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COLORADO STATE
TEACHERS COLLEGE
Greeley, Colo.

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Colorado State Teachers
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Winter Quarter, 1930



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Series 28
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COLORADO STATE TEACHERS COLLEGE

BULLETIN



CATALOG AND YEAR BOOK 1928-1929

GREELEY

SERIES XXVIII

APRIL

NUMBER 1

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BULLETIN

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CATALOG
AND
YEAR BOOK

COLORADO STATE TEACHERS COLLEGE

1928—1929

GREELEY, COLORADO
PUBLISHED BY THE COLLEGE
APRIL, 1928

1928—THE COLLEGE CALENDAR—1929

FALL QUARTER 1928

<i>Sept. 20.</i>	<i>Thursday</i>	Freshman Week begins, 10:30, Little Theater
<i>Sept. 24.</i>	<i>Monday</i>	Registration of Freshmen
<i>Sept. 25.</i>	<i>Tuesday</i>	Registration of Upper Classmen
<i>Sept. 26.</i>	<i>Wednesday</i>	Classes begin
<i>Nov. 11.</i>	<i>Sunday</i>	Armistice Day (Holiday)
<i>Nov. 29-30,</i>	<i>Thursday, Friday</i>	Thanksgiving (Holiday)
<i>Dec. 8.</i>	<i>Saturday</i>	Advance Registration for Winter quarter
<i>Dec. 16.</i>	<i>Sunday</i>	Christmas Vacation begins

WINTER QUARTER

<i>Dec. 31.</i>	<i>Monday</i>	Registration of New Students
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1929

<i>Jan. 2.</i>	<i>Wednesday</i>	Classes begin
<i>Feb. 22.</i>	<i>Friday</i>	Washington's Birthday (Holiday)
<i>Mar. 9.</i>	<i>Saturday</i>	Advance Registration for Spring quarter
<i>Mar. 17.</i>	<i>Sunday</i>	Spring Vacation begins

SPRING QUARTER

<i>Mar. 25.</i>	<i>Monday</i>	Registration of New Students
<i>Mar. 26.</i>	<i>Tuesday</i>	Classes begin
<i>May 3.</i>	<i>Friday</i>	Insignia Day
<i>May 30.</i>	<i>Thursday</i>	Memorial Day (Holiday)
<i>June 8.</i>	<i>Saturday</i>	Commencement

SUMMER QUARTER

<i>June 15.</i>	<i>Saturday</i>	Registration
<i>June 17.</i>	<i>Monday</i>	Classes begin
<i>July 4.</i>	<i>Thursday</i>	Independence Day (Holiday)
<i>July 20.</i>	<i>Saturday</i>	First Half ends (Registration for second half quarter)
<i>July 22</i>	<i>Monday</i>	Second Half begins
<i>Aug. 24.</i>	<i>Saturday</i>	Summer Convocation

IMPORTANT ANNOUNCEMENT

CERTIFICATE OF HIGH SCHOOL GRADUATION—Students enrolling for the first time in the College and those whose admission has not yet been formally arranged must obtain an entrance blank. The request for this blank should reach the registrar's office at least a month before the opening of the quarter. Send the blank to your superintendent or principal, who will forward the same, completed, direct to the registrar. The prospective student should have received a report as to conditions of his admission at least two weeks before the opening date of the first quarter he attends the College. Do not present a diploma unless full and complete data indicated above are not available.

Special summer students may not consider themselves candidates for graduation until properly matriculated. This means that entrance credits must be presented, as indicated above, unless admission is accepted in any other approved manner. Matriculation is not complete until the student has taken all required tests, a physical examination made by one of the College physicians, and a photograph taken for permanent filing. Fees will be announced at the time these things are done. All students, even though once graduated, are required to readjust their admission to correspond with entrance standards now effective, before continuing a higher course.

Special Admissions—See page 39 for a statement concerning other ways of gaining entrance, either as regular or unclassified students.

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PART I
ORGANIZATION OF THE COLLEGE

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- EDITH GALE WIEBKING, A.B., A.M. *Associate Professor of Household Arts*
A.B., A.M., Colorado State Teachers College.
- GRACE HANNAH WILSON, A.B., A.M. *Associate Professor of Education;
Director of Religious Activities*
Diploma, Colorado State Teachers College; A.B., Colorado College;
A.M., Teachers College, Columbia University; Graduate Student, Har-
vard University.
- WILLIAM LAWRENCE WRINKLE, A.B., A.M. *Principal of
Teachers College High School;
Professor of Secondary Social Science*
A.B., A.M., Colorado State Teachers College.
- A. F. ZIMMERMAN, A.B., B.D., A.M., Ph.D. *Assistant Professor of History*
A.B., McKendrie College; B.D., Drew Theological Seminary; A.M.,
Teachers College, Columbia University; Ph.D., University of Illinois.

 THE LIBRARY

- ALBERT FRANK CARTER, A.B. *Head Librarian*
- GRACE LILLIAN CUSHMAN *Assistant Librarian*
Diploma, Colorado State Teachers College.
- ANN MAXVILLE, A.B. *Library Assistant*
A.B., Colorado State Teachers College.
- WILLIAM BIDWELL PAGE, M.D. *Assistant Librarian*
M.D., University of Michigan.
- 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; Student, New York State Library School and New York
University.

 *On leave.

THE CONSERVATORY OF MUSIC

- J. DEFOREST CLINE** *Director of the Conservatory of Music;
Professor of Public School 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 under Albert Zoellner, Jacques Gottlieb, Earl Pfouts, Philadelphia; Sol Marcossou, Frederic MacMurray, Carl-Frederic Steckelberg, University School of Music, Lincoln, Nebraska; and Leon Sametini.
- 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, Illinois; 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*)
B.S., Music Education, Teachers College, Columbia University; Public School Music Diploma, Bowling Green Normal College, Bowling Green, Ohio; Graduate Student, Teachers College, Columbia University; Voice, Prof. R. M. Tunnickliffe, Walter Kiesewetter, Madame Aslanoff, Percy Rector Stephens, Dean Harold Butler, Syracuse University.
- LESTER EDWIN OPP** *Assistant Professor of Music*)
B.M., Dana's Musical Institute; 'Cello, L. A. Gregory, Dillon, Montana, and L. V. Ruhl, Dana's 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, Thiel College, Pennsylvania; Oboe and Saxophone, Professor J. D. Cook, Dana's Musical Institute.
- ANGIE S. K. SOUTHARD** *Instructor in Music Appreciation* √
A.B., Wellesley 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 at University of Berlin.
- JAMES J. THOMAS** *Assistant Professor of Music*)
B.M., Dana's Musical Institute, Warren, Ohio; Violin Pupil of Charles H. Lowry; Pupil of John Hundertmark.

SPECIAL FACULTY AND GENERAL LECTURERS

SUMMER QUARTER, 1928

In addition to the regular faculty, which will serve almost in its entirety through the summer quarter, the College will bring in a number of outside lecturers and teachers, leaders in their respective fields, who will conduct courses in the different departments. Some of those who will thus supplement the already strong faculty personnel are:

- DR. GEORGE E. RAIGUEL, Physician, and Lecturer on History and Politics; Staff Lecturer on International Politics for the American Society for University Teaching. Lecturer.
- DR. CARLETON W. WASHBURNE, Superintendent of Schools, Winnetka, Illinois; Expert in Field of Individual Instruction. Courses in Education.
- DR. EDWARD HOWARD GRIGGS, Author and Lecturer on Literature and Philosophy. Lecturer.
- MISS CAROLYN ELIZABETH GRAY, Lecturer in Nursing Education; Author and Hospital Nurse Superintendent. Courses in Nurse Teacher Training.
- DR. JESSE H. NEWLON, Director the Lincoln School of Teachers College, Columbia University; Former President National Education Association; Leading Educator, Lecturer and Author. Lecturer.
- MRS. SATIS COLEMAN, Music Investigator for Lincoln School of Teachers College, Columbia University; Author, and Lecturer on Music. Courses in Music and Music Education.
- DR. ARTHUR H. NOYES, Assistant Professor of History and Director of Freshman Course in European History, Ohio State University. Courses in History.
- MRS. HILDEGARD SWEET, Dean of Girls, West High School, Denver, Colorado. Courses in Psychology and Education.
- MR. ALFONSO IANNELLI, Art Institute of Chicago; Artist and Sculptor of International Renown. Courses in Art.
- MISS JESSIE HAMILTON, Principal Morey Junior High School, Denver, Colorado. Courses in Education.
- DR. ERNEST HORN, Professor of Education, State University of Iowa. Courses in Education, and Lecturer.
- MR. A. L. THRELKELD, Superintendent of Schools, Denver, Colorado. Lecturer.
- DR. ROLLO WALTER BROWN, Author and Lecturer on Literature and Philosophy. Lecturer.
- DR. JOHN CROWE RANSOM, Professor of English, Vanderbilt University. Courses in Literature.
- MR. A. E. SHIRLING, Head of the Department of Natural Science and Geography, Teachers College, Kansas City, Missouri. Courses in Biological Sciences.
- MR. MERLE PRUNTY, Principal Central High School, Tulsa, Oklahoma. 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.
- MR. CLARK FRASIER, Director of Training, Lewiston State Normal School, Lewiston, Idaho. Courses in Education.

PART II
GENERAL INFORMATION

HISTORICAL SKETCH

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

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

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

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

LOCATION

Colorado State Teachers College is located in Greeley, Weld County, Colorado, on the Union Pacific and the Colorado & Southern Railways, fifty-two miles north of Denver. This city is in the valley of the Cache la Poudre river, one of the richest agricultural sections of the state. The altitude is 4,567 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 65,000 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, the Junior High School, the Elementary School, and the Kindergarten. 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 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 manual training and art, including every branch 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 house. 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 especially well suited for the new purposes to which it has been put. 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.

HOUSEHOLD ARTS 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 household arts in a teachers college, including both household arts and household science. A well-arranged cafeteria is maintained to provide meals for students.

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 healthful 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 will be, there will be 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 serve 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 customs 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, it is easier for her to find a suitable room in a private home.

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 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.

DEPARTMENTAL MUSEUMS

The museums of Colorado State Teachers College are fully developed for actual use. Each department maintains a well-arranged museum. The objects in the museums are such as may be used by way of illustrating lessons.

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 65,000 volumes. There is ample opportunity to work out subjects requiring library research. There is a handicraft department connected with the library wherein a student may learn how to conduct a library.

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, including matters of conduct and discipline, social life, and 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 \$3.75, which admits the student to all Associated Student activities with the exception of athletics and benefits:

The affairs of the association are managed by an elected council consisting of the class presidents, two representatives from each class, the officers of the association, and the editors of the student publications.

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.

FEES AND EXPENSES

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.

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 such rooms from which they may make a selection. No student should rent her room by mail. Prospective students are urged to come a few days before the opening of the quarter and personally select their rooms. The office of the dean of women is open during the month of September for this purpose.

Any student wishing to move from his or her rooming place during a quarter must have permission from the vice-president of the College or the dean of women. This permission is given only in very unusual cases.

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. In selecting a room first, the student runs a great risk of finding no roommate.

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 per student for a quarter. Rooms outside of the dormitories rent from \$12.00 to \$16.00 for one in a room and \$18.00 to \$24.00 for two in a room per month. Rooms in houses where the privilege of light housekeeping is granted cost from \$18.00 to \$26.00 a month for two students.

Table board costs an average of \$6.00 per week in the College cafeteria. In private boarding houses, the cost is usually \$6.00 or \$6.50 per week.

Board	\$72.00
Room	42.00
Matriculation fee	5.00
Physical Education and Health fee	2.00
Incidental fee	8.00
Library fee	2.00
Student Association fee	3.75

Total for a quarter (12 weeks)..... \$134.75

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

- 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, 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 65,000 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.

THE SUMMER QUARTER

The summer quarter of 1929 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 college 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.

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 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 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 five hours of student teaching is required of all 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. Ed. 101, "Principles of Teaching in the High School," precede the student teaching. This course consists of a series of systematic observations together with a study of the technic and principles of teaching in high schools.

REQUIREMENTS IN STUDENT TEACHING

1. No student is eligible for student teaching whose college grades show thirty percent D's or F's 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. The course in observation (Ed. 2a) shall consist of two regular observation hours each week and one conference hour every two weeks with the training teacher. This course shall also include assigned readings, which will supplement the observations and prepare the student for the subsequent course in student teaching. This course in observation (Ed. 2a) carries one hour credit.

4. 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).

5. 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.

6. 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).

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

8. Additional prerequisites for student teaching in the junior college are: Ed. 1, Ed. 2a, and the method courses required for the majors listed on pages 76 and 77. The prerequisite for student teaching in the high school is Ed. 101 and at least one method and one content course in the student's major.

9. A full quarter of student teaching carries five hours of credit. This course meets five days a week, and in addition one-hour group conferences are required on Tuesdays, the minimum number of which shall be those held on the first and third Tuesdays of each calendar month at 4 o'clock.

10. 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 standard college entrance test
- b. A score above average on the English Exemption test
- c. A grade of less than "C" (the average) in two college courses within one quarter disqualifies.
- d. No exemption is allowed where students have changed their major and have had no teaching experience in their new field.

DEPARTMENT OF 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 work when work on the masters' theses 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.

THE 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. Extra-mural classes and part-time enrollment classes are considered as resident work and may be counted as such to the extent of one quarter on the two-year course and one of the two resident quarters required beyond that for the Bachelor of Arts degree. Sixteen hours of graduate credit may be earned by completing approved extra-mural courses. Three hours credit. Fee \$10.00.

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. Three hours credit. Fee \$10.00.

3. **CORRESPONDENCE COURSES**—For the convenience of those who can not 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. Fee \$2.50 per credit hour, plus a 25-cent postage fee per credit hour. A four-hour course thus costs \$11.00, a three-hour course \$8.25.

LIMITS OF EXTENSION CREDIT—Since September 1, 1926, students have not been permitted to apply more than twenty four credit hours of extension class or correspondence credit toward the two-year course or 48 hours toward the Bachelor of Arts degree course. 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.

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 charge 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 January 1, 1927, and January 1, 1928, there were 501 graduates of the College who obtained positions through the placement bureau. These positions were in twenty-three states of the Union. Three graduates obtained positions outside of the United States—two in Hawaii and one in Newfoundland.

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.

STUDENT 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 an 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.

NORMAL STUDENT LOAN FUND—The money constituting this fund consists of contributions from persons, classes, and organizations dis-

posed 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 \$225.00 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 \$3,658.00 which is to be lent to female 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.

GRADUATE LOAN FUNDS—For information about graduate loan funds, see pages 48 and 49.

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.

This College will remit tuition or fees in cases of exceptionally worthy students who do not qualify under this scholarship plan. But in each case, these students to be considered must be recommended by a *committee of the high school faculty* and will be finally passed upon by a committee composed of the registrar and two faculty members who are appointed by the president. This school will remit fees or tuition beyond the total number of 25 students in any one year.

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 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 III
ADMISSION, GRADUATION, CREDITS

ADMISSION

The following entrance requirements were adopted beginning September 1, 1924, and are now effective:

- GROUP I (Required) Minimum of four units must be presented
1. English 3
 2. Social Science (History, Civics, Sociology, Economics)..... 1

- GROUP II (Required) Minimum of five units must be presented
3. Foreign Languages (A single unit will be accepted in one foreign language, but not in more than one)
 4. Mathematics (May include Advanced Arithmetic, after Algebra, but does not include Commercial Arithmetic)
 5. The Physical and Natural Sciences (Physics, Chemistry, Biology, General Science, Botany, Zoology, Physical Geography, Physiology, Hygiene, Agriculture)

Note: Excess units above what is actually required in Groups I and II may be counted in Group III as electives

- GROUP III (Elective) A maximum of six units may be presented
6. Music and Fine Arts
 7. Commercial Arts
 8. Home Economics
 9. Manual Arts
 10. Normal Training (Maximum of two units)

Note: If more than four units are presented in any special field (Nos. 6, 7, 8, 9), they will be accepted for entrance only in the same special field of work in the College.

All candidates for admission must satisfactorily pass a physical examination and also make an acceptable score in a standard classification test, an English test, and an achievement test. (Read pp. 41 and 42 to determine what "matriculation" includes.) Students from non-accredited high schools may gain admission to the College by presenting the same kind of credentials for admission as are required of students from accredited schools. The College will, however, give more attention to the showing made in the three tests than is given for graduates of accredited schools. An applicant for admission must be certified as being of good moral character, in good health, and free from any physical defects such as defective hearing or marked physical deformity that would interfere with success as a teacher.

CONDITIONAL ADMISSION—Any applicant who is not a high school graduate, but who is credited with 14 high school units, may be admitted to the College upon presenting a transcript from a reputable high school, showing the completion of 14 units in designated groups. Such students are limited to a maximum program of 12 hours per quarter in the College, and must make up the deficient high school work during their first year in the College. A student may be admitted unconditionally by offering fifteen standard units in the designated required and elective groups provided graduation from an accredited high school has been effected and further provided that the grades do not place the student in the lowest quartile of the high school class. Otherwise, additional requirements may be imposed. The student can not be enrolled for the second year until the entrance condition has been removed.

Adult students (twenty years of age or over) may be admitted to the College upon passing the three tests required of all students, provided the scores are sufficiently high to assure the College that the student has the ability to carry on college work, even though he may have had no high school training, or only a partial high school course.

FRESHMAN ENROLLMENT—All freshmen enrolling in this College for the first time are required to report at 10:30 o'clock Thursday, September

20, 1928, 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, must present himself or herself for a health examination and for the usual classification test and the English test. 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 24. Those who are accepted for entrance into the College will then complete their registration in classes during Monday, September 24. Upper class registration will take place on Tuesday, September 25, and classes will begin on Wednesday, September 26.

GRADUATION

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 (ninety-six quarter hours) course. This course 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, at least thirty-two of which must be done in residence, the Life Certificate 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 public schools.

III. THE BACHELOR OF ARTS DEGREE

The Bachelor of Arts degree is granted upon the satisfactory completion of four years work. (See page 51 for details).

IV. THE MASTER OF ARTS DEGREE

See Part IV "Graduate Work," pages 45-48.

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.

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. Extra-mural classes and part-time enrollment classes conducted by members of the College faculty are considered as resident work and may be counted as such to the extent of one quarter for the two-year course and one of the two resident quarters required beyond that for the Bachelor of Arts degree.

CREDITS

UNIT OF COLLEGE CREDIT—All credit toward graduation is completed in "quarter-hours." The term "quarter-hour" 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, 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.

THE TEN-HOUR RULE—A student failing to pass in ten hours of college work out of a full quarter's program of from twelve to eighteen hours will be dropped at the end of the quarter and may not enroll again except by special permission of the vice-president, and then only on probation for one quarter. The second failure to pass in ten hours of work permanently excludes the student from the College. Students taking less than a normal program, with the special approval of the director of freshman studies in the case of freshmen, or the registrar in the case of upper classmen, are expected to complete satisfactorily two-thirds of the number of hours taken. The completion of courses after the teachers' grades are filed with the registrar will not involve suspension of the rule unless petition has been made by the student for special consideration before the grades are reported.

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 dean of women in the case of women students or the vice-president in the case of men students, 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 dean of women or 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.

THE HOUSING OF WOMEN STUDENTS—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.

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.

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 or personal qualifications at the end of the first quarter are unsatisfactory will not be admitted to candidacy for the degree.

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

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 who restrict their graduate work entirely to the summer quarters must complete and have approved by the Graduate Council all requirements including the thesis within five summer quarters, or additional requirements may be made by the Graduate Council.

REQUIREMENTS FOR THE DEGREE

1. Beyond the four-year undergraduate course, the student working for the degree, Master of Arts, must earn graduate credits amounting to 48 quarter hours. Three quarters of work in residence are required, but one quarter of approved graduate work may be transferred from another institution; or 16 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 (32 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 9 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 64 quarter hours of undergraduate and graduate work in his major or closely related subjects.
6. He must have not less than 32 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 4 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 2 weeks before the date upon which the degree is to be conferred, the complete thesis in final form must be approved and 2 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 type-written 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.

GRADUATE FELLOWSHIPS, SCHOLARSHIPS, AND LOAN FUNDS FOR 1928-29

TEACHING FELLOWSHIPS

Ten graduate teaching fellowships will be available for the school year 1928-29. 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.

DELTA PHI OMEGA GRADUATE SCHOLARSHIP

The Delta Phi Omega sorority offers a graduate scholarship with a stipend of \$150 for the school year of 1928-29. 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.

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.

PART V
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.

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

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:

Art	Rural Schools
Kindergarten-Primary	Industrial Arts
Intermediate Grades	Home Economics
Upper Grades	

This regulation is made because it is impossible to place teachers with less than four years of college training in positions in accredited high schools, except in certain of the types of work noted above. Teachers with less than four years of college training usually go into the elementary or 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 the Life 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 for the two-year certificate may, however, begin his course as a major in one of the listed curricula and at the same time elect the departmental requirements of the first two years of the curriculum he finally expects to use as his major. At the end of two years he may take his certificate with a major, for example, in junior high school 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 go on and complete his four-year curriculum and receive the degree of Bachelor of Arts in the field finally chosen. During the first two years this student would register as a major in one of the designated departments. 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—Each course is planned to occupy twelve quarters. A quarter is approximately twelve weeks in length. Upon the completion of the course the degree of Bachelor of Arts will be granted. Each course is so arranged that it may be divided in the middle. The first part of the course may be completed in six quarters. The student who chooses to be graduated at the end of the two-year course receives the Limited Certificate good for three years, but no degree.

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: Biology 1, English 0 or 4 (unless excused for proficiency), Health Education 1, Education 1, Civilization 1 and 2, and a Physical Exercise course each quarter.

SECOND YEAR: Psychology 2a and 2b, Education 2a and 2b (pre-student observation and student teaching), Education 10, and a Physical Exercise course each quarter.

THIRD AND FOURTH YEARS: (For majors in elementary school work, supervision, etc.) Education 102 (student teaching), Education 111, Psychology 104 and 108a, and Sociology 105.

THIRD AND FOURTH YEARS: (For majors expecting to become high school teachers, supervisors, and principals.) Education 101, 103 (student teaching), and 111, Health Education 103, Psychology 105 and 108b, Sociology 105, and Education 116, or Education 113 if intending to teach in the junior high school.

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

Art	53	History and Political Science.....	103
Athletics and Men's Physical		Home Economics.....	108
Education	56	Industrial Arts.....	112
Biology	60	Library Science.....	117
Chemistry	64	Mathematics	118
Commercial Education	67	Music	121
Education (all divisions).....	75	Physical Education and Athletics	
Educational Psychology.....	85	for Women.....	126
English and Literature	91	Physics	130
Foreign Languages	97	Sociology, Anthropology and Eco-	
Geology, Physiography, and		nomics	132
Geography	100		

HOW TO MAKE UP A COMPLETE COURSE OF STUDY—To make up your complete course of study, list by years the "core" subjects first. Then turn to your major department and add to the list of "core" subjects the departmental subjects prescribed for each year. If the sum of these two lists does not make forty-eight hours per year, you are permitted to elect other subjects to make up the full forty-eight hours required for each year's work.

ART

The Art Department offers technical and professional courses intended to give a conception of the fundamental principles of art structure which help the student to a better interpretation of art in its various forms, provide a working basis for creative art expression, and develop power and skill. In the technical courses the purpose is to increase the student's power of expression and to aid in the understanding of art structure; in the more professionalized courses dealing more specifically with problems in art education, the purpose is to familiarize the student with methods of teaching, organization of subject matter, supervision and administration of art teaching, and research.

The aim is to meet the needs of students preparing to be teachers or supervisors in the field of art education, and to assist grade teachers to a better understanding of art in its relations to the general curriculum.

COURSE OF STUDY

In addition to the core subjects as listed on page 52, this department requires:

FIRST YEAR: Art 2, 3, 3a, 4a, 14, 16, 17, and Industrial Arts 10.

SECOND YEAR: Art 1, 4b, 5, 6, 7, 9, 12, 13.

THIRD YEAR: Art 100, 101, 104, 108, 116, and 117.

FOURTH YEAR: Art 103, 104a, 120, and eight hours of Art to be selected by the student.

1. FINE ARTS METHODS FOR INTERMEDIATE GRADES AND JUNIOR HIGH SCHOOL.—Winter and summer quarters. Four hours. Fee, 50 cents.

This course consists of the presentation of methods for teaching fine arts together with the subject matter handled in intermediate grades and junior high schools. The student has practice in art expression, in organization of subject content, and in lesson planning. Subjects considered in this course are freehand drawing, perspective, composition, color, design, art appreciation, art in costume, in the home and community life. Mediums used are pencil, charcoal, water colors, crayons.

2. FINE ARTS METHODS FOR PRIMARY—Each quarter. Four hours. Fee, 50 cents.

This course consists of the presentation of methods for teaching fine arts together with the subject matter handled in primary grades.

The student has practice in art expression, in organization of subject content and in lesson planning. Subjects considered are freehand drawing, painting, design, color, compositional principles, and art appreciation in relation to the needs of primary children at school, at home and in the community. Mediums: crayon, water color and paper cutting.

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

Drawing in line and in dark and light with emphasis on perspective and composition. Mediums: pencil, pen and ink, charcoal. Reference texts, "Perspective," Norton; "Composition," Dow.

3a. ART STRUCTURE I—Fall quarter. Four hours.

An introductory course devoted to the study of basic principles in art structure to give the student a working basis for the interpretation and expression of fine arts. Creative problems in spacing, value relations, and color harmony to produce fine quality in line and pattern.

Reference text, "Composition," Dow.

4a. ART STRUCTURE II—Fall, winter, and summer quarters. Three hours.

Art structure the basis of fine pattern. Exercises in design creating harmony through the use of structural principles. Application to textiles: print-block, tie-dye, batik, free brush, stitchery. Study of design in historic textiles.

4b. DESIGN—Fall, winter and summer quarters. Four hours.

Theory of design. Development of the principles of design through the study of line, mass, and space relationship. The theory of color and its use in design.

5. WATER-COLOR PAINTING—Fall, spring and summer quarters. Four hours.

A course to develop color harmony, composition, form and water-color technic. Study of the various methods of water-color painting. Appreciation of the work of the masters. Still life and landscape suggested the subject matter for this course.

6. ART APPRECIATION—Each quarter. One hour.

The essential structural elements of fine arts are taken up in illustrated lectures. The purpose of the course is to increase the student's power to interpret, select, and enjoy fine art, in its various forms—pictures, sculpture, architecture, textiles, furniture, pottery, and to organize lesson plans for the teaching of art appreciation.

7. CONSTRUCTIVE DESIGN—Fall, spring and summer quarters. Four hours.

Creative design and construction of problems in tooled leather, basketry, block-printing, batik, gesso. Decoration of common objects. Study of dyes and the uses of dye. Laboratory experience.

9. HISTORY OF ART—Winter and summer quarters. Three hours.

The evolution of art from the beginning of history; the growth of the great schools and their influences; the study of the important masters, their personalities as related to their art, and their work as an index to the time in which they lived; illustrated by photographs and lantern slides. Lectures with related reading.

12. HOUSEHOLD ART DESIGN—Spring quarter. Four hours.

Principles of design and color related to costumes and interior decoration. The execution of designs for interiors and costumes.

13. INDUSTRIAL ARTS METHODS FOR PRIMARY GRADES—Each quarter. Four hours. Fee \$1.50.

A study of art in the industries with relation to the life needs of primary children. Methods of teaching are presented with the subject matter and the student has practice in industrial expression. Subjects considered are clothing, shelters, utensils, and records. Problems executed in clay modeling, basketry, weaving, paper construction, stick printing, toy making, and table problems.

14. INDUSTRIAL ARTS METHODS FOR INTERMEDIATE GRADES AND JUNIOR HIGH SCHOOL—Fall, spring and summer quarters. Four hours. Fee \$1.50.

A study of art in the industries with relation to the life needs of the individual and the community. Methods of teaching are presented with the subject matter and the student has practice in design and color in industrial expression. Subjects considered are clothing, shelters, utensils and records. Problems executed in basketry, bookbinding, print block, toy-making and clay modeling.

16. FREEHAND DRAWING II—Winter, spring and summer quarters. Four hours.

An intensive course requiring accurate drawing, use of the principles of composition, and study of value and tone relations.

17. LETTERING AND POSTER COMPOSITION—Each quarter. Two hours.

The aim of this course is to familiarize the student with alphabets used in fine printing, good advertisements, and to give practice in lettering, manuscript writing, color, design, and the rendering of objects in decorative form as required for poster work.

100. SUPERVISION OF ART EDUCATION—Spring and summer quarters. Two hours.

Supervision of art in public school systems; the planning of a course of study; methods of teaching; organization of subject content; reading on related subjects.

101. DRAWING FROM THE FIGURE—Winter, spring and summer quarters. Four hours.

Figure construction, composition. Study from the costumed model. Mediums: pencil, charcoal, color. Prerequisite, Art 16 or equivalent.

103. ART STRUCTURE III—Winter and summer quarters (given alternate years). Four hours.

Advanced study of composition. Mediums: oil and water color. Execution of design for specific fine arts objects.

103a. ART STRUCTURE—Fall quarter. Four hours.

For description of course see Art 3a.

104. COLOR THEORY AND COMPOSITION—Winter and summer quarters. (Not given 1929.) Four hours.

A study of color theory and ways of producing color harmony in design and composition.

104a. ART STRUCTURE—Fall and winter quarters. Three hours.

For description of this course see Art 4a.

105. WATER COLOR PAINTING—Fall, spring and summer quarters. Four hours.

Advanced water color painting with emphasis on color structure, composition and technic.

106.—ART APPRECIATION—Each quarter. One hour.

The essential structural elements of fine arts are taken up in illustrated lectures. The purpose of the course is to increase the student's power to interpret, select and enjoy fine art in its various forms. Analysis of pictures, sculpture, architecture, textiles and furniture in the light of educational methods of teaching will be considered, and lesson plans organized for the teaching of art appreciation.

107. CONSTRUCTIVE DESIGN—Fall and spring quarters. Four hours.

Creative design and construction of craft problems in tooled leather, basketry, block printing, batik, gesso. Laboratory experience in the use of dyes.

108. POTTERY I—Winter quarter. Two or four hours. Fee, \$2.00.

Study and application of various processes in modeling, firing, and decorating clay objects, such as bowls, vases, and tiles. The historical development of pottery-making as a craft with emphasis on standards for judging the art value. Casting and cement pottery.

109. HISTORY OF ART—Winter and summer quarters. Three hours.

This is a continuation of Art 9 and represents advanced work.

112. HOUSEHOLD ART DESIGN—Spring quarter. Four hours.

For description of course see Art 12.

115. POTTERY II—Winter quarter. Two hours. Fee, \$2.00.

A course which stresses the decoration and glazing of pottery.

116. FREEHAND DRAWING AND COMPOSITION—Winter, spring and summer quarters. Four hours.

Intensive study of the principles of composition in the use of line, values and tone relations. Subjects: still life, interiors, landscape, animals, figure. Prerequisite Art 16.

117. LETTERING AND DESIGN—Fall and spring quarters. Four hours.

Advanced lettering. Design considered in its relation to advertising art. Posters, cover designs, show cards, and other advertising problems are executed. Prerequisite, Art 17.

120. OIL PAINTING—Spring and summer quarters. Four hours.

A study of methods used in developing a professional technic and an appreciation of the various types of painting; impressionism, neo-impressionism, post-impressionism, old masters, modern. Composition of still-life, landscape, and figure. Study of color properties, tone relationship.

200. SUPERVISION OF ART EDUCATION—Spring and summer quarters. Two hours.

For description of course see Art 100.

