaching carries four 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. 2b) each student must make at least a grade of "C" in observation (Ed. 2a), pass satisfactorily an achievement test, Ed. 1, and the methods courses in his major department. An additional quarter may be taken as 2d.

2c. PRE-TEACHING OBSERVATION IN THE SECONDARY SCHOOL—Every quarter. Two hours.

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

***3a. LANGUAGE ARTS IN PRIMARY GRADES—Every quarter. 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 to these phases of primary school work are a part of the course.

3b. SOCIAL ARTS IN PRIMARY METHODS—Every quarter. 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 is 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.

***3c. KINDERGARTEN-PRIMARY MATERIALS—Every quarter. Four hours.**

A course in kindergarten-primary methods. The course includes: the furnishing and equipping of kindergarten and primary rooms; a survey of the work of the unified kindergarten-primary grades, including a study of types of literature suitable for young children, principles of selection of material, suggestions concerning the conducting of the literature hour, and types of returns which may be expected from children; plays and games, including a study of the significance of play in the life of the child, types

*Given also by extension.

of plays and games suitable for young children with principles of selection, suggestions concerning the conducting and guiding of the play period, and the educational and social value of plays and games. Demonstration lessons illustrating the application of method to these phases of primary school work are a part of the course.

Ed. 4a. LANGUAGE ARTS IN THE INTERMEDIATE GRADES—Every quarter. 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 recreatory 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 both 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.

5. PRINCIPLES OF TEACHING—(Now a part of Ed. 1)—Summer quarter. Two hours.

This course deals with fundamental principles and methods of teaching in the elementary grades. It attempts to show how efficiency and economy in instruction may be attained by adapting instruction to contemporary social needs and through the application of the principles of psychology and scientific business management to teaching. Emphasis is placed upon the specific application of the principles and methods presented.

***10. PROBLEMS OF EDUCATION—Every quarter. Four hours.**

Prerequisite, Ed. 1 and Sophomore standing.

This is a more advanced (sophomore) course in education for all junior college students. It is designed to acquaint the student with present-day problems concerning 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, (b) the major classes of activities; and adaptation of subject matter to the community and pupil.

***15. EDUCATIONAL AND VOCATIONAL GUIDANCE—Fall, winter, and summer quarters. 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 periods. 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. ELEMENTARY TRAINING COURSE FOR CAMP FIRE GIRLS LEADERSHIP—Every quarter. Two hours.

This course is a training for community leadership in leisure time program for girls. It includes lectures and demonstrations covering projects in the seven crafts of Camp Fire, motion songs, symbolism, organization, planning of programs, out-of-doors activities, and so on. The course leads to the national elementary certificate for leadership in Camp Fire girls' work.

ED. 16. TRAINING COURSE FOR CAMP FIRE GIRLS' LEADERSHIP—Every quarter. 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, organi-

*Given also by extension.

zation, program planning, and so on. The course leads to the national certificate for leadership in Camp Fire girls' work.

17. **BOY SCOUT WORK**—Summer quarter. Two hours.

*20. **ELEMENTARY RURAL SCHOOL AGRICULTURE**—Spring and summer quarters. Four hours.

This course considers the place of agriculture in rural elementary education. It considers the objectives concerned with an appreciation of agriculture as a mode of living, not merely as a means of making a living, involving an introduction to knowledge of plant and animal types, methods of attack in solving agricultural problems guided by the fundamental principles and purposes of elementary education. It deals with the methods and materials to be used in rural activities.

*21. **RURAL SCHOOL PROBLEMS**—Winter and summer quarters. Four hours.

This course contributes directly and genuinely to the practice of those who work in rural and village schools. Many of the common everyday problems of the rural teacher are considered and solutions offered as a guide to action in many new and difficult situations which confront the young and beginning teachers of the rural schools.

*23. **RURAL SCHOOL MANAGEMENT**—Winter and summer quarters. Four hours.

This course deals with the teaching of the common school subjects under conditions usually met by the rural teacher in the one, two, and three-teacher schools. It aims to present the basic principles of learning and the approved methods of presentation for each subject. The subjects are considered separately, principles and methods for each subject being illustrated by concrete examples. The latest results of educational research in methods and subject matter are adapted to meet the peculiar conditions of the small rural school.

24. **RURAL LIFE PROBLEMS IN EDUCATION**—Spring and summer quarters. Four hours.

This course deals with some of the most fundamental aspects of rural community life in terms of rural education and rural schools. It considers the two-fold function of the public school in the rural community—to teach people to live and to make a living, and to train a new generation, clear-seeing and able to solve its own problems.

*28. **SCHOOL AND HOME GARDENS**—Spring and summer quarters. 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.

*52. **KINDERGARTEN MATERIALS**—now combined with Ed. 3c.

II. COURSES PRIMARILY FOR SENIOR COLLEGE STUDENTS

100a. **PROBLEMS OF EDUCATION**—Summer quarter. Two hours.

This course attempts to bring to interested students the results of research concerning current educational problems. A survey course with a different lecturer daily or weekly, representing major fields of knowledge.

100d. **UNIT COURSES IN CREATIVE EDUCATION**—Summer quarter. One hour.

Units numbered differently for each summer.

100e. **UNIT COURSES IN EDUCATION FOR COUNTY SUPERINTENDENTS**—Summer quarter. One hour.

Units numbered differently each summer.

100f. **UNIT COURSES IN PARENT-TEACHER EDUCATION**—Summer quarter. One hour.

*Given also by extension.

***101. PRINCIPLES OF HIGH SCHOOL TEACHING—Winter and summer quarters. Two hours.**

This course is designed to develop those principles of teaching and features of methodology which are particularly applicable to high school teaching. Some of the topics to be considered are: characteristics of adolescence; types of disciplinary control; economical classroom management; types of instruction; lesson planning; and supervised study.

102. ADVANCED STUDENT TEACHING IN THE ELEMENTARY TRAINING SCHOOL—Every quarter. Four hours.

An additional quarter may be taken as 102d.

102a. STUDENT SUPERVISION IN ELEMENTARY TRAINING SCHOOL—Every quarter. Four hours.

103. STUDENT TEACHING IN THE SECONDARY TRAINING SCHOOL—Every quarter. Four hours.

An additional quarter may be taken as 103d.

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

103a. STUDENT SUPERVISION IN THE SECONDARY TRAINING SCHOOL—Every quarter. Four hours.

104. THE PROJECT METHOD OF TEACHING—Summer quarter. 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.

105. PRACTICAL SUBJECTS IN THE PRIMARY GRADES—Summer quarter. Two hours.

A study is made of the activity curriculum as set forth in progressive primary schools where the traditional curriculum is being modified by activities of the problem-solving or project type. Attention is given to some specimen enterprises of school children and how to judge their worth. Some consideration is given to the organization of the project with regard to curriculum content, learning materials, and methods.

***106. ELEMENTARY TYPES OF TEACHING—Summer quarter. Two or four hours.**

An analysis of the less familiar types of teaching and learning; learning to understand social life; learning to be skillful in problem solving, silent reading, communicating ideas; learning to enjoy leisure time; learning to behave morally.

107. METHODS OF IMPROVING READING AND STUDY HABITS OF ELEMENTARY SCHOOL CHILDREN—Summer quarter. Four hours.

In this course a study will be made of silent reading habits and abilities in their relationship to efficient performance in the elementary school subjects. Particular emphasis will be placed upon the methods of forming those habits in silent reading which are fundamental in independent or supervised study. The following problems will be discussed; the mechanics of reading and the work of the eye in reading; measurement of silent reading ability; factors affecting silent reading ability; the treatment of cases of retardation due to poor study and silent reading habits.

108. EDUCATIONAL SUPERVISION—Winter and summer quarters. Four hours.

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.

***108c. SUPERVISION OF EDUCATIONAL VALUES—(Given by Extension only.) Two hours.**

*Given also by extension.

***109a. SUPERVISED STUDY IN THE ELEMENTARY SCHOOL—(Given by Extension only.) Three hours.**

This course deals with the principles and methods of supervised or directed study as applied to the elementary school. 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.

***109b. SUPERVISED STUDY IN THE HIGH SCHOOL—(Given by Extension only.) Three hours.**

The aim of this course is to provide experience in the various conceptions of supervised or directed study as applied to the secondary school. Principles, methods, and schemes of organization and administration are presented and applied to the teaching of the various high school subjects. It is intended to facilitate high school teaching through providing for ways and means of properly directing the efforts of the students in study.

***110. EXTRA-CURRICULAR ACTIVITIES—Fall, winter, and summer quarters. Two 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.

110a. CITIZENSHIP EDUCATION IN THE JUNIOR HIGH SCHOOL—Summer quarter. Two hours.

110b. CITIZENSHIP EDUCATION IN THE GRADES—Summer quarter. Two hours.

***110c. CITIZENSHIP EDUCATION IN THE SCHOOLS—(Given by Extension only.) Three hours.**

This course is given in the Extension Department as a combination of Ed. 110a and Ed 110b.

***110f. SUPERVISION OF CURRICULUM MAKING—(Given by Extension only.) Three hours.**

***111. HISTORY AND PHILOSOPHY OF EDUCATION—Spring and summer quarters. Four hours.**

Open only to senior college and graduate students.

The first part of this course presents an outline of the great educational movements which have been developed by the process of civilization and attempts to show how the educational ideals which were approximated in one age descended to the next and were enlarged by experience and wisdom. The evolution of these educational ideals are presented in connection with the great personalities which made them possible.

Having presented in the first part of this course the historical development and evolution of the general theory of education, the second part 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.

112. SCHOOLHOUSE CONSTRUCTION—(Now a part of Ed. 142-143).

***113. ORGANIZATION AND ADMINISTRATION OF A JUNIOR HIGH SCHOOL—Winter, spring, and summer quarters. Four hours.**

Primarily for upper grade majors. Senior college and graduate students take Ed. 213. Prerequisite, Ed. 1.

This course will deal with the junior high school from the standpoint of organization, programs, teaching, course of study, social life, athletics, and all general problems arising in administering a junior high school.

*Given also by extension.

114. PRIMARY SUPERVISION—Spring and summer quarters. Four hours.

Prerequisites, Ed. 3a and 3b.

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 the modern trends in the primary field.

115. ORGANIZATION AND ADMINISTRATION OF THE ELEMENTARY SCHOOL—Summer quarter. Two hours.

This course will deal with the elementary school from the standpoint of organization, programs, teaching, course of study, social life, athletics, and all general problems arising in the administering of an elementary school.

*116. ORGANIZATION AND ADMINISTRATION OF A SENIOR HIGH SCHOOL—Fall, winter, and summer quarters. Four hours.

General principles of organization and administration of the high school with special emphasis on the teacher's responsibilities and relationships. The course contains discussions of the function of secondary education; problems of personnel, including the principalship and teaching staff, salaries, tenure, teaching load, professional improvement; composition, control, and guidance of the student body; the secondary school curriculum; departmental organization and supervision; methods of instruction; the daily program; unit costs, control of student finances; records and reports.

117. PROBLEMS IN SCHOOL DISCIPLINE—Summer quarter. Two 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 responsibility, legal aspects of discipline, and general theories and principles of discipline are the phases of the course discussed.

*118. PROBLEMS IN CHARACTER AND MORAL EDUCATION—Summer quarter. Two 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 twenty school systems are the basis 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.

120. EDUCATIONAL FINANCE—(Now a part of Ed. 142-143).

123. EDUCATIONAL RESEARCH FOR SENIOR COLLEGE STUDENTS—Every quarter. Four hours.

Registration for this course permitted only after conference with the head of the department. This course is a seminar or conference course for qualified senior college students. Students with definite problems will carry on research under the direction of the instructor in whose field the problem lies.

125. MODERN TRENDS IN RURAL SCHOOL EDUCATION—Winter and summer quarters. Four hours.

This course considers the problems that grow out of the demands made upon the rural school and attempts an interpretation of the means and methods which the solution of these problems requires.

127. SPECIAL RURAL SCHOOL METHODS—Fall and summer quarters. Four hours.

This course aims to acquaint the student with a few of the outstanding experiments that have been made in recent years which deal with special methods of adapting the rural elementary school program to the needs of rural schools.

128. COUNTY ADMINISTRATION—Summer quarter. Two hours.

This course deals with the problems of rural education from the supervisory point of view of county superintendents. It deals with the relations of county superintendents to teachers of rural schools.

*Given also by extension.

*129. CURRENT EDUCATIONAL THOUGHT (Formerly Ed. 229)—Summer quarter. Two or four hours.

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

130. VISUAL AIDS IN EDUCATION—Summer quarter. 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.

*133. HISTORY OF EDUCATION WITH SPECIAL REFERENCE TO MODERN TIMES—Summer quarter. 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.

*134. HISTORY OF EDUCATION IN THE UNITED STATES—Fall and summer quarters. 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.

136. COMPARATIVE EDUCATION—Summer quarter. Two hours.

139. RECENT EDUCATIONAL DEVELOPMENTS—Summer quarter. Two hours.

140. GUIDANCE PROBLEMS OF DEANS OF GIRLS—Spring and summer quarters. 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.

141. ADMINISTRATION FOR TEACHERS—Summer quarter. Two hours.

This course is especially designed for content majors (in English, science, etc.) interested in equipping themselves for administrative duties in town and consolidated schools. It is particularly needed by young men majoring in a content field with little or no experience who accept teaching positions and the superintendency or principalship of the district.

142. SCHOOL ADMINISTRATION, ELEMENTARY—Fall and summer quarters. Four hours.

A first course for school administrators. The course contains discussions of the philosophy of educational administration, relation of the federal government to public schools, function of the state in supporting and controlling schools, school organization—federal, state, county, local; the election, organization, and function of boards of education; the selection, qualifications, duties of the superintendent; responsibilities of other administrative officers; qualifications, salaries, selection, promotion, and tenure of teachers; organization of special departments; building management; school finance.

143. SCHOOL ADMINISTRATION, ADVANCED—Winter and summer quarters. Four hours.

Second course in administration. Sources of school funds; classification of expenditures; unit costs; budget making; bonds and bond issues; control of school finances; continuous school surveys, their meaning, func-

*Given also by extension.

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tion, and various technics; selection of school sites; planning buildings; size, shape, ventilation, and lighting of classrooms, corridors, gymnasiums, auditoriums, offices, and laboratories.

144. SCHOOL PUBLICITY—Winter and summer quarters. Two hours.

This course will study such problems as school papers, bulletins, house organs, and publications for patrons. How to get material ready for the newspapers and how to handle such community projects as clean-up week, American education week, know-your-schools week, music week, bond elections, parent-teachers associations, and other community enterprises will be a part of this course. Given by the Department of Education and the Department of English jointly.

145. PLATOON SCHOOL ORGANIZATION—Summer quarter.

147. EDUCATIONAL SURVEYS—(Now a part of Ed. 142-143.) Summer quarter. Two hours.

148. PROBLEMS OF INDIVIDUAL INSTRUCTION—Summer quarter. Two hours.

150. FOUNDATIONS OF METHOD—Fall and summer quarters. Four 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.

151. THE PRE-SCHOOL—Winter and summer quarters. 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.

152. THE CHILD AND HIS SCHOOL—Fall and summer quarters. Four hours.

An interpretation of elementary education as a social process in which the child is the major factor. A study of the principles underlying the education of elementary school children.

154. RECENT INVESTIGATIONS IN ELEMENTARY EDUCATION—Summer quarter. (Not given 1929.)

155. RECENT INVESTIGATIONS IN KINDERGARTEN EDUCATION—Summer quarter. Four hours.

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

168. CURRENT PROBLEMS IN THE TEACHING OF RELIGION—Winter and summer quarters. Two hours.

This course is a study of the problem of teaching religion in the light of present day conditions affecting the religious life of children and methods of meeting these changed conditions.

169. THE TEACHING VALUES OF THE BIBLE—Spring and summer quarters. Two hours.

Biblical material will be considered in relation to the needs and interests of children and young people. Ways of presenting this material will also be considered.

190. THE ADMINISTRATION OF NORMAL SCHOOLS AND TEACHERS COLLEGES—Winter and summer quarters. 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 relation to other educational institutions.

*191. PROFESSIONAL EDUCATION OF TEACHERS—(Given by Extension only.) Three hours.

192. TRAINING SCHOOL PROBLEMS IN THE PROFESSIONAL EDUCATION OF TEACHERS—Winter and summer quarters. 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.

194. THE JUNIOR COLLEGE—Summer quarter. Two hours.

This course deals with the development and organization of the junior college.

III. COURSES FOR GRADUATE STUDENTS AND QUALIFIED SENIOR COLLEGE STUDENTS WITH CONSENT OF THE INSTRUCTOR

(Junior college students may NOT register for these courses.)

208.—SEMINAR IN EDUCATIONAL VALUES—Fall quarter. (Not given 1929-30.) Four hours.

May be repeated as Ed. 209 for four additional hours.

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.

***210. PROBLEMS OF THE SCHOOL CURRICULUM**—Winter and summer quarters. Four hours.

Substituted for Ed. 10 for senior college students.

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.

211. CONCEPTION OF MIND IN EDUCATIONAL THEORY—Winter quarter. (Not given 1929-30.) 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.

213. PROBLEMS OF THE JUNIOR HIGH SCHOOL, WITH SPECIAL REFERENCE TO THE CURRICULUM—Spring and summer quarters. Two or four hours.

Given successive summers as 213, 214, and 215. Students may earn up to twelve hours.

This course will attempt to offer practical suggestions for the reorganization of the junior high school grades. The following problems, with the possible solutions based upon sound educational theory, practice, and scientific method, will be discussed: how to relate and integrate the program of the junior high school with that of the elementary and senior high schools; economy of time and learning; enrichment of the curriculum; and how to organize junior high schools for effective training in citizenship. The Rugg-Schweppe program, as embodied in "The Social Science Pamphlets," will be presented and applications of their experimental curriculum procedure will be made to other subjects of the junior high school.

216. PROBLEMS OF SECONDARY EDUCATION—Fall and summer quarters. Four hours.

Given successive summers as 216, 217, and 218. Students may earn up to twelve hours.

This course is intended for graduate and advanced undergraduate students who are interested in intensive study of significant and fundamental problems in the field of secondary education. These problems will include organizing programs of study, administering student activities, financing

*Given also by extension.

student activities, organizing curriculum materials, planning teachers' meetings, and others related to secondary education. Intensive study and investigation will be organized along the lines of individual interest.

219. PROBLEMS OF STUDY AND DISCIPLINE—Spring and summer quarters. Four hours.

This course will deal in an advanced way with specialized technics of classroom organization, management, and control. It will discuss objective studies of discipline, character education study, and method. The case approach will be used as much as possible.

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

This is the thesis course for masters candidates in Education 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 EDUCATION—Every quarter. Two hours.

This is the thesis course for masters candidates in Education 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.

230. A HISTORY OF PHILOSOPHY—Winter and summer quarters. 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.

240. WOMEN IN ADMINISTRATION—Summer quarter. Four hours.

242. PROBLEMS IN EDUCATIONAL ADMINISTRATION—Spring and summer quarters. Four hours.

Organization and administration of a school system. The superintendent's functions and relationship to the public, the board of education, teachers, and students; departmental organization; functions of the board of education; rules and regulations; management of board meetings; the school calendar; the minute book.

243. PROBLEMS IN EDUCATIONAL ADMINISTRATION—Summer quarter. Four hours.

Business administration; organization for fiscal control; office practice; school funds and school indebtedness; the budget, its preparation and use; cost accounting, audit, payrolls, and reports.

244. PROBLEMS IN EDUCATIONAL ADMINISTRATION—Summer quarter. Four hours.

Personnel management. Qualifications, tenure, salaries, and promotion of teachers and their training while in service; duties and responsibilities of principals, assistant superintendents, and supervisors; leaves of absence; teachers' meetings; teacher load and contracts.

258. PROBLEMS OF ELEMENTARY EDUCATION—First Course (Spelling and Reading)—Fall and summer quarters. Four hours.

This is a course in the supervision of spelling and reading in the elementary school. It is intended to serve experienced teachers, principals, supervisors, and superintendents. In the light of the results of research the following items will be considered: (1) Selection of the content of the course of study; (2) determination of grade-placement; (3) selection of efficient methods of teaching and materials of instruction; and (4) selection of procedures in measuring pupil accomplishment.

259. PROBLEMS OF ELEMENTARY EDUCATION—Second Course (Content Subjects)—Winter and summer quarters. Four hours.

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 method and the socialized recitation.

260. PROBLEMS OF ELEMENTARY EDUCATION—Third Course (Handwriting, Composition, Arithmetic)—Spring and summer quarters. Four hours.

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.

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 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 three times each week and will confer with individual students by 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.

EDUCATIONAL PSYCHOLOGY

FIRST YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Civ'l. 1 Ed. 1 Elective Phys. Ed. Sci. 1	Art 1 Elective Eng. 4 Hyg. 1 Mus. 25 Phys. Ed.	Civ'l. 1 Ed. 1 Elective Eng. 0 Phys. Ed.	Fall
Winter	Art 1 Elective Minor Mus. 25 Phys. Ed. Sci. 2	Civ'l. 1 Elective Minor Phys. Ed. Sci. 1	Elective Eng. 4 Hyg. 1 Minor Phys. Ed.	Winter
Spring	Hyg. 1 Minor Observ. 1 Phys. Ed. Psych. 2a	Ed. 1 Elective Minor Phys. Ed. Sci. 2	Art 1 Elective Minor Mus. 25 Phys. Ed. Sci. 1	Spring

SECOND YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Elective Minor Phys. Ed. Psych. 2b Teaching 1	Elective Minor Observ. 1 Phys. Ed. Psych. 2b	Ed. 10 Elective Eng. 21 Phys. Ed. Sci. 2	Fall
Winter	Ed. 10 Eng. 21 Minor Phys. Ed. Psych. 1	Minor Phys. Ed. Psych. 1 Psych. 2a Teaching 1	Eng. 22 Minor Observ. 1 Phys. Ed. Psych. 1 Psych 2b	Winter
Spring	Elective Eng. 22 Hist. 125 Phys. Ed. Psych. 3	Ed. 10 Elective Eng. 21 Phys. Ed. Psych. 3	Elective Phys. Ed. Psych. 2a Psych. 3 Teaching 1	Spring

THIRD YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Hist. 126 Psych. 110 Psych. 114 or 111 Sci. 2	Eng. 22 Hist. 125 Psych. 110 Psych. 114 or 111	Ed. 10 Minor Psych. 110 Psych. 114 or 111	Fall
Winter	Ed. 116 Elective Minor Psych. 105	Elective Hist. 126 Minor Psych. 105	Elective Hist. 125 Minor Psych. 105	Winter
Spring	Elective Minor Psych. 103 Psych. 104 Observ. 2	Elective Psych. 103 Psych. 104 Psych. 108c	Hist. 126 Psych. 103 Psych. 104 Psych. 108c	Spring

FOURTH YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Elective Psych. 108a Psych. 117 Teaching 2	Minor Observ. 2 Psych. 108a Psych. 117	Ed. 116 Minor Psych. 108a Soc. 105	Fall
Winter	Elective Elective Psych. Psych. 107 Soc. 105	Ed. 116 Elective Psych. Psych. 107 Teaching 2	Elective Elective Psych. Observ. 2 Psych. 107	Winter
Spring	Ed. 111 Elective Psych. 108b Psych. 115	Ed. 111 Psych. 108b Psych. 115 Soc. 105	Ed. 111 Psych. 108b Psych. 115 Teaching 2	Spring

EDUCATIONAL PSYCHOLOGY

The courses of this department have been arranged for the purpose of making the student familiar with the important contributions which psychology has made to the problems of education. The whole school system is viewed from the standpoint of the nature and needs of the child. The courses contribute to the problems of what the schools should be and the teachers should do in order to preserve the child's physical and mental health, respect his native capacities and tendencies, secure his normal development, utilize the best modes of learning, and measure the efficiency of his responses. More specific statements of the purposes of the department appear in the descriptions of the courses.

The department prepares students to teach psychology in high schools and teachers' colleges and to fill positions in research and tests and measurements departments. It also has very important contributions to make to the preparation of teachers, supervisors, principals, superintendents and teachers of special schools and classes.

A student who wishes to major in this department must have approximately forty-eight hours credit in psychology for the Bachelor of Arts degree, and not less than sixty-four hours for the Master of Arts degree. In addition he will be obliged to take the core subjects and a minor of twelve to twenty-four hours outside the department.

Courses numbered under 100 are primarily for students in the junior college; those numbered above 100 and under 200 are primarily for students in the senior college; those above 200, primarily for graduate students. Majors in the department will be permitted to elect advanced courses.

A FOUR-YEAR COURSE OF STUDY IN EDUCATIONAL PSYCHOLOGY

Majors in Psychology are required to distribute their core subjects according to the diagram on page 110. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following psychology courses are required of majors in the department: Psych. 1, 3, 103, 104, 107, 108a, 108b, 108c, 110, 111, 114, 115, 117.

According to the diagram there are sixty-eight hours of core subjects, sixty-four hours of psychology (including the twelve hours of psychology in the core), and seventy-two hours for minors and free electives. Depending upon the needs of the student, he may not be required to take both Psychology 104 and Psychology 105, and both Psychology 108a and Psychology 108b.

Students are required to minor in one or two other subjects. There should be no less than twelve hours in each of two minors, and no less than twenty-four hours in a single minor. The minor or minors should be selected according to the needs of the work which the student is preparing to do.

*1. CHILD HYGIENE—Winter quarter. Four hours.

Purposes: to give the student a better understanding of the significance of health and defects, and to improve his ability to realize the health aim in education.

Topics: the necessity of paying attention to health and some of the bad effects of school life upon it; what the teacher can do to improve the health

*Given also by extension.

of the school child; the meaning of the physical differences between the adult and the child; the laws and disorders of growth and the factors which influence growth; the effect upon the child of different condition of the air and the right amount of exercise; the nature, causes, prevalence, and bad effects upon the child's activity, health and happiness of such defects as malnutrition, physical deformities, defective vision, defective hearing, defective tonsils and adenoids, defective teeth and unwholesome conditions of the mouth; the methods and means of discovering defects in the school child and the conditions which are necessary to prevent defects; demonstration of methods for detecting defects; what the teacher should do with the children who suffer from various kinds of physical defects.

***2a. EDUCATIONAL PSYCHOLOGY—Second year. Every quarter. Four hours.**

Required of all students.

This course serves the double purpose of introducing the student to the fundamental principles of educational psychology underlying the practices of education and of providing the minimum essentials of the technic of measuring the results of education.

Topics: purposes of educational psychology and the application of psychological methods to the problems of the school room; origin, development and general characteristics of inherited nature, including the central and autonomic nervous systems; emotional development and control and the problems of the socially maladjusted school child; the problem of the intellectually maladjusted school child—the backward and retarded child; 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.

***2b. EDUCATIONAL PSYCHOLOGY—Second year. Every quarter. Four hours.**

Required of all students. May be taken before 2a.

Purposes: to acquaint the student with the psychology underlying learning and instruction; to prove the student's ability to control learning by familiarizing him with the laws and principles which are a description of how learning occurs and with such conditions and procedures as will greatly facilitate learning.

Topics: the content of the course consists of a description of the nature of learning; a classification of the kinds of learning such as motor, perceptual, and informational; a treatment of the primary and secondary laws and principles of learning with many illustrations of their operation in simple and complex functions; 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; the problem of transfer with respect to methods of discussion and manner of transfer in sensori-motor and perceptual processes; in reasoning, in memories, and other associative processes; transfer as actually found in both the elementary and high school subjects.

3. CHILD DEVELOPMENT—Second year. Spring quarter. 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.

Purposes: to point out the psychological capacities of the child at various levels of his development; to acquaint the student with the typical and, to a limited extent, the atypical behavior that is characteristic of these several levels.

Topics: the nature of development; past and present methods of attacking the problem; heredity versus environmental factors in the development of the child; innate equipment common to all children; growth characteristics of the pre-school, kindergarten, and elementary school 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.

4. PSYCHOLOGY OF STUDY—First year. Fall quarter. Two hours.

The primary purpose of this course is to aid students in the formation of their own study habits and adjustments to college study requirements.

*Given also by extension.

The secondary purpose is to enable the students as prospective teachers to lay a foundation in methods of study habit formation and guidance that will permit them as teachers to assist efficiently those pupils who will eventually come under their control in the public schools. A large part of the work of the course will be in the nature of applications to the study problems of the individual, thus putting into practice the points emphasized in instruction.

Topics: the assignment from the pupil's point of view—i. e. what to do with whatever assignment is given; reading habits for different school purposes, building a working vocabulary, note taking, both from lectures and from reading assignments; locating and using information in library and from other sources; preparing special bibliographies and reports; preparing for examinations; taking examinations; budgeting one's time and making a working schedule; using study time efficiently; efficient distribution of time in learning; special study devices and when to use them and when not to use them.

103. PSYCHOLOGY OF ADOLESCENCE—Third or fourth year. Spring quarter. Four hours.

This course is designed to meet the needs of those interested in secondary education either as teachers, administrators or as boys' and girls' advisers.

Purposes: this course serves the same purpose for the adolescent level that Course 3 does for the earlier levels of childhood. See Course 3.

Topics: 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.

***104. PSYCHOLOGY OF ELEMENTARY SCHOOL SUBJECTS—Spring and summer quarters. Four hours.**

Purposes: to prepare the student to give more effective assistance to the child in his attempt to learn handwriting, reading, spelling, language, arithmetic, history, and geography by making him familiar with such procedures, factors and conditions of learning as have been found to be superior through experimental studies, the application of the laws of learning and the known facts about the child's capacities and tendencies.

Topics: 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 deficits 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.

105. THE PSYCHOLOGY OF SENIOR HIGH SCHOOL SUBJECTS—Third year. Winter and summer quarters. Four hours.

Purposes: to stress the importance of the psychological rather than the logical or chronological treatment of high school subject matter; to make available the results of experimental studies relative to the application of the principles of learning to the high school subjects as modified by the individual capacities and interests of the high school pupils; to demonstrate the psychological importance of cooperation of all the teachers of the different subjects for the benefit of the pupil; to supply criteria by which to judge and modify proposed methods of teaching in high school and enable the teacher to develop methods independently in light of these criteria.

Topics: 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.

106. CLINICAL PSYCHOLOGY—Winter quarter. (Not given 1929-30.) Four hours.

Purposes: to teach the student the various technics which are employed to determine the general mental status and the specific abilities and disabilities of the school child; to give the student the psychological training requisite for engaging in the training of subnormal children.

*Given also by extension.

Topics: description of clinical psychology; the methods and objectives of clinical psychology; its inception and history; 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; qualifications requisite for successful psycho-clinical work; the value of classification; 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.

107. MENTAL TESTS AND MEASUREMENTS—Winter and summer quarters. Four hours.

Purposes: to familiarize the student with the different kinds of mental measurement and with the means and methods of making them; to develop the right attitude toward the use of mental tests; to point out the social, educational, vocational and psychological significance of mental tests.

Topics: history of the testing movement; classification of mental tests and measurements, including tests of intelligence and personality traits; the meaning of intelligence; the principles 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 the sexes and city and rural school children; the relation between intelligence on the one hand and crime and physical traits on the other.

***108a. EDUCATIONAL MEASUREMENT IN THE ELEMENTARY GRADES AND JUNIOR HIGH SCHOOL—Fall and summer quarters. Four hours.**

This course has been prepared for those who teach and supervise in the elementary school, including the junior high school.

Purposes: to give an appreciation of the importance of accurate measurement in education; to make the student familiar with the best standardized educational tests and with their use in the schoolroom; to develop the right attitude toward the use of standardized tests.

Topics: 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 greater 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.

***108b—EDUCATIONAL MEASUREMENT IN THE SENIOR HIGH SCHOOL—Fourth year. Spring and summer quarters. Four hours.**

Purposes: (a) to give the student an appreciation of the meaning and importance of accurate measurement in education; (b) to develop a realization of the inaccuracy of the traditional methods of measurement; (c) to give the student a working knowledge of the best instruments for measuring the outcomes of education; (d) to develop the right attitude toward the use of measuring instruments.

Topics: the content of the course consists 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.

***108c. TEACHERS' CLASSROOM TESTS—Spring quarter. Four hours.**

This course may be taken by sophomores who are in their last quarter as well as by senior college students.

Purposes: to give instruction in the nature and uses of teachers' tests; to give practice in their construction, administration, scoring, and the use and interpretation of their results.

*Given also by extension.

Topics: 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, re-arrangement, 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.

109. CLINICAL PRACTICE—On request. Two or four hours.

Purposes: to give the student practice in making a first-hand study of individual children, especially those who are problem cases on account of bad behavior and special abilities or disabilities in one or more of the school subjects.

The child is examined for such physical and mental abnormalities as are responsible for his failures. On the basis of the results of the examination remedial treatment is prescribed and given. Before taking this course the student should have had a course in mental tests.

***110. GENERAL PSYCHOLOGY—Fall quarter. Four hours.**

Purposes: to give the student a fuller knowledge of the subject matter of the science of psychology, its problems, methods, concepts, and theories than is possible in any of the other courses offered by the department, in the hope that students may be better able to apply psychological principles to situations in which they may be helpful and have a better appreciation of the differences between psychology as a science and psychological quackery, and of the literature in other fields in which psychological concepts and theories appear or are alluded to; to prepare students to teach psychology in colleges and high school.

Topics: the content of the 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 other sciences; the nature and kind of reactions and their physiological 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 intelligence; the nature of learning and habit formation; 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, and imagination; the will and personality.

111. THE PSYCHOLOGY AND PATHOLOGY OF SPEECH—Fall quarter. (Not given 1929-30.) Four hours.

Purposes: to acquaint the student with the importance of speech for individual development and as a means of communication; to offer instruction in the methods and importance of correcting speech defects.

Topics: 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.

112. PSYCHOLOGY OF MUSIC—Winter quarter. Four hours.

Purposes: to increase the student's understanding of music; to give assistance in preparing him to teach music.

The general topics of this course are: The application of the psychology of learning to the teaching and learning of music; The sensory, intellectual and motor aspects of music; tests of musical aptitude and the use of their results in the schools; standardized tests of musical knowledge, musical appreciation, and musical performance and the use of their results; the psychology of appreciation in music; heredity and musical talent.

113. PSYCHOLOGY OF INDUSTRIAL ARTS, HOME ECONOMICS, AND FINE ARTS—Third year. (On request.) Four hours.

Required of all industrial arts, home economics, and fine arts majors preparing to teach and supervise work in the senior high school.

Purposes: to acquaint the prospective high school teacher with: nature of individual variations in the capacity for and efficiency in different mental functions; an analysis of the different mental processes and activities involved in the practical arts; the application of psychological principles in the learning of mental functions; tests and measurements in the field of practical arts.

Topics: the content of the course consists of a treatment of individual differences, their causes and effects; popular systems of vocational

*Given also by extension.

analysis and their fallacies; psychological methods in vocational analysis; intelligence and success in the field of practical arts; a survey of recent experimental literature of an analytical nature dealing with the psychological selection and arrangement of subject matter, how best to present the subject matter, physiological and psychological factors conditioning learning; individual differences in learning; measuring the extent to which learning has taken place by means of improved written examinations and standardized tests; a study of standardized prognostic and achievement tests; technic of giving and scoring tests; how to handle the results of informal and standardized tests.

114. PSYCHOLOGY OF DELINQUENCY—Fall quarter. Four hours.

Purpose: the purpose of this course is to contribute to the realization of the most important education aim, the improvement of the moral behavior of children, by giving instruction in the prevention and correction of delinquent acts.

Topics: the nature of delinquency; the method of the psychologist; the causes of delinquency; how they operate to produce maladjustment and bad behavior; the relative importance of each cause; 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. Under each one of these headings many specific causes of delinquency appear. For each of these the method of its operation in the production of crime, the relative importance and the best methods of treatment are discussed.

115. ABNORMAL PSYCHOLOGY AND MENTAL HYGIENE—Spring quarter. Four hours.

Purposes: to increase the student's understanding of normal behavior by making him familiar with abnormal behavior; to give the prospective teacher some of the training which is necessary to avoid abnormalities of character and personality. The results of investigations indicate that many mental disorders are an educational rather than a medical problem.

Topics: diagnostic procedures; abnormalities of sensation, perception, association, memory, movement, emotions and personality; delusions; sleep and dreams; suggestion and hypnosis; the psycho-neuroses such as neurasthenia, psychasthenia and hysteria; the functional and organic psychoses such as dementia praecox, manic-depressive insanity, paranoia, general paresis, toxic and senile psychoses, gross brain disease and epilepsy; the causes of abnormal behavior; preventive and remedial measures.

116. PSYCHOLOGY OF COMMERCIAL SUBJECTS—Winter and summer quarters. Four hours.

Required of all commercial majors preparing to teach in the senior high school, unless they have already taken Psychology 113.

Purposes: to acquaint the prospective high school teacher with: nature of individual variations in the capacity for and efficiency in different mental functions; an analysis of the different mental processes and activities involved in typewriting, shorthand, and bookkeeping; the application of psychological principles in the learning of these functions; tests and measurements in the field of typewriting, shorthand, and bookkeeping.

Topics: the content of the course consists of: a treatment of individual differences, their causes and effects; intelligence and success in the commercial field; a survey of recent literature dealing with the selection and arrangement of subject matter, the psychological principles underlying the learning and teaching of typewriting, shorthand, and bookkeeping; physiological and psychological factors conditioning learning; measuring the extent to which learning has taken place, by means of informal and standardized tests; a study of standardized, prognostic, and achievement tests; technic of giving and scoring tests; how to handle the results of informal and standardized tests.

117. ELEMENTARY STATISTICAL METHODS—Fall and summer quarters. Four hours.

Purposes: to prepare the student to interpret the scientific literature in psychology and education; to prepare him to make the computations involved in the use of tests and measurements, and in making original investigations which require a statistical technic.

Topics: 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 arithmetic 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.