223. RESEARCH IN ART—Every quarter. Three 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.

Art 224. RESEARCH IN ART EDUCATION—Each quarter. Three 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.

Art 225. RESEARCH IN ART EDUCATION—Each quarter. Three hours.

A continuation of Art 224.

ATHLETICS AND PHYSICAL EDUCATION FOR MEN

Leaders in education now recognize the fundamental need for athletics as an important part of any broad educational program. The demand for competent teachers, supervisors, coaches and directors in elementary schools, high schools, and colleges, far exceeds the supply. This is especially true in the case of men qualified to coach and conduct athletics and gymnastics. Our better schools are seeking college-trained men to take charge of their athletics; men who are thoroughly versed in all phases of athletic coaching and administration.

COURSE OF STUDY

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.

In addition to the core subjects as listed on page 52 this department also requires:

FIRST YEAR—Athletics 37, 40, 73, 74, 80, and H. Ed. 2, 3.

SECOND YEAR—Athletics 50, 51, 52, 53, 54, 55, 57, 60, 67, 70, 72, 75.

THIRD YEAR—Athletics 165, 169, 170, and H. Ed. 120 121.

FOURTH YEAR—Athletics 166, 168, 171, Biot. 101, English 100, and H. Ed. 122, 123.

THEORY COURSES IN HEALTH EDUCATION FOR MAJORS

1. INDIVIDUAL AND SOCIAL HYGIENE (for men)—Each quarter. Three periods. Three 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.

2. **PHYSIOLOGY**—Fall quarter. Four periods. Three hours.

Lectures, demonstrations, laboratory exercises with recitations from text and general references on human physiology.

3. **FIRST AID**—Winter quarter. Two periods. Two hours.

A study of the causes of accidents and type injuries; what the first-aiders 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.

120. **ANATOMY**—Fall quarter. Four hours.

General anatomy with special emphasis upon the osteology, arthrology and myology. Use is made of the skeleton, manikin and anatomical atlases with some dissections and demonstrations upon the cat or dog.

121. **APPLIED ANATOMY AND KINESIOLOGY**—Winter quarter. Three hours.

A continuation of Ath. 120, with special emphasis upon the action of the muscles in exercises of different kinds. Bowen and McKenzie's Applied Anatomy and Kinesiology is the text and this is supplemented by references to other standard authorities.

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

Prerequisite Ath. 42. 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.

123. **PHYSICAL EXAMINATIONS AND NORMAL DIAGNOSIS**—Spring quarter. Four periods. Four hours.

A lecture, recitation, practice course. Principals and methods of making physical measurements, the determination of norms for different age groups; application of principles to physical education problems; the detection and correction of common physical defects; signs and symptoms of different infections.

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 this 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 course for men students.

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

A recreational course for men students.

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

A recreational course for men students.

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

A recreational course for men students, also required of majors.

40. **ELEMENTARY SWIMMING**—Each quarter. Three periods. One hour.

A course for the beginner in swimming.

44. **FRESHMAN FOOTBALL**—Fall quarter. Daily. One hour.

Competition with other Conference Freshmen teams. All men who plan to be candidates for the Varsity, should take this course.

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 and winter quarters. Three periods. One hour.

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

52. **MAT WORK**—Each quarter. Three periods. One hour.

Tumbling and elementary mat work.

53. **ADVANCED TUMBLING**—Winter quarter. Three periods. One hour.

54. **BOXING**—Winter quarter. Three periods. One hour.

Fundamentals for class and individual work.

55. **WRESTLING**—Winter quarter. Three periods. One hour.

Fundamentals; personal proficiency.

57. **CORRECTIVE GYMNASTICS**—Each quarter. Three periods. One hour.

Exercises which aid in the correction of abnormalities, and which are suited to the 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**—Fall, winter, and spring quarters (by arrangement). One hour.

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

68. **CROSS COUNTRY RUNNING**—Fall quarter. Three periods. One hour.

A man is trained for a cross-country run of three miles; this event is then held on Home-coming Day.

70 to 77. **VARSIITY SPORTS**—Each quarter in season. One hour.

70. **VARSIITY SWIMMING**—Each quarter. Daily.

71. **GYM TEAM**—Winter quarter. Daily.

72. **VARSIITY FOOTBALL**—Fall quarter. Daily.

73. **VARSIITY BASKETBALL**—Winter quarter. Daily.

74. **VARSIITY BASEBALL**—Spring quarter. Daily.

75. **VARSIITY TRACK**—Spring quarter. Daily.

76. **VARSIITY TENNIS**—Spring quarter. Daily.

77. **VARSIITY WRESTLING**—Winter quarter. Daily.

THEORY COURSES IN COACHING

165. FOOTBALL COACHING—Fall quarter. Three periods. Two hours.

Prerequisite: Football experience as player or coach. Theory of coaching a football team; rules of the game from the standpoint of player, coach, and spectator; different systems of both offense and defense, with a thorough study of the strength and weakness of each system; generalship and strategy; selection of suitable equipment and the conditioning of players.

166. BASKETBALL COACHING—Winter quarter. Three periods. Two hours.

Prerequisite: Basketball experience as player or coach. Theory of coaching different styles of both offense and defense as used by the leading coaches; methods of goal throwing; foul throwing; signals from tip-off and out-of-bounds plays; value and the use of the pivot.

168. TRACK COACHING—Spring quarter. 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 of men, the management of meets, and the rules for the various events.

169. BASEBALL COACHING—Spring quarter. Three periods. Two hours.

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

170. ORGANIZATION AND ADMINISTRATION OF ATHLETICS AND PHYSICAL EDUCATION—Spring quarter. Two periods. Two hours.

Organization, problems, methods, ideal programs of department of Physical Education and Athletics. Relation of department to the other departments of instruction; and the relation of the various branches of the department (such as health, gymnastics, intra-mural and interscholastic athletics) to each other. Sportsmanship and ethics.

171. PSYCHOLOGY OF ATHLETICS—Fall quarter. Three periods. Three hours.

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

80. ATHLETIC TRAINING—Fall quarter. Two periods. One hour.

This course aims to aid the prospective coach in gaining a knowledge of emergency treatment of the common injuries, and to furnish theory training for the various sports; simple massage and treatment of sprains and bruises.

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.

COURSE OF STUDY

Courses marked * are given also by extension.

In addition to the core subjects as listed on page 52, this department requires:

†BOTANY THE MAJOR INTEREST

FIRST YEAR: Botany 1, 2, and 3.

SECOND YEAR: Zoology 1 and 2, and Chem. 1 and 2 and 3.

THIRD YEAR: Botany 103, Zoology 3 and 4, Bacteriology 100; and Phys. 1, 2, and 3.

FOURTH YEAR: Biotics 101, Biology 102, Botany 102, Geol. 100, General Science 1, Phys. 103.

†ZOOLOGY THE MAJOR INTEREST

FIRST YEAR: Zoology 1, 2, and 3.

SECOND YEAR—Botany 1, 2, and 3; Zoology 4, Chem. 1, 2, and 3.

THIRD YEAR—Zoology 107, Geol. 100, Bact. 100, Physics 1, 2, and 3.

FOURTH YEAR—Biotics 101, Biology 102, Botany 103, Gen. Sci. 1, Phys. 103.

BIOLOGY

*1. EDUCATIONAL BIOLOGY—Every quarter. Three hours. Fee, \$1.00.

Required of all Junior College students.

A study of protoplasm, its stimuli and responses; the cell and differentiation accompanying specialization and adaptation. The whole question of nutrition from the making and use of foods by plants to their use in the animal body, especially man, is surveyed. Bodily secretions and excretions are treated; also the matter of decay, whereby the elements composing organic bodies are again released, is emphasized. Evolution, its scope, factors, evidences, and implications are studied. Heredity, Mendel's laws and their relation to innate capacities and abilities are treated.

101. BIOLOGY SEMINAR—Each quarter. Two hours.

For biology majors.

102. TEACHING OF BIOLOGY—Spring quarter. Four hours. Fee, \$1.00.

Prerequisites, Biology 1, Botany 1, 2, and 3, Zoology 1, 2, and 3.

A careful consideration of the biology course in secondary schools as to content, aims and methods of presentation. The use of materials, texts and reference books are considered as well as the laboratory equipment and supplies needed.

201. BIOLOGY SEMINAR—Each quarter. Two hours.

For graduate biology majors.

223. RESEARCH IN BIOLOGY—Every quarter. Three 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—Three 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, methods of procedure in the solution of them, and the interpretation of results. It should be registered for only after consultation with the head of the department.

†Students who wish to teach more than one science may prepare to do so by consulting the head of the department.

225. BIOLOGICAL RESEARCH—Three hours.

A continuation of Biological Research 225.

BOTANY**1. GENERAL BOTANY—Fall quarter. Four hours. Fee, \$1.00.**

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. (Not given summer 1929.) Four hours. Fee \$1.00.

Prerequisite, Biology 1.

This course includes a study of algae; such fungal forms as bread mold, yeasts, rusts, smuts, and mushrooms; liverworts, mosses, and ferns. Throughout the course constant emphasis is placed upon their relation to man.

3. SYSTEMATIC BOTANY—Spring quarter. Four hours. Fee, \$1.00.

A course carried on largely in the field. Its purpose is to teach the student how to identify plants, trace their structural relations, and how to become acquainted with the flowers and plants in the region where he may be teaching.

101. SYSTEMATIC BOTANY—Spring and summer quarters. Four hours. Fee, \$1.00.

The purpose of this course is to give the student a still larger acquaintance with plants in the field and their relations to one another than can be obtained through Course 3.

102. BOTANICAL TECHNIC AND HISTOLOGY—Fall quarter. Four hours. Given in 1928 and alternate years. Fee, \$1.50.

Prerequisite, Botany 1.

A course in which the science of killing, staining, and making of botanical materials into permanent slides is combined with the study of plant tissues as to origin, differentiation, and organization. Some methods of preserving unmounted botanical materials are also considered.

103. PLANT PHYSIOLOGY—Winter quarter. Four hours. Fee, \$1.50.

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 largely used. The student is encouraged to plan and accurately carry on these experiments. Constant stress is laid upon sources of error and modifying conditions.

201. TAXONOMY—Spring and summer quarters. Four hours. Fee, \$1.00.

Prerequisites, Botany 2 and 3.

The purpose of this course is to give the advanced student an understanding of the morphological relations of plants and the underlying principles of their classification. The work is carried on largely in the field, and results in a rather wide knowledge of local wild plants and flowers.

223. RESEARCH IN BOTANY—Each quarter. Three 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—Three 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. It should be registered for only after consultation with the head of the department.

225. BOTANICAL RESEARCH—Three hours. Fee, \$1.00.

A continuation of Botanical Research 224.

ZOOLOGY

1. GENERAL ZOOLOGY—Fall and summer quarters. Four hours. Fee, \$1.00.

A study of animal biology, principles of structure, function, inter-relations, origin and development of animal life. Designed to better equip students for life in any community. Lectures, discussions, demonstrations, and laboratory.

2. GENERAL ZOOLOGY—Winter quarter. Four hours. Fee, \$1.00.

A continuation of Course 1, and should be preceded by it.

3. BIRD STUDY—Spring and summer quarters. Three hours. Fee, \$1.00.

A study of the common birds of the vicinity. Identification, food relations, seasonal distribution, migration activities, economic importance of birds and their conservation. Lectures, assigned readings, field trips, supplemented by work in the laboratory.

*4. ECONOMIC ZOOLOGY—Spring quarter. 1928 and alternate years. Four hours.

Prerequisite, Biology 1.

A survey of the animal groups with special emphasis on their relation to man. Of especial value to teachers and those students who are interested in practical problems of every-day life.

101. INVERTEBRATE ZOOLOGY—Spring quarter. Four hours. 1929 and alternate years. Fee, \$1.00.

Prerequisites, Zoology 1 and 2 or equivalent.

Morphology of a series of invertebrates. Invertebrate structure and development.

102. VERTEBRATE ZOOLOGY—Spring quarter. Four hours. Fee, \$1.00.

Prerequisites, Zoology 1 and 2 or equivalent.

A study of the vertebrate series designed to acquaint the student with the group, their structure, relationship, and development. Lectures, assigned readings, laboratory and demonstrations.

103. ZOOLOGICAL TECHNIC AND ANIMAL HISTOLOGY—Winter quarter. (Given 1929 and alternate years.) Four hours. Fee, \$1.50.

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 origin, differentiation and organization of animal tissues.

107. ELEMENTARY ENTOMOLOGY—Fall quarter. (1928 and alternate years.) Four hours. Fee, \$1.00.

Prerequisites, Zoology 1 and 2 or equivalent.

A study of the structure and classification of insects, together with identification of the common species of the vicinity. Methods of collecting, mounting, and preparing insect material for study will be given emphasis. Those preparing to teach will be given opportunity to prepare a reference collection of the common species. Field observations will constitute a part of the work.

201. MORPHOLOGY OF THE VERTEBRATES—Winter quarter. Four hours. Fee, \$1.00.

Prerequisites, Zoology 1, 2, and 102.

Detailed studies of systems of organs from the comparative standpoint. Designed for students who desire to continue the study of the vertebrates. Lectures, assigned readings, and laboratory.

223. RESEARCH IN ZOOLOGY—Every quarter. Three 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—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—Fee, \$1.00.

Continuation of course 224.

BIOTICS

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

Prerequisite, Biology 1.

The first half of this course deals with the physical basis of heredity, Mendel's laws, their modifications and extensions, and other principles governing the transmission of inherited characters. The second half considers 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.

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

Prerequisite, Biology 1.

This course covers the same ground as Course 101, but additional and more advanced work is required.

BACTERIOLOGY

100. GENERAL BACTERIOLOGY—Winter and summer quarters. Four hours. Fee, \$1.50.

Prerequisite, Biology 1.

This course treats of bacteria, yeasts, and molds. Their classification, cultivation in cultures, activities and relation to man are considered. Especial emphasis is placed upon their relation to foods and cookery and upon the disease-producing effects of these micro-organisms.

ELEMENTARY SCIENCE

1. ELEMENTARY SCIENCE—Fall, spring, and summer quarters. Four hours. Fee \$1.00.

This course has heretofore been known as Nature Study. Its purpose is to acquaint the grade teacher with trees, butterflies, moths, other insects, and with our most common birds, their habits and songs. Attention is also given to the aims in teaching elementary science, methods of presentation, organization, and ways of collecting, preserving, and using materials.

2. ELEMENTARY SCIENCE—Winter quarter. Four hours. Fee, \$1.00.

This course is a continuation of Elementary Science 1 and may be elected by students who wish advance 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.

GENERAL SCIENCE

1. GENERAL SCIENCE—Each 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 formulate a course of study. Some time will be devoted to the examination of appropriate texts and individual investigations in the field of general science teaching. Especially for junior high school majors.

CHEMISTRY

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

A. Students taking chemistry as a requirement of the Home Economics Department. Such students will find the chemistry requirements outlined under their department.

B. Students desiring to specialize in chemistry in order to enter the teaching profession. They will follow the program outlined below.

C. Students taking other science courses with chemistry as a minor subject. They will find the requirements in chemistry outlined under the Department of Physics or the Department of Biology.

COURSE OF STUDY

Courses marked * are given also by extension.

In addition to the core subjects as listed on page 52 this department requires:

FIRST YEAR: Chemistry 4, 5, and 6 and Phys. 1, 2, and 3.

SECOND YEAR: Chemistry 7, 110, and 111 and Bot. 1 and 3.

THIRD YEAR: Chemistry 113, 114, and 114b and Zool. 1 and 2.

FOURTH YEAR: Chemistry 115, 115b, 116, 117.

†CHEMISTRY

1. GENERAL CHEMISTRY—Fall and summer quarters. Three hours. Fee, \$3.00.

Two lectures and one laboratory period on the theory of chemistry and the non-metals.

2. GENERAL CHEMISTRY—Winter quarter. Three hours. Fee, \$3.00.

Two lectures and one laboratory period. A continuation of Course 1.

*3. GENERAL CHEMISTRY—Spring quarter. Three hours. Fee, \$3.00.

Two lectures and one laboratory period on the chemistry of metals. A continuation of Course 2.

*3b. HOUSEHOLD CHEMISTRY—Spring quarter. Three hours. Fee, \$3.00. Prerequisite, Chemistry 1 and 2.

Two lectures and one laboratory period on chemistry in the home. Prerequisites, Chemistry 1 and 2.

4. GENERAL CHEMISTRY—Fall and summer quarters. Four hours. Fee, \$4.00.

This course covers the same textbook work as Course 1 does, but requires more laboratory work. Two lectures and two laboratory periods.

†For students who may wish to teach other sciences along with chemistry, this course will be modified to suit their needs.

5. GENERAL CHEMISTRY—Winter quarter. Four hours. Fee, \$4.00.

A more extensive course than Course 2. Two lectures and two laboratory periods. Continuation of Course 4.

6. GENERAL CHEMISTRY—Spring quarter. Four hours. Fee, \$4.00.

A continuation of Course 5. Two lectures and two laboratory periods. Courses 4, 5, and 6 are required of all science students (except those specializing in biology, who may elect 1, 2, and 3 instead).

7. QUALITATIVE ANALYSIS—Any quarter. Two or four hours. Fee, \$2.00—\$4.00.

A laboratory and consultation course on the separation and identification of the common elements. Prerequisites, Courses 1, 2, and 3, or 4, 5, and 6.

*108. ORGANIC CHEMISTRY—Fall and summer quarters. Three hours. Fee, \$3.00.

Two lectures and one laboratory period. A study of the hydrocarbons and their derivatives. Prerequisites, Chemistry 1, 2 or 4, and 5.

*109. ORGANIC CHEMISTRY—Winter quarter. Three hours. Fee, \$3.00.

Prerequisites 1, 2 or 4, and 5. Recommended to students specializing in biology or physics.

110. ORGANIC CHEMISTRY—Fall and summer quarters. Four hours. Fee, \$4.00.

Two lectures and two laboratory periods. Same textbook work as Course 108, but more extensive laboratory work. Prerequisites, Chemistry 4 and 5.

111. ORGANIC CHEMISTRY—Winter quarter. Four hours. Fee, \$4.00.

Two lectures and two laboratory periods. A continuation of Course 110. Prerequisites, Chemistry 4 and 5.

*112. FOOD CHEMISTRY—Spring quarter. Three hours. Fee, \$3.00.

Two lectures and one laboratory period. A study of food, detection of adulterants, metabolism and dietary lists. Recommended as a general cultural course. Prerequisites, 1, 2, 108, and 109.

113. FOOD CHEMISTRY—Spring quarter. Four hours. Fee, \$4.00.

A more comprehensive course than 112. Prerequisites, 4, 5, 110, 111.

114 and 114b. QUANTITATIVE ANALYSIS—Any quarter. Four hours for each course. Fee, \$4.00 for each course.

Gravimetric and volumetric analysis. A laboratory and consultation course. Eight or sixteen hours' attendance. Prerequisites, Courses 4, 5, 6, and 7.

*115 and 115b. INDUSTRIAL CHEMISTRY—Spring quarter. Four or eight hours. Fee, \$4.00.

In this course the student may enter upon a study of any one or more of the following chemical industries: Steel, oil, coal, water, gas, fertilizers, cement, dyes, etc. A laboratory and consultation course. Prerequisites, Courses 4, 5, 6, 7, and 114.

116. AGRICULTURAL CHEMISTRY—Winter quarter. Four hours. Fee, \$4.00.

An application of the principles of chemistry to soils, fertilizers, etc. Prerequisites, 1, 2, 3, and 7 or 4, 5, 6, and 7.

117. TEACHING OF CHEMISTRY—Fall quarter. Three hours.

Discussion and reports on the teaching of high school chemistry, and practice in setting up demonstration apparatus.

118. TEXTILE CHEMISTRY—Spring quarter. Two to four hours. Fee, corresponding to hours of credit.

A laboratory and consultation course, consisting of qualitative and quantitative tests on various textile fabrics.

COURSES FOR GRADUATE STUDENTS

In the following courses for graduate students, the work may be the same as in corresponding senior college courses, but with extra requirements.

213. FOOD CHEMISTRY—Spring quarter. Four hours. Fee, \$4.00.

A more comprehensive course than 112. Prerequisites, 4, 5, 6, 110, and 111.

214. QUANTITATIVE ANALYSIS—Any quarter. Four to eight hours. Fee, \$4.00 or \$8.00.

Technical analysis. A laboratory and consultation course. Eight to sixteen hours' attendance. Prerequisites, Courses 4, 5, 6, 7, 114, and 114b.

215. INDUSTRIAL CHEMISTRY—Any quarter. Four to eight hours. Fee, \$4.00 or \$8.00.

In this course the student may enter upon a study of any one or more of the following chemical industries: Steel, oil, water, gas, fertilizers, cement, dyes, etc. A laboratory and lecture course. Prerequisites, Courses 4, 5, 6, 7, 114, and 114b.

216. AGRICULTURAL CHEMISTRY—Any quarter. Four hours. Fee, \$4.00.

An application of the principles of chemistry to soils, fertilizers, etc. Prerequisites, 1, 2, 3, and 7 or 4, 5, 6, and 7.

217. TEACHING OF CHEMISTRY—Any quarter. Three hours.

Discussion and reports on the teaching of high school chemistry, and practice in setting up demonstration apparatus.

*221. ADVANCED INORGANIC CHEMISTRY—Fall quarter. Three or four hours. Fee, \$3.00.

Recitations and lectures on the most recent theories of chemistry of non-metals.

222. ADVANCED INORGANIC CHEMISTRY—Winter quarter. Three or four hours. Fee, \$3.00.

Recitations and lectures on most recent findings concerning the metals.

223. RESEARCH IN CHEMISTRY—Every quarter. Three 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 THE TEACHING OF CHEMISTRY—Three hours.

This course is intended primarily for graduate students working on their masters' theses.

225. RESEARCH IN THE TEACHING OF CHEMISTRY—Three hours.

A continuation of Chem. 224.

COMMERCIAL EDUCATION

The Department of Commercial Education prescribes a course of study with minimum requirements for the preparation of commercial teachers for junior high schools, senior high schools, junior colleges, and teacher training institutions.

Three major fields of commercial education are emphasized in this program of studies. They are bookkeeping, secretarial, and general business training. An attempt has been made to include enough background material in commercial education for the prospective teacher to enable

him or her to organize a program of subjects for a general business training course in the high school without specialization in either of the two conventional fields, bookkeeping or secretarial studies.

A wide range of elective subjects is offered making it possible for the student to specialize in accounting, salesmanship, merchandising, or secretarial studies by electing subjects in addition to the requirements set forth below.

The Bachelor of Arts Degree will be granted to those who have completed the following four-year course and the core subjects listed on page 52 and who have earned 192 hours of college credit. The Master of Arts Degree will be granted to those who have met the requirements set forth below together with those set forth on pages 45-48.

COURSE OF STUDY

Courses marked * are also offered by extension.

In addition to the core subjects as listed on page 52, this department requires:

FIRST YEAR: Commercial Education 11, 12, 13, 14, 16, and Hist. 10.

SECOND YEAR: Commercial Education 1, 2, 3, 4, 15, 37, and Geog. 7.

THIRD YEAR: Commercial Education 38, 39, 40, 50, 51, 52, and 55.

FOURTH YEAR: Commercial Education 158, Hist. 101, Soc. 110, 112, and Geog. 199.

*1. PRINCIPLES OF SHORTHAND I—Fall and summer quarters. Four hours.

This course is based on the Gregg Shorthand Manual and covers the first ten lessons. It is offered for the benefit of students who have had no training in shorthand but who desire to major in the teaching of secretarial training courses. Beginning shorthand shall receive credit only on completion of the shorthand work of the second quarter.

*2. PRINCIPLES OF SHORTHAND II—Winter and summer quarters. Four hours.

Prerequisites, C. E. 1 or the equivalent. This course is a continuation of C. E. 1 and is based on the last ten lessons in the Gregg Shorthand Manual.

3. SECRETARIAL PRACTICE I—Fall, spring, and summer quarters. 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 and summer quarters. One hour.

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 teaching shorthand.

5. SECRETARIAL PRACTICE II—Winter 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.

6. STUDENT TEACHING—Fall, winter, and spring quarters. Two hours.

This course is a substitute for Ed. 2b for junior college students who are majoring in Commercial Education. The student will be assigned to observe the class he is to teach for three weeks before he begins teaching. At the end of the period of observation he will take complete charge of the class for a period of three weeks. All candidates for this course must have passed the achievement test. A student making a grade of less than "C" in this course shall be required to repeat the course.

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: the mimeograph; the mimeoscope; the multigraph; the dictaphone; 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. PRINCIPLES OF TYPEWRITING I—Fall and summer quarters. Two hours. Fee, \$1.00.

This class meets four times a week. It will be counted as two hours in determining the student's load. 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. PRINCIPLES OF TYPEWRITING II—Winter quarter. 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. PRINCIPLES OF TYPEWRITING III—Fall, spring, and summer quarters. Three 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 life certificate or A. B. Degree who are majoring in the secretarial group of studies of the Commercial Education curricula.

14. METHODS OF TEACHING TYPEWRITING—Fall, spring, and summer quarters. One hour.

Prerequisite, C. E. 12 or the equivalent. This class meets once a week. The purpose of the course is to give the prospective teachers of typewriting a knowledge of the equipment that is necessary to teach typing successfully. It also deals with the different texts on the market and the 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—Spring quarter. Four 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 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. Four 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 organizations and presentation of this material to high school students.

***36. HANDWRITING METHODS—Every quarter. 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 80 as measured by the Zaner Handwriting Scale No. 5 before credit will be given.

***37.—BUSINESS MATHEMATICS—Fall, spring and summer quarter. 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 of trading concerns are treated.

41. MATERIAL AND METHODS FOR JUNIOR BUSINESS TRAINING—Spring quarter. 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—Summer quarter. Four hours.**

This course deals with the principles of good advertising. An attempt is made to combine all of the arts and sciences that enter into the work of advertising and to study the fundamentals of each with reference to all 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—(Not offered 1928-29.) Four hours.**

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

directed, therefore, toward the satisfaction of economic wants. The personal selling which effectively serves those wants is socially and economically desirable. 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.

103. THE ORGANIZATION OF SHORTHAND MATERIAL—(Not offered, 1928-29.) Two hours.

This two-hour course is planned to give the prospective teacher a definite study of student individual differences, with a view to adjusting methods in teaching to the particular needs of given localities. Attention will be given to the evaluation of various skills to be developed and the allocation of the time to be devoted to each, according to studies and available questionnaires conducted on the basis of job analyses. Special reports from the Federal Board of Vocational Education and other current reports by experts of national reputation in the shorthand field will be considered.

104. METHODS OF TRAINING FOR SECRETARIAL PERSONNEL SERVICE—(Not offered, 1928-29.) Two hours.

Prerequisite C. E. 3 and 13 or the equivalent. This two-hour course is planned to give teachers of secretarial work specialized methods in classroom management and organization of work to meet standards of accomplishment in senior high school courses. In the commercial field these are of a highly technical nature and require special consideration. Attention will be given to studies by Charters and Whitley in personnel service and its particular bearing on the training of secretaries.

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

Prerequisite, C. E. 3 or the equivalent.

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.

107. SECRETARIAL SCIENCE II—(Not offered, 1928-29.) Three hours.

Prerequisite, C. E. 106 or the equivalent.

This course is a continuation of C. E. 106. More advanced problems will be presented dealing with the special training of teachers of secretarial work.

108. SECRETARIAL STANDARDS AND MEASUREMENTS—(Not offered, 1928-29.) Three hours.

Prerequisite, C. E. 105 or the equivalent.

This course is planned to fit the prospective teacher for using in the classroom standard tests which have been scientifically worked out by experts. The Hoke Measurement Studies, Prognostic Tests by Adams, and material to secure the best results in manual skill and content are to be worked out by laboratory methods. Relative values of shorthand systems with historical settings of special interest to the teacher will be considered in developing the principles of her work on a scientific basis which will take into account a correlation with professional study in other subjects.

109. ANALYTICAL STUDIES IN GREGG SHORTHAND—(Not offered, 1928-29.) Three hours.

Prerequisite, C. E. 3 or the equivalent.

The aim of the course is to work out for the prospective teacher lesson plans applicable exclusively to the presentation of shorthand. This is a specialized subject to which general plans cannot be successfully applied.

Studies of recent books in the field along this line are to be supplemented by the surveys in teaching problems through a series of projects. The basic texts are to be Principles of Gregg Shorthand and Analytical Lessons in Gregg Shorthand by M. D. Frink.

111. SECRETARIAL BOOKKEEPING—Spring quarter. Four 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.

***138. COMMERCIAL LAW I—Winter 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. 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 quarter. 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 the 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 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—(Not offered, 1928-29.) Four hours.**

Prerequisite, C. E. 38 or the equivalent.

This is an advanced course in commercial law open only to senior college students. It treats the law of corporation, 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. PRINCIPLES OF 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. PRINCIPLES OF ACCOUNTING II—Winter quarter. 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 this course.

***152. PRINCIPLES OF 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—(Not offered 1928-29.) 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 sales people; 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—Fall quarter. 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.

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

Prerequisite, C. E. 52 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. Four hours.

Prerequisite, C. E. 52 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—(Not offered, 1928-29.) 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 bookkeeping 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—(Not offered, 1928-29.) 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 quarter. 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 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 quarter. 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. Three 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 COMMERCIAL EDUCATION—Every quarter. Three 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. Three hours.

This course is a continuation of C. E. 224.

CONTEMPORARY CIVILIZATION

The purpose of this department is to enlarge the outlook of college students with respect to fundamental life problems. It often happens that contact with these vital problems is such that students do not work out for themselves sufficiently clear and definite convictions to determine their attitudes when confronted by perplexing situations in the social world.

The courses offered have been arranged with the general purpose of (1) introducing the student to fundamental life problems and (2) making him acquainted with the cultural achievements of his time.

COURSE OF STUDY

1. CIVILIZATION—Introduction to Contemporary Civilization. Fall and winter quarters. Required of all first year students. Three hours.

This course deals with fundamental social, industrial, political, and international problems. It is social in its outlook and emphasizes the relation of the individual to his large-group social organization. It seeks to give the student a helpful conception of his place in the trends and movements of civilization.

2. CIVILIZATION—Introduction to Contemporary Culture. Winter and spring quarters. Required of all first year students. Three hours.

This course deals with the important cultural contributions made in such fields of human activity as religion, morals, ethics, art, and science. It is individual in its outlook and emphasizes the importance of the student's helpful acquaintance with the cultural achievements of his time. It seeks to give the student a definite understanding of outstanding cultural developments.

EDUCATION

The aim of the Department of Education is to help make better teachers, supervisors, principals, and superintendents. 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 with either the director of freshman studies or the head of the Department of Education early in their first quarter as to choice of a 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) Introduction to Curriculum Making—a content course designed to survey critically the 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 technic such as individual instruction, platoon school organization, rural methods, or supervised study. All students should consult advisers when submitting programs concerning specialized courses not required as core or departmental subjects.

COURSE OF STUDY

Courses marked * are given also by extension.

In addition to the core subjects as listed on page 52, this department requires:

FOR KINDERGARTEN AND PRIMARY TEACHERS

A TWO-YEAR COURSE

Education 3a, 3b, 3c, 52, and Art 2, 13, Eng. 15, Music 1a; Ele. Sci. 1 (Soph. year).

(For one of six required quarters of active physical exercise take P. E. 11; for a second quarter take P. E. 2; other four quarters of active physical exercise to be selected by student.)

FOR INTERMEDIATE GRADE TEACHERS

A TWO-YEAR COURSE

Education 4a, 4b, and Art 14, Geog. 12, Math. 104, Hist. 10, Ele. Sci. 1 (Soph. year), Eng. 1, 15, Music 1a.