213. CONFERENCE, SEMINAR, AND LABORATORY COURSES—Any quarter. Hours depending upon the amount of work done.

Purpose: to make it possible for the student to do, on problems which are of especial interest to him, more extensive and exhaustive work than was possible in the other courses in Psychology.

Suggested topics: test construction; diagnostic testing; practice in giving tests and working up the results of tests; prognostic testing; intensive study of all the tests in one or more of the school subjects; problems in learning and the transfer of training; the relative effect of heredity and environment on individual differences; sex hygiene; retardation; delinquency; a study of tests of moral behavior; personality traits, the emotions, temperament, and will; current psychological literature, etc.

214. ADVANCED EDUCATIONAL PSYCHOLOGY—Spring quarter. (Not given 1929-30.) Four hours.

Purposes: (a) to give the student a first-hand acquaintance with the experimental literature in educational psychology; (b) to develop an appreciation of psychological methods and experimental technic; (c) to give a fuller knowledge of some of the topics which are the subject matter of the elementary courses in educational psychology.

Topics: 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.

217. INTERMEDIATE STATISTICAL METHODS—Four hours. Given on demand.

Purposes: to prepare the student to interpret the scientific literature in psychology and education; to prepare him to make the computations involved in the use of tests and measurements, and in making original investigations which require a statistical technic.

Topics: 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 the 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.

222. EXPERIMENTAL TECHNIC AND ITS APPLICATION—Fall and summer quarters. 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.

223. RESEARCH IN EDUCATIONAL PSYCHOLOGY—Every quarter. 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 EDUCATIONAL PSYCHOLOGY—Every quarter. Four hours.

In his second quarter of graduate work, the candidate for the master's degree in psychology reports progress on his thesis once a week to his thesis adviser.

225. RESEARCH IN EDUCATIONAL PSYCHOLOGY—Every quarter. Two hours.

In his third quarter, the candidate for the master's degree reports progress on his thesis once a week to his thesis adviser.

ENGLISH AND LITERATURE

FIRST YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Civ'l. 1 Ed. 1 Elective Phys. Ed. Sci. 1	Art 1 Elective Eng. 4 Hyg. 1 Mus. 25 Phys. Ed.	Fall
Winter	Art 1 Eng. 8 Minor Mus. 25 Phys. Ed. Sci. 2	Civ'l. 1 Eng. 8 Minor Phys. Ed. Sci. 1	Winter
Spring	Elective (2 hours) Eng. 9 Hyg. 1 Observ. 1 (2 hours) Phys. Ed. Psych. 2a	Ed. 1 Eng. 9 Minor Phys. Ed. Sci. 2	Spring
SECOND YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Eng. 10 Minor Phys. Ed. Psych. 2b Teaching 1	Elective (2 hours) Eng. 10 Minor Observ. 1 (2 hours) Phys. Ed. Psych. 2a	Fall
Winter	Ed. 10 Elective Eng. 21 Minor Phys. Ed.	Eng. 6 Minor Phys. Ed. Psych. 2b Teaching 1	Winter
Spring	Eng. 6 Eng. 22 Hist. 125 Minor Phys. Ed.	Ed. 10 Elective Eng. 21 Minor Phys. Ed.	Spring
THIRD YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Eng. 11 Eng. 20 Hist. 126 Minor	Eng. 20 Eng. 22 Hist. 125 Ed. 116	Fall
Winter	Ed. 116 Eng. 1 Eng. 12 Minor	Eng. 1 Eng. 11 Eng. 16 Hist. 126	Winter
Spring	Eng. 16 Eng. 105 Minor Observ. 2 Psych. 105	Eng. 2 Eng. 12 Minor Elective	Spring
FOURTH YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Eng. 106 Eng. Elective Minor Teaching 2	Eng. 105 (2 hours) Eng. Elective Observ. 2 (2 hours) Psych. 105	Fall
Winter	Elective Eng. Elective Minor Soc. 105	Eng. 106 Eng. Elective Minor Teaching 2	Winter
Spring	Ed. 111 Elective Eng. Elective Minor	Ed. 111 Eng. Elective Minor Soc. 105	Spring

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.

Colorado State Teachers College requires all its students to take an examination in the fundamentals of written English. Only those who score in the upper third on the English test are advised to become English majors. Those whose scores in the test fall in the lowest third are required to take English 0 without college credit. Those in the middle third are exempt from English 0 but are required to take English 4 with college credit. Those with scores in the upper third are exempt from both English 0 and English 4.

A FOUR-YEAR COURSE OF STUDY IN ENGLISH AND LITERATURE

Majors in English are required to distribute their core subjects according to the diagram on page 118. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following English courses are required of majors in this department: Eng. 1, 2, 6, 8, 9, 10, 11, 12, 16, 20, 105, 106 and twenty hours of English selected by the student to meet his own anticipated need. Those who are especially interested in oral English should elect Eng. 13, 14, 18, 19, 112, and 114. Students who know from the beginning of the freshman fall quarter that they are to be English majors and will go through the four-year course without stopping for the limited certificate at the end of the second year may take English 6 in the fall quarter if they wish to do so.

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 a foreign language, history, or social science 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 8, 9 and 10 till the third year and fill in as a minor all the spaces marked "minor" and "elective" with the courses prescribed for graduation from the intermediate or junior high curricula. The intermediate courses are: Hist. 10, Ed. 4a, Hist. 13b, Art 2a, El. Sci. 1, Geog. 10, Music 1a, Geog. 11, Ed. 4b, Math. 10. Total thirty-eight hours.

English majors selecting junior high school as their minor should consult the recommendations of the Department of Education, page 94, as a guide to the selection of minor subjects.

The arrangement set out in the diagram requires seventy-two hours of core subjects, six hours of physical education, fifty-two hours of

English (outside the English and literature in the core), and sixty-eight hours for minors and free electives. Total 198 hours.

0. FUNDAMENTALS OF ENGLISH—Every quarter. 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.

1. LITERATURE FOR THE ELEMENTARY SCHOOL—Intermediate Grades. Every quarter. 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.

2. LITERATURE FOR THE JUNIOR HIGH SCHOOL—Every quarter. 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.

4. SPEAKING AND WRITING ENGLISH—Every quarter. 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.

*6. AMERICAN LITERATURE—Winter, spring, and summer quarters. 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.

*8. A SURVEY OF ENGLISH LITERATURE 700-1625—Winter and spring quarters. 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.

*9. A SURVEY OF ENGLISH LITERATURE 1625-1798—Spring quarter. 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.

*10. A SURVEY OF ENGLISH LITERATURE—Fall and spring quarters. Four Hours.

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

*11. THE ENGLISH LANGUAGE FOR TEACHERS—Every quarter. 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.

*Given also by extension.

Under (b) and (c) the course includes the history of grammar and composition in the school curriculum, the aims and educational values of the subject, the psychology of English teaching, tests and devices for measuring progress, and instruction in the teaching of written English in the upper grades.

This course combines the topics formerly included in English 2 and English 11, but leaves the practice of the writing in composition exercises for the grades to Ed. 4a. Textbooks: Cross's "Fundamentals in English," and "Teachers' Guide to the Little Book of English Composition."

12. ORAL EXPRESSION—Every quarter. 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. THE ART OF STORY TELLING—Every quarter. 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—Fall quarter. Four hours.

Prerequisite, English 12.

This course embraces all the basic principles of dramatic art. Bodily, facial, and vocal expression are 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. CONTEMPORARY LITERATURE—Fall and winter quarters. 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.

18. DEBATING—Fall quarter. Two hours.

A practice course in debating open to any student interested in interclass 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—Winter quarter. 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.

*20. ADVANCED COMPOSITION—Every quarter. 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.

21. AN OUTLINE OF LITERATURE—Every quarter. 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 mediaeval 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.

*Given also by extension.

22. AN OUTLINE OF LITERATURE—(Continued)—Every quarter. 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.

*31. THE SHORT STORY—Spring and summer quarters. 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.

60. THE LIFE AND TEACHINGS OF JESUS—Fall quarter. 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.

100. JOURNALISM—Fall quarter. 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—Winter quarter. 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.

102. JOURNALISM—Spring quarter. 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.

105. ORAL ENGLISH IN THE HIGH SCHOOL—Spring and summer quarters. 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.

106. THE TEACHING OF ENGLISH IN THE HIGH SCHOOL—Winter and summer quarters. 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.

107. COMPARATIVE LITERATURE—Greek and Latin. Fall quarter. 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.

108. COMPARATIVE LITERATURE—Italian, Spanish, and French. Winter quarter. 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."

*Given also by extension.

109. COMPARATIVE LITERATURE—German, Scandinavian, and Russian. Spring quarter. 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."

112. CHILDREN'S THEATER—Winter quarter. 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—Winter and summer quarters. 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.

120. LYRIC POETRY—Winter and summer quarters. (Not given 1929-30.) 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.

121. EARLY NINETEENTH CENTURY POETRY—Fall quarter. (Not given 1929-30.) Four hours.

A study of English poetry from Wordsworth to Tennyson, including Coleridge, Byron, Shelley, Keats, and the lesser writers from 1798 to 1832.

122. VICTORIAN POETRY—Spring and summer quarters. (Not given 1929-30.) Four hours.

Tennyson and Browning, and the general choir of English poets from 1832 to 1900.

*126. NINETEENTH CENTURY PROSE—Fall and summer quarters. (Not given 1929-30.) Four hours.

Consideration of the serious prose writing, chiefly critical and literary, of the leaders of thought in the nineteenth century.

*127. SHAKESPEARE'S COMEDIES—Fall and summer quarters. 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.

128. SHAKESPEARE'S HISTORICAL PLAYS—Winter quarter. Four hours.

A continuation of the study of Shakespeare begun in English 127.

129. SHAKESPEARE'S TRAGEDIES—Spring and summer quarters. Four hours.

The completion of the year's work in Shakespeare.

130. ELIZABETHAN DRAMA EXCLUSIVE OF SHAKESPEARE—Fall quarter. 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 1585 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.

*132. THE DEVELOPMENT OF THE NOVEL—Winter quarter. (Not given 1929-30.) Four hours.

The development, technic, and significance of the novel.

*Given also by extension.

- *133. THE RECENT NOVEL—Spring and summer quarters. 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—Winter and summer quarters. Four hours.
Reading and class discussion of plays that best represent the characteristics, thought-current, and the dramatic structure of our time.
160. THE HISTORY, LITERATURE, AND RELIGION OF THE OLD TESTAMENT—Winter and summer quarters. 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.
161. THE HISTORY, LITERATURE, AND RELIGION OF THE OLD TESTAMENT—Spring and summer quarters. 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.

GRADUATE COURSE

207. COMPARATIVE LITERATURE
208. COMPARATIVE LITERATURE
209. COMPARATIVE LITERATURE
226. NINETEENTH CENTURY PROSE
230. ELIZABETHAN DRAMA EXCLUSIVE OF SHAKESPEARE
234. MODERN PLAYS
The six courses listed above, corresponding in content, credit, and time to 107, 108, 109, 126, 130 and 134 afford graduate students opportunities for regular class work and require reading and reports additional to those of the undergraduate students.
223. RESEARCH IN ENGLISH—Every quarter. 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—Every quarter. 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—Every quarter. Two hours.
This is a continuation of English 224.

*Given also by extension.

FOREIGN LANGUAGE

FIRST YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Civ'l. 1 Ed. 1 For. Lang. 1 Phys. Ed. Sci. 1	Art 1 Eng. 4 For. Lang. Hyg. 1 Mus. 25 Phys. Ed.	Civ'l. 1 Ed. 1 Eng. 0 For. Lang. 1 Phys. Ed.	Fall
Winter	Art 1 For. Lang. 2 Minor Mus. 25 Phys. Ed. Sci. 2	Civ'l. 1 For. Lang. 2 Minor Phys. Ed. Sci. 1	Eng. 4 For. Lang. 2 Hyg. 1 Minor Phys. Ed.	Winter
Spring	Eng. 20 For. Lang. 3 Hyg. 1 Phys. Ed. Psych. 2a	Ed. 1 Eng. 20 For. Lang. 3 Phys. Ed. Sci. 2	Art 1 Eng. 20 For. Lang. 3 Mus. 25 Phys. Ed. Sci. 1	Spring

SECOND YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Eng. 11 For. Lang. 5 Minor Phys. Ed. Psych. 2b	Eng. 11 For. Lang. 5 Minor Phys. Ed. Psych. 2a	Ed. 10 Eng. 21 For. Lang. 5 Phys. Ed. Sci. 2	Fall
Winter	Ed. 10 Eng. 21 For. Lang. 6 Minor Phys. Ed.	For. Lang. 6 Elective Minor Phys. Ed. Psych. 2b	Eng. 11 Eng. 22 For. Lang. 6 Phys. Ed. Psych. 2a	Winter
Spring	Eng. 22 For. Lang. 7 Hist. 125 Minor Phys. Ed.	Ed. 10 Eng. 21 For. Lang. 7 Minor Phys. Ed.	For. Lang. 7 Minor Phys. Ed. Psych. 2b Teaching 1	Spring

THIRD YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Dept. Minor For. Lang. 105 Hist. 126 Minor	Dept. Minor Eng. 22 For. Lang. 105 Hist. 125	Dept. Minor Ed. 10 For. Lang. 105 Minor	Fall
Winter	Dept. Minor Ed. 116 For. Lang. 106 Psych. 105	Ed. 116 For. Lang. 106 Hist. 126 Psych. 105	Ed. 116 For. Lang. 106 Hist. 125 Psych. 105	Winter
Spring	Dept. Minor Elective (2 hrs.) For. Lang. 107 Observ. 1	Dept. Minor Electives For. Lang. 107	Dept. Minor For. Lang. 107 Hist. 126 Minor	Spring

FOURTH YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Dept. Minor For. Lang. 131 For. Lang. 205 Teaching 1	Dept. Minor Elective (2 hours) For. Lang. 131 For. Lang. 205 Observ. 1	Dept. Minor For. Lang. 131 For. Lang. 205 Observ. Soc. 105	Fall
Winter	Dept. Minor For. Lang. 132 For. Lang. 206 Soc. 105	Dept. Minor For. Lang. 132 For. Lang. 206 Teaching 1	Dept. Minor Electives For. Lang. 206 Teaching 1	Winter
Spring	Dept. Minor Ed. 111 For. Lang. 207 Teaching 2	Dept. Minor Ed. 111 For. Lang. 207 Soc. 105 Teaching 2	Dept. Minor Ed. 111 For. Lang. 207 Teaching 2	Spring

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. Latin 5, 6, 7, and 205, 206, 207 alternate with Latin 55, 56, 57, and 105, 106, 107. French 105 and French 205 are both called advanced French and will be offered in alternate years. Either course may be taken first. The course in foreign language for music majors will alternate with elementary Italian. If music majors desire to take the first quarter or a full year of a four-hour course in French, German, or Italian, they will, of course, be excused from the corresponding quarter of the course in foreign language.

Spanish 1, 2, 3 and 5, 6, 7 and French 1, 2, 3 are 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 COURSE OF STUDY IN FOREIGN LANGUAGES

Majors in Foreign Languages are required to distribute their core subjects according to the diagram on page 125. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following courses are required of majors in this department: For. Lang. 1, 2, 3, 5, 6, 7, 105, 106, 107, 131, 132, 205, 206, 207.

The department requires for the bachelor's degree forty-four hours in the language of the major, and a minor twelve to twenty-four hours outside the department. A student may select an additional minor of twenty-four hours within one department. Foreign Language 131 and 132 are required as part of the forty-four hours for the major. 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 English courses are required of majors in the foreign languages: English 11 and 20, eight hours. Psychology 105 and Education 116 are also required.

51. FOREIGN LANGUAGE—Italian—Fall quarter. (Not given 1929-30.) 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—Winter quarter. (Not given 1929-30.) 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—Spring quarter. (Not given 1929-30.) 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—Fall and summer quarters. 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. Text: Handschin's Teaching of Modern Languages.

132. PROBLEMS IN THE TEACHING OF ROMANCE LANGUAGES—Winter quarter. Four hours.

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 grades 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.

223. RESEARCH IN FOREIGN LANGUAGES—Every quarter. 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—Every quarter. 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—Every quarter. Two hours.

A continuation of Foreign Language 224.

FRENCH

1. ELEMENTARY FRENCH—Fall quarter. Four hours.

Camerlynck's France, Book I.

2. ELEMENTARY FRENCH—Winter quarter. Four hours.

Camerlynck's France, Book II.

3. ELEMENTARY FRENCH—Spring quarter. Four hours.

Camerlynck's France, Book III.

1, 2, 3. ELEMENTARY FRENCH—Summer quarter. 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 French.

*5. INTERMEDIATE FRENCH—Fall quarter. Four hours.

A review course in the elements of French. Carnahan's Short Review Grammar.

*6. INTERMEDIATE FRENCH—Winter quarter. Four hours.

A brief survey of French history as a basis for French literature. Lavissee's Histoire de France.

*7. INTERMEDIATE FRENCH—Spring quarter. Four hours.

The short story. Buffum's Contes Francais.

105. ADVANCED FRENCH—Fall quarter. (Not given 1929-30.) Four hours.

Classical drama. Corneille's Le Cid, Moliere's Tartuffe, Racine's Andromaque. Readings and lectures on the literary history of the period.

106. ADVANCED FRENCH—Winter quarter. (Not given 1929-30.) Four hours.

The Romantic movement. A study of the works of Hugo and Musset in class with supplementary reading outside.

*Given also by extension.

107. **ADVANCED FRENCH**—Spring quarter. (Not given 1929-30.) Four hours.

Survey of French poetry from Charles d'Orleans and Villon to contemporary poets.

205. **ADVANCED FRENCH**—Fall quarter. Four hours.

French 105, 106, 107 not a prerequisite. A study of the works of Voltaire and Rousseau.

206. **ADVANCED FRENCH**—Winter quarter. Four hours.

Nineteenth century novel. Balzac and Sand studied in class, and Flaubert and Hugo outside.

207. **ADVANCED FRENCH**—Spring quarter. Four hours.

Twentieth century novel. A study of Anatole France in class, with collateral reading of novels by Bourget, Loti, Rolland, Bazin, and Bordeaux.

SPANISH

1. **ELEMENTARY SPANISH**—Fall quarter. Four hours.

Hills and Cano's *Cuentos y Leyendas* and Warshaw and Bonilla's *Elements of Spanish*.

2. **ELEMENTARY SPANISH**—Winter quarter. Four hours.

A continuation of the study of grammar in Warshaw and Bonilla. Reading from *Cuentos Contados* by Pittarro and Green.

*3. **ELEMENTARY SPANISH**—Spring quarter. Four hours.

Finish Warshaw and Bonilla. Reading from and conversation on Padre Isla's *Gil Blas*.

1, 2, 3. **ELEMENTARY SPANISH**—Summer quarter. 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**—Fall quarter. Four hours.

A review in the elements of Spanish. Seymour and Carnahan's *Short Review Grammar*. *El Sombrero de Tres Picos* of Alarcon.

*6. **INTERMEDIATE SPANISH**—Winter quarter. Four hours.

Reading in Don Juan Manuel's *El Conde Lucanor* and the Quintero brothers' *Dona Clarines*.

7. **INTERMEDIATE SPANISH**—Spring quarter. Four hours.

Julio Camba's *La Rana Viajera* and Larra's *Partir a Tiempo*.

105. **ADVANCED SPANISH**—Fall quarter. Four hours.

Romantic drama. Echegaray's *El Gran Galeoto*, Hartzzenbusch's *Los Amantes de Teruel*, and Tamayo y Baus's *Un Drama Nuevo* in class with collateral readings in the period outside.

*106. **ADVANCED SPANISH**—Winter quarter. 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 class, and supplementary readings outside.

*107. **ADVANCED SPANISH**—Spring quarter. Four hours.

Modern prose and poetry. A study of the works of Ruben Dario, Azorin, and Blasco Ibanez.

205. **GRADUATE SPANISH**—Fall quarter. Four hours.

Nineteenth century prose. A study of the period with readings from Mesonero Romanos, Larra, Galdos, Valdes, Pereda, and Pio Baroja.

206. **GRADUATE SPANISH**—Winter quarter. Four hours.

Golden Age Drama. Plays of Calderon, Lope de Vega, and Alarcon, with lectures and readings on the literary history of the period.

*Given also by extension.

207. GRADUATE SPANISH—Spring quarter. 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 Graduate Span. a second time, calling it 209, 210, 211.

GERMAN

1. ELEMENTARY GERMAN—Fall quarter. Four hours.

Vos's Essentials of German.

*2. ELEMENTARY GERMAN—Winter quarter. Four hours.

Vos's Essentials of German and Betz's Modern German Reader.

*3. ELEMENTARY GERMAN—Spring quarter. Four hours.

Purin and Rose's Deutsche Kulturkunde.

5. INTERMEDIATE GERMAN—Fall quarter. (Not given 1929-30.) Four hours.

Popes Writing and Speaking German.

6. INTERMEDIATE GERMAN—Winter quarter. (Not given 1929-30.) Four hours.

Nineteenth century novelle. Baumach's Die Nonna, Der Schwiegersonn.

7. INTERMEDIATE GERMAN—Spring quarter. (Not given 1929-30.) Four hours.

German lyric poetry.

LATIN

*5. THIRD YEAR LATIN—Fall quarter. Four hours.

Prerequisite two years of Latin. Nepos' Lives.

6. THIRD YEAR LATIN—Winter quarter. Four hours.

Prerequisite, two years of Latin. Two of Cicero's Orations: Against Catiline, For Archias.

7. THIRD YEAR LATIN—Spring quarter. Four hours.

Prerequisite two years of Latin. Ovid's Metamorphoses.

55. FOURTH YEAR LATIN—Fall quarter. (Not given 1929-30.) Four hours.

Prerequisite, two years of Latin. Vergil's Aeneid, book I, and Roman mythology.

56. FOURTH YEAR LATIN—Winter quarter. (Not given 1929-30.) Four hours.

Prerequisite, two years of Latin. Vergil's Aeneid, books II, III, IV.

57. FOURTH YEAR LATIN—Spring quarter. (Not given 1929-30.) Four hours.

Prerequisite, two years of Latin. Vergil's Aeneid, books V, VI.

*105. FIFTH YEAR LATIN—Fall quarter. (Not given 1929-30.) Four hours.

Prerequisite, four years of Latin. Pliny's Letters, and a study of Roman life, using Johnston's Private Life of the Romans.

106. FIFTH YEAR LATIN—Winter quarter. (Not given 1929-30.) Four hours.

Prerequisite, four years of Latin. Horace's Odes and Epodes.

*Given also by extension.

107. FIFTH YEAR LATIN—Spring quarter. (Not given 1929-30.) Four hours.

Prerequisite, four years of Latin. Terence's *Adelphi*.

205. SIXTH YEAR LATIN—Fall quarter. Four hours.

Prerequisite five years of Latin. Tacitus' *Agricola* and *Germania*.

206. SIXTH YEAR LATIN—Winter quarter. Four hours.

Prerequisite five years of Latin. Horace's *Satires* and *Epistles*.

207. SIXTH YEAR LATIN—Spring quarter. Four hours.

Prerequisite five years of Latin. Plautus' *Captivi*.

ITALIAN

1. ELEMENTARY ITALIAN—Fall quarter. Four hours.

Wilkins' *First Italian Book*.

2. ELEMENTARY ITALIAN—Winter quarter. Four hours.

Wilkins and Santelli, *Beginner's Italian Reader*.

3. ELEMENTARY ITALIAN—Spring quarter. Four hours.

Italian comedy. Pirandello's *Lumie de Sicilia*, Castelnovo's *O Bere o Affogare*, Testa's *L'Oro e l'Oropello*.

GEOGRAPHY

FIRST YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Civ'l. 1 Ed. 1 Elective Phys. Ed. Sci. 1	Art. 1 Elective Eng. 4 Hyg. 1 Mus. 25 Phys. Ed.	Fall
Winter	Art 1 Mus. 25 Phys. Ed. Sci. 2	Civ'l. 1 Geog. 7 Geog. 10 Phys. Ed. Sci. 1	Winter
Spring	Electives (6 hours) Hyg. 1 Observ. 1 Psych. 2a Phys. Ed.	Ed. 1 Minor Elective Phys. Ed. Sci. 2	Spring

SECOND YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Geog. 8 Minor Phys. Ed. Psych. 2b Teaching 1	Geog. 8 Observ. 1 Elective Phys. Ed. Psych. 2a	Fall
Winter	Art 1 Ed. 10 Geog. 11 Minor Phys. Ed.	Geog. 11 Minor Phys. Ed. Psych. 2b Teaching 1	Winter
Spring	Eng. 22 Geog. 15 Geog. 50 Hist. 125 Phys. Ed.	Ed. 10 Elective Eng. 21 Geog. 15 Phys. Ed.	Spring

THIRD YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Geog. 100 Geog. 199 Hist. 126 Minor	Eng. 22 Geog. 100 Geog. 199 Hist. 125	Fall
Winter	Ed. 116 Geog. 104 Geog. 105 Minor	Eng. 1 Geog. 104 Geog. 105 Hist. 126	Winter
Spring	Elective Eng. 105 Geog. 103 Observ. 1 Psych. 105	Eng. 2 Geog. 103 Minor Elective	Spring

FOURTH YEAR			
Sec. A	Sec. B	Sec. C	
Fall	Geog. 102 Geog. 113 Minor Teaching 2	Ed. 116 Geog. 102 Geog. 113 Observ. 1 Psych. 105	Fall
Winter	Elective Geog. 124 Soc. 105	Elective Geog. 113 Geog. 124 Teaching 2	Winter
Spring	Ed. 111 Elective Geog. 123 Minor	Ed. 111 Geog. 123 Hist. 2 Teaching 2	Spring

A FOUR-YEAR COURSE OF STUDY IN GEOGRAPHY

Majors in Geography are required to distribute their core subjects according to the diagram on page 131. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following Geography courses are required of majors in this department: Geog. 7, 8, 100, 102, 103, 104, 105, 113, 123, 124, 199, and one of the following: Geog. 10, 11, 15, 50. A minor of twenty-four hours must be selected.

History and Sociology are suggested minors that may be elected with geography.

*7. BUSINESS GEOGRAPHY.—Winter and summer quarters. 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.

A study will be made of commercial products in the college and departmental museums. Field trips will be made to industrial plants of the community.

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—Fall quarter. Four hours.

The great divisions of mankind from the racial standpoint will be taken up. After a short discussion of primitive man with especial 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) Negrito 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. METHOD AND MATERIALS IN GEOGRAPHY FOR THE INTERMEDIATE GRADES—Fall, winter and summer quarters. Four hours.

This two quarter course covers in a rapid cursory survey the courses formerly called Geography of North America, Geography of Europe, Geography of Asia, Geography of Australia and Geography of Africa. Of necessity this material is not covered in nearly as much detail as in the regional courses. However, it is hoped to give the intermediate major a background in geography which, when supplemented by reading at the time of teaching, will give a geographic knowledge that is sufficient for a person not a departmental teacher of geography. The material in this course is professionalized subject matter adapted to the needs of intermediate grade teachers.

11. METHOD AND MATERIALS IN GEOGRAPHY FOR THE INTERMEDIATE GRADES—Winter and spring quarters. Four hours.

A continuation of Geography 10.

*Given also by extension.

***15. METHODS AND MATERIALS FOR TEACHING JUNIOR HIGH SCHOOL GEOGRAPHY—Fall, spring, and summer quarters. Four hours.**

This course stresses mainly the problem aspects of geography. Some of the main topics treated are: effect of the Appalachian barrier on industry and history; effect of the Mississippi River on nineteenth century American industry and history; effect of the Panama Canal on American trades; effect of the Hudson Bay R. E. and sea route in development of the Canadian wheat fields of the northwest. Conservation of our forests and its economic and social effects; geographic distribution of immigrants in U. S. and causes for the distribution; England as an island and the political and social effects of its insular position; France's position between Latin, Moslem, and Teutonic cultures and the social effects of this position; rise of modern industrial Germany and geographic forces at work in this rise; Spain turns its back on Europe and looks toward Africa—effect of this position. Australia's famous experiment in colonizing the tropics with white people; Hawaii—the crossroads of the Pacific; Problems of old and new China; Japanese island position, its effect upon her culture, industry and social structure; the racial geography of India and the caste system; the Turkish renaissance; Soviet Russia in Europe and Asia; the resources of Brazil; American adaptation to South American conditions.

50. HOME GEOGRAPHY AND GEOGRAPHY OF COLORADO—Every quarter. Four 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. Insofar as it is possible the geography of Greeley and vicinity is used as a basis for Colorado geography.

100. GEOLOGY—Fall quarter. Four hours.

The main emphasis in this course is upon historical geology. It is felt that this particular phase of geology is of most value to the students of our school and the needs to which they put geology. The work in historical geology is illuminated by geological folios especially those which have to do with Colorado geology. Where possible a pupil is assigned a folio that treats of his own particular home locality. Pupils are also encouraged in their travels home, in this state, or to other states to work up by United States geological folios or state reports a cursory knowledge of the geology en route. Several field trips are taken during the term.

The historical geology is treated from the standpoint particularly of climates of the past and the more or less general progressive evolution toward dryer and more continental conditions in the later geological ages. The realm of historical geology is prefaced by a discussion of the various theories of the earth's origin and an attempt is made to tie up the earlier geological ages with the planetesimal hypothesis.

101. GEOGRAPHY AND GEOLOGY OF MOUNTAINS—Spring quarter. Four hours.

This is a course in which the dynamic phases of mountain making and the types of mountains in the world are first based on a study of the Colorado mountains. After these have been studied as types the mountains most nearly related to them in structure are studied. Not only are the geologic aspects of mountains taken up but the geographic phases as well as climate, vegetation, timber line, animal life, mineral deposits, people and their life and other distinctive features peculiar to mountain districts.

102. THE CHANGING WEATHER—Fall quarter. Four 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.

*Given also by extension.

***103. CLIMATOLOGY—Spring quarter. Four hours.**

This course deals with an attempt to divide the world into a series of type climates, as follows: Oregonian, Californian, Alaskan, Polar, Canadian, Nevadan, Coloradoan, Arizonan, Mississippian, Appalachian, Caribbean, Amazonian, Floridan, Monsoon.

The plan is to study these climates intensively insofar as they are represented in the United States. This will include products and crops that are particularly a product of one of these climatic provinces. For example the Californian climate with its winter rain and summer dry condition produces almonds, olives and grapes. Then we can search elsewhere for a similar climate so far as temperatures and seasonal distribution of rainfall are concerned, feeling that it will probably produce the same or similar products.

This course will include extensive work in graphs or charts as this is necessary in making comparative studies of this type clear. It is not necessary to take Geography 102 as a prerequisite for this course.

104. OCEANOGRAPHY—Winter and summer quarters. Four hours.

This course presents the following topics and problems; (1) Extent of the ocean basins; (2) depth of the ocean basins; (3) submarine plateaus; (4) vulcanism and the ocean basins; (5) continental shelves; (6) movements of the ocean floor; (7) chemical composition of ocean water; (8) pressure of ocean water; (9) temperature of the ocean water; (10) general circulation of ocean water; (11) ocean currents; (12) effects of ocean currents on temperature; (13) effects of ocean currents on precipitation; (14) plant life on ocean; (15) animal life of the surface; (16) animal life of the ocean depths; (17) animal life on the shore lines; (18) animal life that migrates from salt to fresh water, or fresh to salt water; (19) artificial propagation and transplantation of ocean animals; (20) value of marine life as food; (21) great food fishes of the world; (22) methods of preserving fish for consumer; (23) needs for larger fish consumption; (24) uses of marine life other than as food; (25) the ocean as a highway; (26) steam and sail transportation; (27) great circle routes; (28) the Diesel engine and its revolution of the fuel problem; (29) interocean canals; (30) airplane, dirigible, and ocean transportation

105. PHYSIOGRAPHY—Winter quarter. Four hours.

The work in this course is divided between topographic work which embraces a study of topographic and geologic maps, and, as 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 common 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.

***113. MATHEMATICAL GEOGRAPHY—Fall quarter. Four hours.**

This course is primarily designed for mathematics, physics, and geography majors, but others may elect it. There is no mathematical prerequisite.

The following topics are presented: (1) proofs of the earth's rotation and revolution; (2) tides; (3) latitude and longitude; (4) standard time belts; (5) international date line; (6) map projection; (7) contour maps; (8) pilot charts; (9) tellurions; (10) fourth dimension; (11) calendar. A brief popular discussion of the Einstein theory forms part of the course.

123. PLANT GEOGRAPHY—Spring quarter. Four hours.

The geographic distribution of plants as determined by climate and soil. The great world plant provinces are taken up in this course. The following are some of the ones treated: (1) selvas, or tropical rainy forest; (2) savanna, or park-like landscape in the tropics; (3) monsoon forest; (4) tropical thorn forest; (5) tropical scrub; (6) hot interior tropical deserts; (7) tropical sea coast deserts; (8) warm temperate regions with summer rain; (9) warm temperate region with winter rain; (10) steppe; (11) sage brush; (12) temperate deciduous forest; (13) pine barrens; (14) coniferous forest or taiga; (15) N. Pacific coast coniferous forest; (16) wet prairie; (17) fens; (18) downs; (19) moors; (20) peat bogs; (21) tidal flats; (22) Alpine meadows; (23) Alpine fell fields; (24) Alpine lichen zones.

The greenhouse and the campus enable us to show first-hand some of the characteristic plants which in their structure show adaptations to the environment in which the species has been formed. The lantern is also much employed for illustrative material in this course.

*Given also by extension.

124. ZOOGEOGRAPHY—Winter and summer quarters. Four hours.

The geographic distribution of animals as determined by climate, land barriers, soil, ocean currents, distribution of plant food and other factors. In animals mobility makes the problem a different one than that of plants. Ocean barriers usually loom larger as barriers and climate is a less effectual barrier.

Wallace's animal provinces and Hart Merriam's life zones are largely the bases upon which animal life of the world is divided into separate provinces.

The museum and the lantern are the main aid to the book work in this course. The paleogeography of the animal world will be stressed as an aid in understanding present distribution.

160. FIELD GEOGRAPHY OF GLACIER AND RAINIER NATIONAL PARKS AND ALASKA—Summer quarter. (Given by extension only.) Three hours.

The students in this course visit Thermopolis Hot Springs, Wyoming; Glacier National Park, Montana; Mount Rainier, Washington, and then embark on a steamer for the coastal district of southern Alaska. In Alaska, in addition to visiting Ketchikan, Taku Glacier, Juneau, Skagway, Sitka, and Wrangell, the party goes into the interior across the coast range as far as Lake Bennett in the Yukon headwaters. The chief geographic and geologic features of the regions visited are treated in lectures on the ground.

162. GEOGRAPHY OF THE TROPICS—Winter quarter. Four 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 a 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—Spring quarter. Four 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.

194. GEOGRAPHIC INFLUENCES IN AMERICAN HISTORY—Spring quarter. 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.

199. CONSERVATION OF NATIONAL RESOURCES—Fall and summer quarters. 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.

HISTORY AND POLITICAL SCIENCE

		Sec. A	FIRST YEAR Sec. B	Sec. C			
Fall	Winter	Civ'l. 1 Ed. 1 Hist. 1 Phys. Ed. Sci. 1	Art 1 Eng. 4 Hist. 1 Hyg. 1 Mus. 25 Phys. Ed.	Civ'l. 1 Ed. 1 Eng. 0 Hist. 1 Phys. Ed.	Fall	Winter	
		Art 1 Elective or Minor Hist. 2 Mus. 25 Phys. Ed. Sci. 2	Civ. 1 Elective or Minor Hist. 2 Phys. Ed. Sci. 1	Elective or Minor Eng. 4 Hist. 2 Hyg. 1 Phys. Ed.			Spring
		Elective or Minor Hist. 3 Hyg. 1 Observ. 1 Phys. Ed. Psych. 2a	Ed. 1 Elective or Minor Hist. 3 Phys. Ed. Sci. 2	Art 1 Ed. 1 Elective or Minor Hist. 3 Mus. 25 Phys. Ed. Sci. 1			

		Sec. A	SECOND YEAR Sec. B	Sec. C			
Fall	Winter	Hist. 5 Phys. Ed. Pol. Sci. 1 Psych. 2b Teaching 1	Hist. 5 Observ. 1 Phys. Ed. Pol. Sci. 1 Psych. 2a	Ed. 10 Eng. 21 Hist. 5 Phys. Ed. Sci. 2	Fall	Winter	
		Ed. 10 Eng. 21 Hist. 6 Pol. Sci. 2	Hist. 6 Phys. Ed. Pol. Sci. 2 Psych. 2b Teaching 1	Eng. 22 Hist. 6 Observ. 1 Phys. Ed. Psych. 2a			Spring
		Eng. 22 Hist. 125 Hist. 7 Hist. 13 Phys. Ed.	Ed. 10 Eng. 21 Hist. 7 Hist. 13 Phys. Ed.	Hist. 7 Hist. 13 Phys. Ed. Psych. 2b Teaching 1			

		Sec. A	THIRD YEAR Sec. B	Sec. C			
Fall	Winter	Hist. 126 Major Elective Minor Minor	Eng. 22 Hist. 125 Major Elective Minor	Ed. 10 Major Elective Minor Pol. Sci. 1	Fall	Winter	
		Elective Major Minor Ed. 116 or 210	Hist. 126 Major Elective Minor Ed. 116 or 210	Hist. 125 Minor Pol. Sci. 2 Ed. 116 or 210			Spring
		Electives Observ. 2 Hist. 102 Minor	Elective Hist. 102 Minor	Elective Hist. 126 Hist. 102 Minor			

		Sec. A	FOURTH YEAR Sec. B	Sec. C			
Fall	Winter	Elective Hist. 117 Minor Teaching 2	Elective Hist. 117 Minor Observ. 2	Hist. 117 Minor Psych. 110 or 214 Soc. 105	Fall	Winter	
		Minor Pol. Sci. 101 Psych. 110 or 214 Soc. 105	Minor Pol. Sci. 101 Psych. 110 or 214 Teaching 2	Observ. 2 Minor Pol. Sci. 101 Elective			Spring
		Ed. 111 Minor Minor Pol. Sci. 102	Ed. 111 Minor Pol. Sci. 102 Soc. 105	Ed. 111 Minor Pol. Sci. 102 Teaching 2			

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 COURSE OF STUDY IN HISTORY AND POLITICAL SCIENCE

Majors in History are required to distribute their core subjects according to the diagram on page 136. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following courses are required of majors in the department: Hist. 1, 2, 3, 5, 6, 7, 13, 102, 117. Pol. Sci. 1, 2, 101, 102, 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 125 and 126 which are listed as core requireds in case they have followed the above course.