(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.)

FOR TEACHERS AND SUPERVISORS IN RURAL SCHOOLS

A TWO-YEAR COURSE

Education 3a, 4a, 4b, 20, 21, 23, and Eng. 1, Hist. 10, Math. 104, Music 1a, Geog. 12.

(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.)

FOR UPPER GRADE TEACHERS
(Formerly called Junior High School Teachers)

A TWO-YEAR COURSE

Education 15, 110, 113, and Eng. 2, 15, Gen. Sci. 1, Hist 1, 2, or 10, Geog. 14, Math. 107.

(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.)

FOR THIRD AND FOURTH YEAR STUDENTS
IN EDUCATION

FOR MAJORS IN ELEMENTARY EDUCATION: Education 106, 129, 134, 150, 152 or 258, 210, Psych. 107, Biotics 101.

FOR SUPERINTENDENTS, SUPERVISORS, AND PRINCIPALS: Education 113 or 115, 108, 129, 134, 142, 143, 144, 210, Psych. 107, Biotics 101.

I. COURSES PRIMARILY FOR JUNIOR COLLEGE STUDENTS

*1. INTRODUCTION TO EDUCATION—Required of all first-year students. Every quarter. Four hours.

This course combines former Ed. 1 and Ed. 5 courses. It aims to introduce the student to the study of education and to the principles of teaching 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 education; function of education in a democracy; development of free schools; organization of American schools; professional ethics; professional training; the teacher's job in the community; how children learn; methods of teaching; classroom management; individual differences; measurement and testing; health of the child; in-service preparation and growth; etc.

2a. PRE-TEACHING OBSERVATION—Every quarter. One hour.

This course consists of two regularly scheduled observation hours each week and one conference hour the first and fourth Tuesday of each month. The student observes the class he is to teach for a quarter preceding his actual 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; 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. Hours according to schedule.

Required of all junior college students. A full quarter of teaching carries five 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 a prerequisite 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.

*3a. PRIMARY GRADE METHODS—Every quarter. Three hours.

Prerequisite, Ed. 1.

Deals with methods of teaching reading, language, and spelling.

*3b. PRIMARY GRADE METHODS—Every quarter. Three hours.

Prerequisite, Ed. 1.

Deals with methods of teaching arithmetic, elementary social science, and health.

*3c. PRIMARY GRADE METHODS—Every quarter. Three hours.

Prerequisite, Ed. 1.

Literature and theory of games for the kindergarten-primary grades.

*4a. INTERMEDIATE GRADE METHODS—Every quarter. Four hours.

Prerequisite, Ed. 1.

Deals with methods of teaching reading, language, and spelling.

*4b. INTERMEDIATE GRADE METHODS—Every quarter. Four hours.

Prerequisite, Ed. 1.

Deals with methods of teaching arithmetic, social science, and health.

5. PRINCIPLES OF TEACHING—Now a part of Ed. 1, Introduction to Education. (Given as elective, summer quarter.) Three hours.

*10. AN INTRODUCTION TO CURRICULUM MAKING (formerly the elementary school curriculum)—Every quarter. Three hours.

Prerequisite, Ed. 1 and sophomore standing.

This is a content course in education for all junior college students. It is designed to acquaint the student with present-day theories concerning what should be taught in the school. It attempts to give majors in various fields a perspective of the whole program of studies in school to the end that they may see their own materials in relation to the entire field and may thereby be critical of a better coordination of subject matter. Topics such as the following will be covered: Where and how education takes place; the source of the curriculum; criteria for making the curriculum in each field; technic of analysis in making the course of study; objective determination of life activities; etc.

*15. EDUCATIONAL GUIDANCE—Fall, winter, and summer quarters. Three hours.

In this course a study will be made of the various agencies and methods for guiding pupils in their school work and into desirable vocational and avocational activities.

16. ELEMENTARY TRAINING COURSE FOR CAMP FIRE GIRLS LEADERSHIP—Every quarter. One hour.

This course is intended for those who wish to become Camp Fire Guardians. Groups will be organized into regular camp fires and will do the work usually required of girls in such groups.

16a. ADVANCED TRAINING COURSE FOR CAMP FIRE GIRLS LEADERSHIP—Winter, spring, and summer quarters. One hour.

Open to students who have had the elementary course in Camp Fires.

17. BOY SCOUT WORK—Spring and summer quarters. One hour.

This course is intended for those who wish to become Boy Scout Masters.

*20. AGRICULTURAL EDUCATION—Spring and summer quarters. Four hours.

This is an elementary college course, given to meet the growing feeling that since agriculture applies generally to vital facts of many sciences, especially in pointing out man's relationship to nature and society, instruction in agriculture may well be given to all students irrespective of future life pursuits, as a training for good citizenship. This course, covering in a brief way the different fields or divisions of agriculture, will serve as an introductory course, and will especially meet the needs of those teachers who are preparing to teach in rural or grade schools where only one year of agriculture is taught. Particular attention is given to the planning of projects.

*21. RURAL SCHOOL PROBLEMS—Fall, spring, and summer quarters. Three hours.

This course aims to contribute directly to the practice of those who work in rural schools. Genuine problems of the rural teacher are considered and real solutions offered. It attempts to apply present-day educational theory and scientific educational principles to the most difficult American educational situation, the rural school.

23. RURAL SCHOOL MANAGEMENT—Winter and summer quarters. Three hours. Prerequisite, Ed. 21.

This course deals with the distinctive problems of rural teaching that are due to many grades and consequent difficulties of rural school organization. It intends to assist young rural teachers immediately and directly.

24. THE RURAL COMMUNITY—Fall quarter. Three hours.

This course intends to acquaint the student with the constructive factors of farm life needful for rural leadership and teaching under rural conditions, such as the school as a social center, the organization of parent-teachers' clubs and other community organizations, program making for community organizations, relating the work of the school to the community life, the survey and its adaptation to the rural community. A brief study of the important characteristics of the rural community will also be made.

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

The topics of this course include: planning, planting, and cultivating; controlling insect enemies and plant diseases; methods of propagation of vegetables and flowers; best varieties of vegetables and flowers for certain seasons; soil requirements for successful gardening; planting about home and school; use of hot-beds and cold-frames.

51. LITERATURE, SONGS, AND GAMES FOR KINDERGARTEN AND PRIMARY CHILDREN—(Now Ed. 3c).

*52. KINDERGARTEN MATERIALS—Every quarter. Three hours:

This course is a study of the educational possibilities of the natural activities of childhood.

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, representing all major fields of knowledge.

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

Summer, 1928, Unit 1—Creative Music; Unit 2—Creative Art; Unit 3—Creative Religion; Unit 4—Creative Literature; Unit 5—Creative Education in School.

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

Summer, 1928, Unit 8—Rural School Buildings; Unit 9—Improvement of Written Examinations; Unit 10—Recent Investigations in the Course of Study and Application to Rural Schools.

101. PRINCIPLES OF HIGH SCHOOL TEACHING—Fall, spring, and summer quarters. Four hours.

This course is designed to develop those principles of teaching and features of methodology which are particularly applicable to high school teaching. A textbook is used as a basis, but this is supplemented by individual reports, class discussions, and special papers. There will also be directed observations of 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 ELEMENTARY TRAINING SCHOOL—Every quarter. Five hours.

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

102b. STUDENT SUPERVISION OF EXTRA-CURRICULAR ACTIVITIES IN THE TRAINING SCHOOL—Every quarter. Five hours.

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

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

103a. STUDENT SUPERVISION IN THE SECONDARY TRAINING SCHOOL—Every quarter. Five 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 PROJECTS IN THE PRIMARY GRADES—Summer quarter. Four hours.

*106. ELEMENTARY TYPES OF TEACHING—Spring and summer quarters. 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—Spring and summer quarters. Four hours.

In the light of research the first part of this course will deal with the supervision of the so-called skill subjects commonly taught in the elementary school. The work will cover the determination of content of the course of study, the discovery of suitable methods and materials for teaching and testing, and supervision of classroom procedure in the case of spelling, reading, composition, and handwriting. In like manner the second part of the course will deal with the content subjects commonly taught in the elementary school, and will cover a consideration of such general procedures as the problem method and the socialized recitation.

*109. SUPERVISED STUDY—Winter and summer quarters. Two hours.

This course will discuss the conceptions of supervised study, the various schemes of organization by which the supervision of study is administered, the principles and methods of supervised study as they apply to various school subjects, the results of the more significant investigations concerning study, and a general evaluation of what this movement means.

*110. EXTRA-CURRICULAR ACTIVITIES—Winter, spring, and summer quarters. Three 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.

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—(By extension department.) Three hours.

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

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

Open only to senior and graduate students.

This course is designed to study the underlying philosophy of education. It will attempt to show that education is a process of forming fundamental dispositions toward mankind; a process by which social groups maintain their continuous existence; a process by which an individual grows through gaining new meanings in his environment. This course also attempts to point out that a philosophy of education is a general theory of education, and, as such, it determines the fundamental aims of education and influences method and practice, and the selection and organization of subject matter. Finally, it will attempt to point out how it determines the educational values of materials taught and the activities of the school.

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

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

Primarily for junior high school 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.

114. PRIMARY SUPERVISION—Summer quarter. Four hours.

This course is intended to meet the needs of kindergarten and primary supervisors.

115. ORGANIZATION AND ADMINISTRATION OF THE ELEMENTARY SCHOOL—Winter and summer quarters. Four 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.**

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

117. PROBLEMS OF SCHOOL DISCIPLINE—Summer quarter. Two hours.

This course will consider recent investigation of actual concrete situations in which discipline is involved and suggested principles for promoting good discipline in the school.

120. EDUCATIONAL FINANCE—(Now a part of major administration courses, 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. (FORMERLY Ed. 25) RURAL EDUCATION—Winter and summer quarters. Four hours.

A study of the general purpose and problems of rural elementary education. It considers the problem as being first elementary and then

rural, or the problem of the elementary school in a rural setting. The influences of environment upon rural education, the proposed purposes—retaining the rural child upon the farm, vocation efficiency, broad rural citizenship, education through “ruralized curriculum,” etc.—and a criticism of these proposals will be considered. The advantages of the rural school for project study, the needs for larger units in rural education than the local district, the advantages and disadvantages of “open-country” consolidation, and the preparation of the rural teacher to meet the demands of the rural situations will be studied.

127. SPECIAL RURAL SCHOOL METHODS—(The Individual Instruction plan; the Project Curriculum.) Fall and summer quarters. Four hours.

In this course the student will study the fundamental principles of the plan for individual instruction and will be given instruction in the use of the specific materials and devices necessary for putting the plan into operation. The student will study and interpret the basic ideas implied in the concept of project curriculum and make applications of their use in rural schools. The underlying principles which control the procedure of each method and their adaptation to rural school conditions will be given special attention.

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.

***129. (FORMERLY ED. 229) CURRENT EDUCATIONAL THOUGHT—**Spring and summer quarters. 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.

***133. HISTORY OF EDUCATION WITH SPECIAL REFERENCE TO MODERN TIMES—**Winter and summer quarters. Three 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, Herbert, 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. Three 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.

A comparative study of European, English, and the American educational systems. Special attention is given to organization, curriculum, and methods of instruction.

139. RECENT EDUCATIONAL DEVELOPMENTS—Summer quarter. (Not given 1928.) Four hours.

A course to acquaint students with special educational developments. Includes such topics as: adult education and Americanization; individual instruction; classes for the anemic, tubercular, blind, crippled, and delinquent; continuation and extension education; and the like.

140. GUIDANCE PROBLEMS OF DEANS OF GIRLS—Summer quarter. 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 a course especially designed for content majors (in English, science, etc.) interested in equipping themselves for administrative duties in village 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.

This, a first course in administration, is the introductory course in school administration. It will emphasize in a general and systematic way for persons planning to enter administration, and even for teachers, generally accepted principles of school administration.

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

This, a second course in administration, is a more specialized course for administration majors. It will deal in a particularized and specialized way with such problems as educational finance, schoolhouse construction, technic of school surveys, etc.

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-teacher 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. (Not given 1928.) Two hours.

147. EDUCATIONAL SURVEYS—(Now a part of major courses in Administration. Ed. 142-143.) Given as elective, 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. (Not given 1928.) 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—Fall and summer quarters. (Not given 1928.) Four hours.

This course deals with scientific studies of the social and learning needs of elementary school pupils.

155. RECENT INVESTIGATIONS IN KINDERGARTEN EDUCATION—Spring quarter. (Not given 1929.) Three hours.

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

168-170. PROBLEMS OF RELIGIOUS EDUCATION—(168 Fall, 169 winter, 170 spring quarters.) Three hours.

A study of the principles and problems of religious education and their relation to present-day needs. These courses will include such topics as: problems religion is facing; aims; curriculum; method; and worship.

190. THE ADMINISTRATION OF NORMAL SCHOOLS AND TEACHERS COLLEGES—Summer quarter. 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. (By extension department.) Three hours.

192. TRAINING SCHOOL PROBLEMS IN THE PROFESSIONAL EDUCATION OF TEACHERS—Summer quarter. 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.

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 1928.) 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—Fall and summer quarters. Three 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 THE MIND IN EDUCATIONAL THEORY—Winter quarter. 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. Three or four hours.

(Given successive summers as 213, 214, 215. Students may earn up to 12 hours.)

This course will attempt to offer practical suggestions for the re-organization 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—Winter and summer quarters. (Not given 1929.) Four hours.

(Given successive summers as 216, 217, and 218. Students may earn up to 12 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 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.

223. RESEARCH IN EDUCATION—Every quarter. Three hours.

To be taken in first quarter of graduate work. This 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 FOR GRADUATE STUDENTS—Three 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 consent of the head of the department.

225. RESEARCH FOR GRADUATE STUDENTS—Three 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.

240. WOMEN IN ADMINISTRATION—Summer quarter. (Not given 1928.) Four hours.

A course for deans of women and advisers of girls. Especially designed for those who desire training for positions as advisers of girls and deans of women. Some degree of maturity and experience in teaching fields is required of the students. The purpose is to set up ideals and standards of such a position; to find a body of definitely useful knowledge available for such training; and to secure recognition of the professional status of people trained in the technic of dealing with human relations. Lectures, readings, and reports on special investigations.

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

(Given successive summers as 242, 243, and 244. Students may earn up to 12 hours.) This, the third course in administration, is primarily intended for superintendents and principals of schools. The problems selected for work in any quarter will vary with the interests of the group electing the course and the relative importance of the problems in present-day educational administration. The following are types of problems, some of which will be studied: types of publicity for a school system; modern schoolhouse construction; selection, purchase, and distribution of textbooks, equipment, and supplies; the development and utilization of a budget; needed changes in financial accounting; needed changes in taxation; needed changes in education laws for a particular state; a plan for a self-survey of a school system; the superintendent or principal as a supervisor—what he can do to improve instruction; an adequate set of educational and financial records and reports for cities of various sizes; how to make and utilize the results of age-grade-progress studies; analysis of the janitor's job; the selection, preparation, tenure, and promotion of teachers; and the legal rights of boards of education. For students desiring it, the course will afford guidance in the discovery and statement of problems suitable for work toward the advanced degrees.

258. PROBLEMS OF ELEMENTARY EDUCATION—Fall and summer quarters. Four hours.

(Given successive summers as 258, 259, and 260. Students may earn up to 12 hours.) This course will emphasize the principal phases of elementary education of particular interest to experienced elementary school teachers.

EDUCATIONAL PSYCHOLOGY

The courses of this department have been arranged with the general purpose of making the student familiar with the important contributions which psychology has made to such phases of education as school organization and administration, the aims of education, and the best means and methods of realizing these aims. The whole public school system is viewed from the standpoint of the nature and needs of the child. An attempt is made to point out what the schools should be in order to preserve the child's physical and mental health, respect his native capacities and tendencies, secure his normal development, utilize his most natural modes of learning, and promote and check up the efficiency of his responses. More specific statements of the purposes of the department are given in the descriptions of the courses following.

The department also prepares the student to teach special schools and classes and psychology in normal schools and high schools, and to fill such positions in clinical psychology and tests and measurements as are developing in connection with public school systems.

COURSE OF STUDY

Courses marked * are given also by extension.

FOUR YEARS FOR MAJORS IN PSYCHOLOGY

In addition to the core subjects listed on page 52, this department requires:

FIRST YEAR: Psychology 1 and 110.

SECOND YEAR: Psychology 3 and 108c.

THIRD YEAR: Psychology 106, and 107, Biot. 101 or 201.

FOURTH YEAR: Psychology 108b, 109, 111, 113, 114, and 212.

Students who wish to specialize in the department, but find it impossible to remain at school four years, will be permitted to elect advanced courses.

*1. CHILD HYGIENE—Winter and summer quarters. Four hours. Required of students who specialize in physical education.

Purposes: (a) to give the student training in the detection of physical defects; (b) to discuss the effects of physical defects upon the child's health and his physical and mental behavior and development; (c) to discuss the causes of defects, the methods of preventing them, and the measures which are required for their removal; (d) to give partial preparation for the course in Clinical Psychology.

Topics: the necessity of paying attention to health; the types of effort required to improve health; air requirements for good health, and efficient behavior; deformities and faulty postures; malnutrition; enlarged and diseased tonsils and adenoids; defective teeth and mouth hygiene; defective hearing; defective vision. For each of the defects just enumerated there is a discussion of: the nature of the defect; its causes; its prevalence; its bad effects upon the child's behavior, happiness, and physical excellence; conditions requisite for the prevention of the defect; the methods and means of detecting defects; the treatment the child should receive in view of his defects. The last two items receive especial emphasis. Methods of detecting defects are demonstrated in classroom.

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

Required of all students.

The purposes of the courses are (a) to make the student familiar with the child's capacities, tendencies, and native responses and to show him how

they and the nature and order of their development are involved in the process of educating the child; (b) to discuss such conditions of the school room and school activities as will avoid fatigue and promote work.

Topics treated: discussion of the subject matter, methods, and scope of psychology and its province in education; the stimulus response hypothesis; the physiological mechanism underlying a stimulus response psychology; brief discussion of simple and complex mental processes; the origin, development, and general characteristics of instinctive activity and their significance in controlling the behavior of children; the difference between native and acquired traits; an inventory of instinctive impulses and activities and a consideration of these as they appear in the behavior of school children in such forms as: manipulation of objects, exploration and curiosity, fighting and self-assertion, formation of gangs, rivalry, sympathy and cooperation, play, ownership, collecting, fear, truancy, etc.; discussion of the emotions, their control and utilization; the dynamic role of instincts in learning; conditions which promote work and avoid fatigue. One-third of the course will be devoted to instruction in measures of central tendency, variability, and simple methods of correlation in connection with a few typical standardized tests and their results.

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

Required of all students. Students may take 2b prior to 2a if they so desire.

Purposes of the course: (a) in connection with Psychology 2a to acquaint the student with the psychology underlying learning and instruction; (b) to prove the student's ability to control learning by making him familiar with the principles which are a description of how learning occurs and with such conditions and procedures as will greatly facilitate learning; to discuss the nature of individual differences and point out their significance for instruction, school organization, and the arrangements of school work.

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 memorial, and thinking, a treatment of the primary and secondary laws of learning with many examples of their operation in the different kinds of learning and in the different school subjects; the part played in learning by such other factors as imitation and ideomotor action; general characteristics of learning, such as trial and error, the course of improvement, the curve of learning and the curve of forgetting; a discussion of motor learning, perceptual learning, memorial learning and thinking as these are involved in the activities of life and the schoolroom; the requirements of effective instruction in the different kinds of learning; the problem of the transfer of training and its significance for instruction, and the selection of the content of the course of study; the nature of individual differences and the significance of these differences for instruction and school organization; a brief general treatment of mental and educational measurements, personality traits, and race differences.

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

Purposes of the course: (a) to point out the child's requirements during the different stages of his physical development; (b) to describe the nature of the child's mental development and discuss what kind of behavior and activities may be expected of him in any stage of development; (c) to encourage the student to form the habit of observing the behavior of the child and to interpret the significance of such behavior; (d) to give the student a sympathetic and understanding attitude toward child life.

The following topics are treated: the purposes and methods of studying the development of children; anthropometrical measurements and the nature of the child's physical growth; the child's physical requirements in the different stages of his physical development; general characteristics of the mental development of the child; the development of the child's attention, sense-perception, memory, imagination and thinking, feelings, ideas, interests and volition; the behavior which may reasonably be expected of the child during the different stages of development of his mental processes; the psychology of lying; instruction in observation and esthetic appreciation; children's ideals; the child's suggestibility; the nature and significance of play; the moral and religious life of the child.

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

Required of students who teach and supervise elementary and junior high school subjects.

Purposes: (a) to give the student a basis for the evaluation of methods of instruction and the requirements of learning in the different school subjects; (b) to give him the ability to modify the methods of instruction and the conditions of learning so as to preserve an effective balance of emphasis

among the mental activities involved in learning them and to adapt them to differences in the instructional needs of individual children; (c) to place before the student such procedures and conditions of learning in the different school subjects as have been discovered through experimental studies and deduced from the laws of learning and known facts about the child's capacities and tendencies. The course also is a partial preparation for the course in Clinical Psychology.

Content of the course: for each of the elementary school subjects, an analysis is made of the activities involved in learning them in order that none of the abilities which the subject is supposed to develop may be neglected, and as a preparation for a discussion of such methods and conditions of learning and teaching the school subjects as have been found to be favorable either by experimental studies or the deductive application of known psychological facts and principles; individual differences in learning the elementary school subjects; factors which have a favorable influence upon learning them. This general statement of the content of the course must suffice because it would take too much space to list the topics treated in each one of the school subjects.

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

Required of senior high school teachers and principals who are majoring in English, Foreign Languages, History and the other Social Sciences.

Purposes: (a) to develop a psychological attitude in the prospective high school teacher toward both the child and his subject; (b) to demonstrate the need of cooperation on the part of the teachers of all the different high school subjects for the benefit of the student; (c) for additional purposes, see those stated under Course 104.

Topics treated: presentation of the aim and requirements of the course; the importance of understanding the high school student; essential differences between the old and new high school from the psychological point of view; how to train high school students to study effectively; the psychology of class room management; the experimental work on the transfer of training in high school subjects; the psychological analysis of the subjects included in this course; the psychology of the methods employed in teaching these high school subjects; the psychology of motivation and appreciation in the high school; individual differences in aptitudes and interests.

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

Required of senior high school teachers and principals who are majoring in Mathematics and the Physical Sciences.

For a description of this course, see Psychology 105a.

106. CLINICAL PSYCHOLOGY—Spring quarter. Four hours.

Purposes: to teach the student how to determine the mental status of the child with the purpose of improving the child's adaptation to his school life and life in general; (b) to show how we may learn about the child's mental status through first-hand observations, tests and experiments, a prescribed course of treatment, and the collection of hereditary, developmental and environmental data pertaining to the child; (c) to supply such preparatory information for this work as was not presented in other courses in psychology.

Topics: description of clinical psychology; the methods and objectives of clinical psychology; its inception and history in schools and higher institutions of learning; discussion of the kind of data which should be collected for the purpose of making mental diagnoses, prognoses, and recommendations for treatment; a presentation and discussion of suitable blanks for the purpose of recording these data; qualifications essential for successful psycho-clinical work; the value of classification; the classification of children from the standpoints of intelligence, pedagogical retardation and acceleration, and psychological retardation and acceleration; the causes of retardation. The remainder of the course consists primarily of a treatment of the mental and physical natures of the feebleminded and the unstable child with a discussion of such other factors as causes, prevalence, learning ability, social and racial significance, treatment, and disposal. A clinical study is made of several children for demonstration purposes.

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

Purposes: (a) to familiarize the student with the various kinds of mental measurements and with the means and methods employed in making them; (b) to give the student training in the administration of the various kinds of mental tests; (c) to develop the right attitudes toward the use of

mental tests; (d) to point out the social, educational, psychological, and vocational significance of mental tests; (e) to give the student some conception of the nature of the mental processes measured and of the principles of mental testing and test constructions; (f) to give partial preparation for the course in Clinical Psychology.

Topics: historical background for the development of mental testing; historical sketch of the development of mental tests; general classification of tests and measurements, including tests of inherited capacity, acquired ability, and such miscellaneous tests as are designed to measure the will and temperament, the emotions, moral behavior, and personality traits; intelligence tests as a means of vocational guidance; a dozen or more uses of intelligence tests in education; other uses of intelligence tests which have more or less educational significance, such as differences in intelligence between the sexes, among races, communities, and neighborhoods, the children from the various occupational groups, and immigrants of different nationalities, and between rural and city school children; the relation between intelligence on the one hand and crime, physical characteristics, physical stigmata, and physical defects on the other; the hereditary nature of intelligence; the possibility of improving the intelligence through training, etc.; preparation for giving intelligence tests; the concept of intelligence; the principles of intelligence testing and intelligence test construction; the reliability and validity of intelligence tests.

***108a. EDUCATIONAL TESTS AND MEASUREMENTS—Fourth year. Fall and summer quarters. Four hours.**

Required of students who are preparing to teach and supervise elementary school work, including the Junior High School.

Purposes: (a) to give the student an appreciation of the 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 standardized tests.

Topics: historical sketch of the development of educational tests and measurements; the nature and classification of tests and measurements of school achievement; the general values of educational measurements; the importance of greater accuracy in educational measurement, and the requirements of greater accuracy; undesirable features of the traditional type of examination; the extent to which the traditional types of measurement should be replaced by standardized educational tests; the limitations of standardized educational tests; the newer types of examinations; their nature and value in comparison with the written examination; methods of improving the ordinary teacher's examination; discussion of the criteria for the selection of standardized educational tests and scales; instructions for giving educational tests and using quality scales; using the results of educational measurements for the purposes of classification and promotion, educational guidance, making prognoses and different degrees of diagnoses, and measuring the efficiency of schools and the methods and means of instruction employed by the schools; the use of tests as a teaching device; description and discussion of some of the standardized educational tests in each one of the elementary school subjects.

***108b. EDUCATIONAL TESTS AND MEASUREMENTS—Fourth year. Spring and summer quarters. Four hours.**

Required of students who are preparing to teach and supervise in the senior high school.

Purposes: see Psychology 108a.

Topics: the content of the course differs from that of 108a mainly in the description and discussion of standardized tests. In 108a a study is made of the tests designed for the elementary school subjects, while in 108b a study is made of the tests designed for the subjects of the high school.

***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: (a) to give instruction in the nature and uses of teachers' tests; (b) to give practice in their construction, administration and scoring, and in the interpretation of the results of these tests.

Topics: deficits and advantages in the different types of teachers' classroom tests; the nature of the different types such as the essay, the simple recall, the true-false, the completion, the judgment, the association, the matching and the multiple choice; the construction, administration and scoring of these types; the interpretation of the results and their uses in teaching, promotion, classification and diagnosis.

109. PSYCHO-CLINICAL PRACTICE—Fall quarter. Two or more hours.

Purpose: to give the student practice in the kind of work treated in other courses, especially in Psychology 106. Another practical purpose is to improve the physical and mental conditions of the children of the Training School and remove hindrances to their school progress.

Work done: children are examined for physical and mental defects; courses of treatment are prescribed or parents notified.

***110. GENERAL PSYCHOLOGY—Fall and summer quarters. Fourth year. Four hours.**

Purposes: (a) 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; (b) 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. SPEECH DEFECTS—Fall quarter, 1928. Two hours.

Purposes: to make the student realize the importance of correcting speech defects and to give instruction in the methods of correcting these defects.

Topics: classification of speech defects; description of the nature of the defects; their social, pedagogical, vocational, and personal handicaps; their prevalence; their causes and their treatment or cure. Some time is devoted to classroom demonstration.

112. PSYCHOLOGY OF MUSIC—Winter and summer quarters. (Not given summer 1929.) Four hours.

Required of third or fourth-year music majors in lieu of Psychology 104, 105, 108a, and 108b.

The general topics of this course are: (a) the psychology of learning as it applies to music; (b) the psychology of musical talent; (c) tests and measurements in music; (d) the psychology of musical appreciation.

Purpose: to acquaint the student with: (a) the nature of individual variations in the capacity for and efficiency in various kinds of vocational work; (b) the use of psychological tests in detecting these variations; and (c) the experimental literature of a practical nature in the vocational field.

Topics: the field and history of vocational psychology; individual differences as applied to the vocational field, their causes and effects; uses and limitations of intelligence tests and rating scales; traits and abilities desirable for various occupations; popular systems of vocational guidance and analysis, and their fallacies; the value of the personal interview with the applicant and its psychological aspects; psychological methods in vocational analysis; a study of trade tests and special ability tests in the field of industrial arts, fine arts, home economics, and commercial education; technic of giving and scoring these tests; sufficient work in statistical methods to enable the student to treat and interpret results; a survey of the experimental literature which concerns vocational testing in its practical application.

114. THE PSYCHOLOGY OF JUVENILE DELINQUENCY—Fall quarter, 1928. Two hours.

The purpose of the course is to give the teacher and school officials some notion of how the delinquent child may best be studied and handled. A study will be made of the causes of delinquent behavior and of the methods of treatment which will improve or correct such behavior. More

in detail a study will be made of the child's offense and such casual factors of delinquent behavior as native and acquired traits, both physical and mental, the child's environment, and his past history. The child's future progress under treatment will also be considered.

116. PSYCHOLOGY OF COMMERCIAL SUBJECTS—Winter and summer quarters. (Not given summer, 1928.) Four hours.

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

Topics: the psychological principles which underlie the learning and teaching of the commercial subjects; the psychology of typewriting, shorthand, bookkeeping, business arithmetic and penmanship; the administration, scoring and nature of standardized tests in the commercial subjects and the interpretation of test results; practice in the construction and use of new type tests applicable to this field, and the interpretations of the results obtained by these tests.

212. STATISTICAL METHODS—Fall and summer quarters. Four hours.

Purposes: (a) to improve the student's ability to comprehend the meaning of educational and psychological literature; (b) to prepare him to make the necessary computations involved in mental and educational measurements; (c) to equip him with an important part of the knowledge necessary for the selection of the best mental and educational tests; (d) to prepare the student to make original investigations which involve a statistical technic.

Topics: the meaning of statistics and statistical methods; sketch of the development of the science of statistics; the value of statistics; common errors in the use and interpretation of statistics; the collection and classification of data; measures of central tendency, such as the mode, median, and the arithmetic mean; measures of variability, such as the quartile deviation, the mean deviation, and the standard deviation; measures of reliability; the application of measures of central tendency, variability; reliability to test construction and to the results of measurements in psychology and education; the measurement of relationship; the use of tabular and graphic methods.

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 and summer quarters. 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.

215. ADVANCED EDUCATIONAL TESTS AND MEASUREMENTS—Spring quarter. Four hours.

Purposes: to give the student such advanced training in tests and measurements as to prepare him to construct and standardize tests, to make an intelligent selection of tests, to plan testing programs, to work up the results of measurements in a meaningful way, and to give him a deeper insight into some of the problems which were briefly discussed in Psychology 108.

Topics: the nature of educational measurements; the preparation and validation of test material; the organization of test material; the preparation of instructions for giving tests; the technic of scaling tests and measuring instruments; practice in using the technic; the requirements of reliability and objectivity; the establishment of norms and their uses; planning testing programs; working up the results so as to realize the objectives of the program; how to make a critical study of a test.

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. Three 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. THESIS—Every quarter. Three hours. Work will depend upon nature of thesis.

225. THESIS—Every quarter. Three hours. Work will depend upon nature of thesis.

ENGLISH AND LITERATURE

The English courses in a teachers college should be complete and sufficient for all the needs of public school teachers. Students who expect to become high school teachers of English will find in Colorado State Teachers College all the courses they need in the field of English.