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.

HISTORY

*1. ORIGINS OF AMERICAN NATIONALITY, 1600-1800—Every quarter.
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—Every quarter.
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.

*Given also by extension.

***3. RECENT AMERICAN HISTORY, 1865 to the present time—Spring quarter. 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.

4. WESTERN AMERICAN HISTORY—Winter quarter. Four hours.

Sophomore year.

The westward movement as an historical process. Causes which lead 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.

5. EARLY MODERN EUROPE—Fall quarter. 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—Winter quarter. 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. New alliances. The world war. Versailles and since.

***7. RECENT EUROPEAN HISTORY—Spring quarter. 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—Every quarter. 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.

13a, 13b. TEACHING OF HISTORY AND CIVICS IN THE ELEMENTARY SCHOOL—Spring and summer quarters. Two hours.

These courses are similar in general plan; 13a is planned for the primary and intermediate, and 13b for the upper 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 6; in 13b the material commonly found in grades 5 to 8.

*Given also by extension.

27. CONTEMPORARY HISTORY—Summer quarter. 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—Spring quarter. 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 government 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.

102. ANCIENT SOCIAL HISTORY, GREECE AND THE ORIENT—Summer quarter. 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.

103. THE LITERATURE OF AMERICAN HISTORY—Summer quarter. 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.

***107. THE BRITISH EMPIRE—Summer quarter. Four hours.**

The acquisition of the great colonies; commercial relations prior to 1800; development of self-government; missionary movements of the nineteenth century; secret diplomacy and expansion in Asia and Africa; India; the empire in Africa; the empire during the world war; efforts to bring about improved imperial organization.

117. THE TEACHING OF HISTORY AND CIVICS IN JUNIOR AND SENIOR HIGH SCHOOLS—Fall and summer quarters. 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; evaluating results. Prerequisite, one content course in History.

125. CONTRIBUTIONS OF THE ANCIENT AND MEDIEVAL WORLD TO MODERN CIVILIZATION—Fall quarter. (Not given 1929-30.) Four hours.

This is an orienting course of senior 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.

126. THE EXPANSION OF EUROPEAN CIVILIZATION IN MODERN TIMES—Winter quarter. (Not given 1929-30.) Four hours.

This is a continuation of 125. 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 developed as a result of such expansion. Emphasis will be laid upon leading personalities and upon those elements of European civiliza-

*Given also by extension.

tion that have left permanent contributions for the modern world or permanent ulcers for the world to attempt to cure.

202. ANCIENT SOCIAL HISTORY, ROME AND WESTERN EUROPE—Summer quarter. Four hours.

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.

203. THE REFORMATION—Winter quarter. 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—Fall quarter. 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; beginnings of commerce; the medieval church; medieval learning, schools and colleges; administration of justice; art and architecture.

206. THE FRENCH REVOLUTION—Summer quarter. 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 monarchical 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.

208. THE AMERICAN REVOLUTION—Fall and summer quarters. 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—Winter quarter. 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—Spring and summer quarters. 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 Panama, and the purchase of the Danish West Indies, and to the new Pan-Americanism.

221. HISTORY OF THE FAR EAST—Spring quarter. 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.

223. RESEARCH IN HISTORY—Every quarter. 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 HISTORY—Every quarter. 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—A continuation of 224. Two hours.

300. SEMINAR IN THE TEACHING OF HISTORY—Offered on Request. Two to 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.

POLITICAL SCIENCE

*1. GOVERNMENT OF THE UNITED STATES—Fall and summer quarters. 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.

*2. STATE GOVERNMENT—Winter quarter. 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.

3. MUNICIPAL GOVERNMENT—Spring quarter. (Not given 1929-30.) 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;

*Given also by extension.

city planning; the commission form of government; the city manager; other recent movements.

***101. HISTORY OF THE FOREIGN POLICIES OF THE UNITED STATES—Summer quarter. Four hours.**

Few good 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.

***102. INTERNATIONAL RELATIONS—Summer quarter. Four hours.**

In this course there is a study of the principles governing the relations of civilized nations, which includes the problems of citizenship, the position of aliens and of alien enemies, the rights of nations with respect to war, neutrality, and intervention, the regard for treaties, American ideals, Pan-Americanism, and the League of Nations.

203. POLITICAL SCIENCE THEORY—Summer quarter. (Not given 1930). 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

		Sec. A	FIRST YEAR Sec. B	Sec. C			
Fall	Winter	Spring	Civ'l. 1 Ed. 1 H. E. 1 H. E. 7a Phys. Ed. Sci. 1	Art 1 Eng. 4 H. E. 1 H. E. 7a Hyg. 1 Mus. 25 Phys. Ed.	Civ'l. 1 Ed. 1 Eng. 0 H. E. 1 H. E. 7a Phys. Ed.	Fall	
			Art 1 H. E. 2 Mus. 25 Phys. Ed. Phys. 10 Sci. 2	Civ'l. 1 H. E. 2 Phys. Ed. Phys. 10 Sci. 1	Eng. 4 H. E. 2 Hyg. 1 Phys. Ed. Phys. 10		Winter
			Chem. 3b H. E. 3 H. E. 24 Hyg. 1 Phys. Ed. Psych. 2a	Chem. 3b Ed. 1 H. E. 3 H. E. 24 Phys. Ed. Sci. 2	Art 1 Chem. 3b H. E. 3 H. E. 24 Mus. 25 Phys. Ed. Sci. 1		

		Sec. A	SECOND YEAR Sec. B	Sec. C			
Fall	Winter	Spring	Chem. 1 H. E. 21 H. E. 25 Phys. Ed. Psych. 2b	Chem. 1 H. E. 21 H. E. 25 Phys. Ed. Psych. 2a	Chem. 1 H. E. 21 H. E. 25 Phys. Ed. Sci. 2	Fall	
			Bact. 100 Ed. 10 Eng. 21 H. E. 22 Phys. Ed.	Bact. 100 H. E. 22 Phys. Ed. Psych. 2b Teaching 1	Bact. 100 Eng. 22 H. E. 22 Phys. Ed. Psych. 2a		Winter
			Eng. 22 H. E. 7b H. E. 23 Hist. 125 Phys. Ed.	Ed. 10 Eng. 21 H. E. 7b H. E. 23 Phys. Ed.	H. E. 7b H. E. 23 Observ. 1 Phys. Ed. Psych. 2b		

		Sec. A	THIRD YEAR Sec. B	Sec. C			
Fall	Winter	Spring	H. E. 27 H. E. 106 Hist. 126 Observ. 1	Eng. 22 H. E. 27 H. E. 106 Hist. 125 Observ. 1	Ed. 10 H. E. 27 H. E. 106 Teaching 1	Fall	
			Elective H. E. 102 H. E. 103 Teaching 1	H. E. 102 H. E. 103 Hist. 126 Teaching 1	Eng. 21 H. E. 102 H. E. 103 Hist. 125		Winter
			Electives H. E. 107 Observ. 2 Psych. 103	Electives H. E. 107 Psych. 103	Eng. 22 H. E. 107 Hist. 126 Psych. 103		

		Sec. A	FOURTH YEAR Sec. B	Sec. C			
Fall	Winter	Spring	Ed. 116 H. E. 125 Minor Teaching 2	Ed. 116 H. E. 125 Minor Observ. 2	Ed. 116 H. E. 125 Minor Soc. 105	Fall	
			H. E. 132 H. E. 140 Minor Soc. 105	H. E. 132 H. E. 140 Minor Teaching 2	H. E. 132 H. E. 140 Minor Observ. 2		Winter
			Ed. 111 Elective H. E. 124 Teaching 2	Ed. 111 H. E. 124 Minor Soc. 105	Ed. 111 H. E. 124 Minor Teaching 2		

HOME ECONOMICS

This course has as its purpose the setting up of high standards for guidance in the choice of shelter, in the selection of food, clothing, and other necessities of life. To promote the health, contentment, and advancement of citizens of our land is no mean object to be engaged in, and well-trained home economics teachers are here prepared to participate fully in this life work.

To those interested in choosing a minor in home economics the courses numbered 5, 24, and 125 are particularly offered. These courses are dress appreciation, elementary nutrition, and child care.

Many courses in the department are open to others than majors.

A FOUR YEAR COURSE OF STUDY IN HOME ECONOMICS

Majors in Home Economics are required to distribute their core subjects according to the diagram on page 143. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following courses are required: 1, 2, 3, 7a, 7b, 21, 22, 23, 24, 25, 27, 102, 103, 106, 107, 124, 125, 132, 140. A minor of not less than twelve hours is required.

1. **PATTERN DESIGNING**—Fall and summer quarters. Two or four hours.

At least two hours are required of all freshman 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**—Winter quarter. 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**—Spring and summer quarters. 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—Fall and summer quarters. 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—Fall quarter. Four hours.

This course is open to all college students. It 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, woolsens 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.

7a. HOUSEHOLD MANAGEMENT THEORY—Fall, spring and summer quarters. Two hours.

This course may be taken any time, preferably before the junior year. Open to anyone who is interested.

Purposes: (1) to train in the scientific principles concerned in administering a household; (2) to give some insight into conditions and problems of home making from the economic aspect; (3) to develop an appreciation of time values in discharging efficiently the duties of the homemaker; (4) to give a working knowledge of the food needs of the family; (5) to learn to regard homemaking as a profession well worth the time, energy, and thought some men put on their part of earning the salary. The course includes a job analysis, time studies, motion studies, step-saving, labor-saving, scheduling, account-keeping, budget-making, marketing, storage problems, menu-making, and other equally important house-keeping duties.

H. Sc. 21, 22, and 23 are planned as consecutive courses.

7b. PRACTICAL APPLICATION OF 7a, 21, 22, 23, AND OTHER COURSES—Every quarter. Two hours.

Aims: (1) to emphasize the relation of food to health; (2) to improve the student's own food habits; (3) to study food products from the standpoints of production, manufacturing processes, composition, nutritive value, digestibility, cost, food legislation, and marketing problems; (4) to develop the principles of cookery as applied in the preparation of typical dishes; (5) to develop habits of accuracy, neatness, and a certain amount of manipulative skill; (6) to study principles and methods of food preservation; (7) to study all available fuels and laboratory equipment; (8) to observe manufacturing processes and sanitary standards through field trips to local food factories and markets; (9) to plan, prepare, and serve well-balanced meals; (10) to develop appreciation for the aesthetic aspects of food preparation and service.

21. FOODS AND COOKERY—Fall and summer quarters. Four hours.

Fee, \$3.00.

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—Winter quarter. Four hours.

Fee, \$3.00.

More complicated cooking processes are undertaken; emphasis is placed on the economic phases of food problems. Food legislation is studied.

23. COOKERY AND SERVING—Spring quarter. Four hours.

Fee, \$3.50.

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—Fall, winter, and summer quarters. 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 food 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—Spring and summer quarters. (Not given 1929-30.) Four hours.

Fee, \$3.50. 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. The table service includes a breakfast, luncheon, dinner and afternoon tea.

26. ORIENTATION IN HOME ECONOMICS—Spring quarter. Two hours.

A guide to students who are not familiar with the field open to students of the subject. A means of directing those who choose at random their sequence of studies.

27. OBSERVATION AND METHODS FOR THE ELEMENTARY CLASSES IN HOME ECONOMICS—Every quarter. 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.

100. MILLINERY—Spring and summer quarters. Four hours.

Fee, \$2.50. Open to anyone interested in hatmaking.

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.

101. ADVANCED TEXTILES—Winter and summer quarters. Four hours.

Purpose: (1) to give an appreciation of some of the world's famous textiles and the part they have played in the histories of peoples; (2) to broaden the background of knowledge of students who have had few contacts with museums and art collections; (3) to dignify, in the eyes of students, rugs, draperies, tapestries, block prints, fine upholstery materials, appliques, etc.; (4) to develop an appreciation of the work of our early

colonial and present mountain weavers. The course opens with a brief review of textiles, and arts and crafts of all ages. Those textiles that represent the finest era in all ages are dwelt upon. Illustrations and examples are studied and written about. These include rugs, laces, tapestries, prints, and embroideries. In addition to this study, furs, leather goods, and the recent developments in silks are to be considered. Collections will be made of illustrative materials.

102. CHILDREN'S CLOTHES AND APPLIED DESIGN—Fall and summer quarters. 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—Fall and summer quarters. Four hours.

Fee, 50 cents. Open to all students.

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.

104. HOUSING AND HOUSE SANITATION—Winter and summer quarters. (Not given 1929-30.) Two or four hours.

Open to anyone.

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 comparisons. The restrictive and constructive local laws relating to property are examined and analyzed. Houses are visited, and score cards are filled with observations of differences. Problems relating to heat, light, ventilation, plumbing, and refrigeration are studied and demonstrated. Costs and care are studied.

105. ADVANCED DRESSMAKING—Winter quarter. Four hours.

Fee, 50 cents.

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.

106. HOME CARE OF THE SICK—Fall and summer quarters. Four hours.

Fee, \$1.00.

This course is open to all senior college students. The purpose of the course is to enable students to adapt such means as are at hand in most homes to meet emergencies of illness or accident; to learn the essential facts in regard to prevention, as well as care in sickness, and to make peo-

ple more sensible and careful about matters pertaining to health; choice and preparation of room and bed, also atmosphere, temperature, and ventilation of room; changing bed of helpless patient with fresh bed linen; bed sores, cause, prevention, and care; care of mouth, teeth, and hair; care and management of sick room—care of flowers, how to handle visitors, etc.; different kinds of baths and how to give them; different kinds of enemas and how to give them; different kinds of poultices and how to apply them; the home medicine closet and articles included; making of home appliances; care of contagious diseases; care of small children; care of the aged patient; and the tray and the preparation of food for the invalid and convalescence tray.

107. HOME DECORATION—Spring and summer quarters. Four hours.

The application of art principles to interior decoration. This course includes practice problems met with in the everyday home of small means, as well as in some of the more pretentious homes. The idea of avoiding the stereotyped home, decorated according to a rule of thumb, is kept in mind. Ideas of expressing personality, and domestic or social qualities in one's surroundings are the ambition of this course.

Various rooms are taken up in turn, each to be studied with regard to its finish, its furnishing and its arrangement. The making and hanging of curtains is studied, as well as the framing and hanging of pictures and mirrors. Bric-a-brac and other means of adding notes of color to a room are included. The arrangement and care of flowers for decoration are considered. A trip is made to Denver where the large stores arrange rooms especially for this class and have experienced decorators to display rugs, draperies, and other objects of interest.

108. THE HOMEMAKER AS BUYER OF FOOD, CLOTHING, AND HOUSEHOLD FURNISHINGS—Spring quarter. (Not given 1930.) Four hours.

The idea in presenting this course is to teach the homemaker household economies as a means to making better homes and contented homemakers. There will be several sections in the course; one will relate to fuels and foods; one to textiles and clothing; the third to furnishings and equipment. It is hoped this course will benefit students, as well as homemakers.

121. EXPERIMENTAL COOKERY—Fall quarter. (Not given 1929-30.) Four hours.

Fee, \$5.00. 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—Winter quarter. Four hours.

Fee, \$3.50. 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—Spring and summer quarters. Four hours.

Fee, \$3.00. 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.

125. CHILD CARE AND CHILD WELFARE—Spring and summer quarters. 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. THE SCHOOL LUNCH AND CATERING—Fall and summer quarters. (Not given 1929-30.) Four hours.

Fee, \$3.50. Open to all students, especially rural school teachers.

Aims: (1) to prepare teachers to meet the situations in small or rural communities where children's lunches are a problem; (2) to teach large quantity cookery and serving so the teacher in any system may assist in social functions that are a part of all school programs; (3) to prepare the teacher to aid the mothers in selecting proper lunches for children who must bring lunches to school.

Procedure: (1) determining how many may be served from definite quantities of food; (2) making floor plans for banquet tables; (3) listing and arranging the dishes, silver and linens needed to serve a definite number; (4) organizing functions of varying and increasing difficulty or size, with menus, order lists, floor plans and serving directions, decorations and costs; (5) serving different types of meals, from the school lunch to afternoon tea, the formal dinner, the banquet; (6) lunch boxes and home lunches are included as picnic occasions presented to classes.

132. THE HOME—Winter quarter. (Not given 1929-30.) Four hours.

Open to any student.

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.

140. METHODS OF TEACHING HIGH SCHOOL HOME ECONOMICS—Winter quarter. 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 of 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, readings and trips to schools and classes.

223. RESEARCH IN HOME ECONOMICS—Every quarter. Four hours.

To be taken in the first quarter of graduate work.

This course is a required seminar and conference course for students who are working on their masters' theses. The director of educational research meets the students three times a week for conference.

224. RESEARCH IN HOME ECONOMICS—Every quarter. Four hours.

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

225. RESEARCH IN HOME ECONOMICS—Every quarter. Two hours.

A continuation of Home Economics 224.