Courses in composition, oral and written, in oral English, public speaking, and 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.

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 pass the test may become English majors. Of the students who fail, those in the second quartile are required to take English 4 in class with collegiate credit, but those in the third and fourth quartiles are required to take English O without collegiate credit.

COURSE OF STUDY

Courses marked * are also given by extension.

In addition to the core subjects listed on page 52, this department requires:

FIRST YEAR: English 8, 9, 10, 11, and 12.

SECOND YEAR: English 1, 2, 6, 16, and 20.

THIRD YEAR: English 105 and 106 and eight hours of English selected by the student.

FOURTH YEAR: Twelve hours of English selected by the student.

0. FUNDAMENTALS OF ENGLISH—Every quarter.

No college credit.

This course is required of all students whose grades in the English 4 Exemption Test place them in the third and fourth quartiles. The work covers the fundamentals in the mechanics of expression, both oral and written.

1. CHILDREN'S LITERATURE—Intermediate Grades. Every quarter. Four hours.

Required of Intermediate 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. CHILDREN'S LITERATURE—Junior high school. Every quarter. Four hours.

Required 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. Three hours.

Required of all students whose scores in the English 4 Exemption Test place them in the second quartile.

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

***6. AMERICAN LITERATURE—Fall, 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 670-1625—Fall quarter. 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—Winter 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—Spring quarter. 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 one of their two special subjects. 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.

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, and the tests and devices for measuring progress.

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 as given in Ed. 4a. Textbooks: Cross's Fundamentals in English, and Teachers' guide to the Little Book of English composition.

12. ORAL EXPRESSION—Every quarter. Three 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. Three 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 students is carried on under the supervision of the instructor. This course is prerequisite to English 105.

15. TYPES OF LITERATURE—Every quarter. Three hours.

A reading course looking toward an appreciation of literature and covering all the types of literature that can be made interesting to young people and formative of good taste in reading. This includes English, American, and foreign literature which has become classic. But no matter how "classic" it is, it still must be attractive. The types covered will be lyric, narrative, and epic poetry, drama, essay, story, novel, letters, and biography.

16. CONTEMPORARY LITERATURE—Fall, winter, and summer quarters. Four hours.

A second appreciation course similar to English 15, but dealing with the literature of not more than ten years back. 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. Three 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 4.

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

***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.

100. JOURNALISM—Fall quarter. Three 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 presupposes 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. Three 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. Three 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—Winter and summer quarters. Three 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—Fall and summer quarters. Three 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.

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."

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."

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.

112. CHILDREN'S THEATER—Every quarter. Three 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.

120. LYRIC POETRY—Winter and summer quarters. 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. 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. Four hours.

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

***126. NINETEENTH CENTURY PROSE—Fall and summer quarters. 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. Four hours.**

The development, technic, and significance of the novel.

***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 PLAYS—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. OLD TESTAMENT LITERATURE—Winter quarter. Three hours.

A study of the Scriptures from the point of view of their historical development in a method of approach which removes much of the difficulty in understanding them and adds to their charm. The course includes the early poetical, legal, and biographical writings, and the two great prophetic histories.

161. OLD TESTAMENT LITERATURE—Spring quarter. Three hours.

This course, continuous with 160, consists of the consideration of important productions during the three centuries following 750 B. C., with special reference to the work of the Deuteronomists and the Priestly Editors. Some intensive study of literary masterpieces in each period is required.

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. Three 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—Three 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—Three hours.

This is a continuation of Eng. 224.

FOREIGN LANGUAGES

This department offers courses in French, German, Latin, Spanish, and in the teaching of Foreign Languages. Because of the small demand for Latin and German, one course is offered each year in each. Latin 5, 6, and 7 alternate each year with Latin 105, 106, and 107. German 1, 2, and 3 alternate each year with German 5, 6, and 7. Courses in other foreign languages will be offered at the request of ten or more students. Spanish 1, 2, and 3, and French 1, 2, and 3 are offered in the summer quarter, five days each week, classes meeting twice daily, for those who wish to work off a year's credit in beginning foreign language. College credit for beginning foreign languages 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.

In addition to the core subjects required of all students and listed on page 52, the department requires for the bachelor's degree forty hours in the language of the major, and thirty-six hours in a minor approved by the head of the department. Foreign Language 131 is required as part of

the forty hours for the major. In addition to the foreign language requirements, the department requires that the candidate for the Bachelor or Arts degree be proficient also in the English language. The following English courses are required of majors in foreign languages: English 11 and 20, eight hours.

COURSE OF STUDY

Courses marked * are given also by extension.

110. FOREIGN LANGUAGE, ITALIAN—Fall quarter. 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.

111. FOREIGN LANGUAGE, FRENCH—Winter quarter. Two hours.

For music majors and students desiring ability in oral French. Principles of orthography and pronunciation, with drill in oral reading and pronunciation.

112. FOREIGN LANGUAGE, GERMAN—Spring quarter. Two hours.

For music majors and students desiring ability in oral German. Principles of orthography and pronunciation, with drill in oral reading and pronunciation.

131. THE TEACHING OF MODERN 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 graded classes. The history of the teaching of foreign languages, and a study of methods used in Europe, in comparison with methods used in college and secondary schools in the United States.

223. RESEARCH IN FOREIGN LANGUAGES—Every quarter. Three 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—Winter quarter. Three 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—Spring quarter. Three hours.

A continuation of Foreign Language 224.

FRENCH

1. ELEMENTARY FRENCH—Fall quarter. Four hours.

Beziat French Grammar, and Roehm and Shane Laboratory Exercises. First twenty lessons.

2. ELEMENTARY FRENCH—Winter quarter. Four hours.

A continuation of French 1, finishing the texts.

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

Montvert's *LaBelle France*. Labiche's *La Poudre aux Yeux*. Easy conversation and composition.

1, 2, 3, **ELEMENTARY FRENCH**—Summer quarter. Twelve hours.

Beziat French Grammar, and Roehm and Shane Laboratory Exercises. Montvert's *La Belle France*. 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.

French History. Lavis's *Histoire de France, Cours Moyen*. (This course was formerly French 7.)

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

The French Novel. Sand's *La Mare au Diable*, and *La Famille de Germandre*. (This course was formerly French 8.)

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

Classic French Drama. Racine's *Berenice*. Moliere's *Le Misanthrope*, and *Les Femmes Savantes*.

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

Romantic French Drama. Hugo's *Hernani*, and Ruy Blas. (This course was formerly French 107.)

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

Modern French Drama. Laveden's *Le Duel*. Brieux's *La Robe Rouge*. (This course was formerly French 109.)

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

A survey course in French Literature. Nineteenth Century Literature. Lectures, with oral and written reports on parallel reading.

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

A survey course in French Literature. Seventeenth and Eighteenth Century Literature. Lectures, with oral and written reports on parallel reading.

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

A survey course in French Literature. Contemporary Literature. Lectures, with oral and written reports on parallel reading.

GERMAN

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

Prokosch and Morgan's *Introduction to German*. First half. Offered 1929-30.)

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

A continuation of German 1, finishing the text. (Offered 1929-30.)

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

Zeydel's *A Second German Reader*. Storm's *Immensee*. (Offered 1929-30.)

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

A review course in the elements of German. Pope's *Reading and Writing German*. (Offered 1928-29.)

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

Nineteenth Century Novel. Wildenbruch's *Das Edle Blut*. (Offered 1928-29.)

7. INTERMEDIATE GERMAN—Spring quarter. Four hours.

Nineteenth Century Drama. Freytag's *Die Journalisten*. (Offered 1928-29.)

LATIN

5. INTERMEDIATE LATIN—Fall quarter. Four hours.

A review course in the elements of Latin. Two of Cicero's orations against Cataline. (Offered 1928-29.) (This course was formerly Latin 1.)

6. INTERMEDIATE LATIN—Winter quarter. Four hours.

The orations for Archias and for the Mainlian Law. Reports on Roman life and customs. (Offered 1928-29.) (This course was formerly Latin 2.)

7. INTERMEDIATE LATIN—Spring quarter. Four hours.

Selections from Ovid's *Metamorphoses*. Reports on Roman mythology. (Offered in 1928-29.) (This course was formerly Latin 3.)

105. ADVANCED LATIN—Fall quarter. Four hours.

Virgil's *Aeneid*. Roman mythology studied. (Offered 1929-30.) (This course was formerly Latin 5.)

106. ADVANCED LATIN—Winter quarter. Four hours.

Second, third, and fourth books of Virgil's *Aeneid*. (Offered 1929-30.) (This course was formerly Latin 7.)

107. ADVANCED LATIN—Spring quarter. Four hours.

Fifth and Sixth books of Virgil's *Aeneid*. (Offered 1929-30.) (This course was formerly Latin 9.)

SPANISH

1. ELEMENTARY SPANISH—Fall quarter. Four hours.

Warsaw and Bonilla's *Elements of Spanish*, and Roehm and Manchester's *Laboratory Exercises*. First forty lessons.

2. ELEMENTARY SPANISH—Winter quarter. Four hours.

A continuation of Spanish 1, finishing the text.

3. ELEMENTARY SPANISH—Spring quarter. Four hours.

Marcial Dorado's *Espana Pintoresca*. Easy conversation and composition.

1, 2, 3. ELEMENTARY SPANISH—Summer quarter. Twelve hours.

Warsaw and Bonilla's *Elements of Spanish*, and Roehm and Manchester's *Laboratory Exercises*. Marcial Dorado's *Espana Pintoresca*. 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 course in the elements of Spanish. Seymour and Carnahan's *Short Review Grammar*. Reading of Alarcon's *El Sombrero de Tres Picos*.

6. INTERMEDIATE SPANISH—Winter quarter. Four hours.

The Spanish Short Story. Stories of Blasco Ibanez, *Antologia de Cuentos Espanoles*. *Cuentos Alegres de Taboada*. (This course was formerly Spanish 7.)

7. INTERMEDIATE SPANISH—Spring quarter. Four hours.

The Spanish Novel. Alarcon's *El Final de Norma*. Selgas' *La Mariposa Blanca*. Galdos' *Marianela*. (This course was formerly Spanish 9.)

105. ADVANCED SPANISH—Fall quarter. Four hours.

Modern Spanish Drama. Echegaray's *O Locura o Santidad*, Galdos' *Linares Rivas*, *El Abolengo*. *Dona Perfecta*.

106. ADVANCED SPANISH—Winter quarter. Four hours.

Modern Spanish Drama. Benavente's *Los Intereses Creados*. Enhegaray's *El Gran Galeoto*. Martinez Sierra's *Cancion de Cuna*. (This course was formerly Spanish 107.)

107. ADVANCED SPANISH—Spring quarter. Four hours.

The Spanish Romantic Drama. Tamayo y Baus' *Un Drama Nuevo*. Hartzbusch's *Los Amantes de Teruel*. Espronceda's *El Estudiante de Salamanca*. (This course was formerly Spanish 109.)

205. GRADUATE SPANISH—Fall quarter. Four hours.

A survey of Spanish Literature. Nineteenth Century Literature. Lectures, with oral and written reports on parallel reading. (This course was formerly Spanish 226.)

206. GRADUATE SPANISH—Winter quarter. Four hours.

A survey course in Spanish Literature. The Golden Age of Spanish Literature. Lectures, with oral and written reports on parallel reading. (This course was formerly Spanish 227.)

207. GRADUATE SPANISH—Spring quarter. Four hours.

A survey course in Spanish Literature. Contemporary Literature. Lectures, with oral and written reports on parallel reading.

GEOLOGY, PHYSIOGRAPHY, AND GEOGRAPHY

The courses listed in this department are not review courses covering the material taught in the elementary schools. The subject matter included is treated in a professional manner with teaching as the objective.

Geography is a definite science in which the superstructure of commercial and human factors is built upon the underlying climatic and geologic causes. It is from this point of view that the work of the department is given.

COURSE OF STUDY

Courses marked * are given also by extension.

FOUR YEARS FOR MAJORS IN GEOLOGY, PHYSIOGRAPHY, AND GEOGRAPHY

In addition to the core subjects as listed on page 52, this department requires:

FIRST YEAR: Geography 7, 8, and History 10.

SECOND YEAR: Geography 4, 5, 12, and 52, and Elementary Science 1.

THIRD YEAR: Twelve hours of Geography selected by the student.

FOURTH YEAR: Eight hours of Geography selected by the student.

4. REGIONAL GEOGRAPHY OF NORTH AMERICA—Fall quarter. Four hours.

The continent will be studied from the standpoint of its geologic and climatic controls, and upon these will be built the economic and other bases for the human aspects. The continent will be divided regionally into climatic provinces which will be used as the starting point for the study of similar climatic provinces in other continents.

5. GEOGRAPHY OF THE NEW EUROPE—Winter quarter. Four hours.

We endeavor to understand Europe in the climatic and geologic terms of our own continent. The linguistic, economic, and other bases for the new countries of Europe will be studied. The work in this course is taken up from the social science point of view. No textbook is used because we wish to bring the subject matter up to the present time.

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

A course primarily designed for business majors. A study of the great product areas, the human factors in production, trade routes, reasons for location of cities, and the displacement of river by railway traffic are some of the chief topics studied. The human factors in production, for example the varying potentialities of races, health, and social tradition, will also be dwelt upon.

8. HUMAN GEOGRAPHY—Fall quarter. Four hours.

The great subdivisions of mankind from the racial standpoint will be taken up, with a study of their physical and mental characteristics. The relation of man to his environment, as, for instance, desert, tropical, forest, etc., will be stressed.

12. METHODS IN INTERMEDIATE GEOGRAPHY—Each quarter. Four hours.

This course is a lecture course in which the general principles of geography are discussed. Field trips and museum work are a part of the course. The endeavor is to give a course in the methods of presenting geography and at the same time to make the subject enough of a content course so that intermediate majors who wish to get a brief survey of the subject matter and the methods of presenting it may have a chance to do so.

15.—METHODS AND MATERIALS OF JUNIOR HIGH SCHOOL GEOGRAPHY—Spring and summer quarters. Four hours.

A course in subject matter and method designed for junior high majors. The course involves the treatment of the subject matter from the social science point of view. This is a method course in which method is presented, not alone, but as a part of the subject matter.

52. GEOGRAPHY OF SOUTH AMERICA—Spring quarter. Four hours.

A course on the racial, economic, and political aspects of South American geography. After a brief general survey of the continent, the students are assigned special topics, which they present to the class in the form of an illustrated lecture. An excellent megopticon lantern makes it possible to carry on this without any interference with class routine.

53. GEOGRAPHY OF ASIA—Spring quarter. Four hours.

A course on Asia following the same line as the course on South America, Geog. 52. In the case of Asia the social and racial geographies are stressed while in South America more emphasis is placed on the commercial aspects. (Not given in 1929.)

54. GEOGRAPHY OF AFRICA—Winter quarter. Four hours.

A course on the economic and political geography of Africa based on the climatic and geologic backgrounds. Special emphasis will be placed upon the mandates given various powers after the World War.

55. GEOGRAPHY OF AUSTRALIA—Spring quarter. Four hours.

A course on Australia, largely a comparative study of the great commonwealth in terms of the institutions and economic and political life of the United States. The similarity of these two great English speaking frontiers makes such a comparison a very satisfactory method of approach.

100. GEOLOGY—Fall quarter. Four hours.

Not so much a textbook course as an endeavor to get the kind of geology that will enable our Colorado teacher from mountain and plain to understand her environment in geologic terms and to incorporate this understanding in her nature study and geography teaching.

102. THE CHANGING WEATHER—Fall quarter. Four hours.

A course in the study of weather and its influence on man's activities. Extensive use will be made of government publications and of weather instruments.

***103. CLIMATOLOGY—Spring and summer quarters. Four hours.**

The climates of the world with particular reference to their geographic and historic influences will be the primary elements studied in this course. The basis for dividing the world into climatic provinces—Oregonian, Californian, Canadian, Nevadan, etc.—will be taken up in detail.

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. Four weeks of the twelve are devoted to the study of meteorology and the observation and prediction of weather phenomena. This course is a good foundation for much of the work given in elementary science and furnishes an excellent background for history and for other geography courses.

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

A recitation course designed to cover such problems as proofs of the earth's rotation and revolution, the tides, the international date line, standard time belts, calendars, etc.

***122. BIOGEOGRAPHY—Spring and summer quarters. Four hours.**

The geographic distribution of plants and animals, as determined by climate and soil. The great world plant provinces—as, for example, the *selvus* hot deserts and taiga tundra—are taken up. Animal life, insofar as it takes on peculiar forms or habits of life in these varying habitats, will be considered. The effect of island isolation on animal and plant forms will be discussed.

130. THE ISLANDS OF THE SEA—Fall quarter. Two hours.

A study of the various ways islands are formed as well as their relation to the continents in a biologic and social sense. Geographies often omit a study of outlying islands because they are chiefly concerned with the continents. This course is designed to fill this gap in the student's geographic knowledge—a gap that needs to be filled because of the strategic and historic importance of many island groups.

150. GEOGRAPHY OF COLORADO—Winter and summer quarters. Four hours.

A lecture course on Colorado geography, touching the physiographic features of the state, the influence of the geologic past upon these features, weather phases and climate of Colorado, the main geographic controls in animal and plant distribution, Colorado man, past and present, and his distribution, the industries of the state, and the geographic controls of industry.

162. GEOGRAPHY OF THE TROPICS—Winter and summer quarters. Four hours.

A course on the chief problems of the tropics, climatic, racial, social, and governmental. The interdependence of tropical and temperate zones will be stressed.

170. GEOGRAPHY OF POLAR LANDS—Spring quarter. Four hours.

A course designed to bring out the main facts with reference to the Arctic and Antarctic regions. Emphasis will be placed upon the economic potentialities of these regions in future world economy. A large part of the course will be devoted to special reports by students.

199. CONSERVATION—Fall quarter. Four hours.

A course on the preservation of the great natural resources of our land. Special reports by students on topics like forests, water power, pollution of streams, irrigation projects, etc., will form the main part of the course.

223. RESEARCH IN GEOGRAPHY—Every quarter. Three 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 GEOGRAPHY—Three hours.

A course designed for students who are working on theses in the geographic field.

225. RESEARCH IN GEOGRAPHY—Three hours.

A continuation of Geog. 224.

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 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 in this field are all chosen from fields that are of most value to teachers in the public schools. The new and growing fields are represented as well as the more traditional selections of subject matter.

COURSE OF STUDY

Courses marked * are given also by extension.

In addition to the core subjects as listed on page 52, this department requires:

FIRST YEAR: History 1, 2 or 4,

SECOND YEAR: History 5, 6, 7, and 13, Political Science 1 and 2.

THIRD YEAR: Ten hours of History and Political Science selected by the student.

FOURTH YEAR: History 117 and nine additional hours of History and Political Science selected by the student.

SUBSTITUTIONS: History 117 for History 13 for those preparing to teach in junior or senior high schools.

In addition to the above, a total of at least twelve hours of Sociology, Economics, and Geography combined should be selected by the student. This work may be distributed over the four years.

Students who plan to go on with graduate work are advised to acquire a good reading knowledge of French or Spanish before completing their work for the Bachelor's degree. All students are advised so to arrange their programs that they will have other subjects that are regularly taught in junior or senior high schools besides their major that they can teach, if required to do so.

HISTORY

*1. FOUNDATIONS OF AMERICAN NATIONALITY, 1700-1800—Fall, spring, and summer quarters. 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; foreign relations; finances; the loyalists; formation of a permanent government; establishing the new government.

*2. DEVELOPMENT OF AMERICAN NATIONALITY, 1820-1865—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.

***3. RECENT AMERICAN HISTORY—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.

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

Sophomore year.

The westward movement as an historical process. Causes which led to migration from the eastern states. The occupation of the region between the Alleghenies and the Mississippi. The land policy of the United States. Reaction of the West upon national policies. Expansion into Florida, Louisiana, and the Oregon country. Acquisition of Texas and war with Mexico. 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 and summer quarters. Four hours.**

Phases of the later medieval period that vitally affected the development of the nations of western Europe. Development of important nations. The Reformation, with its results upon both Catholic and Protestant churches. The new spirit of education and missionary zeal. Beginning of the expansion of European nations to other continents and the growth of colonial empires. 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.

7. EUROPE SINCE 1900—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 covenants, 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.**

The current social and industrial conditions in the United States will be traced from their beginnings; European conditions which furnish traceable influences will be considered. Some of the subjects 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.

13a, 13b. TEACHING OF HISTORY AND CIVICS IN THE ELEMENTARY SCHOOL. Every quarter. (Not given summer, 1928.) Three hours.

These courses are similar in general plan; 13a is planned for the primary and lower 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 5; in 13b the material commonly found in grades 5 to 7.

***27. CONTEMPORARY HISTORY—Fall and summer quarters. 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—Winter 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. 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 the concrete material that is frequently used in the grades. It also covers the material that high school instructors find most difficult to teach in the courses in Ancient History and World History.

103. THE LITERATURE OF AMERICAN HISTORY—Spring and summer quarters. 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, 1928. 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. Three 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 course in History.

203. THE REFORMATION—Summer quarter, 1929. 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

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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—Summer quarter. Two or four hours.

This course deals with those phases of mediæval 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 mediæval church; mediæval learning, schools and colleges; administration of justice; art and architecture.

206. THE FRENCH REVOLUTION—Not given 1928-29. 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—Winter 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—Spring 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. SPANISH-AMERICAN HISTORY—Fall quarter. 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—Not given 1928-29. 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. Three 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—Offered on application.

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.

300. SEMINAR IN THE TEACHING OF HISTORY—Offered on application. 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 quarter. 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 and summer quarters. 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. Three hours.

The growth of cities; their relation to trade and industry; state control over cities; the development of the American city; services to the people; city planning; the commission form of government; the city manager; other recent movements.

*101. HISTORY OF THE FOREIGN POLICIES OF THE UNITED STATES—Winter and summer quarters. 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—Fall 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, and the regard for treaties. American ideals, Pan-Americanism, and the League of Nations.

203. POLITICAL SCIENCE THEORY—Summer quarter, 1929. Four hours.

This is an introduction to the principles of 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.

HOME ECONOMICS

The immediate purpose of this department is to develop judgment in the selection of shelter, food, and clothing. The main purpose is to train capable teachers of the subject. The ultimate aim of the course is to stabilize home life, by teaching the principles and ideals that determine its harmonious existence.

It is now the policy of this department to recommend for elementary and junior high school positions those students who have had high school work and two years of creditable college work in the subject. The four-year course prepares students to teach the subject in all accredited high schools.

Students entering the Home Economics department without previous training in the high school will be required to take H. Sc. 1 and H. Sc. 2 before any credit is given.

COURSE OF STUDY

Courses marked * are given also by extension.

In addition to the core subjects as listed on page 52, this department requires:

FIRST YEAR: Household Arts 1, 3, 5, 6, and Art 4a, Chem. 1, 2, and 3, Phys. 10.

SECOND YEAR: Household Science 1, 2, 3, 7, and Eng. 12 or Eng. 15, H. A. 4, Bact. 100.

THIRD YEAR: Household Arts 102, 108, 109, Household Science 104, 106, 108, and Chem. 108, 109 and 112.

FOURTH YEAR: Household Science 103, 105, Home Economics 111 and Household Arts 112.

HOUSEHOLD SCIENCE

1. FOODS AND COOKERY—Fall and summer quarters. Four hours. Fee, \$3.00.

Household Science 1, 2, and 3 are planned as consecutive courses. The relation of foods to health is the underlying keynote. The courses include the study of foods from the standpoints of production, manufacture, com-

position, nutritive value and cost. Field trips are made to local food factories. In H. Sc. 1 special emphasis is placed on the selection and principles involved in the preparation of many types of food. The course aims to familiarize the student with the use and care of laboratory equipment and with all available fuels and cooking equipment, such as gas, electric, and kerosene ranges, the fireless and pressure cookers.

2. **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. Some practice in menu making and table service is given in this course.

3. **COOKERY AND SERVING**—Spring and summer quarters. Four hours. Fee, \$3.50.

Prerequisites, H. Sc. 1 and H. Sc. 2.

The types of food prepared in this course include more difficult combinations and require a greater degree of manipulative skill. Further practice is given in the planning and serving of meals with reference to the nutritive needs of the various members of the family group; the time, labor, and cost involved. The social and esthetic phases of food service are also stressed.

4. **CHILDREN'S FOOD PROBLEMS**—Every quarter. Four hours.

A course for primary, intermediate and Physical Education majors. No prerequisite. This course is designed to give the teacher a fundamental knowledge of nutrition that she may train growing children in desirable food habits.

*7. **HOUSEHOLD MANAGEMENT**—Every quarter. Lecture course. Two hours.

A course for housekeepers and teachers of the subject by means of class discussion and related practical work in the cottage, applying scientific and economic principles to the problems of the modern housewife. Such topics as the following are discussed from the ideal and practical standpoint; the organization and administration of the household; apportionment of time; motion studies as applied to household activities; menus; household efficiency; the budget and its apportionment; household accounts; household service; home life and its standards.

7a. **PRACTICAL COURSE**—Residence in Cottage, one half quarter. Two hours.

Required of all graduates. Prerequisites H. Sc. 1 and 2.

103. **DIETETICS**—Spring and summer quarters. Four hours. Fee, \$3.00.

The completion of chemistry is prerequisite. The course deals with the principles which govern the choice of food under varying conditions, such as age, occupation, health and disease. Dietaries are planned and prepared to meet the needs of individuals from infancy to old age, also family dietaries which fulfill the requirements of each member with due consideration as to cost.

104. **DEMONSTRATION COOKERY**—Winter quarter. Four hours. Fee, \$3.50.

This course presupposes at least three quarters of previous training in cookery. It is planned to broaden the students' experience by affording a greater range of applications; to increase skill and confidence and to fit students to do community work as demonstrators.

105. **CHILD CARE**—Fall and summer quarters. Four hours.

The subject matter of the course treats of such topics as: training for parenthood; heredity and eugenics; prenatal care; the physical care of children from infancy through adolescence. The historical development of the child-welfare movement, the work of the various agencies which are promoting child welfare, methods of organizing and conducting such work in schools and communities, and sources of available material are included.

106. HOME CARE OF THE SICK—Fall and summer quarters. Four hours. Fee, \$1.00.

This course enables students to adapt such means as are at hand in most homes to meet the emergencies of illness or accident. The preparation and care of the sick room, preventive measures and first aid are taught. Attractive trays for the sick are prepared.

108. HOUSING AND HOUSE SANITATION—Spring and summer quarters. Four Hours.

This course deals with the housing problem as it relates to morals, manners, and health. Some time will be given to modern ideals of comfort and cleanliness. The effect of the automobile on housing and housekeeping is taken note of. Methods of control of housing and recent housing laws will be studied.

200. SEMINAR.

Graduate work may be arranged for in this course, dependent on previous training. The credit is to be agreed on when the time to be spent on the work is determined.

HOUSEHOLD ARTS

*1. TEXTILES—Fall quarter. Four hours.

The study of the four chief fibers used in household fabrics. The chief purpose of the course is to develop good taste and correct judgment in the consumer. Methods of teaching the subject are emphasized. This course is prerequisite to H. A. 6.

3. GARMENT MAKING—Winter, and summer quarters. Four hours.

The fundamentals of plain sewing are taught as they should be presented in high school. Undergarments and child's dress are completed in the course. Cleaning and repair of garments is included in this course. Methods are stressed.

4. MILLINERY—Fall and summer quarters. Four hours. Fee, \$2.50.

This course includes a discussion of practical and artistic principles of millinery; designing and modeling hats of various types in paper and crinoline; making willow, wire, and buckram frames; the use of velvet, silk, and straw in hat-making. This course increases one's ability to select suitable hats, as well as hats that have good workmanship. Renovation problems are taught. Attention is given to correct presentation of the subject, and planning short courses for high schools. Illustrative materials are prepared.

*5. PATTERN DESIGNING—Winter and summer quarters. Four hours. Fee 50c.

This course is prerequisite to H. A. 6. The course includes cutting of all fundamental patterns to accurate measurements of the figure. Designing original patterns that may be drafted to individual measurements. Modeling patterns with tissue paper on the figure. These patterns are used in H. A. 6.

6. ELEMENTARY DRESSMAKING—Spring and summer quarters. Four hours.

This course is primarily for majors who have completed H. A. 1 or 2, and 5. The teaching of the use of all attachments of the sewing machine. The preparation of illustrative material for teaching. Designing and making a tailored sports dress in suitable silk fabric. This is entirely a machine construction problem.

10. DRESS APPRECIATION—Fall and summer quarters. Four hours. For non-majors.

This course aims to give a practical working knowledge of clothing selection which will enable anyone to choose her personal wardrobe wisely. Clothing budgets; clothing economics; care of clothing, and clothing hygiene are considered.

101. THE HOME—Spring and summer quarters. Two hours.

This course gives some of the problems that relate to every individual who expects to have a home or share in making better homes.

102. APPLIED DESIGN—Winter and summer quarters. Four hours.

This course emphasizes the principles of design in relation to dress decoration, and the use of decorative design as applied to household linens.

108. COSTUME DESIGN—Fall and summer quarters. Four hours. Fee, 50c.

This is a study of art principles as applied to the standard and the individual figure. The fashion figure is used as a means of analyzing defects in the lines of individuals. The best lines found in historic dress are copied and modified to meet the needs of the times. Work in color is adapted to specific needs of the students. This course is required of Senior College majors in this department.

109. ADVANCED DRESSMAKING—Spring quarter. Four hours. Fee, 50c.

In this course we put into practice the accumulated experience of all the preceding Household Arts courses. It is planned so as to increase confidence by the use of difficult problems both in quality of materials used in finishes, and decoration. A dress of fine wool or silk material is made.

110. ADVANCED TEXTILES—Winter quarter. Four hours.

This course includes extensive study of the more elaborate textile fabrics, lace, shawls, brocades, tapestries, and Oriental rugs. Also a study of furs and the fur bearing animals.

112. HOME DECORATION—Spring and summer quarters. Four hours.

The application of art principles to interior decoration. This course considers the practical side of decorating simple homes. Such questions as suitable types and lengths of curtains, correct picture-hanging, and arranging of furniture are stressed, beside the study of line, color and proportion as evidenced in floors, walls, and furniture.

HOME ECONOMICS ED. 111—Fall and summer quarters. Four hours.

The methods, subject matter, equipment, texts, reference books, and other sources of help every teacher of home economics should be familiar with for successful teaching of the subject. Current articles in education journals are used as a basis of discussion.

223. RESEARCH IN HOME ECONOMICS—Every quarter. Three 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 HOME ECONOMICS—Three hours.

This is a graduate seminar provided to take up problems in the teaching of Home Economics such as require investigation by graduate students working upon theses in the department of Home Economics. The amount of credit depends upon the work successfully completed.

225. RESEARCH IN HOME ECONOMICS—Three hours.

This is a continuation of H. E. 224.

INDUSTRIAL ARTS

The Industrial Arts Department includes work in woodworking, drafting, printing, bookbinding, and metal craft work. These departments are well equipped. They occupy the first and second floors of Guggenheim Hall of Industrial Arts. The rooms are large, well ventilated, and well lighted. The students in these classes are never crowded for room or hindered in their work by lack of equipment. Our equipment is of the latest and best type, and is always kept in first-class condition.

The first aim of the department is to prepare teachers for elementary and secondary schools. The courses are varied, and are organized along two lines. The practical or technical phases of the subjects and the educational phases give an opportunity for study along technical,

theoretical, and historical lines. An excellent training department housed in the Training School building gives full opportunity to put into practice in teaching the ideas presented in the various courses.

COURSE OF STUDY

Courses marked * are given also by extension.