INDUSTRIAL EDUCATION

FIRST YEAR			
	Sec. A	Sec. B	Sec. C
Fall	Civ'l. 1 Ed. 1 Ind. Ed. Req. Phys. Ed. Sci. 1	Art 1 Eng. 4 Hyg. 1 Ind. Ed. Req. Mus. 25 Phys. Ed.	Civ'l. 1 Ed. 1 Eng. 0 Ind. Ed. Req. Phys. Ed.
Winter	Art 1 Elective Ind. Ed. Req. Mus. 25 Phys. Ed. Sci. 2	Civ'l. 1 Elective Ind. Ed. Req. Phys. Ed. Sci. 1	Elective Eng. 4 Hyg. 1 Ind. Ed. Req. Phys. Ed.
Spring	Hyg. 1 Ind. Ed. Major Observ. 1 Phys. Ed. Psych. 2a	Ed. 1 Ind. Ed. Major Ind. Ed. Req. Phys. Ed. Sci. 2	Art 1 Ind. Ed. Major Ind. Ed. Req. Mus. 25 Phys. Ed. Sci. 1
SECOND YEAR			
	Sec. A	Sec. B	Sec. C
Fall	Ind. Ed. Major Ind. Ed. Req. Phys. Ed. Psych. 2b Teaching 1	Ind. Ed. Major Ind. Ed. Req. Observ. 1 Psych. 2a Phys. Ed.	Ed. 10 Eng. 21 Ind. Ed. Req. Phys. Ed. Sci. 2
Winter	Ed. 10 Eng. 21 Ind. Ed. Major Ind. Ed. Req. Phys. Ed.	Ind. Ed. Major Ind. Ed. Req. Phys. Ed. Psych. 2b Teaching 1	Eng. 22 Ind. Ed. Req. Observ. 1 Phys. Ed. Psych. 2a
Spring	Eng. 22 Hist. 125 Ind. Ed. Minor Ind. Ed. Req. Phys. Ed.	Ed. 10 Eng. 21 Ind. Ed. Minor Ind. Ed. Req. Phys. Ed.	Ind. Ed. Minor Ind. Ed. Req. Phys. Ed. Psych. 2b Teaching 1
THIRD YEAR			
	Sec. A	Sec. B	Sec. C
Fall	Elective or Minor Hist. 126 Ind. Ed. Major Ind. Ed. Req.	Ed. 116 Eng. 22 Hist. 125 Ind. Ed. Minor	Ed. 10 Elective or Minor Ind. Ed. Minor Ind. Ed. Req.
Winter	Ed. 116 Elective Ind. Ed. Major Ind. Ed. Req.	Elective Hist. 126 Ind. Ed. Minor Ind. Ed. Req.	Elective Hist. 125 Ind. Ed. Minor Ind. Ed. Req.
Spring	Ind. Ed. Major Minor Observ. 2 Psych. 105	Elective or Minor Ind. Ed. Major Ind. Ed. Req. Minor	Hist. 126 Ind. Ed. Major Ind. Ed. Req. Minor
FOURTH YEAR			
	Sec. A	Sec. B	Sec. C
Fall	Elective Ind. Ed. Major Ind. Ed. Req. Teaching 2	Elective or Minor Ind. Ed. Req. Observ. 2 Psych. 105	Ed. 116 Elective Ind. Ed. Req. Soc. 105
Winter	Elective Ind. Ed. Major Ind. Ed. Req. Soc. 105	Elective Ind. Ed. Major Ind. Ed. Req. Teaching 2	Elective Ind. Ed. Req. Observ. 2 Psych. 103
Spring	Ed. 111 Elective Elective Ind. Ed. Minor	Ed. 111 Elective Ind. Ed. Req. Soc. 105	Ed. 111 Elective Ind. Ed. Req. Teaching 2

INDUSTRIAL EDUCATION

The aim of the department is to prepare teachers for the public schools and 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 COURSE OF STUDY IN INDUSTRIAL EDUCATION

Majors in Industrial Education are required to distribute their core subjects according to the diagram on page 150. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following courses are required of majors in the department:

This department requires from seventy to seventy-six hours to fulfill the requirement for a bachelor of arts degree in industrial education.

All industrial education majors are required to take Industrial Education 5, 104, 119, 126, and at least eight hours in each of the following industrial fields: drafting, metal working, woodworking, 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 41a, 41b, 41c, 143a, 143b, 144a, 144b.

PRINTING

Industrial Education 31, 33, 34, 36, 132, 133, 136.

1. CONSTRUCTIVE WOODWORKING I—Fall and spring quarters. Four hours.

Fee, \$2.00.

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—Winter quarter. Four hours.

Fee, \$2.00.

This course is a continuation of Constructive Woodworking I and leads the student into more advanced problems, both practical and technical.

5. INDUSTRIAL EDUCATION—Fall quarter. Four hours.

In this course problems are centered around the education of workers who are to enter industrial pursuits. Such problems as the placing of industry in general education, historical background, junior high school, practical arts and industrial courses, unit trade courses, and continuation courses are discussed.

8a. ART METAL I—Fall and spring quarters. Two or four hours.

Fee, \$2.00.

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—Winter quarter. Two or four hours.

Fee, \$2.00.

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—Fall quarter. Two or four hours.

Fee, \$1.00.

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—Winter quarter. Four hours.

Fee, \$1.00.

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—Winter quarter. Four hours.

Fee, \$1.00.

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 out in this course.

13. PRINCIPLES OF ARCHITECTURAL DRAWING II—Spring quarter. Four hours.

Fee, \$1.00.

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—Fall quarter. 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—Winter quarter. Four hours.

Fee, \$2.00.

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—Fall quarter. 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—Winter quarter. 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—Spring quarter. 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—Fall quarter. 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—Winter quarter. 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—Spring quarter. 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.

41a. ELEMENTARY BOOKBINDING AND LEATHER CRAFT—Fall, winter, and spring quarters. Four hours.

Fee, \$1.00.

This course aims to introduce all the tools and equipment necessary in elementary bookbinding and leather craft, also the terminology of materials used, the making of some articles in leather craft and binding of small volumes.

41b. ELEMENTARY BOOKBINDING AND LEATHER CRAFT—Fall, winter, and spring quarters. Four hours.

Fee, \$1.00.

Full buckram magazine bindings and care and repair of books. Beginning hot and cold tooling—a continuation of leather craft. Pattern making for leather craft.

41c. ELEMENTARY BOOKBINDING AND LEATHERCRAFT—Fall and spring quarters. Four hours.

Fee, \$1.00.

Half and full leather bindings in morocco, calf, and cow hides. Leather tooling and design. Elementary gold stamping on lettering machine.

42a. INTERMEDIATE BOOKBINDING AND LEATHER CRAFT—Spring quarter. Four hours.

Fee, \$1.00.

This course deals with advanced steps in half and full leather bindings, also takes up antique tooling, stamping, and titling.

42b. INTERMEDIATE BOOKBINDING AND LEATHER CRAFT—Fall, winter, and spring quarters. Four hours.

Fee, \$1.00.

A continuation of 42a and taking up padded bindings with and without deckled edge effect.

42c. HISTORY OF BOOKBINDING—Fall and winter quarter. Four hours.

This course deals with the methods applied and materials used in ancient, medieval, and modern bindings.

100. WOOD SHOP PROBLEMS—Fall and spring quarters. Four hours.

Fee, \$2.00.

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—Spring quarter. 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. VOCATIONAL EDUCATION—Winter quarter. Four hours.

The aim is to give a better understanding of the underlying principles essential in teaching, and involves a study of the classroom laboratory, shop and studio methods and practices. In general, the topics discussed will be what is to be taught in the practical arts field, the illustrative materials essential for good teaching, and the method of attack in the teaching of a single lesson or series of lessons, type and illustrative lessons, and the place of the arts in the curriculum of the public schools.

105. PRINCIPLES OF ARCHITECTURAL DRAWING III—Fall quarter. Four hours.

Fee, \$1.00.

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—Fall quarter. 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—On request. Two or four hours.

Fee, \$2.00.

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.

109a. ART METAL AND JEWELRY I—Fall quarter. Four hours.

Fee, \$2.00.

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—Winter and spring quarters. Four hours.

Fee, \$2.00.

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.

117. MACHINE DRAWING I—Winter quarter. Four hours.

Fee, \$1.00.

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—Spring quarter. Four hours.

Fee, \$1.00.

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—Spring quarter. 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—Winter quarter. On request. Four hours.

Fee, \$2.00.

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—Spring quarter. Four hours.

Fee, \$2.00.

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—Winter quarter. On request. Four hours.

Fee, \$1.00.

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—On request. Fall, winter and spring quarters. 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—Spring quarter. 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**—Fall and spring quarters. 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**—Winter quarter. 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.

134. **PRACTICAL NEWSPAPER WORK IN PRINTING**—On request. Four hours.

The various technical processes incident to the printing of a school newspaper are performed by the student. The business and cost side of the school newspaper is dealt with in this connection. Good design in typographical makeup is emphasized in the course.

135. **COST ACCOUNTING IN PRINTING**—On request. 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**—On request. 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**—On request. 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**—On request. 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.

143a. **ADVANCED BOOKBINDING**—Fall and spring quarters. Four hours.

A practical course in classroom management and fundamentals of teaching binding and leather craft, care of equipment, and materials.

143b. **ADVANCED BOOKBINDING**—Winter quarter. Four hours.

This course takes up hand lettering, tooling, and designs in gold, the making of gold edges, and also the art of marble and wax edge making.

143c. **ADVANCED BOOKBINDING**—On request. Fall quarter. Four hours.
Fee, \$1.00.

This course takes up the binding of extra large volumes requiring special sewing and make-ready necessary in the building of large volumes. Advanced work in book titling in gold and foils on lettering machine.

144a. **ADVANCED BOOKBINDING AND LEATHERCRAFT**—Fall quarter. Two or four hours.

Fee, \$1.00.

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.

144b. **ADVANCED BOOKBINDING**—Winter quarter. Two or four hours.
Fee, \$1.00.

Science of shop accounting, purchasing of materials and equipment for the classroom. Production estimating, cost and upkeep expense. Department floor plans.

144c. **ADVANCED BOOKBINDING**—Winter and spring quarters. Two or four hours.

Fee, \$1.00.

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.

201. **SEMINAR IN INDUSTRIAL EDUCATION**—On request. 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.

202. **SUPERVISORY WOODWORKING**—On request. Two or four hours.

The aim of this course is primarily to give an opportunity to study the subject of woodworking from the standpoint of an administrator. Such phases of the subject as teaching, management, economy in buying, suitable equipment, and general upkeep will be made the basis of this course. In connection with it, it is planned to furnish to students, who may care to pursue a somewhat different type of shop work, an opportunity to conduct a line of investigations in various fields which are exceedingly rich in educational values to those interested in the subject of industrial education.

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 67,000 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 a class in library training.

Library Science is not offered as a major course, but as a minor for students working for the Bachelor of Arts degree. The work is given in the junior and senior years. It is suggested that it be taken with literature, foreign languages, or history as the major, although it is not limited to any one major. Any course in library science may also be chosen as an elective by a student not taking it as a minor. It is required of all taking library science as a minor that they shall take at least four hours in library bookbinding. The following courses in library science are offered:

101. **BOOKMAKING AND BOOK SELECTION**—Fall quarter. Four hours.

Paleography. Manuscripts. History of printing. Paper and paper-making. The physical make-up of the book. Study of modern processes of printing and illustrating. Reviews and aids in book selection. Trade bibliography. Checking in and preparing for shelves.

103. **CLASSIFICATION AND CATALOGING**—Winter quarter. Four hours.

A study of the principles of classification, the decimal system particularly. Classification of books, pamphlets, pictures, and the varied items that may be obtained for the school library. The dictionary catalog, alphabetizing, adaptation, and use of Library of Congress cards, use of subject headings and shelf lists.

104. REFERENCE WORK—Spring quarter. 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. Selection and purchase of periodicals, checking in and accounting; and concerning their use 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—Spring and summer quarters. 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.

107. ADMINISTRATION AND HISTORY OF LIBRARIES—Winter quarter. Four hours.

Historical libraries, American Library Association, Library extension, finances and budget libraries, Library commissions, library legislation, finances and budget allotments. Book circulation and charging systems.

108. PRACTICAL WORK IN LIBRARY—By arrangement. Four hours.

Time required, two hours per day, plus optional work by student. This is allowed only to those who have taken 102, 103, 104, and calls for a certain responsibility on the part of the student.

MATHEMATICS

FIRST YEAR

Sec. A

Sec. B

Sec. C

Fall	Civ'l. 1 Ed. 1 Math. 5 or 1 Phys. Ed. Sci. 1	Art 1 Eng. 4 Hvg. 1 Math. 5 or 1 Mus. 25 Phys. Ed.	Civ'l. 1 Eng. 0 Math. 1 or 5 Phys. Ed.
	Art 1 Minor Math. 6 or 2 Mus. 25 Phys. Ed. Sci. 2	Civ'l. 1 Math. 6 or 2 Minor Phys. Ed. Sci. 1	Eng. 4 Hvg. 1 Math. 2 or 6 Minor Phys. Ed.
	Hvg. 1 Math. 7, or 3 or 4 Obser. 1 Phys. Ed. Psych. 2a	Ed. 1 Elective Math. 7, or 3 and 4 Phys. Ed. Sci. 2	Art 1 Elective Math. 3, 4, or 7 Mus. 25 Phys. Ed. Sci. 1
Winter			
Spring			

SECOND YEAR

Sec. A

Sec. B

Sec. C

Fall	Math. 9 or 5 Methods Course Phys. Ed. Fsyh. 2b Teaching 1	Elective (2 hours) Math. 9 or 5 Observ. 1 Phys. Ed. Physics 1 Psych. 2a	Ed. 10 Eng. 21 Math. 5 or 9 Phys. Ed. Sci. 2
	Ed. 10 Eng. 21 Math. 101 or 6 Minor Phys. Ed.	Math. 101 or 6 Methods Course Phys. Ed. Psych. 2b Teaching 1	Elective (2 hours) Eng. 22 Math. 5 or 101 Observ. 1 Phys. Ed. Fsyh. 2b
	Eng. 22 Hist. 125 Math. 102 or 7 Minor Phys. Ed.	Ed. 10 Eng. 21 Math. 102 or 7 Minor Phys. Ed.	Math. 7 or 102 Methods Course Phys. Ed. Psych. 2b Teaching 1
Winter			
Spring			

THIRD YEAR

Sec. A

Sec. B

Sec. C

Fall	Elective Hist. 126 Math. 9 or Elective Physics 1	Eng. 22 Hist. 125 Math. 9 or Elective Minor	Ed. 10 Math. 9 or Elective Minor Physics 1
	Ed. 116 Elective Math. 101 or Elect. Minor	Ed. 116 Hist. 126 Math. 101 or Elec. Minor	Elective Hist. 125 Math. 101 or Elect. Minor
	Elective Math. 102 or Elect. Observ. 1 Psych. 117 or 108b	Elective Math. 102 or Elect.	Elective Hist. 126 Math. 102 or Elect. Minor
Winter			
Spring			

FOURTH YEAR

Sec. A

Sec. B

Sec. C

Fall	Elective Elective Math. Minor Teaching 2	Elective Minor Observ. 1 Fsyh. 117 or 108b	Ed. 116 Minor Soc. 105
	Elective Soc. 105	Elective Elective Math. Teaching 2	Elective Observ. 1 Psych. 117 or 108b
	Ed. 111 Elective	Ed. 111 Elective Soc. 105	Ed. 111 Elective Teaching 2
Winter			
Spring			

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 COURSE OF STUDY IN MATHEMATICS

Majors in Mathematics are required to distribute their core subjects according to the diagram on page 159. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following courses are required of majors in the department: Math. 1, 2, 3, 4 (unless excused), 5, 6, 7, 9, 101, 102, and Physics 1.

Each student must select a department in which to minor and take at least twelve hours in that department.

***1. COLLEGE ALGEBRA—Fall and summer quarters. 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—Winter and summer quarters. 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—Spring quarter. First half. Two 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—Spring quarter. Two 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—Fall quarter. Four hours.**

Courses 5, 6, and 7 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, 2, and 3.

Mathematics 5 deals with functions and graphs and gives an introduction to the use of the derivative and the integral in the solution of real problems.

*Given also by extension.

***6. GENERAL MATHEMATICS—Winter quarter. Four hours.**

A continuation of Mathematics 5. It treats of the trigonometric functions and their applications, logarithms, exponential functions, and an analytical study of the straight line and the circle, with a brief treatment of the other conic sections.

***7. GENERAL MATHEMATICS—Spring quarter. Four hours.**

A continuation of Mathematics 6. It deals with the solution of equations, polar coordinates, trigonometric analysis, the progressions, probability with the probability curve, and an introduction to complex number.

8. SURVEYING—Spring and summer quarters. 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—Fall and summer quarters. 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—Fall and spring quarters. Four 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. SOLID GEOMETRY—Summer quarter. 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—Winter and summer quarters. 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—Spring and summer quarters. 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—Fall quarter. (Not given 1929-30.) 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—Winter, spring and summer quarters. Four hours.**

This course is 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. It treats 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.

*Given also by extension.

106. DESCRIPTIVE ASTRONOMY—Winter and summer quarters. 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—Fall, winter and summer quarters. 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.

*109. THE TEACHING OF ALGEBRA—Fall and summer quarters. 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 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—Winter and summer quarters. 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. ALGEBRA AND GEOMETRY FOR THE UPPER GRADES—Spring quarter. Four hours.

This course 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.

*200. ADVANCED CALCULUS—Fall quarter. 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—Winter quarter. (Not given 1929-30.) Four hours.

This course leads to an understanding of the differential equations, its solution and its simpler applications.

223. RESEARCH IN MATHEMATICS—Every quarter. 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' thesis.

225. RESEARCH IN MATHEMATICS—Two hours.

A continuation of Mathematics 224.

*Given also by extension.

MUSIC

FIRST YEAR

Sec. A

Sec. B

Sec. C

Fall	Civ'l. 1 Ed. 1 Mus. 1b Mus. 45 Phys. Ed. Sci. 1	Art 1 Eng. 4 Hyg. 1 Mus. 1b Mus. 45 Phys. Ed.	Civ'l. 1 Ed. 1 Eng. 0 Mus. 1b Mus. 45 Phys. Ed.	Fall	
	Art 1 Mus. 1c Mus. 45 Phys. Ed. Sci. 1-2	Civ. 1 Mus. 1c Mus. 45 Phys. Ed. Sci. 1	Eng. 4 Hyg. 1 Mus. 1c Mus. 45 Phys. Ed.		Winter
	Hyg. 1 Mus. 1d Mus. 2 Mus. 45 Observ. 1 Phys. Ed. Psych. 2a	Ed. 1 Mus. 1d Mus. 2 Mus. 45 Phys. Ed. Sci. 2	Art 1 Mus. 1d Mus. 2 Mus. 45 Phys. Ed. Sci. 1		

SECOND YEAR

Sec. A

Sec. B

Sec. C

Fall	Mus. 3 Mus. 10 Mus. 45 Phys. Ed. Psych. 2b Teaching 1	Mus. 3 Mus. 10 Mus. 45 Observ. 1 Phys. Ed. Psych. 2a	Ed. 10 Eng. 21 Mus. 3 Mus. 10 Mus. 45 Phys. Ed. Sci. 2	Fall	
	Ed. 10 Eng. 21 Mus. 4 Mus. 11 Mus. 45 Phys. Ed.	Mus. 4 Mus. 11 Mus. 45 Phys. Ed. Psych. 2b Teaching 1	Eng. 22 Mus. 4 Mus. 11 Mus. 45 Observ. 1 Phys. Ed. Psych. 2a		Winter
	Eng. 22 Hist. 125 Mus. 5 Mus. 45 Phys. Ed.	Ed. 10 Eng. 21 Mus. 5 Mus. 45 Phys. Ed.	Mus. 5 Mus. 45 Phys. Ed. Psych. 2b Teaching 1		

THIRD YEAR

Sec. A

Sec. B

Sec. C

Fall	Hist. 126 Mus. 20 Mus. 45	Eng. 22 Hist. 125 Mus. 20 Mus. 45	Ed. 10 Mus. 20 Mus. 45	Fall	
	Minor Mus. 21 Mus. 22 Mus. 45	Hist. 126 Mus. 21 Mus. 22 Mus. 45 Mus. 112	Hist. 125 Mus. 21 Mus. 22 Mus. 45 Mus. 112		Winter
	Mus. 23 Mus. 45 Observ. Phys. 114	Minor Mus. 23 Mus. 45 Phys. 114	Hist. 126 Mus. 23 Mus. 45 Mus. 114		

FOURTH YEAR

Sec. A

Sec. B

Sec. C

Fall	Mus. 103 Teaching 2 Minor (3 hours)	Ed. 111 Mus. 103 Minor (6 hours)	Mus. 103 Minor (3 hours) Soc. 105	Fall	
	Mus. 104 Mus. 105 Mus. 107 Psych. 112 Soc. 105	Mus. 104 Mus. 105 Mus. 107 Psych. 112 Teaching 2	Mus. 104 Mus. 105 Mus. 107 Observ. 1 Psych. 112		Winter
	Ed. 111 Mus. 106 Mus. 107 Mus. 110	Ed. 111 Mus. 106 Mus. 110 Soc. 105	Ed. 111 Mus. 106 Mus. 110 Teaching 2		

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. Send for special music bulletin.