In addition to the core subjects as listed on page 52, this department requires:

FIRST YEAR: Industrial Arts 11, 12, two hours in addition to fine arts, and at least twelve hours in addition in two of the following fields: Woodworking, printing, art metal, drafting, bookbinding.

SECOND YEAR: Industrial Arts, 5, 9, two hours in a selected course in fine arts and twelve additional hours in the two fields selected as majors the first year.

THIRD YEAR: Industrial Arts 104, 117, 119, and at least twelve hours in the two fields selected as majors the first year.

FOURTH YEAR: Industrial Arts 105, 118, and at least twelve hours in the two fields selected as majors the first year.

College credit shall be given for Industrial Arts subjects under the following conditions:

MAJORS:

1. Credit shall be given for the elementary work in woodwork (one quarter) only on completion of three quarters of work, i. e., Woodworking 1a, 2, and 19, and shall amount to one-half of the number of weekly periods in recitation and shop.

2. Credit shall be given for the elementary work in printing (one quarter) only on completion of three quarters of work, i. e., Elementary Printing 31a, 31b, and 31c, and shall amount to one-half the number of weekly periods.

3. Credit shall be given for the elementary work in bookbinding (one quarter) only on completion of three quarters of work, i. e., Elementary Bookbinding 41a, 41b, 41c, and shall amount to one-half of the number of weekly periods.

NON-MAJORS:

1. Credit shall be given only for Industrial Arts 2 or more advanced courses or for professional courses, and shall amount to one-half of the number of weekly periods in the case of shop courses.

1. **TECHNIC AND THEORY OF WOODWORKING I**—Fall, spring, and summer quarters. Four hours. Fee, \$2.00.

This course is arranged for beginners in woodworking who intend to major in the industrial field or those who wish to take the work as an elective. The purpose of the course is to give the student a fair knowledge of woodworking tools and a comprehensive idea of methods of construction. The construction of simple pieces of furniture is made the basis of this course.

2. **TECHNIC AND THEORY OF WOODWORKING II**—Winter and summer quarters. Four hours. Fee, \$2.00.

This course is a continuation of Course I and is designed for advanced students and majors. More advanced phases of woodworking are presented in technical problem form.

3. **WOODWORKING FOR ELEMENTARY AND SECONDARY SCHOOLS**—Spring quarter. Four hours.

This is a methods course and deals with such topics as equipment, materials used, where and what to buy, kind of work to be undertaken in

the different grades, the preparation and presentation of projects, the making of suitable drawings, and the proper mathematics to be used in woodworking.

4. CONSTRUCTION OF CLASS PROJECTS—On request. Four hours. Fee, \$2.00.

The purpose of this course is to train the students in designing and carefully working out suitable projects to be used in the elementary and junior high classes.

*5. PRINCIPLES OF TEACHING PRACTICAL ART SUBJECTS—Fall and spring quarters. Three hours.

The aim of this course 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 practice. 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.

6. REPAIR AND EQUIPMENT CONSTRUCTION—Fall quarter. Four hours.

This course has for its base the building of various types of equipment and the use of power machines in working out these problems. This is an especially valuable course for those who wish to emphasize the large phases of vocational education.

8a. ART METAL—Fall, winter and summer quarters. Four hours. Fee, \$2.00.

This course has in mind the designing and creation of simple, artistic forms in copper, brass, and German silver.

8b. ART METAL—Winter and spring quarters. Four hours. Fee, \$2.00.

A continuation of 8a. The course in general includes the designing and executing of simple, artistic jewelry pieces, such as monograms, simple settings of precious stones, and the development of advanced artistic forms in copper.

9. CLASSIC ARCHITECTURE—Fall and summer quarters. One hour.

A general survey of the history of ancient and classic architecture from the standpoint of the history of peoples. Topical studies by members of the class, of selected monuments and of specific problems. Illustrated by lantern slides.

*10. MECHANICAL DRAWING—Fall and spring quarters. Two or four hours. For art majors. Fee, \$1.00 or \$2.00.

This course is designed to give a knowledge of the use of drawing equipment and materials. Problems presented include geometrical drawing, elements of projection, development of surface, isometric and oblique projecting, simple working drawing and lettering. This course is planned for beginners who have had no technical drawing.

*11. PROJECTIONS, SHADE, AND SHADOW—Fall quarter. Four hours. Fee, \$1.00.

The purpose of this course is to give a student a working knowledge of the fundamentals of orthographic projection as applied to points, lines, planes, solids, shade and shadow, and applications.

*12. PRINCIPLES OF ARCHITECTURAL DRAWING I—Winter and summer quarters. Four hours. Fee, \$1.00.

This course includes the making of complete designs of simple one-story cottages, together with details and specifications of same.

*13. PRINCIPLES OF ARCHITECTURAL DRAWING II—Spring quarter. Four hours. Fee, \$1.00.

This course is a continuation of Course 12 and deals with the drawing of plans of cement, brick, and stone structures, culminating in complete plans and specifications for resident and public buildings.

14. CARE AND MANAGEMENT—Fall quarter. Three hours.

This course is designed to train students to care for, repair, and adjust hand and power tools of the woodworking department.

19. WOODTURNING—Winter and summer quarters. Four hours. Fee, \$2.00.

Two sections of this course will be given.

The aim of this course is to give the students a fair knowledge of the woodworking lathe, its care, use and possibilities. Different types of problems will be worked out, such as cylindrical work, working to scale, turning duplicate parts, turning, and assembling, the making of handles and attaching them to the proper tools. Special attention will be given to the making of drawings such as are used in ordinary wood turning.

31a. ELEMENTARY PRINTING—Fall and summer quarters. Two or four hours. Fee, \$1.00.

A course intended to acquaint the student with the various tools and materials of a print shop and to teach him the fundamentals of plain type composition, as he carries simple jobs through the various stages from composition to making ready and putting on the press.

31b. ELEMENTARY PRINTING—Winter quarter. Two or four hours. Fee, \$1.00.

Continued work in fundamentals as applied to more complicated pieces of printing, involving rule work, borders, ornaments, etc.

31c. ELEMENTARY PRINTING—Spring and summer quarters. Four hours. Fee, \$1.00.

Balance, proportion, simplicity, harmony, etc., as applied to the designing and producing of good printing.

32a. INTERMEDIATE PRINTING—Fall and summer quarters. Two or four hours. Fee, \$1.00.

Added stress upon principles of good design and workmanship with a view to making the student more proficient in producing artistic work. An intensive study of typographic design in laying out and printing cards, tickets, letterheads, posters, etc.

32b. INTERMEDIATE PRINTING—Winter quarter. Two or four hours. Fee, \$1.00.

Production of title pages, covers, menus, etc.

32c. INTERMEDIATE PRINTING—Spring and summer quarters. Two or four hours. Fee, \$1.00.

Continued practice in producing more pretentious pieces of work of the classes named in 32a and 32b.

41a. ELEMENTARY BOOKBINDING—Every quarter. Four hours. Fee, \$1.00.

This course aims to introduce the following: tools, machines, materials and uses, collating and preparing sheets for sewing, sewing on tape and cord, preparing end sheets, trimming, gluing, rounding and backing, headbanding, banding and preparing backs for covers, selecting cover materials, planning and making covers, and all steps necessary in binding of all kinds, including full cloth, buckram, paper, spring or loose back, with plain and fancy edges. Beside the fundamental technic of bookbinding, a variety of individual projects are undertaken, such as memorandum books, writing pads, leather cases, boxes, cloth portfolios, and kodak albums.

41b. ELEMENTARY BOOKBINDING—Every quarter. Four hours. Fee, \$1.00.

A continuation of bookbinding 41a.

41c. ELEMENTARY BOOKBINDING—Fall and spring quarters. Four hours. Fee, \$1.00.

A continuation of bookbinding 41b.

42a. INTERMEDIATE BOOKBINDING—Every quarter. Four hours. Fee, \$1.00.

This course includes the binding of books in half leather, half morocco, cowhide, calf, sheep, and fancy leathers. Some of the type projects undertaken are the making of travelers' full leather writing cases, music cases and a variety of other art leather pieces.

42b. INTERMEDIATE BOOKBINDING—Fall and spring quarters. Four hours. Fee, \$1.00.

A continuation of bookbinding 42a.

42c. INTERMEDIATE BOOKBINDING—Winter and spring quarters. Four hours. Fee, \$1.00.

A continuation of bookbinding 42b.

100. WOODSHOP PROBLEMS—On request. 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 may be worked out in school or factory.

*104. PRE-VOCATIONAL EDUCATION—Winter and summer quarters. Three hours.

The purpose of this course is to discuss the educational needs of pupils in school, based on the community environment, vocational opportunities, and demand; recognizing that vocational needs vary with community conditions, and that vocational work fundamental and helpful in one community might be very unfit and unnecessary in another. We generally make a survey of the vocational activities of a nearby community. The entire course is a discussion of special, government, state, and community school problems in vocational fields that we may learn something of the methods of attack used in planning special pre-vocational work, especially the junior high school problem.

105. ADVANCED ARCHITECTURAL DRAWING—Spring and summer quarters. Four hours. Fee, \$1.00.

The course is designed to give the student a knowledge of great historic materials and their application in modern buildings. A study of columns, capitals, pediments, buttresses, arches, vaults, and their application in building will be stressed through this entire course. The work is intensive rather than extensive in its fundamental aspects.

106. ADVANCED REPAIR AND EQUIPMENT CONSTRUCTION—On request. Four hours.

This course is similar to Ind. Arts 6 but deals with a much more advanced type of work.

109a. ART METAL—Fall quarter. Four hours. Fee, \$2.00.

The base for this course is the designing, making and finishing of artistic jewelry in semi-precious and precious metals; also simple artistic jewelry, with all the steps that are fundamental in stone setting and finishing.

109b. ART METAL—Winter and spring quarters. Four hours. Fee, \$2.00.

A continuation of 109a, with the applications in teaching of jewelry work in the public schools. Advanced problems in design as applied to set metal, wire work, chasing, and repousse.

117. ELEMENTS OF MACHINE DESIGN I—Fall quarter. Four hours. Fee, \$1.00.

This course includes sketches, drawings and tracings of simple parts, such as collars, face plates, screw center, clamps, brackets, couplings, simple bearings, and pulleys. Standardized proportions are used in all drawings.

118. ELEMENTS OF MACHINE DESIGN II—Spring quarter. Four hours. Fee, \$1.00.

A study is made of the transmission of motion by belts, pulleys, gears, and cams. Sketches, details and assembled drawings are made of valves, vises, lathes, band saws, motor and gas or steam engines.

119. MEDIEVAL AND MODERN ARCHITECTURE—Winter quarter. One hour.

The architecture of the Middle Ages of the Renaissance. Lectures and readings on the principle which underlies the theory and the practice of architecture during this period, illustrated by lantern slides. Open to all students of the college.

120. ADVANCED WOODTURNING—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—On request. Three 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—On request. 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.

133a. ADVANCED PRINTING—Fall, spring, and summer quarters. Four hours. Fee \$1.00.

Advanced work in the complete designing and producing of printed matter, with a study of plates, papers, and inks. Advanced imposition and press work.

133a. ADVANCED PRINTING—Winter, spring, and summer quarters. Two or four hours. Fee, \$1.00.

Special work in cutting and printing of linoleum blocks. Hand-let-tering and its application to printing.

134a. PRACTICAL NEWSPAPER WORK IN PRINTING—On request. Two or four hours.

The various processes incident to the printing of a newspaper will be performed by the student in this course, with stress upon good design in "ads" and make-up.

135. COST ACCOUNTING IN PRINTING—On request. Two hours.

Estimating and work dealing with the cost of printing.

136. SHOP MANAGEMENT IN PRINTING—On request. Two hours.

Keeping of records and accounts. Purchase of materials. Planning and laying out of equipment. Students will be encouraged to contribute and work out original ideas intended to broaden the scope of the shop's work and to increase its efficiency.

143a. ADVANCED ART BINDINGS AND LEATHER CRAFT—Fall, spring and summer quarters. Four hours. Fee, \$1.00.**143b. ADVANCED LEATHER CRAFT AND COMMERCIAL BINDINGS—On request. Four hours. Fee, \$1.00.**

The technic involved in this course includes special work in lettering in gold and other materials and foils, tooling and use of stamping machine in applied design. In general, the course is a continuation of previous courses with additional technic and advanced projects in full leather bindings with raised panels, gilt, fancy, starch, and agate edges, finishing in antique and gold, hand-lettering. Hand tooling in gold antique and embossed design.

143c. ADVANCED LEATHER CRAFT AND BLANK BOOK AND LOOSE LEAF BINDING, EXTRA BOUNDED IN FULL LEATHER—On request.**144. SHOP MANAGEMENT IN BOOKBINDING—On request. Two hours.**

This course deals with the organization and arrangement of a shop. Planning of the technical work in regard to particular pieces, the laying out of designs, selection of materials and methods of construction.

145. SECRETARIAL SCIENCE IN SHOP ACCOUNTING—On request. Four hours. Elective.

Keeping shop records. Selection and purchasing of all types of materials and equipment necessary for school bindery. Estimating cost of production and general shop expense.

201. SEMINAR—On request. Four hours.

Individual research in the field of practical arts. Problems to be selected upon consultation. This is a conference course. Conference hours will be arranged to meet the needs of students.

223. RESEARCH IN INDUSTRIAL ARTS—Every quarter. Three 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 ARTS—Three hours.

This course is intended primarily for graduate students working on their masters' theses.

225. RESEARCH IN INDUSTRIAL ARTS—Three hours.

A continuation of Ind. A. 224.

LIBRARY SCIENCE

The main Library of the College contains about 65,000 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. The following courses are offered:

COURSE OF STUDY

In addition to the core subjects offered on page 52, the following or their equivalents are presupposed for Library majors:

MODERN LANGUAGE: Not less than twelve hours in either French, German, or Spanish.

LITERATURE AND ENGLISH: Courses 6, 8, 9, 10.

FINE ARTS: Courses 9, 17.

EDUCATION: Course 3c.

HISTORY: Course 104.

BOOKBINDING: Four hours.

101. BOOK SELECTION AND BIBLIOGRAPHY—Fall quarter. Two hours.

Study of reviews and aids in book selection. Publishers' catalogs and trade bibliography. Bibliography of special subjects. Compilation of booklists, checking bills, collating, accessioning, preparation for shelves.

102. PRINTING AND BOOKMAKING—Fall quarter. Three hours.

Paleography, manuscripts, paper and paper making, history of printing, study of modern processes, illustrating, bookbinding and materials, the physical make-up of the book.

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, Library of Congress cards, shelf lists. Subject headings.

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, periodicals for special purposes. Bibliographies and reading lists, periodical indexes and aids, public documents. Practical questions and problems assigned.

106 CHILDREN'S LITERATURE AND JUVENILE LIBRARY SERVICE—Spring quarter. Three hours.

A survey of the field of literature for children, and its selection for juvenile libraries. Story-telling, history of children's literature. Modern illustrators. School libraries and equipment.

107. ADMINISTRATION AND HISTORY OF LIBRARIES—By request. Four hours.

Historical libraries, American Library Association, library extension, county libraries, traveling libraries, library buildings and equipment, school libraries, library commissions, library legislation, finances and budget allotments. Book circulation and charging systems.

108. PRACTICAL WORK IN LIBRARY—By arrangement. Five hours.

Time required, two hours per day, plus optional work by the student. This is allowed only to those who have taken courses 102, 103, 104, and calls for a certain responsibility on the part of the student.

MATHEMATICS

Every course in this department is given strictly from the professional viewpoint. The aim is to present each topic in such a way that the student will get a real knowledge of the subject matter itself and at the same time be led to give careful consideration to the question of how the material can best be taught.

The attempt is being made also to give a course in mathematics in the freshman year which will bring in those topics of the subject which will give a teacher, no matter what his special field may be, a working knowledge of some of the most valuable parts of the great science of mathematics.

For this reason the old formal subjects of College algebra and trigonometry, with much of the useless, antiquated material which they have contained in the past, are being supplanted by a course in General Mathematics. The time saved by dropping the dead material will be utilized in giving an introduction to the most valuable parts of analytics and the calculus, and in making the application of mathematics to such vital topics as statistics. The formal subjects are still offered, but all who can do so should plan to take the courses in general mathematics instead.

COURSE OF STUDY

Courses marked * are also offered by extension.

In addition to the core subjects as listed on page 52, this department requires:

FIRST YEAR: Mathematics 1, 2, 3, or 5, 6, 7.

SECOND YEAR: Mathematics 9, Phys. 1, and four hours chosen from Math. 104, 107, 109, 110.

THIRD YEAR: Mathematics 101, 102, and either Math. 106 or Geog. 113.

FOURTH YEAR: Twelve hours of Mathematics, elective.

***1. GENERAL MATHEMATICS—Fall and summer quarters. Four hours.**

This quarter's work deals with functions and graphs, simple derivation, simple integration, trigonometric functions, logarithms and exponential functions.

***2. GENERAL MATHEMATICS—Winter quarter. Four hours.**

The second quarter deals with an analytical study of the straight line, circle and other conic sections, solution of equations, polar coordinates, and trigonometric analysis.

***3. GENERAL MATHEMATICS—Spring quarter. Four hours.**

The integral as applied to areas, the progressions and other series permutations, combinations, probability including the probability curve and complex number.

***4. SOLID GEOMETRY—Spring and summer quarters. Four hours.**

The ordinary proposition and exercises of this subject are given. Special attention is given to practical applications.

***5. COLLEGE ALGEBRA—Winter and summer quarters. Four hours.**

This course opens with a thorough review of elementary algebra with a view to giving a clear knowledge of the principles of the subject. It continues with permutations and combinations, the progressions, and the functions and its graph. All the material is presented from the professional viewpoint.

***6. COLLEGE ALGEBRA—Spring and summer quarters. Four hours.**

A continuation of Course 5 dealing with logarithms, variables and limits, theory of equations, and infinite series. Throughout, the needs of the prospective teacher are constantly kept in view.

***7. PLANE TRIGONOMETRY—Spring and summer quarters. Four hours.**

The solution of the right triangle, with numerous practical applications secured by the use of surveyors' instruments in the field; the development of the formulas leading up to the solution of the oblique triangle.

8. SURVEYING—Fall, spring, and summer quarters. Four hours.

In this course the student becomes familiar with the ordinary instruments of the surveyor; the transit, the compass, the level, etc. He takes up such practical problems as running a line of levels for an irrigation ditch, establishing a sidewalk grade, and measuring land.

***9. ANALYTIC GEOMETRY—Fall and summer quarters. Four hours.**

This course opens to the student, in a small way, the great field of higher mathematics. It also connects closely with the subjects or graphs in algebra and forms the basis of the work in the calculus.

***101. DIFFERENTIAL CALCULUS—Winter and summer quarters. Four hours.**

An introduction to the powerful subject of the calculus. While care is taken to see that the formal side of the subject is mastered, many problems of a practical nature are introduced from the realms of geometry, physics, and mechanics.

***102. INTEGRAL CALCULUS—Spring and summer quarters. Four hours.**

This course takes up the ordinary formulas for integration and the commoner applications of the integral calculus.

***103. THEORY OF EQUATIONS—Fall quarter. Four hours.**

This course deals with the graph, complex number, cubic and quartic equations, symmetric functions, and determinants.

***104. THE TEACHING OF ARITHMETIC—Winter and summer quarters. Four hours.**

This course deals primarily with the modern movements and methods in the teaching of arithmetic. A brief history of the development of the subject and of the methods used in the past is given. The real problems of the classroom are taken up and discussed with a view to giving the student something definite that she can use when she gets into a school of her own.

106. DESCRIPTIVE ASTRONOMY—Winter and summer quarters. Four hours.

This course gives an introduction to the fascinating study of astronomy. It gives the idea of the principles, methods and results of the science; shows the steps by which the remarkable achievements in it have been attained; and covers the recent investigations respecting the origin and development of the solar system.

*107. JUNIOR HIGH SCHOOL MATHEMATICS—Fall, spring and summer quarters. Four hours.

The almost universal adoption of the junior high school plan has given a great stimulus to the study of the character of the work in the common branches that should be pursued in the seventh, eighth, and ninth grades. This course attempts to solve the problems that arise concerning the mathematics in these grades.

109. THE TEACHING OF ALGEBRA—Fall and summer quarters. Four hours.

This course treats of professionalized subject matter in algebra. It also deals with the practical problems which every modern teacher of algebra must solve, such as the purpose of algebra, its place in the curriculum, the principles used in the subject, and the best methods of teaching it.

110. GEOMETRY FOR TEACHERS—Winter and summer quarters. Four hours.

This course treats of professionalized subject matter in geometry. It aims at the extension of the student's knowledge of the field of plane geometry as well as the presentation of the best methods of teaching geometry.

111. ALGEBRA AND GEOMETRY FOR THE UPPER GRADES—Winter and summer quarters. Four hours.

This course deals with the algebra and geometry that is now being taught in the seventh and eighth grades in our most up to date schools. It aims to give a thorough knowledge of the subject matter as well as the way in which the material should be presented to the children.

*200. ADVANCED CALCULUS—Fall quarter. Four hours.

Prerequisites: Math. 2, 5, 6, 7, 101, 102. A discussion of problems given over largely to applications of the calculus.

*201. DIFFERENTIAL EQUATIONS—Spring quarter. Four hours.

A discussion of problems which lead to differential equations and of the standard methods of their solution.

223. RESEARCH IN MATHEMATICS—Every quarter. Three 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—Three hours.

This course is intended primarily for graduate students working on their masters' theses.

225. RESEARCH IN MATHEMATICS—Three hours.

A continuation of Mathematics 224.

MUSIC

The Department of Music is maintained primarily in order that teachers may be thoroughly trained to teach music in the public schools. The student life of the College is influenced directly by the large part music plays in all the student activities. It is necessary to maintain a large and highly trained music faculty in order properly to educate the public school music supervisor. Thus, it becomes possible to offer high-class instruction to those who are interested in the study of vocal and instrumental music. 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.

A lecture recital class 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, 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 Music 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.

FOR MAJORS IN MUSIC

Examination must be taken in piano work before graduation.

The maximum credit in applied music will be twenty-four hours.

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 \$3.75 per quarter.

Courses marked * are given by extension.

In addition to the core subjects as listed on page 52, this department requires for majors in public school music:

FIRST YEAR: Music 1b, 1c, 1d, 2, 20, 22, 45, 101.

SECOND YEAR: Music 1e, 3, 4, 5, 10, 11, 21, 23, 40, 101.

THIRD YEAR: Music 43, 101, 103, 104, 110, 116, and For. Lang. 135, 136, Phys. 114, Psyc. 112,

FOURTH YEAR: Music 43, 101, 105, 106, 107, 108, 114, 117, 122.

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 METHODS**—Every quarter. Three 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. Three hours.

This course is required of music majors. Rudiments of music and beginning sight singing.

1c. **SIGHT SINGING**—Winter and summer quarters. Three 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. Three hours.

A continuation of Music 1c.

1e. **SIGHT SINGING**—Fall quarter. Three hours.

A continuation of Music 1d.

2. **TONE THINKING AND MELODY WRITING**—Spring and summer quarters. Three 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. Three 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. Three hours.

Continuation of Music 3. Required of music majors.

5. **HARMONY**—Spring and summer quarters. Three hours.

A continuation of Music 4, taking up discords and modulations. Required of music majors.

10. **KINDERGARTEN-PRIMARY METHODS**—Fall and summer quarters. Three hours.

Methods for kindergarten, first, second and third grades. Child voice. Defective singers. The teaching of rote songs. Development of rhythm through free and controlled expression. The toy orchestra. Materials for song singing and appreciation. Beginning the development of skill in music reading. Required. Music majors only. Prerequisites, Music 1b, 1c, 1d.

11. **INTERMEDIATE METHODS**—Winter and summer quarters. Three hours.

Methods for upper grades. A continuation of Music 10. The teaching of all skills which are necessary for musical performance. Creative work. Materials and methods for appreciation. Song teaching and song interpretation. Required. Music majors only. Prerequisites, Music 10.

*20. **HISTORY OF ANCIENT AND MEDIEVAL MUSIC**—Fall and summer quarters. Three 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 different composers. Required of music majors.

***21. MODERN HISTORY—Winter and summer quarters. Three 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. Three 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. Three hours.

A listening course wherein the student is taught to distinguish between the various forms of composition. A thorough knowledge of dance forms, song forms, etc., will be obtained.

24. LECTURES AND RECITAL CLASS—Fall, winter, and spring quarters. One-half credit.

Given so that students may hear much good music and have an opportunity to appear before an audience. Required of music majors every quarter.

30. INDIVIDUAL VOCAL LESSONS—Every quarter. One hour. Fee, \$24. 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 supervised.

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, Guilmant, Rheinberger, Widor and other organ composers of like standing in the musical world.

34. PIANO CLASS LESSONS—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—Every quarter. One hour.

Fundamental work in voice building.

40. BEGINNING ORCHESTRA—Every quarter. One-half hour.

Beginners on orchestral instruments who have progressed sufficiently will find this an opportunity for ensemble rehearsal under competent direction.

41. MEN'S GLEE CLUB—Fall, winter, and spring quarters. One-half hour.

Entrance upon examination. This club prepares a program and makes an extended tour of Colorado and near-by states.

42. SCHUMANN GLEE CLUB—Fall, winter, and spring quarters. One-half 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-half hour.

Only those are admitted to this orchestra who have had experience. Entrance upon examination only. All members must be present when called upon to play for College activities.

44. ADVANCED BAND—Every quarter. One-half 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. One-half hour.

A course in instrument study for the supervisors.

101. COLLEGE CHORUS—Every quarter. One-half 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. COUNTERPOINT—Fall and summer quarters. Three 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. Three hours.

Continuation of Music 103. Required of majors in Music.

105. BEGINNING ORCHESTRATION—Winter quarter. Three hours.

A study is made of the several instruments of the 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. Three hours.

Continuation of Music 105. Required for a degree in Music.

107. FORM ANALYSIS—Winter quarter. Three hours.

Analysis will be made of the smaller forms in music, also of symphonies from Haydn down to the present. Prerequisite, Music 104 and 106. Required of majors in Music.

108. ADVANCED FORM ANALYSIS—Spring quarter. Three hours.

Continuation of Music 107. Required of majors in Music.

110. SUPERVISOR'S COURSE—Spring and summer quarters. Three hours.

Survey of development of public school music; its leaders. Comparison and discussion of various music series, and texts. Duties and responsibilities of the supervisor. Outlines for music work. Public school music surveys. Tests and measurements. The adolescent voice. Materials. The school orchestra. Music magazines. Required. Music majors only. Prerequisites, Music 1e, 2, 3, 4, 10, 11.

111. CONDUCTING (By assignment)—All quarters. Two hours.

114. METHODS IN CONDUCTING—Spring and summer quarters. Three 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.

116. HARMONY—Fall quarter. Three hours.

A continuation of Music 5.

117. KEY BOARD HARMONY—Winter quarter. Three hours.

A continuation of Music 116.

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 textbook.

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' problem.

131. INDIVIDUAL PIANO LESSONS AND METHODS—Every quarter. One hour. Fee, \$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.

223. RESEARCH IN MUSIC—Every quarter. Three 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 PUBLIC SCHOOL MUSIC—Three hours.

225. RESEARCH IN PUBLIC SCHOOL MUSIC—Three hours.

This is a continuation of Music 224.

PHYSICAL EDUCATION AND ATHLETICS 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.

No physical education course may be taken more than once for credit. This will enable us 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 fee will be refunded if the lock is returned in good condition.

General students who are especially good in Physical Education work may take major classes with special permission of the instructor.

MAJOR REQUIREMENTS IN PHYSICAL EDUCATION

A four-year course is required of all Physical Education majors, therefore, no certificate upon the completion of a two year course will be granted in this department. Physical Education students desiring certificates at the end of two years should make primary, intermediate or junior high school education their minor.

All women students majoring in Physical Education should be proficient enough in piano to play simple dances, marches, and skips before they graduate.

Majors in this department are required to take, without credit, a different one of the courses ranging from P. E. 12 to P. E. 18 inclusive, each quarter until all have been taken.

In addition to the core subjects as listed on page 52, this department requires:

FIRST YEAR: Physical Education 1, 6, 11, 26, 31, 32 and one athletic course each quarter, and Eng. 12 and 13, Chem. 1 and 2, Hist. 10.

SECOND YEAR: Physical Education 2, 3, 7, 27, H. Ed. 2, 3, and one athletic course each quarter, and Zool. 1 and 2, History 27, Eng. 15, Psych. 1, Music 1a, H. S. 4.

THIRD YEAR: Physical Education 28, 101, 103, 107, 111, 113, 115, 120, 121, 131, 132, 137 and one athletic course each quarter, and Eng. 20, Biotics 101.

FOURTH YEAR: Physical Education 114, 118, 122, 123, 133, 135, 136.

The above program allows for twenty-eight hours electives to meet the total number of hours required for the degree.

COURSE OF STUDY

I. GENERAL ACTIVITY COURSES PRIMARILY FOR JUNIOR COLLEGE STUDENTS AND FIRST AND SECOND YEAR PHYSICAL EDUCATION MAJORS.

1. CLOG AND ATHLETIC DANCING—Spring quarter. One hour.

This course will contain jigs, clogs, and athletic dances which are especially good for boys and girls in Junior High School.

2. NATURAL DANCING—Winter quarter. One hour.

This course offers an opportunity for music interpretation and pantomime based upon a technic of free natural movement.

3. NATURAL DANCING—Spring quarter. One hour:

Open to those who have had P. E. 2. This course gives advanced work in P. E. 2.

5. FOLK DANCING—Every quarter. One hour.

Simple dances for beginners in folk dancing.

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**—Every quarter. 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**—Each quarter. One hour.

This course is for Primary and Intermediate and Physical Education Majors only, 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.

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, the development of skill in it.

16. **HOCKEY**—Fall quarter. One hour.

The rule 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.

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, and beginning diving.

27. **INTERMEDIATE SWIMMING**—Every quarter. One hour.

This course will take up more difficult swimming strokes and diving than P. E. 26. P. E. 26 or its equivalent is a prerequisite.

28. **ADVANCED INTERMEDIATE SWIMMING**—Every quarter. One hour.

A more advanced course than either P. E. 26 or P. E. 27, and must be preceded by them.

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**—Fall and winter quarters. One hour.

This course will present the different types of Danish gymnastics. Special emphasis will be laid on flexibility exercises.

32. **DANISH GYMNASTICS**—Winter and spring quarters. One hour.

A continuation of P. E. 31 with special emphasis laid on strength exercises. More advanced work than P. E. 31. P. E. 31 a prerequisite.

THEORY COURSES IN HEALTH EDUCATION FOR JUNIOR COLLEGE AND MAJOR STUDENTS.

HEALTH ED. 1. INDIVIDUAL AND SOCIAL HYGIENE (for women)—Three periods. Three 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.

HEALTH ED. 2. PHYSIOLOGY—Fall quarter. Three hours.

This course discusses the functional processes of the different organs and a brief study of the body as a whole.

HEALTH ED. 3. FIRST AID—Winter quarter. Two hours.

A course covering the usual subject matter on the right thing to do. A study of the causes of accidents and type injuries; what the first aider should do in case of fracture, dislocation of joints, hemorrhage, poisoning, electric shock, asphyxiation, etc. The American Red Cross Text is followed. Required of Physical Education students. Open to all.

ACTIVITY COURSES FOR P. E. MAJORS OF SENIOR COLLEGE RANK. OTHER STUDENTS ADMITTED BY PERMISSION OF THE INSTRUCTOR.