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.

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.

Examination must be taken in piano work before graduation. The maximum credit in applied music will be twenty-four hours.

A FOUR-YEAR COURSE OF STUDY IN MUSIC

Majors in Music are required to distribute their core subjects according to the diagram on page 163. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following courses are required of majors in the department: Music 1b, 1c, 2, 3, 4, 5, 10, 11, 20, 21, 22, 23, 45, 103, 104, 105, 106, 107, 110, 112.

FOR MAJORS IN MUSIC

Examination must be taken in piano work 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.

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 58 and select a minor of twelve to twenty-four hours outside the department.

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 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**—Every quarter. 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**—Fall and summer quarters. Four hours.

This course is required of music majors. Rudiments of music and beginning sight-singing.

1c. **SIGHT-SINGING**—Winter and summer quarters. Four 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**—Spring quarter. Four hours.

A continuation of Music 1c.

2. **TONE THINKING AND MELODY WRITING**—Spring and summer quarters. Four hours.

It is expected that students will become proficient in writing melodies in all kinds of rhythms. A great deal of dictation is done. Required of music majors. Prerequisite, Music 1c.

3. **HARMONY**—Fall and summer quarters. 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.

4. **HARMONY**—Winter and summer quarters. Four hours.

Continuation of Music 3. Required of music majors.

5. HARMONY—Spring quarter. Four hours.

A continuation of Music 4, taking up discords and modulations. Required of music majors.

10. METHODS FOR TEACHING MUSIC READING—Fall and summer quarters. Four hours.

Fundamental principles and devices for training in such musical skills as pitch, rhythm, reading, writing and theory. Music majors only. Required. Prerequisites, Music 1b, 1c, 1d.

11. METHODS FOR TEACHING MUSIC APPRECIATION AND CREATIVE MUSIC—Winter and summer quarters. Four hours.

Fundamental principles and devices for teaching music appreciation through listening. Devices and specific procedures are suggested for all grades. Creative Music. Making of instruments such as drums, marimbas, pan-pipes, etc. Playing. Ocarinas and psalteries. Composing. Music Majors only. Required. Prerequisite, Music 10.

***20. HISTORY OF ANCIENT AND MEDIEVAL MUSIC—Fall and summer quarters. 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—Winter and summer quarters. 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.

22. MUSIC APPRECIATION—Winter and summer quarters. Four hours.

A course open to all who wish to acquire a greater love for good music. The lives of many of the great artists and composers are taken up in this course. Records of bands, orchestras, choruses, soloists, etc., are taken up with the purpose in view of acquainting the student with the best music and teaching him how to appreciate it.

23. MUSICAL LITERATURE—Spring and summer quarters. 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—Every quarter. (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. There are already in print books suitable as guides for such a course. The students' outside preparation would be the reading of some six hundred pages of such a textbook.

30. INDIVIDUAL VOCAL LESSONS—Every quarter. 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—Every quarter. 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—Every quarter. 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.

*Given also by extension.

33. INDIVIDUAL PIPE ORGAN LESSONS—Every quarter. 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, Guilimant, Rheinberger, Widor and other organ composers of like standing in the musical world.

34. CLASS PIANO METHODS—Every quarter. One hour.

Fee, \$6.00.

A course designed for the prospective teacher in piano classes.

35. INDIVIDUAL LESSONS FOR BRASS AND REED INSTRUMENTS—Every quarter. One hour.

Fee, \$15.00.

Each instrument is carefully taught by a competent instructor. Special attention is given to beginners.

36. INDIVIDUAL 'CELLO LESSONS—Every quarter. One hour.

Fee, \$24.00.

Modern methods are used and a thorough course is given presenting the best music literature for the 'cello.

38. COLLECTIVE VOICE TRAINING—Fall and summer quarters. (Four times a week. (Not given 1929-30.) Two hours.

Fundamental work in voice building.

41. MEN'S GLEE CLUB—Fall, winter, and spring quarters. (Two days a week.) 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—Fall, winter, and spring quarters. (Not given 1929-30.) 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—Every quarter. 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—Every quarter. 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—Every quarter. (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 Mus. 45a and 45b.

101. COLLEGE CHORUS—Every quarter. 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—Fall and summer quarters. Two hours.

The rules of harmony are here applied to polyphonic writing. Required of majors in music. Prerequisite, Music 4.

104. ADVANCED COUNTERPOINT—Winter and summer quarters. Two hours.

Continuation of Music 103. Required of music majors.

105. BEGINNING ORCHESTRATION—Winter quarter. (Not given 1929-30.) 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 ORCHESTRATION—Spring quarter. (Not given 1929-30.) Two hours.

Continuation of Music 105. Required for a degree in music.

107. FORM ANALYSIS—Winter quarter. Two hours.

Analysis will be made of the smaller forms in music, also of symphonies from Haydn down to the present. Prerequisite, 104 and 106. Required of music majors.

108. ADVANCED FORM ANALYSIS—Spring quarter. Two hours.

Continuation of Music 107. Required of music majors.

110. PRINCIPLES OF MUSICAL EDUCATION—Spring and summer quarters. 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—All quarters. Two hours.

114. METHODS IN CONDUCTING—Spring and summer quarters. Four hours.

The technic of the baton is obtained through the actual use of the same. Music in all forms is studied with special reference to the directors' problems.

122. APPRECIATION (For the Concert Goer)—Fall and summer quarters. One hour.

123. APPRECIATION OF OPERA—Fall and summer quarters. 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—Every quarter. 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—Every quarter. 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—Every quarter. 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—Every quarter. One hour.

Fee, \$24.00.

An advanced course in organ playing combined with instruction in teaching the instrument.

134. INDIVIDUAL 'CELLO LESSONS AND METHODS—Every quarter. One hour.

Fee, \$24.00.

Discussions will be held with special regard to the methods pursued in teaching the 'cello.

PHYSICAL EDUCATION FOR WOMEN

FIRST YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Chem. 1 Civ'l. 1 Ed. 1 Phys. Ed. Phys. Ed. 35 Sci. 1	Art 1, Chem. 1 Eng. 4 Hyg. 1 Mus. 25 Phys. Ed. Phys. Ed. 35	Chem. 1 Civ'l. 1, Ed. 1 Elective Eng. 0 Phys. Ed. Phys. Ed. 35	Fall
Winter	Art 1, Chem. 2 Elective Mus. 25, Sci. 2 Phys. Ed. 36	Chem. 2, Sci. 1 Civ'l. 1 Elective Phys. Ed. 36	Chem. 2 Elective Eng. 4, Hyg. 1 Phys. Ed. 36	Winter
Spring	Elective Hyg. 1, Observ. 1 Phys. Ed. Phys. Ed. 37 Psych. 2a	Ed. 1, Sci. 2 Elective Elective Phys. Ed. Phys. Ed. 37	Art 1, Mus. 25 Electives (2) Phys. Ed. Phys. Ed. 37 Sci. 1	Spring

SECOND YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Elective Phys. Ed. Psych. 2b Teaching 1 Zool. 1	Electives (2) Observ. 1 Phys. Ed. Psych. 2a Zool. 1	Ed. 10 Eng. 21 Phys. Ed. Sci. 2 Zool. 1	Fall
Winter	Ath. 3 Ed. 10, Eng. 21 Phys. Ed. Phys. Ed. 39 Zool. 2	Ath. 3 Phys. Ed. Phys. Ed. 39 Psych. 2b Teaching 1, Zool. 2	Eng. 22, Zool. 2 Observ. 1 Phys. Ed. Phys. Ed. 39 Psych. 2a	Winter
Spring	Elective (2) Elective Eng. 22, Hist. 125 Phys. Ed. Phys. Ed. 40	Ed. 10, Eng. 21 Elective Elective Phys. Ed. Phys. Ed. 40	Electives (2) Phys. Ed. Phys. Ed. 40 Psych. 2b Teaching 1	Spring

THIRD YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Hist. 126 Minor Phys. Ed. 100 Phys. Ed. 120 Phys. Ed. 137	Elective Eng. 22, Hist. 125 Phys. Ed. 100 Phys. Ed. 120 Phys. Ed. 137	Ed. 10 Elective Phys. Ed. 100 Phys. Ed. 120 Phys. Ed. 137	Fall
Winter	Elective Minor Phys. Ed. 101 Phys. Ed. 121 Psych. 1	Hist. 126 Minor Phys. Ed. 101 Phys. Ed. 121 Psych. 1	Ath. 3, Hist. 125 Minor Phys. Ed. 101 Phys. Ed. 121 Psych. 1	Winter
Spring	Electives (2) Minor Observ. 2 Phys. Ed. 102 Phys. Ed. 132	Elective Elective Minor Phys. Ed. 102 Phys. Ed. 132	Elective Hist. 126 Minor Phys. Ed. 102 Phys. Ed. 132	Spring

FOURTH YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Phys. Ed. 103 Phys. Ed. 122 Phys. Ed. Phys. Ed. *136 Teaching 2	Elective Minor Observ. 2 Phys. Ed. 103, 122 Phys. Ed. *133, *136	Minor Phys. Ed. 103 Phys. Ed. 122 Phys. Ed. *133 Soc. 105	Fall
Winter	Biotics 101 Phys. Ed. 104 Phys. Ed. 133 Phys. Ed. 136 Soc. 105	Biotics 101 Phys. Ed. 104 Phys. Ed. *133 Phys. Ed. *136 Teaching 2	Biotics 101 Minor Observ. 2 Phys. Ed. 104	Winter
Spring	Ed. 111 Elective Phys. Ed. *133, 135, and *136	Ed. 111 Phys. Ed. *133, 135, and *136 Soc. 105	Ed. 111 Phys. Ed. *133, 135, and *136 Teaching 2	Spring

*See footnote at bottom of next page.

PHYSICAL EDUCATION FOR WOMEN

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

No Physical Education course may be taken more than once for credit. This will enable the College to accommodate more students in any one sport and will prevent the monopoly of a popular sport by a few.

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. This padlock will be bought back by the school if returned in good condition.

General students who are especially skilled in Physical Education work may take major classes with special permission of the instructor.

A FOUR-YEAR COURSE OF STUDY IN PHYSICAL EDUCATION FOR WOMEN

Majors in Physical Education are required to distribute their core subjects according to the diagram on page 169. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following Physical Education courses are required of majors in the department: P. E. 1, 35, 36, 37, 39, 40, 100, 101, 102, 103, 104, 120, 121, 122, 132, 133, 135, 136, 137.

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. 35, P. E. 37

Senior college: P. E. 103, 104a, 135, 137.

MAJOR REQUIREMENTS IN PHYSICAL EDUCATION

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.

*Those subjects starred may be taken during any one of the three quarters. Their place in hours is to be substituted by electives during the quarters they are not taken.

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, without credit, during their freshman and sophomore years, the courses ranging from P. E. 12 to P. E. 28 inclusive with the exception of P. E. 17. However, any student who has much previous training in any of the above sports may file a request with the head of the department for exemption from said sport.

Suggested electives outside of the Physical Education department which should be of especial value to the Physical Education major are: Household Science 4, Music 1a, Piano, Eng. 12, 13, and 14, Ed. 16, 16a, Chem. 9, and Ath. 122.

The above requirements will give eighteen hours of work in science to be used as a science minor.

COURSE OF STUDY

1. CLOG AND ATHLETIC DANCING—Fall and spring quarters. 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.

2. NATURAL DANCING—Every quarter. 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—Winter and spring quarters. 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—Every quarter. One hour.

Simple dances for beginners in folk dancing. Material depends upon the skill of the class.

6. FOLK DANCING—Every quarter. One hour.

Prerequisite P.E. 5 or its equivalent. This course will present folk dances, especially suited to high school students.

7. NATIONAL AND CHARACTERISTIC DANCING—Winter and spring quarters. One hour.

This course will present typical national and character dances and will be of special value to the major in high school education.

11. PLAYS AND GAMES—Every quarter. 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—Fall quarter. One hour.

A course organized to develop a knowledge of the rules of the game and skill in technic.

13. TENNIS—Fall and spring quarters. 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.

14. BASKETBALL—Winter quarter. One hour.

This course will consist of a study of the rules of basketball and the development of skill in the technic.

15. BASEBALL—Spring quarter. One hour.

This course will consist of a study of the rules of baseball and the development of skill in it.

16. HOCKEY—Fall quarter. One hour.

The rules of the game will be studied and skill in technic developed.

17. VOLLEY BALL—Winter quarter. One hour.

A game that can be played in the intermediate grades and junior high schools.

18. FIELD AND TRACK—Spring quarter. 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—Every quarter. 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—Every quarter. 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—Winter and spring quarters. 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—Every quarter. 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—Winter quarter. 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 freshmen may take their work with the sophomores without having taken the courses in freshman practice. This has been done because at present the enrollment in the department is too small to warrant giving both courses each year. Freshmen will take sophomore practice courses when offered and sophomores will take freshmen practice courses when offered. The above applies to the senior college practice courses. This arrangement may be changed to separate classes for each by the department staff at any time the need arises.

35. FRESHMAN PRACTICE—Fall quarter. (Not given 1929-30.) 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.

36. FRESHMAN PRACTICE—Winter quarter. (Not given 1929-30.) 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 exercises; to give practice in leadership through squads and to give training in making daily programs for this type of work.

37. FRESHMAN PRACTICE—Spring quarter. (Not given 1929-30.) Two hours.

This practice course presents material in beginning athletic and clog dancing. It will take up in its technic the threes and fives. 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—Winter quarter. 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—Spring quarter. 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.

THEORY COURSES IN HEALTH EDUCATION FOR JUNIOR COLLEGE AND MAJOR STUDENTS

Hyg. 1. INDIVIDUAL AND SOCIAL HYGIENE (for women). Every quarter. Four hours.

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

ACTIVITY COURSES FOR MAJORS OF SENIOR COLLEGE RANK

100. JUNIOR PRACTICE—Fall quarter. Two hours.

This course is designed to meet the teaching needs of major and minor students of Physical Education, for their activity groups. The course aims to: (a) give advanced technic in each sport that has been taken during freshman and sophomore years, (b) give methods for presenting sport material, (c) supply references from which list students may find adequate teaching material.

101. JUNIOR PRACTICE—Winter quarter. Two hours.

This course will be divided into two sections meeting at the same time but on different days:

(a) Advanced athletic and clog dancing. This part of the course will meet two days a week. It is similar to P.E. 37 but additional technic made up of the sevens and new dances will be presented. Each student will also be required to hand in an original athletic and clog dance.

(b) Advanced swimming for majors. 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.

102. JUNIOR PRACTICE—Spring quarter. Two hours.

This course is made up of more advanced folk dances than P.E. 35. It will also give some of the more simple dances leading to Section A of P.E. 103.

103. SENIOR PRACTICE—Fall quarter. Two hours.

This course will be divided into two sections meeting at the same hour but different days of the week:

(a) National and Characteristic Dancing. Three days. This part of the course deals with the dancing characteristics and customs, gives knowledge of costumes, and present national and characteristic dances of different countries.

(b) Natural Dancing. Two days. 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.

104. SENIOR PRACTICE—Winter quarter. Two hours.

This course is also made up of two divisions each meeting at the same hour but on different days:

(a) Playground organization. Two days. 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.

(b) Advanced Natural Dancing. Three days. 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.

THEORY COURSES FOR PHYSICAL EDUCATION MAJORS OF SENIOR COLLEGE RANK

131. PAGEANTRY—Winter quarter. 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. Pantomines, 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—Spring quarter. 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—Every quarter. 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—Spring quarter. 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 building, grounds, equipment, and staff.

136. SUPERVISION OF PHYSICAL EDUCATION—Every quarter. Four hours.

Two quarters of student teaching a prerequisite. The purpose of this course is to give the student actual practice in supervising student teachers in the elementary school in physical education. The content of the course is as follows: The supervisor plans the work for the student teacher to follow. She is required to meet with the student teacher once a week and work out various problems which arise. She also will be required to meet with the room teacher and the supervisor from the physical education department once a week to check up the work which is being done, and receive suggestions and criticisms as to different methods in solving various problems as a supervisor.

137. MATERIALS AND METHODS IN PHYSICAL EDUCATION—Fall quarter. 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-criticize; (g) to give the student actual practice in teaching.

223. RESEARCH IN PHYSICAL EDUCATION—Every quarter. 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—Every quarter. 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—Every quarter. Two hours.

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

235. HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION—Four hours.

This course covers the same ground as P.E. 135 but additional and more advanced work is required.

SENIOR COLLEGE COURSES IN HEALTH EDUCATION FOR MAJORS

120. APPLIED ANATOMY—Fall quarter. 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—Winter quarter. 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—Fall quarter. (Not given 1929-30.) 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 1929-30.) Spring quarter. 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.