101. CLOG AND ATHLETIC DANCING—Fall quarter. Two hours.

Students taking this course will be required to make up original dances and will be given the more difficult dances of this type. Best methods of presentation will also be discussed.

103. NATURAL DANCING—Spring quarter. Two hours.

This course deals with the problems of natural dancing in a program of Physical Education, presents more difficult dances than P. E. 3 and requires original composition. A course for majors only.

107. NATIONAL AND CHARACTERISTIC DANCING—Winter quarter. Two hours.

This course is for majors and will present the typical character and national dances. Requires original composition and practice in presenting dances to groups.

111. NATURE, FUNCTION AND ORIGIN OF PLAY—Spring quarter. Two hours.

This course deals with the psychological and physiological ages of the child and the type of game for these ages; the type of play suitable for the playground and the leadership necessary. Also a brief history of play from its earliest form to the present highly organized types.

113. COACHING METHODS—Fall quarter. Two hours.

This course is given to present the rules of the sports listed in P. E. 13 to P. E. 20, inclusive. The best methods of teaching them will be discussed and an opportunity presented for the perfecting of skills in them.

114. COACHING PRACTICE—Each quarter. Two hours.

This course gives actual experience in coaching the different sports listed under P. E. 13 to P. E. 20. Students registering for this course should make arrangements with head of the department for special assignments. These arrangements should be made as early as possible, preferably the preceding quarter.

118. ADVANCED SWIMMING FOR MAJORS—Fall quarter. Three hours.

This course consists of swimming, diving, life-saving, and gives practice in teaching swimming. 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.

IV. THEORY COURSES FOR P. E. MAJORS OF SENIOR COLLEGE RANK.

131. PAGEENTRY—Winter quarter. Three hours.

This work is for majors and is designed to give an appreciation of the art as developed through motor activities. Pantomimes, pageants and festivals, stage lighting, costuming, and make up will be discussed and opportunity given for practice in the above. Original work will be required.

132. THEORY OF INDIVIDUAL GYMNASTICS—Fall quarter. Two hours.

This course is for Physical Education Majors. It consists of the study of the faults of posture commonly found in growing children, such as lateral curvature of the spine, round shoulders, weak and flat feet, and the measures used in correcting them.

133. INDIVIDUAL GYMNASTICS APPLIED—Every quarter. Two hours.

This course will consist of carefully supervised practical work in correcting faults of posture in the children of the elementary and high schools.

135. HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION.

This course deals with the play activities of primitive man and physical education among civilized races both medieval and modern; the present trend and aims of Physical Education; the formal versus the natural methods, and the value of each in accordance with the modern philosophy of education.

136. SUPERVISION OF PHYSICAL EDUCATION—Every quarter. Five hours.

This course will consist of actual supervision of student teachers of physical education in the Training School.

137. MATERIALS AND METHODS IN PHYSICAL EDUCATION—Fall quarter. Three hours.

This course will deal with the methods of presentation, of material, the problems of the supervisor of physical education, the distribution of materials to grades and the preparation of a program of physical education based on a definite school system.

223. RESEARCH IN PHYSICAL EDUCATION—Every quarter. Three 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—Three hours.

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

225. RESEARCH IN PHYSICAL EDUCATION—Three 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.

V. 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. It will be presented from the standpoint of physical education.

121. KINESIOLOGY—Winter quarter. Three hours.

This course deals with the action of muscles in exercises of different kinds. It is taken up primarily from the corrective standpoint.

122. PHYSIOLOGY OF EXERCISE—Fall quarter. Three hours.

This course is designed to familiarize the student through demonstrations and experiments with the effects of different kinds of activities upon various physiological systems of the body.

123. PHYSICAL EXAMINATIONS AND NORMAL DIAGNOSES—Spring quarter.

This course 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

The various courses in the Physics Department have primarily the object of preparing teachers to teach physics in secondary schools and colleges. The course of study, however, will fit the need of the following classes of students:

1. The physics or science teacher in the secondary schools.
2. The physics major, specializing for the purpose of teaching in secondary school or college.
3. The elementary teacher interested in science because of its growing introduction into the elementary schools.
4. The student interested as a future teacher in its cultural value.

Major students are expected to follow the course as outlined below. Minors in physics are expected to elect Physics 1, 2, 3, 11, 12, 13, 114, 103, and 108. Other courses may be elected by special arrangement.

Students preparing for college teaching, research, or engineering, should elect Physics 11 as a beginning course. Prerequisite, Mathematics 2, Plane Trigonometry.

COURSE OF STUDY

Courses marked * are also given by extension.

In addition to the core subjects as listed on page 52, this department requires:

FIRST YEAR: Physics 1, 2, and 3, Math. 1, 5, and 6.

SECOND YEAR: Physics, 11, 12, 13, and 114 and Chem. 1, 2, and 3.

THIRD YEAR: Physics 103-108, and Bot. 1-3, Zool. 1-2, Math. 7, 101, 102.

FOURTH YEAR: Physics 111 and 121, and Math. 103.

*1. CONTENT AND METHOD OF HIGH SCHOOL PHYSICS—MECHANICS—Fall quarter. Four hours. Fee, \$3.00.

*2. CONTENT AND METHOD OF HIGH SCHOOL PHYSICS—ELECTRICITY—Winter and summer quarters. Four hours. Fee, \$3.00.

*3. CONTENT AND METHOD OF HIGH SCHOOL PHYSICS—HEAT, SOUND, AND LIGHT—Spring and summer quarters. Four hours. Fee, \$3.00.

These three courses in professionalized high school physics are to be taken as a year's work by prospective high school teachers and by elementary teachers interested in science because of its growing introduction into the elementary school. The first quarter will be devoted to the content and method of teaching topics ordinarily included under the term mechanics, the second quarter electricity, and the third quarter heat, sound, and light. One high school text and one text on methods will be used in connection with other texts, periodicals, and pamphlets as collateral. Special emphasis will be placed upon the organization of demonstrations, experiments, projects, and field trips, having in mind the anticipation of the problems of the high school physics teacher.

10. ELEMENTARY HOUSEHOLD PHYSICS—Spring quarter. Three hours.

A non-technical practical course especially for the teacher of home economics or for the home-maker. The content of the course is based upon the questions most frequently raised in the home about the electrical appliances, heating, lighting and ventilation. The course will consist chiefly of illustrated lectures, demonstrations, and excursions, followed by discussions.

11. MECHANICS—Fall quarter. Three or four hours. Fee \$2.00-\$3.00.

Two discussion periods and one double laboratory period are devoted to the principles underlying mechanics, including motion, forces, work, efficiency, laws of impact, elasticity, inertia, simple harmonic motion, etc.

12. HEAT, SOUND AND LIGHT—Winter and summer quarters. Three or four hours. Fee, \$2.00-\$3.00.

A continuation of Physics 11.

13. ELECTRICITY—Spring quarter. Three or four hours. Fee, \$2.00-\$3.00.

A continuation of Physics 12.

103. THEORY OF RADIO RECEPTION—Fall and summer quarters. Three or four hours. Fee, \$2.00-\$3.00.

An elementary course preferably preceded by at least a high school physics course. Three discussion and one double laboratory period per week. It will comprise a review of the elementary principles of electricity underlying radio communication followed by an intensive study of the principles underlying the construction and operation of radio receivers. A number of experiments or projects may be elected by the student. The course is based upon those things the science teacher should know about radio.

104. THEORY AND PRACTICE OF RADIO TRANSMISSION—Winter quarter. Three or four hours.

A study of the principles underlying the transmitting apparatus used in broadcasting stations. It will consist of two lecture or discussion periods and two double laboratory periods devoted to the study of transmitter circuits, amplifiers and radio measurements. Opportunity will be given students electing this course to participate in the operation of the College Broadcasting Station KFKA, which has been increased to 1000 watts power and is now housed in a special radio broadcasting room.

107. RECENT CONTRIBUTIONS OF PHYSICS TO SCIENCE—Winter quarter. Two hours.

A study of some of the recent contributions to science in the field of physics. This course is popular in nature and intended to provide the student with a fund of interesting information regarding the recent achievements of the research laboratories. Two periods each week will be devoted to the discussion of articles occurring in recent scientific magazines and books.

108. METHOD OF TEACHING PHYSICS IN THE SECONDARY SCHOOLS—Fall quarter. Four hours.

This course is intended for teachers of both Physics and General Science. Its main purpose is the organization of projects, experiments, and study units in Elementary Physics.

111. THE PHYSICS OF THE AUTOMOBILE—Fall and summer quarters. Three hours.

A comparative study of the automobile. The course will consist essentially of excursions to various garages and sales-rooms where the chassis, motor and electrical system of the automobile can be studied. These excursions will be followed by illustrated lectures and discussions. The course is divided into three units of study,—the chassis, the motor, and the electrical system.

114. THE PHYSICS OF MUSICAL INSTRUMENTS—Spring and summer quarters. Four hours.

An elementary course given especially for those interested in the principles underlying all musical instruments. The course will comprise a study of the nature of sound, sound waves, velocity of sound, types of instruments, overtones and some of the recent developments in the amplification and reproduction of sound.

118. CLASSROOM APPLICATION OF PRINCIPLES UNDERLYING VISUAL APPARATUS—Winter quarter. Three or four hours. Fee, \$2.00-\$3.00.

This course is given on account of the demand for teachers of the elementary and secondary grades having a practical knowledge of how to make good photographs, lantern slides and how to operate the stereopticon, balopticon and moving picture machine. It will consist of lectures, discussions, field trips and laboratory practice. Especial attention will be given to the development of projects showing how visual apparatus may be used to advantage in teaching nature study, general science, chemistry, physics and biology. Students will be expected to elect projects in their major field of study.

121. DIRECT AND ALTERNATING CURRENTS—Prerequisite: Physics 12. Spring quarter. Three hours.

This course will enable the prospective teacher not only to understand the working of electrical instruments and machinery, but to organize electrical experiments which will act most stimulatingly upon the imagination of the young. The course will involve problems, experiments and projects on D. C. and A. C. generators, motors, telephone, telegraph, radio, etc.

223. RESEARCH IN PHYSICS—Every quarter. Three 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—Three 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—Three hours. Fee, \$3.00:

This is a continuation of Physics 224.

SOCIOLOGY, ANTHROPOLOGY, AND ECONOMICS

This department offers the following series of courses in Sociology, Anthropology, and Economics, to which other courses will be added from time to time. These courses are designed primarily to prepare the student for educational service as teacher, supervisor, or administrator. They are arranged and conducted so as to provide a desirable preparation for the successful teaching of the social sciences, and for those who combine teaching with social work. An unusually fine collection of anthropological and sociological material is available for the use of classes. A full four-year course is offered.

COURSE OF STUDY

Courses marked * are given also by extension.

In addition to the core subjects as listed on page 52, this department requires:

FIRST YEAR: Sociology 1, 10, and a course selected from the freshman requirements in the Department of History.

SECOND YEAR: Anthropology 100 and Geology 7, 8, or 100.

THIRD YEAR: Biotics 101, and twelve hours of Sociology selected by the student, with the advice and consent of the head of the department.

FOURTH YEAR: Twelve hours of Sociology selected by the student, with the advice and consent of the head of the department.

SOCIOLOGY

***1. INTRODUCTION TO THE SOCIAL SCIENCES—Each quarter. Four hours.**

Following a comprehensive view of the sciences and the arts, the various subjects studied in the social sciences such as the family, the state, races, languages, industry, art, customs, religions, etc., are presented in sufficient detail to show what the social sciences are and to enable the student to choose intelligently among them.

3. EDUCATIONAL SOCIOLOGY—Spring and summer quarters. Three hours.

This course deals with sociology from the point of view of education, and presents the sociological ideas, laws, and principles necessary to the successful practice of teaching.

***18. RURAL SOCIOLOGY—Spring quarter. Three hours.**

A constructive study of country life, economic activities, social organizations, schools, clubs, churches, social centers, and modern efforts and successes in rural progress. The course is intended primarily for rural teachers, but is of value for all students of rural social conditions and needs.

34. CHILD WELFARE—Fall, winter, and summer quarters. Two hours.

A study of child accounting involving the problems of child labor, juvenile delinquency, the gifted child, and all child problems arising from social maladjustment.

***92. THE FAMILY—Winter and summer quarters. Three hours.**

A study in the evolution of the family with emphasis on the modern situation. Particular attention will be paid to the relationship of the family to education and industry.

***105. THE PRINCIPLES OF SOCIOLOGY—Each quarter. Four hours. Required of third year students.**

This course is a study of the scope and history of sociology, sketches of the leading contributors to this science, and an exposition of its main principles as set forth systematically in a selected text. Lectures, readings, and reports.

120. SOCIAL SURVEYS AND SOCIAL STATISTICS—Spring quarter. Three hours. Alternate years, not given in 1928-29.

This course acquaints the student with the technic of social surveys and should enable him to interpret scientifically the data of such surveys through the application of statistical methods. Teachers are frequently called upon to make or to assist in making social and educational surveys. This course should be of direct practical value in securing accurate information from such surveys, and in interpreting the information so secured.

130. SOCIAL PSYCHOLOGY—Fall and winter quarters. Four hours.

A study of suggestion and imitation, crowds, mobs, fads, fashions, booms, crises, conventionality, custom, conflict, public opinions, leadership, and like topics. Text and syllabus.

140. DEVELOPMENT OF SOCIAL THOUGHT—Fall quarter. Three hours.

A study of the evolution of social concepts.

142. DEVELOPMENT OF SOCIAL THOUGHT—Spring quarter. Two hours.

A continuation of Soc. 140.

150. MODERN SOCIAL PROBLEMS—Each quarter. Four hours.

A course involving a study of war, crime, the race question, divorce, poverty, etc., in the light of the more recent sociological investigations. The course is designed for both undergraduate and graduate students, and students are admitted with or without previous study in sociology.

SOCIOLOGY 205, THE SOCIAL THEORY OF EDUCATION—Winter and summer quarters.

Doctrines of Education based upon Organic Psychic and Social Evolution. Text, Dr. Howerth's Theory of Education.

SOCIOLOGY 209, SEMINAR—When requested by five or more students. Four hours.

The work of the Seminar, to which only graduate students are admitted without the special permission of the instructor, consists in the study of a selected sociological problem, or the intensive study of the doctrines of one of the leading sociologists of the world, present or past.

This Seminar work may be continued for eight additional hours as Sociology 210, 211.

223. RESEARCH IN SOCIOLOGY—Every quarter. Three 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 SOCIOLOGY—Three hours.

This course is intended primarily for graduate students working on their masters' theses.

225. RESEARCH IN SOCIOLOGY—Three hours.

A continuation of Soc. 224.

ANTHROPOLOGY

100. GENERAL ANTHROPOLOGY—Fall quarter. Four hours.

Primitive people, their physical characteristics, beliefs, customs, arts, industries, forms of government, religions; the evolution of the sciences and the arts, language, religion, law, government. This course is illustrated by concrete material. It is an introduction to, and a preparation for, the courses that follow, as well as for all advanced courses in the social sciences.

101. THE ORIGIN AND ANTIQUITY OF MAN—Winter and summer quarters. Four hours.

This course endeavors to present the knowledge that has been accumulated with respect to fossil man, with such scientific inferences as seem to be warranted by the facts thus far discovered.

102. EARLY CIVILIZATION IN AMERICA—Spring and summer quarters. Four hours.

A study of the early civilization of Central America, Mexico and Peru and of the Pueblo and other Indians of North America. Exclusive use is made of a fine collection of material illustrative of early American art and industry.

ECONOMICS

***10. ELEMENTARY ECONOMICS**—Fall quarter. Three hours.

This is a course designed to give a practical knowledge of the common ideas, laws, terms, and principles of economics that are essential to good citizenship, and also to present an analysis of the basic factors on which the production of all wealth depends. It is a preparatory course in the general subject of economics and for courses 110 and 112.

110. PRINCIPLES OF ECONOMICS—Winter and summer quarters. Four hours.

A general course based upon one of the recognized texts in the subject. Attention is devoted chiefly to the phenomena of production, distribution, and exchange with the view of 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.

112. LABOR AND SOCIETY—Spring quarter. Four hours.

A study of the relation of the work and the life of the laboring classes, their development, place, privileges, and rights in society and the relation of workers to systems of industrial administration. Specially commended to teachers of commercial and industrial education and to students of economics.

200. SOCIAL WASTE—Spring and summer quarters. Four hours.

A course in social as distinguished from political economy. The principles of social waste are discussed, and the social waste resulting from vice, crime, disease, unemployment, the present use and abuse of our natural resources, and like causes.

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COLORADO STATE TEACHERS COLLEGE

BULLETIN



COURSES AND SPECIAL FEATURES
IN
THE DEPARTMENT OF EDUCATION

SUMMER QUARTER

June 16 -- August 25

1928

FIRST HALF

June 16 -- July 21

SECOND HALF

July 23 -- August 25

SERIES XXVIII

MAY

NUMBER 2

Published Monthly by Colorado State Teachers College, Greeley, Colo.
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under the Act of August 24, 1912.

I. CLASSES OF COURSES OFFERED

The following classification is suggestive of the types of courses to be offered. (See the Summer Bulletin, 1928, and the Year Book, 1928-29, for detailed descriptions of these Education courses.)

A. TYPES OF COURSES:

1. Introductory courses: 1, 100a, 100d, 100e, 129.
2. Methods courses: 3a, 3b, & 3c, 4a & 4b, 5, 101, 104, 105, 106, 107, 150, 151.
3. Curriculum: 10, 52, 127, 210, 214.
4. Philosophy: 111, 211.
5. Administration and supervision: 108, 113, 114, 115, 116, 120, 141, 142, 143, 144, 147, 148, 190, 192, 216, 242.
6. History of Education: 133, 134.
7. Rural Education: 20, 21, 23, 24, 28, 125, 127, 128.
8. Activity courses: 15, 16, 16a, 17, 28, 105, 110, 110a, 110b, 140.
9. Courses in allied departments: Biology 1, Biotics 101, 201; Psychology 104, 105, 107, 108, 212, 214, 222; Sociology 100, 105, 130, 150.

B. COURSES IN:

1. Elementary Education: 1, 3a, 3b, & 3c, 4a & 4b, 5, 10, 21, 23, 24, 52, 104, 105, 107, 110, 110b, 111, 115, 150, 151, 259.
2. Junior and Senior High School Education: 110, 110a, 111, 113, 116, 210, 214, 216.
3. Education for Principals, Supervisors, and Critic Teachers: 104, 108, 110, 111, 113, 114, 115, 116, 142, 143, 147, 148, 150, 190, 192, 210, 214, 216, 242, 259.
4. Education for Superintendents: 110, 111, 113, 115, 116, 142, 143, 144, 147, 148, 210, 216, 242, 259.
5. Research in Education: 123, 210, 216, 223, 224, 225, 242, 259.

II. FACULTY OF THE DEPARTMENT OF EDUCATION

- A. The following members of the Department of Education will give courses in the summer of 1928:

Professors Rugg, Armentrout, Cornell, Hargrove, McKee, and Mahan.

- B. Besides the courses offered by resident instructors, the following special teachers and lecturers will cooperate in giving courses in Education:

1. Administration

Mr. G. E. Brown, Superintendent of Schools, Greeley, Colorado.

Mr. J. H. Risley, Superintendent of Schools, Pueblo, Colorado.

Mr. I. E. Stutsman, Superintendent of Schools, Sterling, Colorado.

2. Special Lecturers

Dr. Carleton Washburne, Superintendent of Schools, Winnetka, Illinois (Creative Education).

Dr. G. W. Frasier, President, Colorado State Teachers College, Greeley, Colorado (Normal School Administration).

Dr. E. A. Cross, Vice-President, Colorado State Teachers College, Greeley, Colorado (Normal School Administration).

Mr. R. M. Carson, Registrar, Colorado State Teachers College, Greeley, Colorado (Normal School Administration).

Mrs. Satis Coleman, Lincoln School of Teachers College, New York City (Creative Education).

Mr. Alfonso Iannelli, Chicago Art Institute, Chicago, Illinois (Creative Education).

Mr. Rollo Walter Brown, Cambridge, Massachusetts (Creative Education).

Reverend W. S. Dando, Emporia, Kansas (Creative Education).

Dr. Jesse H. Newlon, Director of the Lincoln School of Teachers College, New York City (Administration).

- Mr. A. L. Threlkeld, Superintendent of Schools, Denver, Colorado (Administration).
 Dr. Ernest Horn, Professor of Elementary Education, State University of Iowa, Iowa City, Iowa (Elementary Education).
3. Secondary Education
 Miss Jessie Hamilton, Principal, Morey Junior High School, Denver, Colorado.
 Mr. Merle Prunty, Principal, Central High School, Tulsa, Oklahoma.
4. Rural Education
 Mr. F. A. Ogle, County Superintendent of Schools, Weld County, Greeley, Colorado.
5. Research
 Dr. F. L. Whitney, Director of Educational Research, Colorado State Teachers College, Greeley, Colorado.
6. Assisting in the Department
 Mr. N. E. Buster, Junior High School Principal, Fort Worth, Texas.
 Mr. Earl Denney, Graduate Student, Colorado State Teachers College, Greeley, Colorado.
 Mr. W. B. Dobson, Supervisor, Elementary Grades, Fort Worth, Texas.
 Mr. Clark Frasier, Director of Training Schools, Normal School, Lewiston, Idaho.
 Mr. R. L. Hunt, Superintendent of Schools, Las Animas, Colorado.
 Miss E. Gertrude Lee, Director of Camp Fire, Greeley, Colorado.
 Mr. Earl B. Moore, Scout Executive, Weld-Morgan Counties, Colorado.
 Mr. R. H. Morrison, Extension Department, Colorado State Teachers College, Greeley, Colorado.
 Mr. Charles Sattgast, Extension Department, Colorado State Teachers College, Greeley, Colorado.
 Mr. J. H. Shaw, Director of Journalism, Colorado State Teachers College, Greeley, Colorado.
 Mrs. Hildegard Sweet, Dean of Girls, West Denver High School, Denver, Colorado.
 Miss Grace Wilson, Director of Religious Education, Colorado State Teachers College, Greeley, Colorado.

III. COURSES FOR GRADUATE STUDENTS

The Department of Education is making special provision for graduate students by offering several courses for such students. Graduate students may also take courses numbered above 100.

Special Graduate Courses in Education and Psychology :

- Ed. 210. Problems of the School Curriculum—Rugg.
 Ed. 211. Conceptions of Mind in Educational Theory—Armen-trout.
 Ed. 213. Problems of the Junior High School—Prunty.
 Ed. 216. Problems of Secondary Education—Prunty.
 Ed. 223-225. Research Courses in Education—(Thesis adviser).
 Ed. 242. Problems in Educational Administration—Cornell.
 Ed. 259. Problems of Elementary Education—McKee.
 Psych. 212. Psychological and Statistical Methods Applied to Education—Heilman.
 Psych. 214. Advanced Educational Psychology—Wait.
 Psych. 222. Experimental Technic and Its Application—Whitney.

The following courses are also suggested for graduate students in Education: Ed. 108, 110, 115, 134, 142, 143, 147, 190, 192; Biotics 101, 201; Psych. 104, 105, 107, 108; Soc. 105, 130, 150.

See the Year Book, and Rules and Regulations of the Graduate School for Requirements for the Master of Arts Degree. (Year Book and Summer Bulletin sent upon request.)

IV. SPECIAL FEATURES

1. Problems of Education (Ed. 100a). Either half or full quarter. One credit each half. Two o'clock, MTW.

Lectures to include (for one to three days): (1) on the regular faculty—President Frasier, Vice-President Cross, Dr. Armentrout, Dr. Cornell, Dr. Heilman, Dr. Hertzberg, Dr. McKee, Professor McCowen, Professor Morrison, Dr. Rugg, and Professor Wrinkle; and (2) of the visiting lecturers and teachers—Dr. Horn, Dr. Newlon, Principal Prunty, Superintendent Risley, Superintendent Threlkeld, and Superintendent Washburne.

2. Unit Courses in Creative Education (Ed. 100e)—5 courses, each two weeks. Either half. Each one hour credit. Two o'clock, Monday to Friday first week; Monday to Thursday second week.

Unit 1. Creative Music. June 18-28 incl. Mrs. Coleman, Lincoln School of Teachers College.

Unit 2. Creative Art. July 2-12 incl. Mr. Iannelli, Chicago Art Institute.

Unit 3. Creative Religion. July 16-26 incl. Reverend Dando, Emporia, Kansas.

Unit 4. Creative Literature. July 30-Aug. 9 incl. Mr. Rollo Brown, Cambridge, Massachusetts.

Unit 5. Creative Education in School. Aug. 13-23 incl. Dr. Washburne, Winnetka, Illinois.

(Special attention is called to these courses, each given by an outstanding scholar in his field. All teachers, especially those interested in music, art, and English, should enroll for these units. Creative education is the latest trend in progressive education, and Colorado State Teachers College is attempting to acquaint teachers with this movement through these unit courses.)

3. Unit Courses for County Superintendents. Three Units—all between June 18 and 28 incl. Each two weeks. Each one hour credit.

Unit 8. Rural School Buildings. Mr. F. A. Ogle—two o'clock.

Unit 9. Improvement of the Written Examination. Dr. Heilman and Dr. Hertzberg—three o'clock.

Unit 10. Recent Investigations of the Course of Study—Dr. McKee and Dr. Rugg—twelve o'clock.

(These three unit courses continue from the summer of 1927 our unit courses for county superintendents. Three additional credits (in new courses) may be earned during the first two weeks of the 1928 summer session.)

4. Ed. 140—Guidance Problems for Deans of Girls. First half. Two hours. Mrs. Hildegard Sweet, Dean of Girls for West Denver High School.

Offered especially for teachers interested to equip themselves for deans of girls in high schools.

5. Ed. 141—Administration for Teachers. First half. Two hours. Mr. I. E. Stutsman, Superintendent of Schools, Sterling, Colorado.

Offered especially for teachers interested to learn of the general problems of administration of schools.

6. Ed. 190 and 192. Administration and Training Problems in Teachers Colleges. Two hours each. First and second half. First half—Professors Frasier, Cross, Rugg, Morrison, Carson; Second half—Professor Armentrout.

Offered especially for those interested in teaching in teachers college.

7. Ed. 117. Problems of School Discipline. First half. Two hours. Superintendent Hunt.

Offered especially for those interested in problems of school discipline and based upon a recent investigation of actual concrete situations in which discipline is involved.

COLORADO STATE TEACHERS COLLEGE

BULLETIN



FRESHMAN
ENROLLMENT

September 20-24
1928

GREELEY

SERIES XXVIII

JUNE

NUMBER 3

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FRESHMAN ENROLLMENT

Colorado State Teachers College

SEPTEMBER, 1928

Freshmen enrolling in Colorado State Teachers College for the first time are required to be present in Greeley Thursday, September 20, for the first freshman assembly at half past ten in the Little Theater of the College. In the past there has been a great deal of confusion in getting the details of admission adjusted and in making first quarter programs. All these details will be taken care of during the days from September 20 to the beginning of classes Wednesday, September 26. There will be an assembly each morning with addresses by the president, vice-president, director of instruction, dean of women, and director of freshman studies. In the afternoons the various tests will be given, your photograph taken, and a physical examination given. The College provides entertainment for the evenings. There will be ample time in the afternoons to make arrangements for room and board, and for employment if you are earning your own way through school. Freshmen boys wishing to make the freshmen football squad will have opportunities for practice.

The following things must be attended to:

1. *High School Transcript*: Request your high school principal to forward your credits to the registrar before September 10. Because there may be entrance conditions imposed, you should receive a written report from the registrar before you come for enrollment. By having your record sent early it will save delay and inconvenience during Freshman Week. The College will submit blanks to the high schools upon which the record should be entered. If blanks should not be available, they will be supplied on request of the principal. An original record should be requested from each high school attended, if you have been a student in more than one.

2. *The Classification Test*. This is a test given to all freshmen to indicate to the College what your scholastic aptitude is. You will be told on Thursday when and where the test will be given.

3. *The English Test*. This test, if successfully passed (upper quartile), will exempt you from English 4, the required fresh-

man English course. If your mark is below the average you will be required to take English 0, without credit.

4. *The Physical Examination.* All freshmen are given a physical and health examination to determine whether they are physically qualified to become teachers. Those having communicable diseases or marked physical deformities will not be accepted as students.

5. *The Achievement Test.* This is a series of tests in the common school branches such as language, arithmetic, geography, history, etc., to ascertain whether you have a sufficient knowledge in these branches to enable you to teach in public schools. The tests cover about the same ground as is covered in the eighth grade.

6. *Photograph.* Six small photographs to be attached to records are made for identification. The College makes the photograph.

If you have a scholarship, present the certificate when you enroll Monday, September 24. This is necessary.

7. *Matriculation Fee.* A fee of five dollars is charged each freshman when he or she enrolls in the College for the first time. This covers the cost of all tests and other expenses of matriculation.

THE COLLEGE CALENDAR

1928

<i>Sept. 20, 21,</i>	<i>Thursday, Friday</i>	}	{	Matriculation and Registration of freshmen
<i>22, 24,</i>	<i>Saturday, Monday</i>			
<i>Sept. 25,</i>	<i>Tuesday</i>			Registration of upper classmen
<i>Sept. 26,</i>	<i>Wednesday</i>			Classes begin
<i>Nov. 29, 30,</i>	<i>Thursday-Friday</i>			Thanksgiving recess
<i>Dec. 8,</i>	<i>Saturday</i>			Advance registration for winter quarter
<i>Dec. 16,</i>	<i>Sunday</i>			Christmas vacation begins

1929

<i>Jan. 2,</i>	<i>Wednesday</i>	Winter quarter begins
<i>Mar. 16,</i>	<i>Saturday</i>	Winter quarter closes
<i>Mar. 26,</i>	<i>Tuesday</i>	Spring quarter begins
<i>May 3,</i>	<i>Friday</i>	Insignia Day
<i>June 8,</i>	<i>Saturday</i>	Commencement
<i>June 15,</i>	<i>Saturday</i>	Registration for Summer Quarter
<i>June 17,</i>	<i>Monday</i>	Classes begin
<i>Aug. 24,</i>	<i>Saturday</i>	Summer Convocation

COLORADO STATE TEACHERS COLLEGE
BULLETIN

Series XXVIII

JULY, 1928

Number 4

Salaries in State Teacher
Training Institutions

A SECOND CHECKING OF SALARIES
SALARY SCHEDULES, AND ALL OTHER
MATTERS OF PAYMENT TO THE
FACULTIES OF STATE TEACHERS
COLLEGES AND STATE NORMAL
SCHOOLS : : : :

(Research Bulletin No. 13)



E. LOWELL KELLY
Research Fellow

DEPARTMENT OF EDUCATIONAL RESEARCH
Frederick L. Whitney, Director

COLORADO STATE TEACHERS COLLEGE
BULLETIN

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COLORADO STATE TEACHERS COLLEGE

SALARIES IN STATE TEACHER
TRAINING INSTITUTIONS

(Research Bulletin No. 13)

PUBLISHED BY THE COLLEGE
Greeley, Colorado

PREFACE

There is a possibility that some of the material presented in this report is incomplete or slightly in error, but it is correct within the limits of the technic used for the study. Any research accomplished by the use of the questionnaire method must of necessity be a cooperative effort. The writer wishes to thank the presidents of the cooperating state teachers colleges and state normal schools for the data which they have so kindly supplied. He wishes also to thank Dr. Frederick L. Whitney for valuable assistance in conducting the study and preparing the report.