PHYSICS

		Sec. A	FIRST YEAR Sec. B	Sec. C		
Fall	Spring	Winter	Civ'l. 1	Art 1	Civ'l. 1	Fall
			Ed. 1	Eng. 4	Ed. 1	
			Minor	Hyg. 1	Eng. 0	
Winter	Spring	Fall	Phys. Ed.	Mus. 25	Phys. Ed.	Winter
			Physics 1	Phys. Ed.	Physics 1	
			Art 1	Civ'l. 1	Eng. 4	
Spring	Winter	Fall	Elective	Elective	Hyg. 1	Spring
			Minor	Minor	Phys. Ed.	
			Mus. 25	Phys. Ed.	Physics 2	
Winter	Spring	Fall	Phys. Ed.	Physics 2	Physics 2	Winter
			Physics 2	Physics 2	Physics 5	
			Elective	Ed. 1	Art 1	
Spring	Winter	Fall	Hyg. 1	Elective	Minor	Spring
			Observ. 1	Minor	Minor	
			Phys. Ed.	Phys. Ed.	Mus. 25	
Winter	Spring	Fall	Physics 3	Physics 3	Phys. Ed.	Winter
			Psych. 2a	Physics 3	Physics 3	

		Sec. A	SECOND YEAR Sec. B	Sec. C		
Fall	Spring	Winter	Minor	Elective	Ed. 10	Fall
			Phys. Ed.	Minor	Eng. 21	
			Physics 103	Obsev. 1	Minor	
Winter	Spring	Fall	Psych. 2b	Phys. Ed.	Phys. Ed.	Winter
			Teaching 1	Physics 103	Physics 103	
			Ed. 10	Psych. 2a	Elective	
Spring	Winter	Fall	Ed. 10	Phys. Ed.	Eng. 22	Spring
			Eng. 21	Physics 5	Eng. 22	
			Phys. Ed.	Physics 104	Observ. 1	
Winter	Spring	Fall	Physics 5	Psych. 2b	Phys. Ed.	Winter
			Physics 104	Teaching 1	Physics 104	
			Eng. 22	Ed. 10	Minor	
Spring	Winter	Fall	Hist. 125	Eng. 21	Phys. Ed.	Spring
			Minor	Minor	Physics 111	
			Phys. Ed.	Phys. Ed.	Psych. 2b	
Winter	Spring	Fall	Physics 111	Physics 111	Teaching 1	Winter

		Sec. A	THIRD YEAR Sec. B	Sec. C		
Fall	Spring	Winter	Hist. 126	Eng. 22	Ed. 10	Fall
			Minor	Hist. 125	Minor	
			Physics 11	Physics 11	Physics 11	
Winter	Spring	Fall	Physics 105-107	Physics 105-107	Physics 105-107	Winter
			Ed. 116	Ed. 116	Hist. 125	
			Elective	Hist. 126	Minor	
Spring	Winter	Fall	Minor	Minor	Minor	Spring
			Physics 12	Physics 12	Physics 12	
			Elective	Elective	Hist. 126	
Winter	Spring	Fall	Obsev. 2	Minor	Minor	Winter
			Physics 13	Physics 13	Physics 13	
			Psych. 105	Physics 13	Physics 13	

		Sec. A	FOURTH YEAR Sec. B	Sec. C		
Fall	Spring	Winter	Minor	Elective	Ed. 116	Fall
			Minor	Minor	Minor	
			Physics 121	Observ. 2	Physics 121	
Winter	Spring	Fall	Teaching 2	Physics 121	Soc. 105	Winter
			Ed. 116	Psych. 105	Elective	
			Elective	Minor	Observ. 2	
Spring	Winter	Fall	Minor	Minor	Physics 108	Spring
			Physics 108	Physics 108	Psych. 105	
			Soc. 105	Teaching 2	Psych. 105	
Winter	Spring	Fall	Ed. 111	Ed. 111	Ed. 111	Winter
			Geog. 100	Geog. 100	Geog. 100	
			Minor	Minor	Minor	
Spring	Winter	Fall	Minor	Soc. 105	Teaching 2	Spring

PHYSICS

The various courses in the Physics Department have primarily the object of preparing teachers to teach physics in the secondary schools and colleges. Students majoring in other departments may find it profitable to elect physics as a minor. This is especially true in the science field where teachers are expected to teach more than one science. A major in the department consists of fifty-two hours and a minor of twenty-four hours. The requirements for a major and minor are given below.

A FOUR-YEAR COURSE OF STUDY IN PHYSICS

Majors in Physics are required to distribute their core subjects according to the diagram on page 176. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following courses are required of majors in the department: Phys. 1, 2, 3, 5, 11, 12, 13, 103, 104, 105, 107, 108, 111, 121.

The Physics major should also elect Math. 1, 2, 106, and Geol. 100 and Astronomy 106.

It is suggested that a Physics major should elect two minors, one of which will be a science. The following minors are suggested: chemistry, biology, mathematics, administration, and physical education or athletics. Other minors may be selected with the approval of the departments concerned.

***1. ELEMENTARY COLLEGE PHYSICS—Fall quarter. Four hours.**

Fee \$3.00.

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—Winter quarter. Four hours.**

Fee \$3.00.

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 thru space, and the relation of sound, light and radio waves. The same methods are followed as in the first quarter.

3. ELEMENTARY COLLEGE PHYSICS—Spring quarter. Four hours.

Fee \$3.00.

The work during the spring quarter is a continuation of the fall and winter quarter and is arranged around three units of study: radiant energy, the utilization of energy and electricity the servant of man.

4. PHYSICS CONTENT OF GENERAL SCIENCE—Winter quarter. Four hours.

Fee, \$3.00.

A course in the physics content of general science, especially arranged for prospective general science teachers. The content will be based upon the physics content of widely used general science texts. The course will consist of lectures, demonstrations, and individual laboratory experiments. The student will be expected to work out demonstrations and experiments which will be used later in teaching general science.

5. PHOTOGRAPHY—Winter quarter. Four hours.

Fee, \$3.00.

This course is arranged especially for science teachers and teachers of other subjects interested in making use of photography in their classes.

*Given also by extension.

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.

10. ELEMENTARY HOUSEHOLD PHYSICS—Spring quarter. 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. A survey is made of the questions raised by housewives and the course based upon these questions.

11. GENERAL COLLEGE PHYSICS—Fall quarter. Four hours.

Fee, \$3.00.

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—Winter quarter. Four hours.

Fee, \$3.00.

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—Spring quarter. Four hours.**

Fee, \$3.00.

A continuation of Physics 12 but devoted to the study of light and sound.

103. THE PRINCIPLES OF RADIO RECEPTION—Fall quarter. Four hours.

Fee, \$3.00.

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—Winter quarter. (Not given 1929-30.) Four hours.

Fee, \$3.00.

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—Fall quarter. Two hours.

Fee, \$3.00.

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—Fall quarter. Two hours.

This course is a 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.

108. METHODS OF TEACHING HIGH SCHOOL PHYSICS—Winter quarter. Four 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.

*Given also by extension.

111. PHYSICS OF THE AUTOMOBILE—Spring quarter. (Not given 1929-30.) 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 sales-rooms 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—Winter quarter. 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 of 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 nontechnical in character.

115. LIGHT AND COLOR—Fall quarter. (Not given 1929-30.) Four hours.

A nontechnical course offered especially for art students involving the principles of light, shade and color. It will consist of illustrated lectures and demonstrations.

121. DIRECT AND ALTERNATING CURRENTS—Fall quarter. (Not given 1929-30.) 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.

223. RESEARCH IN PHYSICS—Every quarter. 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—Every quarter. Two hours.

Fee, \$3.00.

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.

Fee, \$3.00.

This is a continuation of Physics 224.

SCIENCES

1. OUTLINES OF SCIENCE—Every quarter. 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 culture 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.

2. OUTLINES OF SCIENCE—Every quarter. Four hours.

This course is a continuation of course 1. 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.

The content of the course is a study of unicellular plants and animals as to life habits, methods of reproduction, etc.; the intermediate forms of life, how they are related to each other, and how they are related to the lower forms; 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.

SOCIOLOGY

FIRST YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Civ'l. 1 Ed. 1 Phys. Ed. Sci. 1 Soc. 1	Art 1 Eng. 4 Hyg. 1 Mus. 25 Phys. Ed. Soc. 1	Civ'l. 1 Ed. 1 Eng. 0 Phys. Ed. Soc. 1	Fall
Winter	Art 1 Elective Mus. 25 Phys. Ed. Sci. 2 Soc. 2	Civ. 1 Elective Phys. Ed. Sci. 1 Soc. 2	Elective Eng. 4 Hyg. 1 Phys. Ed. Soc. 2	Winter
Spring	Elective (2 hrs.) Hyg. 1 Observ. 1 (2 hrs.) Phys. Ed. Psych. 2a Soc. 3	Ed. 1 Phys. Ed. Sci. 2 Soc. 3 Soc. 10	Art 1 Hist. 10 Mus. 25 Phys. Ed. Sci. 1 Soc. 3	Spring

SECOND YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Phys. Ed. Psych. 2b Soc. 4 Teaching 1	Elective (2 hrs.) Minor Observ. 1 (2 hrs.) Phys. Ed. Psych. 2a Soc. 4	Ed. 10 Eng. 21 Phys. Ed. Sci. 2 Soc. 4	Fall
Winter	Ed. 10 Eng. 21 Phys. Ed. Soc. 5	Minor Phys. Ed. Psych. 2b Soc. 5 Teaching 1	Eng. 22 Observ. 1 (2 hrs.) Phys. Ed. Psych. 2a Soc. 5	Winter
Spring	Eng. 22 Hist. 125 Minor Phys. Ed. Soc. 6	Ed. 10 Elective Eng. 21 Phys. Ed. Soc. 6	Minor Phys. Ed. Psych. 2b Soc. 6 Teaching 1	Spring

THIRD YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Hist. 126 Minor Soc. 10 Soc. 98	Eng. 22 Hist. 125 Soc. 10 Soc. 98	Ed. 10 Minor Soc. 10 Soc. 98	Fall
Winter	Ed. 116 Elective Minor Soc. 100	Elective Hist. 126 Minor Soc. 100	Elective Hist. 125 Minor Soc. 100	Winter
Spring	Elective Observ. 2 (2 hrs.) Psych. 105a Soc. 110	Ed. 116 Elective Minor Soc. 110	Elective Hist. 126 Minor Soc. 110	Spring

FOURTH YEAR

	Sec. A	Sec. B	Sec. C	
Fall	Soc. 120 Soc. 125 Teaching 2 Minor	Observ. 2 Psych. 105a Soc. 120 Soc. 125	Ed. 116 Soc. 105 Soc. 120 Soc. 125	Fall
Winter	Minor Soc. 105 Soc. 130 Soc. 135	Elect. Eng. Soc. 130 Soc. 135 Teaching 2	Elective Observ. 2 Psych. 105a Soc. 130 Soc. 135	Winter
Spring	Ed. 111 Elect. Eng. Elective Minor	Ed. 111 Elective Elective Minor Soc. 105	Ed. 111 Elect. Eng. Minor Teaching 2	Spring

SOCIOLOGY

The primary object of this department, as of all other departments of the College, is to prepare teachers, principals, supervisors and superintendents for service in the schools, particularly the schools of Colorado.

Inasmuch as schools are social agencies and those engaged in conducting them are social servants, it should be obvious that such preparation is incomplete without a knowledge of the science of society, namely, sociology, particularly in its relation and applications to education. Almost every educational problem is at bottom a social problem, or at least educational problems may best be solved through an understanding of their social setting. Some knowledge of sociology is therefore of great practical importance to everyone engaged in school work. The first object of this department, then, is to provide such knowledge of sociology, and the social problems arising in connection with the school, as is thought to be necessary to everyone who is in any way engaged in school work.

There is, however, a second purpose. There is an ever increasing demand for teachers of the social sciences. Sociology, cultural anthropology, economics, and comparative religion, the subjects in which courses are here offered, all belong to this group. Sociology particularly provides an excellent background and preparation for the teaching of any of the other social sciences, such as history, geography, civics, etc., and the courses in anthropology and economics are especially helpful in this regard. This department aims specifically to aid in equipping the student for successful teaching in any of the social sciences, as well as for supervisory and administrative work. Graduates of the department often secure positions in social welfare work.

To meet the purposes above indicated, a series of courses is offered in sociology proper, social anthropology, economics, and comparative religion.

A FOUR-YEAR COURSE OF STUDY IN SOCIOLOGY

Majors in Sociology are required to distribute their core subjects according to the diagram on page 180. Their departmental subjects should be distributed according to the diagram in the first two years, but in the junior and senior years more liberty is allowed in making the distribution.

In addition to the core subjects listed on page 58, the following courses are required of majors in the department: Soc. 1, 2, 3, 4, 5, 6, 10, 98, 100, 110, 120, 125, 130, 135. A minor of twelve to twenty-four hours must be chosen.

Courses 1, 2, 3, 4, and 98 should be taken, if possible, in the order indicated and before the senior college required course, namely, 105.

*1 INTRODUCTION TO THE SOCIAL SCIENCES—Fall and spring quarters. Four hours.

This course is the beginning of Course 2 which completes it as a unit of study. It is designed to give the student a general acquaintance with the whole field of the natural sciences, to stimulate interest in the study of science, and in the lives and achievements of the outstanding men who have contributed most to the development of science. Following a brief consideration of what science is, the nature and importance of the scientific method of study, how and why the various sciences have originated and the unity of science notwithstanding its various divisions, the most striking facts, incidents, and discoveries in the main branches of science are set forth with the design not only of awakening interest in science but also of enlarging the student's knowledge of the general field so that he may determine more intelligently the direction of his further scientific study. In this half of the course, owing to lack of time, only the field of the physical and biological sciences is covered.

*Given also by extension.

2. INTRODUCTION TO THE SOCIAL SCIENCES—(A continuation of Course 1)—Winter and summer quarters. Four hours.

In this second half of the full course indicated by numbers 1 and 2, the field of psychology and sociology is surveyed in the manner and with the purpose indicated in Course 1, chief emphasis being laid upon the main facts and discoveries with respect to the mind and society, and the most interesting incidents in the lives and works of those who have contributed most to the development of science in this particular field. This course, together with Course 1, is intended to provide the student with a comprehensive view of all the sciences, with such knowledge of them as every citizen should possess, and particularly every teacher, and to stimulate the interest of the student so that all the work of his college course may be more pleasurable and interesting.

***3. EDUCATIONAL SOCIOLOGY—Winter and summer quarters. Four hours.**

This is an elementary course in sociology as bearing particularly upon education; a course in which the problems of school organization, management, discipline and instruction, and those naturally arising from the teacher's relation to the community, are approached from the social and sociological point of view. It aims to present just that contribution of sociology that is regarded as essential to successful teaching in the elementary schools. No teacher should begin work in the schools without it or its equivalent.

***4. RURAL SOCIOLOGY—Winter and summer quarters. Four hours.**

The design of this course is not to prepare the teacher for the immediate task of teaching in the rural schools; that is done in courses in Education on rural schools; but it is rather to prepare teachers and principals in rural communities to discharge their duties to the community through an understanding of community life. The course is concerned, then, not directly with the rural school but with the rural community. It focuses attention on the community as a social group, just as in Sociology 5 attention is centered on the family as a social group. Topics considered are such as the origin and development of the modern rural community, its population status, its social, economic and religious institutions in their relations to the school, its various types of organization to promote its own welfare, and how the teacher may best aid in such work.

***5. THE FAMILY—Spring and summer quarters. Four hours.**

A treatment of the origin and development of the family in all its forms; its changing economic and legal status, as well as that of women and children; divorce and the other domestic problems arising from our changing industrial and social order, together with the current theories of domestic reform, radical and conservative.

6. CHILD WELFARE—Fall and spring quarters. Four hours.

A systematic study of the social conditions affecting the welfare of children in order to provide the necessary criteria by means of which the teacher, the parent or the social worker will be better enabled to approach and evaluate the special phases of child welfare that are the particular concern of these persons. The following are some of the topics discussed: Conservation of child life, birth rates and accompanying social phenomena, child mortality—its underlying causes and the methods of its prevention; health and the physique of children as socially affected, and the means by which they may be established and maintained; juvenile delinquency, its nature, causes and treatment; dependent children, causes of dependency and its method of treatment.

10. ELEMENTARY ECONOMICS—Fall and spring quarters. Four hours.

This is primarily a descriptive course explaining the terms of economics and giving such acquaintance with our industrial life as is essential to the conduct of ordinary business affairs. It gives a general and unified acquaintance with our modern industrial order such as every teacher and every citizen should have. It is preparatory to course 110. Students will visit various industrial institutions to get knowledge at first hand.

96. GENERAL ANTHROPOLOGY—Fall quarter. Four hours.

A general and comparative elementary study of primitive peoples, their physical characteristics, beliefs, customs, arts, industries, forms of government, and religions. This course is illustrated by concrete material, relating particularly to the primitive inhabitants of North and South America. It is an introduction to and a preparation for the courses immediately following as well as for all the more advanced courses in sociology.

*Given also by extension.

98. THE ORIGIN, DEVELOPMENT AND ANTIQUITY OF MAN AND HIS SUPERSTITIONS—Winter quarter. 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.

100. EARLY CIVILIZATION IN EUROPE AND AMERICA—Spring quarter. 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.

105. AN INTRODUCTION TO THE SCIENCE OF SOCIOLOGY—Every quarter. Four hours.

This course is a study of the nature, history, scope and methods of sociology, with brief sketches of the leading contributors to this science, and an exposition of the main principles of sociology as set forth systematically in a selected text. Lectures, readings and reports. Required of senior college students.

106. ADVANCED SOCIOLOGY—Winter quarter. Four hours.

This course is a continuation of the preceding course and involves a more intensive study of sociology as a science, and of its main contributions to our knowledge of the world. Particular attention is given to the relationship of sociology and sociological principles to school supervision and administration.

110. PRINCIPLES OF ECONOMICS—Winter and summer quarters. Four hours.

This course naturally follows, and should be taken if possible immediately after, Number 10. It is based upon one of the recognized texts in economics. Attention is devoted chiefly to the phenomena of production, distribution and exchange, with a view to preparing the student for the intelligent discussion of the various present day economic problems, such as immigration, the tariff, currency reform, taxation, insurance and like topics. With Course 10 followed by this course the student should be prepared to teach the subject of economics in the high schools.

120. SOCIAL MEASUREMENTS, SURVEYS AND STATISTICS—Spring quarter. Four hours.

The purposes of this course are to acquaint the student with the methods employed in sociology in the study of group phenomena, and to enable him to conduct a social survey and to present and interpret scientifically the data so collected. It is regarded as essential to the scientific investigation of a social situation. Practice will be given in the application of the methods discussed.

122. COMPARATIVE RELIGION—Every quarter. 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—Fall, spring and summer quarters. Four hours.

An intensive study of practical social problems such as poverty, crime, divorce, immigration, the race problem in America, etc., with particular attention to the scientific methods employed in the study of such problems. As different problems are likely to be discussed each quarter, the course may be repeated as Sociology 125b and 125c.

130. THE SOCIOLOGICAL ASPECTS OF PATRIOTISM, PEACE, AND WAR—Summer quarter. Four hours.

In this course an attempt is made to conduct the student thru 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.

135. RACES, RACE CONTACT AND RACE PROBLEMS—Summer quarter. 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. Materials and illustrations are drawn in part from Dr. Howerth's experiences in a recent trip around the world.

136. SOCIAL PSYCHOLOGY—Fall quarter. Four hours.

A study of suggestion and imitation and their employment in education; the methods employed in propaganda and advertising; the crowd spirit; mobs; fads; fashions; booms; crises; conventionality; custom; conflict; leadership and like topics.

140. THE DEVELOPMENT OF SOCIAL THOUGHT—Winter quarter. Four hours.

This course gives a sketch of social thought from the earliest times down to today, with a brief account of the great social thinkers of the past and the present. It is "The Story of Social Philosophy."

150. THE SOCIAL THEORY OF EDUCATION—Winter quarter. 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 aims of nature with the aims of artificial education, considers the final aim of educational effort, the school as a social instrument, and the relation of education to social progress. In a word all the various topics usually considered in a course on the philosophy of education are discussed from the sociological and evolutionary viewpoint. The text in this course is Dr. Howerth's "Theory of Education."

200. SEMINAR—When requested by six or more students. 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 doctrines of one or more of the leading sociologists of the world, present or past. The course may be continued for eight additional hours as Sociology 201 and 202.

223. RESEARCH IN SOCIOLOGY—Every quarter. 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 a 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.

224. RESEARCH IN SOCIOLOGY—Every quarter. Four hours.

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

225. RESEARCH IN SOCIOLOGY—Every quarter. Two hours.

A continuation of Sociology 224.

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