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SALARIES IN STATE TEACHER TRAINING INSTITUTIONS

A SECOND CHECKING OF SALARIES, SALARY SCHEDULES, AND ALL OTHER MATTERS OF PAYMENT TO THE FACULTIES OF STATE TEACHERS COLLEGES AND STATE NORMAL SCHOOLS

I. INTRODUCTION

During the year 1924-1925 Colorado State Teachers College made a preliminary study of the salary situation of state teachers colleges and state normal schools. It was necessary to tabulate the material before a number of institutions had replied to the questionnaire sent them, thus rendering it impossible to make a complete report. The tabulations and written report of the study were issued in mimeographed form¹ on March 4, 1925.

A number of requests for the results of the study have been received recently, showing that the salary problem of state teachers colleges and state normal schools is a live question among the administrators of these institutions. In fact, many of the requests were from members of committees appointed to revise or build up salary schedules for state teacher training institutions. The facts that the preliminary report is neither complete nor up to date and that such data are still in demand were considered as sufficient reason for the present study.

Although it was impossible to get the cooperation of the presidents of all the institutions concerned in supplying the necessary data for the present study, a sufficiently large sampling was secured to give the results a significant meaning.

Upon reading this report, it will be seen that separate tabulations are made in each case for each of the two types of institutions represented, teachers colleges and normal schools. The data are then thrown together and a combined tabulation presented in order to give a general view of the salary situation, and in order that the results may be compared with those of the previous study.

Due to the very general use of the terms: normal school, normal college, normal university, training school, and teachers college, it was impossible to classify the returns according to the name of the school reporting. Because of this lack of differentiation in terminology, it was decided to use the lists found in the Commissioner's *Educational Directory*² as criteria. In this directory, those institutions which offer four years of work above the secondary school and grant degrees are classed as "teachers

1 Whitney, Frederick L. *A Study of Salaries, Salary Schedules, and all Other Matters of Payment to the Faculties of State Teachers Colleges and State Normal Schools*. Division of Educational Research, Colorado State Teachers College, Greeley, Colorado, March 4, 1925.

2 *Educational Directory: 1927*. Bulletin of the United States Bureau of Education. Bulletin 1, 1927, United States Bureau of Education, Washington, D. C., 1927.

colleges". All other teacher training institutions outside of state universities are classed as "normal schools".

II. PROCEDURE AND TECHNIC

On October 10, 1927, the letter and return sheet, found in Appendix I, were sent to the presidents of 87 state teachers colleges and 91 state normal schools. As a result of the first call, material was returned for about half of the institutions. As this was not a sufficient sampling, a second request was mailed to those presidents who had not yet replied. This yielded returns from about one-fourth more of the institutions, giving a total sampling of approximately 75 per cent. It was decided that it would not be worth the time and cost necessary to secure additional returns, so the study was closed at that point. A list of the institutions supplying usable material is found in Appendix II. A few more returns were received after closing the study, but were not included in the tables.

The next task was that of tabulating the returns. It was found that some of the data called for on the return sheet were given more often than others. The sampling in terms of each item of information asked for is shown in Table I. Thus information concerning item 1, which referred to the use of a salary schedule, was furnished by 64 of the 87 teachers colleges and by 72 of the 91 normal schools, as shown in columns 2 and 3. This is a sampling of 73.6 per cent and 79.1 per cent, or a general sampling of 76.4 per cent for item 1, as shown in columns 5, 6, and 7. The sampling for each of the other items is read in the same manner. It will be seen that the general response was slightly better for the normal schools than for the teachers colleges, the general sampling being 80.2 per cent for the former as compared with 73.6 per cent for the latter. The general sampling for both groups was 77 per cent, which is large enough to lend significance to the results. Since the 137 institutions replying are located in 40 states and Hawaii, the results are indicative of the general situation rather than of local conditions.

The tabulations for each of the items, and also discussions of the results appear in the following sections.

III. THE PRESIDENT'S SALARY

The president's salary is in most cases a composite of an annual cash salary plus such perquisites as the boards of control of the various institutions see fit to grant their chief administrative officer. For that reason, a separate tabulation has been made of the number of presidents receiving additions of various kinds, as well as a tabulation of the annual cash salaries.

1. THE CASH SALARY

The distributions of the annual cash salaries of the presi-

TABLE I

SAMPLING RECEIVED IN TERMS OF NUMBERS AND PER CENT OF 87 STATE TEACHERS COLLEGES AND 91 STATE NORMAL SCHOOLS REPLYING TO SEVEN ITEMS ON THE RETURN SHEET USED IN THIS STUDY, 1927-28

Item of Information	Number of Replies			Per cent of Replies		
	Teachers Colleges	Normal Schools	Total	Teachers Colleges	Normal Schools	Total
1	2	3	4	5	6	7
1. Salary schedule	64	72	136	73.6	79.1	76.4
2. Leave of absence	64	72	136	73.6	79.1	76.4
3. Time off	64	71	135	73.6	78.0	75.8
4. Bonus	64	72	136	73.6	79.1	76.4
5. Extension work	61	68	129	70.1	67.0	72.5
6. President's salary	64	73	137	73.6	80.2	77.0
7. Salary of faculty	64	73	137	73.6	80.2	77.0
Replying to any item	64	73	137	73.6	80.2	77.0

dents of both types of institutions are given in Table II. Column 2 shows the facts for the teachers colleges, column 3 for the normal schools, while the combined distribution is given in column 4.

The large range between the highest and lowest salaries is very noticeable. Some of the teachers college presidents receive twice as much as others, and in the case of the normal schools, it is seen that two men receive three times the amount paid others holding like positions. The last statement should probably be qualified to mean filling the same office, as it is entirely probable that the men receiving \$8000 per year are better qualified and have a somewhat different type of duties than those receiving only \$2700.

The median salary for the presidents of the two types of institutions is approximately the same, but the average, or mean, is some \$200 greater for the teachers college executives. The discrepancy between the median and the mean for the normal school presidents is explained by the relatively large number (25) fall-

TABLE II
 DISTRIBUTION OF THE ANNUAL CASH SALARIES OF THE
 PRESIDENTS OF 64 STATE TEACHERS COLLEGES AND 73
 STATE NORMAL SCHOOLS IN 41 STATE, 1927-28

Salary	Frequency			Total
	Teachers	Colleges	Normal Schools	
1	2	3	4	
\$9000-9299	2			2
8700-8999	0			0
8400-8699	0			0
8100-8399	0			0
7800-8099	5		2	7
7500-7799	7		2	9
7200-7499	3		0	3
6900-7199	0		4	4
6600-6899	1		3	4
6300-6599	4		2	6
6000-6299	11		25	36
5700-5999	0		2	2
5400-5699	5		6	11
5100-5399	4		1	5
4800-5099	17		9	26
4500-4799	5		5	10
4200-4499			3	3
3900-4199			4	4
3600-3899			0	0
3300-3599			2	2
3000-3299			1	1
2700-2999			2	2
N	64	73	137	
Q ₃	\$7300.00	\$6237.00	\$6337.50	
Median	6027.27	6018.00	6020.83	
Mean	6093.75	5607.53	5834.67	
Q ₁	4994.12	4841.67	4895.19	
Q	1152.94	697.67	721.16	

ing just at \$6000. They, however, do not deviate from the average enough to raise the mean as much as they do the median.

None of these measures of central tendency can be considered as very reliable, due to the nature of the distributions. It has already been pointed out that for the normal schools there is a cluster of salaries at \$6000. In the teachers college distribution, there are two distinct clusters, and the same is true for the total distribution. Because of this situation, the mean is probably more significant than the median.

The spread as represented by Q (which is one-half of the difference between Q₁ and Q₃) shows that 50 per cent of the teachers college presidents receive a salary between \$7300.00 and \$4994.12, while the other 50 per cent receive amounts above or below these amounts. For the normal school presidents, 50 per cent receive between \$6237.00 and \$4841.67, and the other 50 per

cent either above or below these amounts. For both groups as a whole, one-half of the presidents' salaries do not deviate more than \$721.16 from the median of \$6020.83, so we may safely say that the president of a teacher training institution is most likely to receive an annual cash salary between \$5000 and \$7000.

2. PERQUISITES

In addition to their annual cash salary, most of the presidents, about 95 per cent of them, receive perquisites such as house rent, traveling expenses, car up-keep, and various other expenses. The number of presidents receiving these various additions to their salary is given in Table III. In column 1 is listed the various additions or combinations of additions to the salary, while columns 2, 4, and 6 show the number of presidents receiving them. Columns 3, 5, and 7 show the average salary received by each group. Thus 29 teachers college presidents receive only their traveling expenses, and also 29 normal school presidents receive like compensation. However, the average salary for the former group is \$6217.24 as compared with \$5543.10 for the normal school group, the mean salary for the entire group being \$5880.17. The remainder of the table is read in a like manner, and reveals several significant facts:

a. Only two teachers colleges and five normal schools of a group of 137 institutions do not give their president any addition to his cash salary.

b. Those not paying any addition also pay a lower average cash salary than do those institutions granting from one to four perquisites. (The mean of \$3300 is not significant since it represents only a single case.)

c. The most frequent addition is the payment of traveling expenses, while the next in order is the combination of house and traveling expenses.

d. The group receiving the highest average salary is the group receiving car and traveling expenses as perquisites.

The above facts and also Table III are more meaningful when the values of the various additions are known. Of those reporting, the average value of the perquisite of a house is \$955 for the teachers college and \$721 for the normal school, or \$802 for both. Traveling expenses averaged \$486 for the teachers college and \$520 for the normal schools, with a general average of \$510. Expense was frequently limited to that incurred on "school business," "within state," etc. Only five gave any data as to the amount allowed for car expense. The amount ranged from \$200 to \$1500 with an average of \$600. The amount allowed for car up-keep is of course very closely related to the amount allowed for traveling expenses. One executive was allowed "ten cents per mile" for car expense.

TABLE III

PRESIDENTS OF STATE TEACHERS COLLEGES AND STATE NORMAL SCHOOLS RECEIVING PERQUISITES OF NINE TYPES IN ADDITION TO THEIR CASH SALARY, 1927-28

Item	Teachers College		Normal School		Total	
	Number	Average Cash Salary	Number	Average Cash Salary	Number	Average Cash Salary
1	2	3	4	5	6	7
1. House only			1	\$2800.00	1	\$2800.00
2. Car only (a)						
3. Traveling expenses only	29	\$6217.24	29	5543.10	58	5880.17
4. House and traveling expenses	22	5550.50	24	5739.58	46	5648.91
5. House and car	0		1	3300.00	1	3300.00
6. Car and traveling expenses	6	7500.00	1	6000.00	7	7285.71
7. House, car, and traveling expenses	4	5950.00	4	5125.00	8	5560.00
8. House, car, traveling expenses and other items	0		5	6200.00	5	6200.00
9. Miscellaneous	1(b)	6000.00	3(c)	6100.00	4	6075.00
10. No additions	2	6850.00	5	4630.00	7	5264.29
Total	64	\$6093.75	73	\$5607.53	137	\$5834.67

- a. No president receives car upkeep alone as a perquisite.
- b. Receives: "\$6000, house, car, traveling expenses, and board for president and wife."
- c. One receives: "7000, rent, light, heat, water, and food." One receives: "\$6000, rent, light, heat, water, and food." One receives: "\$5300, rent, light, heat, and water."

The amounts reported for "other items" averaged \$350. The "other items" included a great variety of expenses, some of which were: water, telephone, and light bills, janitor, fuel, and entertainment of state guests.

In general, it may be said that the "average" president of the state teacher training institutions of today receives approximately \$6000 per year as a cash salary, and in the majority of cases receives also either his traveling expenses, or his house and traveling expenses. His average cash salary is approximately \$600 more than was the case three years ago. The mean salary has raised from \$5227.93 in 1924-25 to \$5834.67 for the cur-

rent year. He receives about the same perquisites as the president of 1924-25. With the exception of the slight increase in cash salary the president's position has undergone little change, financially speaking, during the last three years.

IV. THE SALARY OF THE FACULTY

One of the factors in the preparation or revision of a salary schedule for a teacher training institution is a knowledge of the salaries actually being paid the faculty members of similar institutions. In this section are presented the distributions of the current annual salaries of 6515 persons now teaching in 64 state teachers colleges and 73 state normal schools. For convenience, the salaries of the three academic ranks: professor, instructor, and training teacher are treated separately. However, many of the schools reporting do not make any distinction between the ranks of "professor" and "instructor". A professor in one school might be called an instructor in another, even though his salary and duties were the same in both instances. For this reason a fourth group has been considered, the "college teachers". The distribution of salaries for this group was obtained by combining the salaries reported under the two classifications, professor and instructor.

It will be noted that there are two salary distributions for each academic rank. The first of the two is a distribution of the actual cash salaries received whether it be for nine, ten, or twelve months. However, in order that a truer perspective of the situation might be presented, it was thought best to transmute all salaries to a common unit of time. In the second table of each group, the salaries have been transmuted, or adjusted, to a twelve month basis. Any unit of time could have been used, but since the salaries of a large number of the schools are paid on a twelve month basis, it was decided to use the full year as the common unit. In order to make the transmutation, it was only necessary to divide the salary reported by the number of months for which it was paid and then to multiply the result by twelve. Thus a salary of \$1800 for nine months is \$200 per month or \$2400 per year, when adjusted to a twelve month basis.

It may be argued that the adjusted salaries do not constitute a fair representation of the actual situation. Were all the faculty members paid on a nine month basis, it would not; but since most of them are paid on a twelve month basis and many of the others receive additional salary for summer teaching, it is probable that the second table of each group is the more significant. However, the actual salaries are presented in order to show how much the teachers in the various state teacher training institutions are actually being paid for their professional endeavors.

The tabulations include the salaries of the entire faculties of the schools reporting, but they do not include the registrar's or business manager's salaries. Data for other administrative officers, such as deans and heads of departments, were not reported separately. These salaries are included in the professors' and instructors' tables. Probably very little error resulted from this procedure, however, as both deans and department heads are, as a rule, actively engaged in teaching.

A comparison of the central tendencies of the distributions for 1927-28 with those of 1924-25 shows a slight increase in all cases. This increase amounts to approximately 5 per cent for the professors, 9 per cent for the instructors, and 7 per cent for the training teachers for the last three years. However, during this same period the value of the dollar has increased 3.4 per cent, as computed from the value of the dollar³ in 1924 and 1927. Subtracting this amount from the above percentages, leaves a very slight percentage of increase, a gain so small that its significance is rather questionable.

1. THE PROFESSOR'S SALARY

The distribution of the professors' salaries reported is found in Table IV. In this and all other salary tables following, the various salaries paid are given in column 1, while columns 2 and 3 indicate the number of times a given salary is paid in state teachers colleges and in state normal schools. The combined frequencies are given in column 4 to show the general situation for state teacher training institutions.

Looking at Table IV, it is seen that teachers colleges have many more teachers of the professorial rank than the normal schools in spite of the fact that 73 of the 137 are the latter type school. However, in regard to the size of the professors' salaries, there is a very slight difference, and it is in favor of the normal schools. From column 4, it is seen that the mean annual cash salary of 2120 professors is slightly over \$3000. Because of the large number of cases, this figure is fairly reliable.

The distribution of the professors' salaries after they have been adjusted to a twelve month basis is given in Table V. Again noticing the measures of central tendency, it is seen that the adjustment resulted in increasing the difference between the average salary paid by the state teachers colleges and that paid by normal schools. The interpretation of this may be that, in general, the normal schools pay their professors on a shorter basis of time than do the teachers colleges. It will also be noted that the average salary for the entire group was raised some

³ Norton, J. K. *The Scheduling of Teachers' Salaries*. Research Bulletin of the National Education Association, Vol. V, Number 3 (May, 1927).

TABLE IV
DISTRIBUTION OF THE ANNUAL CASH SALARIES OF 2120
PROFESSORS IN 64 STATE TEACHERS COLLEGES AND 73
STATE NORMAL SCHOOLS IN 41 STATES, 1927-28

Salary	Frequency		
	Teachers Colleges	Normal Schools	Total
1	2	3	4
\$6000-6199	1		1
5800-5999	0		0
5600-5799	0		0
5400-5599	0	1	1
5200-5399	1	0	1
5000-5199	21	1	22
4800-4999	29	0	29
4600-4799	4	2	6
4400-4599	9	20	29
4200-4399	42	12	54
4000-4199	61	34	95
3800-3999	28	25	53
3600-3799	109	58	167
3400-3599	117	58	175
3200-3399	158	47	205
3000-3199	196	62	258
2800-2999	143	41	184
2600-2799	195	62	257
2400-2599	196	67	263
2200-2399	96	45	141
2000-2199	70	36	106
1800-1999	24	17	41
1600-1799	4	5	9
1400-1599	13	3	16
1200-1399	4	3	7
N	1521	599 (a)	2120 (a)
Q ₃	\$3471.37	\$3611.21	\$3517.71
Median	3015.82	3066.13	3017.91
Mean	3075.41	3080.97	3076.98
Q ₁	2572.70	2521.64	2559.70
Q	449.34	544.79	479.01

a. Not including one part time professor at \$1000.

\$250 by the adjustment, indicating that a number of professors are being paid on something less than a twelve month basis.

2. THE INSTRUCTOR'S SALARY

The distribution of the salaries of 2902 instructors is found in Tables VI and VII. It should be noted that all salaries below \$1000 were not included in calculating the measures of central tendency, since they represent payment for part time work only, and therefore are not representative of the actual situation.

The fact that the average instructor's salary is significantly lower than the average professor's salary indicates that real distinction is made between these two academic ranks, at least in

TABLE V

DISTRIBUTION OF THE ANNUAL SALARIES OF 2120 PROFESSORS IN 64 STATE TEACHERS COLLEGES AND 73 STATE NORMAL SCHOOLS IN 41 STATES (ALL SALARIES ADJUSTED TO A TWELVE MONTH BASIS), 1927-28

Salary	Frequency		
	Teachers Colleges	Normal Schools	Total
1	2	3	4
\$6600-6799		1	1
6400-6599		0	0
6200-6399	1	0	1
6000-6199	15	1	16
5800-5999	0	0	0
5600-5799	2	1	3
5400-5599	5	9	14
5200-5399	3	1	4
5000-5199	15	4	19
4800-4999	46	16	62
4600-4799	9	6	15
4400-4599	49	19	68
4200-4399	44	35	79
4000-4199	135	32	167
3800-3999	49	39	88
3600-3799	117	71	188
3400-3599	109	34	143
3200-3399	189	63	252
3000-3199	138	80	218
2800-2999	160	36	196
2600-2799	161	59	220
2400-2599	143	45	188
2200-2399	55	13	68
2000-2199	48	17	65
1800-1999	15	11	26
1600-1799	3	2	5
1400-1599	6	3	9
1200-1399	4	1	5
N	1521	599 (a)	2120 (a)
Q ₃	\$3787.61	\$3873.08	\$3815.19
Median	3229.10	3303.17	3247.62
Mean	3319.07	3387.48	3338.40
Q ₁	2731.99	2795.76	2749.09
Q	527.81	538.66	533.41

a. Not including one part time professor at \$1000.

some schools. This distinction is more marked in the teachers colleges than in the normal schools as evidenced by the larger differences in the average salaries of the two ranks.

Again it is found that the normal school pays a slightly larger average salary than the teachers college, but for the instructors the difference is lessened by the adjustment to a twelve month basis, instead of being increased as was the case for the professor's salary. This may indicate that in general the normal school instructors work a longer time per year than the teachers college instructors, but the difference is very slight.

TABLE VI

DISTRIBUTION OF THE ANNUAL CASH SALARIES OF 2902 INSTRUCTORS IN 64 STATE TEACHERS COLLEGES AND 73 STATE NORMAL SCHOOLS IN 41 STATES, 1927-28

Salary	Frequency		
	Teachers Colleges	Normal Schools	Total
1	2	3	4
\$5000-5199	3	1	4
4800-4999	11	0	11
4600-4799	3	0	3
4400-4599	7	6	13
4200-4399	12	11	23
4000-4199	8	75	83
3800-3999	16	9	25
3600-3799	42	47	89
3400-3599	44	46	90
3200-3399	75	151	226
3000-3199	143	103	246
2800-2999	110	135	245
2600-2799	150	155	305
2400-2599	264	172	436
2200-2399	195	122	317
2000-2199	211	91	302
1800-1999	154	75	229
1600-1799	55	44	99
1400-1599	15	30	45
1200-1399	22	20	42
1000-1199	7	12	19
800- 999	19 (a)	6 (a)	25 (a)
600- 799	8 (a)	5 (a)	13 (a)
400- 599	4 (a)	1 (a)	5 (a)
200- 399	2 (a)	3 (a)	5 (a)
0- 199	1 (a)	1 (a)	2 (a)
N	1581	1321	2902
Q ₃	\$2958.64	\$3226.16	\$3081.30
Median	2486.74	2711.61	2571.10
Mean	2574.21	2749.20	2654.28
Q ₁	2069.43	2288.93	2184.77
Q	444.61	468.62	448.27

a. Part time work only; not included in calculating median, mean, and quartiles.

Noting the quartile points in column 4 of Table VI, it is seen that one-half of the 2902 instructors receive an actual cash salary between approximately \$2000 and \$3000. In other words, about one-fourth of the instructors in our state teacher training institutions receive less than \$2000 while the upper fourth receive over \$3000, the upper limit for the group studied being \$5000. It is of interest to note that the last mentioned amount is larger than the cash salary of 22 of the presidents reported above. Presumably the relatively large salaries in Tables V and VI are paid to heads of departments, although nothing definite is known about them.

TABLE VII

DISTRIBUTION OF THE SALARIES OF 2902 INSTRUCTORS IN 64 STATE TEACHERS COLLEGES AND 73 STATE NORMAL SCHOOLS IN 41 STATES (ALL SALARIES ADJUSTED TO A TWELVE MONTH BASIS, 1927-28)

Salary	Frequency		
	Teachers Colleges	Normal Schools	Total
1	2	3	4
\$6000-6199	3		3
5800-5999	0		0
5600-5799	3		3
5400-5599	1	1	2
5200-5399	1	1	2
5000-5199	4	5	9
4800-4999	16	14	30
4600-4799	4	3	7
4400-4599	22	25	47
4200-4399	29	23	52
4000-4199	37	80	117
3800-3999	40	24	64
3600-3799	87	82	169
3400-3599	48	49	97
3200-3399	140	204	344
3000-3199	139	143	282
2800-2999	143	126	269
2600-2799	195	136	331
2400-2599	257	137	394
2200-2399	86	79	165
2000-2199	136	77	213
1800-1999	106	51	157
1600-1799	13	19	32
1400-1599	9	13	22
1200-1399	21	15	36
1000-1199	8	5	13
800- 999	14 (a)	2 (a)	16 (a)
600- 799	11 (a)	3 (a)	14 (a)
400- 599	3 (a)	0	3 (a)
200- 399	4 (a)	4 (a)	8 (a)
0- 199	1 (a)		1 (a)
N	1581	1321	2902
Q ₃	\$3268.57	\$3379.41	\$3334.30
Median	2741.54	2996.83	2849.81
Mean	2854.13	2999.70	2920.91
Q ₁	2406.23	2500.73	2439.09
Q	431.17	439.34	447.61

a. Part time work only; not included in calculating median, mean, and quartiles.

3. THE TRAINING TEACHER'S SALARY

In spite of the fact that many of the institutions reporting do not have an organized training school and that others utilize the local school system as a student teaching laboratory, data were reported for 1493 training teachers. Distribution of the actual and adjusted salaries of this group are given in Tables VIII and IX. A number of these are supplementary salaries paid

TABLE VIII
DISTRIBUTION OF THE ANNUAL CASH SALARIES OF 1493
TRAINING TEACHERS IN 64 STATE TEACHERS COLLEGES
AND 73 STATE NORMAL SCHOOLS IN 41 STATES, 1927-28

Salary	Frequency		
	Teachers Colleges	Normal Schools	Total
1	2	3	4
\$4400-4599		1 (a)	1 (a)
4200-4399	1 (a)	3 (a)	4 (a)
4000-4199	1 (a)	3 (a)	4 (a)
3800-3999	0	1 (a)	1 (a)
3600-3799	1 (a)	3 (a)	4 (a)
3499-3599	2 (a)	12 (a)	14 (a)
3200-3399	4	17	21
3000-3199	25	12	37
2800-2999	27	37	64
2600-2799	57	95	152
2400-2599	84	62	146
2200-2399	64	87	151
2000-2199	130	111	241
1800-1999	127	102	229
1600-1799	32	60	92
1400-1599	41	28	69
1200-1399	30	32	62
1000-1199	19	19	38
800- 999	10	23	33
600- 799	20 (b)	22 (b)	42 (b)
400- 599	5 (b)	12 (b)	17 (b)
200- 399	5 (b)	65 (b)	70 (b)
0- 199		1 (b)	1 (b)
N	685	808	1493
Q ₃	\$2482.14	\$2566.94	\$2518.15
Median	2101.54	2141.44	2119.92
Mean	2121.85	2140.58	2131.46
Q ₁	1838.03	1818.14	1834.72
Q	322.06	374.40	341.72

- a. Nine of these are definitely known to be administrators; no salaries above \$3400 included in calculating median, mean, and quartiles.
- b. Supplementary salaries paid to city teachers; not included in calculating median, mean, and quartiles.

to the teachers in the local system. However, such salaries were not included in calculating the mean, median, and quartiles as they are not representative of the training teacher's regular full time salary.

Another group of salaries were not included in finding the central tendencies because it seemed that they were too large to be paid to training teachers for teaching alone. A subsequent check showed that many of those receiving more than \$3600 per year were administrative officers such as: director of training, superintendent of the training school, or principal of the affli-

TABLE IX

DISTRIBUTION OF THE SALARIES OF 1493 TRAINING TEACHERS IN 64 STATE TEACHERS COLLEGES AND 73 STATE NORMAL SCHOOLS IN 41 STATES (ALL SALARIES ADJUSTED TO A TWELVE MONTH BASIS) 1927-28

Salary	Frequency		
	Teachers Colleges	Normal Schools	Total
1	2	3	4
\$5400-5599		1 (a)	1 (a)
5200-5399		0	0
5000-5199	1 (a)	0	1 (a)
4800-4999	0	0	0
4600-4799	0	0	0
4400-4599	0	2 (a)	2 (a)
4200-4399	0	5 (a)	5 (a)
4000-4199	1 (a)	9 (a)	10 (a)
3800-3999	1 (a)	6 (a)	7 (a)
3600-3799	6 (a)	6 (a)	12 (a)
3400-3599	4	4	8
3200-3399	39	51	90
3000-3199	45	77	122
2800-2999	41	70	111
2600-2799	80	92	172
2400-2599	152	80	232
2200-2399	61	70	131
2000-2199	110	73	183
1800-1999	33	76	109
1600-1799	34	17	51
1400-1599	26	35	61
1200-1399	19	27	46
1000-1199	2	3	5
800- 999	16 (b)	27 (b)	43 (b)
600- 799	5 (b)	7 (b)	12 (b)
400- 599	6 (b)	16 (b)	22 (b)
200- 399	3 (b)	54 (b)	57 (b)
N	685	808	1493
Q ₃	\$2718.75	\$2895.00	\$2801.35
Median	2450.00	2491.25	2464.22
Mean	2355.73	2445.78	2426.72
Q ₁	2086.36	2029.45	2063.66
Q	316.20	432.78	368.85

- Many of these are definitely known to be administrators; no salaries above \$3600 included in calculating the median, mean, and quartiles.
- Supplementary salaries paid to city teachers; not included in calculating median, mean, and quartiles.

ated high school. It is of course possible that some error was made in assuming such an arbitrary dividing point, but it was felt that such procedure would make the mean and median more significant than they would be, if this group of large salaries had been included.

Again, it is seen that the normal schools pay a very slightly larger average salary for their training teachers than do the

teachers colleges. It will be remembered that this was also true for the professors and instructors. Even though the difference is relatively small in each case, the large sampling assures its significance.

The mean annual salary of the training teachers in state teacher training schools is slightly over \$2000. It is interesting to note that the average salaries of the three groups studied are separated by a difference of approximately \$500, with the instructor's salary falling about midway between that of professors and training teachers.

4. THE COLLEGE TEACHER'S SALARY

The combined distributions of the professor's and instructor's salaries, constituting the college teacher's salary, are presented in Tables X and XI. Here again the central tendencies are probably of most interest. As it was to be expected from a survey of the separate distributions from which Table X was made, the normal schools pay a slightly larger average salary. This difference is increased only very little by the adjustment to a twelve month basis. This indicates that for the entire group of college teachers, there is very little difference in the average length of the salary year in the two types of institutions. Noting the mean and median in column 4 of Table X, it is seen that the average salary of the 5022 teachers is approximately midway between the professor's and instructor's average salary, or about \$2800 per year.

Generally speaking, then, it may be said that a member of the faculty of a state teacher training institution receives less than \$3000 per year for his teaching services.

There is a large discrepancy between this amount and one estimate of the annual cost of living at a professional standard. Peixotto⁴ regards \$5000 as "that amount which to the writer's mind represents the minimum cost of health and decency, granting the accepted need of a professional standard." Although this estimate was based on living conditions in California during 1922, the situation presented by this discrepancy is provocative of serious thought.

V. THE BONUS

The question naturally arises as to whether the faculty members receive additions to their cash salaries as was found to be the case for the presidents. The result of the tabulation of the replies to item 4 indicates that any sort of a bonus for the faculty member is unusual. Only ten of the 137 institutions give any bonus at all, and where given it is of small value.

⁴ Peixotto, Jessica B. *Getting and Spending at the Professional Standard of Living: A Study of the Costs of Living in Academic Life*. The Macmillan Company, New York, 1927.

TABLE X

DISTRIBUTION OF THE ANNUAL CASH SALARIES OF 5022 COLLEGE TEACHERS (a) IN 64 STATE TEACHERS COLLEGES AND 73 STATE NORMAL SCHOOLS IN 41 STATES, 1927-28

Salary	Frequency		
	Teachers Colleges	Normal Schools	Total
1	2	3	4
\$6000-6199	1		1
5800-5999	0		0
5600-5799	0		0
5400-5599	0	1	1
5200-5399	1	0	1
5000-5199	24	2	26
4800-4999	40	0	40
4600-4799	7	2	9
4400-4599	16	26	42
4200-4399	54	23	77
4000-4199	69	109	178
3800-3999	44	34	78
3600-3799	151	105	256
3400-3599	161	104	265
3200-3399	233	198	431
3000-3199	339	165	504
2800-2999	253	176	429
2600-2799	345	217	562
2400-2599	460	239	699
2200-2399	291	167	458
2000-2199	281	127	408
1800-1999	178	92	270
1600-1799	59	49	108
1400-1599	28	33	61
1200-1399	26	23	49
1000-1199	7	12	19
800- 999	19 (b)	6 (b)	25 (b)
600- 799	8 (b)	5 (b)	13 (b)
400- 599	4 (b)	1 (b)	5 (b)
200- 399	2 (b)	3 (b)	5 (b)
0- 199	1 (b)	1 (b)	2 (b)
N	3102	1920 (c)	5022 (c)
Q ₂	\$3229.18	\$3329.29	\$3275.17
Median	2718.26	2793.55	2747.33
Mean	2820.18	2853.57	2834.51
Q ₁	2329.21	2367.66	2343.23
Q	449.99	480.82	465.97

- a. Including professors and instructors but not training teachers.
 b. Part time only; not included in calculating median, mean, and quartiles.
 c. Not including one part time professor at \$1000.

TABLE XI
DISTRIBUTION OF THE SALARIES OF 5022 COLLEGE TEACHERS (a) IN 64 STATE TEACHERS COLLEGES AND 73 STATE NORMAL SCHOOLS IN 41 STATES (ALL SALARIES ADJUSTED TO A TWELVE MONTH BASIS), 1927-28

Salary	Frequency		
	Teachers Colleges	Normal Schools	Total
1	2	3	4
\$6600-6799		1	1
6400-6599		0	0
6200-6399		0	1
6000-6199	18	1	19
5800-5999	0	0	0
5600-5799	5	1	6
5400-5599	6	10	16
5200-5399	4	2	6
5000-5199	19	9	28
4800-4999	62	30	92
4600-4799	13	9	22
4400-4599	71	44	115
4200-4399	73	58	131
4000-4199	172	112	284
3800-3999	89	63	152
3600-3799	204	153	357
3400-3599	157	83	240
3200-3399	329	267	596
3000-3199	277	223	500
2800-2999	303	162	465
2600-2799	356	195	551
2400-2599	400	182	582
2200-2399	141	92	233
2000-2199	184	94	278
1800-1999	121	62	183
1600-1799	16	21	37
1400-1599	15	16	31
1200-1399	25	16	41
1000-1199	8	5	13
800- 999	14 (b)	2 (b)	16 (b)
600- 799	11 (b)	3 (b)	14 (b)
400- 599	3 (b)	0	3 (b)
200- 399	4 (b)	4 (b)	8 (b)
0- 199	1 (b)		1 (b)
N	3102	1920 (c)	5022 (c)
Q _s	\$3561.46	\$3619.93	\$3587.50
Median	2977.23	3099.10	3030.40
Mean	3084.56	3121.25	3098.63
Q ₁	2528.63	2588.74	2547.42
Q	516.42	515.60	520.04

- a. Including professors and instructors but not training teachers.
b. Part time work only; not included in calculating median, mean, and quartiles.
c. Not including one part time professor at \$1000.

Only five state teachers colleges and five state normal schools pay a bonus for attendance at summer schools. It is possible that some of them pay an indirect bonus for this by increasing the salary for those members taking advantage of summer sessions to further their professional training. However, it must be understood that "attendance at summer school" does not mean continuing to teach at the local institution during the summer session, in which case additional pay is granted for extra work with the exception of those members hired on a twelve month basis.

Even a smaller number, three state teachers colleges and one state normal school, pay any sort of a bonus for attendance at educational meetings. In one case, the bonus consists merely of paying "expenses outside of state," and in another case the members are allowed "\$75 per meeting." Details were not given for the other two schools.

In general then, it is seen that the salary of the faculty member consists primarily and almost entirely of the annual cash stipend. The attitude toward the bonus is much the same as was found in 1925, or even slightly less favorable.

About the only other possible source of income from college teaching is the extra salary paid for extension work, which is discussed in the following section.

VI. SALARY FOR EXTENSION WORK

Extension work as offered by state teacher training institutions consists chiefly of correspondence and extra-mural teaching. Although the exact amounts paid for these types of work are not available, data are at hand concerning the frequency with which they are offered and whether or not extra pay is given for such instruction. Many of the institutions represented have one or more men engaged in full time extension work. Such cases were tabulated with the regular faculty members. Obviously these cases are not included in the present discussion.

The situation in regard to the number of each type of institution offering and paying extra salary for the two kinds of extension work is presented in Table XII. In column 2, it is seen that 56 out of the 73 state teachers colleges offer extra-mural teaching, and that 32 of the 56 pay extra for this type of work. This amounts to 57.1 per cent of those offering it. Column 3 presents the data for correspondence, and in column 4 is found the general situation for both types of extension work.

It is seen that the majority of the teachers colleges pay extra salary both for teaching and for correspondence. For the normal schools, it is found that the majority are more prone to consider extension work as a part of the regular teaching load.

TABLE XII
NUMBER AND PER CENT OF STATE TEACHERS COLLEGES
AND STATE NORMAL SCHOOLS PAYING EXTRA SALARY
FOR EXTENSION WORK, 1927-28

Type of School	Teaching	Correspondence	Total
1	2	3	4
1. Teachers Colleges			
a. Number Offering	56	46	102
b. Number Paying	32	28	60
c. Per cent Paying	57.1	60.9	58.8
2. Normal Schools			
a. Number Offering	57	39	96
b. Number Paying	27	13	40
c. Per cent Paying	47.4	33.3	41.7
3. Total			
a. Number Offering	113	85	198
b. Number Paying	59	41	100
c. Per cent Paying	52.2	48.2	50.5

It is probable, however, that where this is done, the regular load is reduced to give the time needed for the extra work.

When both teachers colleges and normal schools are considered together, it is seen that the opposite tendencies of the two types of institutions almost balance each other. In general, the practice of paying for extension work is about as prevalent as the practice of not paying.

One state teachers college reported that it would pay extra for correspondence in 1929, and another reported that it "pays expenses of extension work only."

The situation in regard to extra pay for extension work has changed considerably since 1925. At that time 70 of the 75, or 93.3 per cent of the schools reporting⁵ paid extra salary for this type of work as compared with 50.5 per cent for the current year. The reason for this change in practice can only be surmised. It is probably due in part to the increased amount of extension work offered, causing much of it to be considered as a part of the regular teaching load.

VII. SALARY FOR TIME OFF

Having noted the situation relative to supplementing the faculty's salary, it will be of interest to consider what rules state teacher training institutions observe in regard to paying salaries for time lost from actual service. Absences may be divided into two general classes, professional and those resulting from illness.

⁵ Whitney, F. L., Op. Cit.

No data are available on the former, except those which were reported in the section on "The Bonus." As far as is known, however, the general practice is to continue the payment of the full salary for ordinary professional absences such as attendance at educational meetings. Most of the replies to item 3 on the return sheet said specifically that the rule stated applied to time off for illness only, so the results must be interpreted to apply chiefly to this type of absence.

The practices of the 137 schools represented are shown in Table XIII. It is gratifying to note that all but three of them make some sort of provision for the payment of salaries for time off. As is seen in column 2, practically every arrangement provides for the continuation of the regular salary, for various lengths of time ranging from ten days to one year. The most frequently reported plan, used by nineteen teachers colleges and sixteen normal schools, is the continuation of "full pay for an indefinite length of time." This indicates a liberal attitude in regard to the matter. Next in order, is the plan of paying the full salary for a period of one month, which is used by nine teachers colleges and twelve normal schools. Various other arrangements were reported, whose relative popularity may be seen from their ranking in column 1 of the table.

It will be noted that in twelve cases, the absent faculty members receive full pay less the amount used to hire a substitute. This practice may be commended in that, if one is so unfortunate as to have to lose time, he continues to receive any increments that he has received because of training or of service in the institution. Such a plan may well be considered by schools whose budget is too small to permit continuing the regular salary.

The "other arrangements" mentioned in Table XIII included a variety of plans, some of which are suggestive. One school "pays salary for time in hospital only." Madison, South Dakota, reports "Full pay for two months, and part pay for several years in the case of old members." Providence, Rhode Island, offers "full pay for first month, and full pay less substitute's pay for the remainder of the year." Detroit, Michigan, allows "full pay for two weeks, then 80 per cent for the remainder of the absence." Several other schools continue full pay for a certain length of time, and then "part pay" for a specified period. In many cases, the length of time may be extended by action of the controlling board, or at the discretion of the president of the institution.

In general, the practice is to continue the regular salary for all absences of reasonable length. When an absence continues for relatively long periods, other arrangements are usually made,

TABLE XIII

RANK OF ARRANGEMENTS FOR THE PAYMENT OF SALARIES FOR TIME OFF FOR ILLNESS OR OTHER CAUSES IN 137 STATE TEACHER TRAINING INSTITUTIONS, 1927-28

Rank	Arrangement for Payment	Frequency		
		Teachers Colleges	Normal Schools	Total
1	2	3	4	5
1	Full pay for an indefinite time	19	16	35
2	Full pay for one month	9	12	21
3	Full pay for two weeks	4	8	12
4.5	Full pay less substitute's pay for a "short time"	5	3	8
4.5	Full pay for 40 school days per year	0	8 (a)	8
6	Full pay for "reasonable" time	2	5	7
7.5	Full pay for ten days	0	5	5
7.5	Full pay for three months	4	1	5
9.5	Full pay for two months	3	1	4
9.5	Full pay less substitute's pay indefinitely	2	2	4
11	Full pay for three to four months	1	2	3
13	Full pay for three weeks	1	1	2
13	Full pay for six weeks	2	0	2
13	"Full pay sometimes, half sometimes"	2	0	2
15	Full pay for one year	0	1	1
	Other arrangements	9 (b)	6 (b)	15 (b)
	No salary for time off	1	2	3
	Total	64	73	137

a. All Wisconsin schools. This time may be extended to 90 days by action of the Board of Regents of Normal Schools.

b. See discussion for details, p. 28.

the matter often being referred to the board of trustees for decision. These findings agree with those of the first investigation. No general change has occurred in the attitude of state teachers colleges and normal schools toward the payment of salaries for time lost.

VIII. LEAVE OF ABSENCE

Probably no single factor of the salary situation shows more variation from one institution to another than of leave of absence. A total of 33 different arrangements were reported, many of which were practiced in one school only. The plans differ in the frequency of granting leaves, the length of time granted, the amount and method of payment during leave, and many other details.

The general situation is presented in Table XIV. Some 22 different types of leaves are listed in column 2, while their rank

as to frequency of use appears in column 1. In columns 3 and 4 is found the number of state teachers colleges and normal schools using each plan, while column 5 shows the combined frequencies, upon which the ranks are based. In the lower part of the table is found the number using miscellaneous arrangements, and also the number not granting leave of any kind.

First note the number of schools granting no leaves at all. The table shows that only three teachers colleges and nine normal schools fall in this class. Technically, these figures are correct, but practically they are not, if a leave of absence means other than the mere privilege of not having to teach for a period, while still holding a position. If the phrase is interpreted to mean time off with pay after a certain length of service, it appears that only 24 state teachers colleges and 35 state normal schools, or 41.3 per cent of the 137 reporting, can be said to grant leaves of absence.

It is seen that the most popular types of "leave" are those without pay. Thus, 26 teachers colleges and sixteen normal schools are found granting leaves irregularly for the length of time asked, but with no pay. Some 22 other schools grant the same general type of leave, except that the time is specified as one year. This is a total of 64 institutions in these two classes, more than the total number granting any kind of leave with pay.

As seen in Table XIV, column 2, the most widely used method of granting leaves of absence with pay is the well known sabbatical leave. This arrangement, which is used by nine teachers colleges and eight normal schools, allows a leave every seven years for a period of one year on half pay. In some cases, a six month leave on full pay may be taken instead. Other individual arrangements may be made. For example, Maryville, Missouri, grants "a leave of one year in seven or one term in twelve. No salary is paid during the absence, but one and one-half times the base salary is allowed on return for as many months as the faculty member was on leave."

The next most widely used plan is that of granting a three month leave on full pay every three years. This arrangement is much more popular with the normal schools than with the teachers colleges. A special case under this plan is the practice of giving "every third summer off on full pay." Such an arrangement allows the teaching staff to be reduced during the summer session, and yet assures a full force for the regular school year. It also facilitates bringing in outside faculty members for the summer quarter.

Many other types of leave will be noticed in the table. Seemingly, almost every conceivable plan is used somewhere. The

TABLE XIV
TYPES OF LEAVES OF ABSENCES GRANTED BY 137 STATE
TEACHER TRAINING INSTITUTIONS IN 41 STATES, 1927-28

Rank	Type of Leave	Frequency		
		Teachers Colleges	Normal Schools	Total
1	2	3	4	5
1	Irregular, for time asked, on no pay	26	16	42
2	Irregular, for one year, on no pay	14	8	22
3	Every seven years, for one year, on half pay	9	8	17
4	Every three years, for three months, on full pay	2	11	13
5	Every three years, for six weeks, on full pay	0	6	6
6	Every three years, for nine weeks, on full pay	0	3	3
14.5	Every three years, for six weeks, on no pay	0	1	1
14.5	Every three years, for three months, on half pay	1	0	1
14.5	Every eighth quarter, for three months, on full pay	1	0	1
14.5	Every eighth quarter, for three months, on half pay	1	0	1
14.5	Every fifth year for three months, on full pay	1	0	1
14.5	Every seven years, for six months, on full pay	1	0	1
14.5	Every seven years, for six months, on half pay	1	0	1
14.5	Every seven years, for three quarters, on half pay	1	0	1
14.5	Every seven years, for six months, on no pay	1	0	1
14.5	Every seven years, for one year, on no pay	1	0	1
14.5	Irregular, for six months, on half pay	1	0	1
14.5	Irregular, for three quarters, on half pay	1 (a)	0	1
14.5	Irregular, for three quarters, on no pay	1	0	1
14.5	Irregular, for one year, on half pay	1	0	1
14.5	Every ten years, for one year, on full pay	0	1	1
14.5	After ten years, for one year, on half pay	0	1	1
	Other arrangements	2 (b)	9 (b)	11 (b)
	No leaves granted	3	9	12
	Total	69 (c)	73	142

a. "Not very often."

b. See discussion for details, p. 28.

c. Five state teachers colleges have two plans.

eleven cases listed under "other arrangements" include one or two plans worthy of mention. In two instances, "leaves of absence are a matter of special resolution by the board of trustees, and each case is treated individually."

Kirksville, Missouri, reports as follows: "We grant leave of absence at any time a teacher asks for it. Each month we set aside a fund made up of 5 per cent of the monthly salary of each faculty member, this fund being used as leave of absence money. This fund may be spent at any time that a member of the faculty takes leave of absence and follows a program approved by the president of the school. There are some details, as the faculty member must pledge himself to return to the school, for at least some length of time, after studying either in a university or in foreign travel; and at no time can an individual holding a master's or doctor's degree receive in any one month more than 80 per cent of one month's salary; if he holds only a bachelor's degree, he cannot receive more than 60 per cent of any one month's salary during any month of leave.

The other nine cases were included in this miscellaneous group because of lack of complete details. Most of them, however, grant irregular leaves with no pay.

Again, it is found that the general situation is much the same as in 1925. In the previous study, slightly over one-third of the schools granted leaves with pay as compared with 41.3 per cent now. The two most widely used types of leave at that time, namely sabbatical leave and one quarter off with pay every three years, have remained the most popular arrangements.

IX. THE SALARY SCHEDULE

Up to this point, the discussion has dealt merely with the individual items of information asked for on the return sheet. Although interesting and significant as single units of information, the material presented in the previous sections was included chiefly to lead up to and to assist in the interpretation of the question of the use of salary schedules in state teacher training institutions.

In answer to question 1 on the return sheet, "Do you have a salary schedule?" 22 of the 64 state teachers colleges and 45 of the 73 state normal school replied in the affirmative. However, only 34 of the 67 schools reporting the use of a salary schedule sent any information as to the nature of the schedule in use. This would suggest that many of the presidents reporting did not have a definite conception of just what constitutes a salary schedule. The broad interpretation of the term was further evidenced by the fact that five schools reported only maxima and minima salaries for each rank, and also by such replies as: "Yes, in a manner;" "Yes, not a rigid schedule;" "Yes, maximum

and minimum only;" and "With reference to the salary schedule, I wish to say it is rather an elastic sort of a thing and can hardly be called a schedule; yet it is a graded scale influenced to a considerable extent by rank." Another replied as follows: "Our salary schedule is very elementary in its operation. Our heads of academic departments receive a fixed salary except that the heads of departments of art, home economics, manual training, and also physical education receive uniform smaller salary. I regret to say that we have an exception to this rule in that the Head of Physical Education is also head coach, and he receives a salary equal to that of the heads of academic departments. I have no defense for this any more than I have for excessive cost of intercollegiate athletics."

Two other schools reported that an attempt was being made to arrange a salary schedule as soon as state funds permitted. It was found that five states have state schedules applying to all state teachers colleges and state normal schools. They are: California, Pennsylvania, Massachusetts, Wisconsin, and New York. Other schools reported that an attempt was being made to formulate a state schedule.

Before proceeding further, it would be well to define just what the term salary schedule means. Since most of the developmental work on salary schedules has been done in the field of city public school systems, a definition evolved from a study of the schedules in use there is apropos: "By a salary schedule is meant a plan for the payment of school employees formally adopted by the board of education or school committee, which to a large degree automatically determines the beginning salary, the amount and number of yearly increases, and the maximum salary received by various groups of teachers, principals, and other employees with specified qualifications."⁶ By changing the terminology of this definition, it becomes directly applicable to state teacher training institutions.

Although an examination of the salary schedules in use in the schools sending copies of their schedules reveals the fact that no two are exactly alike (except where it is a state schedule applying to all institutions in the state), here are certain basic principles common to them all: (1) A grouping of the teaching staff into ranks according to training and experience; (2) a minimum and maximum salary for each rank; and (3) a provision for a certain number of annual increments until the maximum is reached.

In general, the schedules supplied as data for this study did not differ a great deal in regard to the last two provisions. Rather marked differences were found, however, in the methods used

⁶ Norton, John K. *The Scheduling of Teachers' Salaries*. Research Bulletin of the National Education Association, Vol. V, Number 3 (May, 1927).

to group or classify the instructional corp into ranks. Examples of several schedules will best illustrate these differences.

Probably the simplest method reported is that used by the East Carolina Teachers College of Greenville, North Carolina, in which the classification is based solely on the professional training of the faculty members. The schedule used in that institution is given in Table XV, and shows how such a scheme works in actual practice. There are, however, various other requirements in addition to the degree, such as a specified amount of professional work and a certain number of semester hours training in the subject taught. The salaries given in Table XV are for nine months' work. One-fourth the annual salary is paid extra for teaching through the summer quarter.

In some cases the classification is based on the degree held and also on the academic rank. This method is used in the California schedule which is reproduced in Table XVI. All salaries quoted are based on a school year of 36 weeks. The following explanation of terms makes the table much more significant:

"The term 'Rank' is intended to designate the position occupied by an individual in the faculty of the institution. The titles Assistant, Instructor, Assistant Instructor, Associate Professor, and Professor are intended to be relative in their application.

"The term 'Class' is proposed by our Committee to describe the type and extent of the professional preparation of the faculty members, in the following general manner:

Class I. Persons whose academic or professional preparation is equivalent to four years beyond high school graduation, or holders of recognized Bachelor's degrees.

Class II. Persons whose academic or professional preparation is deemed equivalent to five years beyond high school graduation, or holders of recognized Master's degrees.

Class III. Persons whose academic or professional preparation is deemed equivalent to six years beyond high school graduation.

Class IV. Persons whose academic or professional preparation is deemed equivalent to seven years beyond high school graduation, or holders of recognized Doctor's degrees."

Still another system of classification is used in the state of Pennsylvania. (Table XVII) As is seen from the schedule, both training and experience are used as criteria for determining the class of the persons coming under its influence. However, by action of the Board of Trustees, it became possible to substitute additional training for experience, as is seen from the footnote below the schedule. The salaries listed are for twelve months' work.

TABLE XV
SALARY SCHEDULE OF EAST CAROLINA TEACHERS COLLEGE AT GREENVILLE, NORTH CAROLINA, 1927-28

Classification (a)	First Year	Second Year	Third Year	Fourth Year	Fifth Year
1	2	3	4	5	6
Schedule A	\$1200	\$1350	\$1500	\$1650	\$1800
Schedule B	1800	2000	2200	2400	2600
Schedule C	2400	2700	3000	3300	3600
Schedule D	3000	3400	3800	4200	4500

- a. Schedule A is the equivalent of a bachelor's degree.
 Schedule B is the equivalent of a master's degree.
 Schedule C is the equivalent of one year beyond the master's degree.
 Schedule D is the equivalent of a Ph. D. degree.

TABLE XVI
FACULTY RANKING, CLASSIFICATION, AND SALARY SCHEDULE PREPARED BY THE STATE DEPARTMENT OF EDUCATION FOR CALIFORNIA STATE TEACHERS COLLEGES, 1927-28

Rank	Class (a)	Salary		
		Minimum	Annual Increase	Maximum
1	2	3	4	5
1. Assistant	I	\$1800	2 of \$120	\$2040
2. Instructor	II	2040	3 of 120	2400
	III	2230	4 of 120	2760
	IV	2400	5 of 120	3000
3. Assistant professor	II	2280	4 of 120	2760
	III	2400	5 of 120	3000
	IV	2700	6 of 120	3420
4. Associate professor	II	2400	4 of 150	3000
	III	2700	5 of 150	3450
	IV	3000	6 of 150	3900
5. Professor	II	2700	5 of 150	3450
	III	3000	6 of 150	3900
	IV	3300	7 of 150	4350

- a. For explanation of this term, see discussion, page 34.

The Pennsylvania schedule is also of interest in that it makes special provision for training teachers paid in part by the local school districts. (Table XVIII) The plan outlined may be sug-

TABLE XVII
SALARY SCHEDULE FOR STATE NORMAL SCHOOL TEACHERS OF PENNSYLVANIA, 1927-28

Class	Salary Range	Increment		Training	Experience
		Amount	Number		
1	2	3	4	5	6
I	\$3600-4500	\$150	6	Master's degree in teaching field or in education (a)	Nine years previous to entering class
II	2800-3600	200	4	Baccalaureate degree plus twelve semester hours graduate work in education (b)	Five years previous to entering class
III	2200-2800	200	3	Baccalaureate degree	Two years previous to entering class

- a. By action of Board of Trustees, the doctor's degree in teaching field or in education was substituted for all persons entering the faculty from outside or all persons reaching the maximum of class II.
- b. By action of the Board of Trustees, the master's degree in teaching field or in education was substituted for all persons entering the faculty from outside or all persons reaching the maximum of class III.

gestive to other schools using the local school system as a training school. The training teacher salaries quoted are for nine months' service.

So far these schedules have mentioned three criteria for the classification of teachers college or normal school facilities: Professional training, academic rank, and experience. It is quite probable, however, that both professional training and experience help to determine academic rank, although not specifically stated in the California schedule. A weakness in many schedules is the lack of sufficient criteria upon which classification is made. There is no doubt but that training and experience are two of the most important qualifications of a good teacher, yet many other factors often influence the type of work done, among which are: native ability, personality, and attitude toward teaching. Because these traits are intangible and relatively immeasurable no mention is made of them in most schedules.

The Wisconsin state schedule makes an attempt to evaluate and take these factors into consideration by placing each teacher

TABLE XVIII

METHOD OF COMPENSATION OF TRAINING TEACHERS OF PENNSYLVANIA STATE NORMAL SCHOOLS PAID IN PART BY THE LOCAL SCHOOL DISTRICT, 1927-28

Item	Amount
1	2
I. Districts of the Fourth Class	
1. Minimum salary paid by school district.....	\$ 900
2. Paid by Normal School	300
(Qualifications: Normal School graduation and two years' experience)	\$1200
3. Increment paid by the Normal School.....	200
(Qualifications: Twelve additional semester hours professional training)	
4. Number of such increments	5
(Qualifications: The equivalent of the Baccalaureate Degree)	
5. Maximum salary	2200
II. Districts of the Third Class	
1. Minimum salary paid by school district.....	1000
2. Paid by Normal School	200
(Qualifications: Normal School graduation and two years' experience)	1200
3. Increments paid by Normal School	200
(Qualifications: Twelve additional semester hours of professional training)	
4. Number of such increments	5
(Qualifications: The equivalent of the Baccalaureate Degree)	
5. Maximum salary	2200

on probation for the first two years, and then making the classification on the basis of the general impression made during this time. Of course, there are certain other minimum qualifications as to training and experience. Although such an arrangement permits the evaluation of actual teaching success, it has the disadvantage of making it possible for friendship and "pull" to have effect by influencing the person who judges the success achieved during the first two years. For this reason the Wisconsin system of classification is of questionable merit, if absolute fairness is desired. On the other hand, it makes for a large degree of flexibility, thus meeting one of the most insistent arguments against the use of a salary schedule.

The above sample schedules should be helpful to administrators attempting to build up a salary schedule for a state teacher training institution. However, it should be borne in mind that a great many factors must be considered before a satisfactory and workable schedule can be devised. Among these are: (1) A suitable system of classification or ranking must be provided; (2) the minimum salaries must be large enough to sup-

port those receiving them at a reasonable standard of living, and at the same time to attract well trained and qualified persons; (3) the maximum salary must be large enough to provide for a professional standard of living, afford cultural advantages, provide for savings, and yet be within the limits demanded by the funds available; (4) the increments must be arranged to stimulate professional growth; and (5) sufficient flexibility must be provided to allow for individual merit.

Many helpful suggestions on the building of salary schedules are found in a recent work by Lewis.⁷ Although applying specifically to the public school situation, it will be very helpful to state teachers colleges or normal school administrators.

The fact that salary schedules are being used by only one-half of the state teacher training institutions reporting indicates that the general attitude is not entirely in favor of them. In fact, in some cases it is distinctly unfavorable. One president replied as follows: "We do not have a salary schedule. Personally I am opposed to such a thing. It rewards the lazy man at the expense of the valuable man on the faculty, and it is a cheap excuse behind which the president may hide when he does not want to raise a salary."

Lewis mentions the following advantages of an automatic schedule in the public schools: "(1) It is impersonal; (2) it cares for new teachers; (3) it secures better academic and professional preparation; (4) it makes a career possible; (5) it protects the home teacher; (6) it increases local and professional tenure; (7) it stimulates teachers to do their best; and (8) it raises the social status of the profession." It will be seen that most of these are applicable to the use of salary schedules in state teacher training institutions. Still another advantage is that the salary schedule is an aid in making the annual budget. This advantage alone is worthy of consideration.

In summary, it may be said that state teachers colleges and normal schools are about equally divided in regard to the use of salary schedules. The attitude of the normal schools is more favorable toward them than that of the teachers colleges. State schedules applying to all institutions in the state were reported in five states, and attempts were being made to formulate them in several others. From the reports, it was evident that the general term, salary schedule, is often misinterpreted, which probably accounts for the unfavorable attitude toward its use in many instances. Careful study of both local and national financial conditions and of many other local matters must precede any attempt at the formulation of a satisfactory and worth while

⁷ Lewis, E. E. *Personal Problems of the Teaching Staff*, Chapter XIV. The Century Company, New York, 1925.

salary schedule. It is hoped that the data presented in this report will be of help in showing the general tendencies in regard to salary questions and thus aid in the solution of individual problems such as arise in every state teacher training institution.

X. GENERAL SUMMARY

In order to ascertain the facts concerning the payment of salaries to the faculties of state teachers colleges and state normal schools, a questionnaire was sent to the presidents of 173 such institutions. A general sampling of 77 per cent was obtained, and the schools which replied are located in 41 states. Tabulation of the data revealed many interesting and significant facts, some of which are:

1. The presidents of state teachers colleges and state normal schools receive an average salary of about \$6000 per year and in the majority of cases receive also either their traveling expenses, or house and traveling expenses. The cash salary is about \$600 more than that of three years ago.

2. The average salary of the faculties of state teacher training institutions has increased very slightly within the last three years, but when the decreased value of the dollar is taken into consideration, the increase is negligible.

3. The average professor's salary is approximately \$3000 per year, that of the instructor \$2500 per year, and the training teacher's salary averages slightly over \$2000 per year. This indicates that there is at least a financial distinction made between the various academic ranks in some institutions.

4. The average college teacher's salary is \$2800 per year, which is \$2200 less than one estimated annual cost of living at the professional standard.

5. Practically no institutions pay a bonus for attendance at summer school, or at educational meetings.

6. A majority of the teachers colleges pay extra for extension work, while the majority of normal schools consider it a part of the regular teaching load.

7. All but three of the 137 institutions reporting make some provision for the payment of salaries for time lost from service.

8. All but nine of the schools reporting grant leaves of absence, but only 41.3 per cent of them grant leaves with pay. The sabbatical leave and one quarter off with pay every three years are the most popular leave of absence arrangements.

9. Approximately one-half of the schools reported the use of a salary schedule, but many of the replies indicated that the term salary schedule is often misinterpreted. Sample schedules are presented to show the types now being used.

APPENDIX I

COLORADO STATE TEACHERS COLLEGE

George Willard Frasier, *President*

GREELEY

DEPARTMENT of EDUCATIONAL RESEARCH

Frederick L. Whitney, Director

Jessie L. Thompson, Research Secretary

E. Lowell Kelly, Research Fellow

October 10, 1927

Dear President:

During the year 1924-1925, Colorado State Teachers College made a preliminary study of salaries, salary schedules, and all other matters of payment to faculties of state teachers colleges and state normal schools. This study was not complete and is now antiquated to the extent of being of little value. As the report of the study is still in demand and many requests have come for its repetition, this Department is making a second checking to include data for the school year 1927-1928. If you will fill in the information asked for on the enclosed sheet and return at once, the data will be tabulated and a report made to you shortly after all schools have been heard from.

If answers to the questions on the enclosed return sheet are found complete in definitely stated rules and regulations or in other printed or mimeographed material, will you please have your office mail copies? Enclose the bill, if there is a charge. If the exact information cannot be given on the enclosed sheet, a personal letter discussing the answers will be greatly appreciated and will add to the value of the final report.

Thank you for your assistance in this professional matter.

Very truly yours,

FREDERICK L. WHITNEY, *Director*
Department of Educational Research.

APPENDIX II

State Teacher Training Institutions Represented in this Investigation

State	Institution	City
1	2	3
Alabama	State Normal School	Florence
	State Normal School	Jacksonville
	State Normal School	Livingston
	State Normal School	Troy
Arizona	Northern Arizona State Teachers College	Flagstaff
California	Tempe State Teachers College	Tempe
	Humboldt State Teachers College	Arcata
	State Teachers College	Fresno
	State Teachers College	San Diego
	State Teachers College	San Francisco
	State Teachers College	San Jose
Colorado	State Teachers College	Santa Barbara
	Colorado State Teachers College	Greeley
Connecticut	Western State College of Colorado	Gunnison
	State Normal School	Danbury
Georgia	State Normal School	Willimantic
	Georgia Normal and Industrial College	Bowden
Hawaii	State Normal School	Statesboro
	Territorial Normal and Training School	Honolulu
Idaho	State Normal School	Albion
	State Normal School	Lewiston
Illinois	Northern Illinois State Teachers College	De Kalb
	Western Illinois State Teachers College	Macomb
	Illinois State Normal University	Normal
Indiana	Indiana State Normal School	Muncie
	Indiana State Normal School	Terre Haute
Iowa	State Teachers College	Cedar Falls
	Kansas State Teachers College	Emporia
Kansas	Kansas State Teachers College	Hays
	Kansas State Teachers College	Pittsburg
	Western Kentucky State Teachers College and Normal School	Bowling Green
Louisiana	State Normal School	Morehead
	Louisiana State Normal College	Natchitoches
Maine	State Normal School	Farmington
	Madawska Training School	Fort Kent
	Washington State Normal School	Machias
	Aroostook State Normal School	Presque Isle
Maryland	State Normal School	Frostburg
	Maryland State Normal School	Salisbury
	Maryland State Normal School	Towson
Massachusetts	State Normal School	Bridgewater
	State Normal School	Fitchburg
	State Normal School	Hyannis
	State Normal School	Lowell
	State Normal School	Worcester
Michigan	Detroit Teachers College	Detroit
	Western State Normal School	Kalamazoo
	Northern State Normal School	Marquette
	Central Michigan Normal School	Mount Pleasant
	Michigan State Normal College	Ypsilanti

State	Institution	City
1	2	3
Minnesota	State Teachers College	Bemidji
	State Teachers College	Duluth
	State Teachers College	Mankato
	State Teachers College	St. Cloud
	State Teachers College	Winona
Mississippi	State Teachers College	Hattiesburg
Missouri	Southeast Missouri State Teachers College	Cape Girardeau
	Northeast Missouri State Teachers College	Kirksville
	Northwest Missouri State Teachers College	Maryville
	Southwest Missouri State Teachers College	Springfield
	Central Missouri State Teachers College	Warrensburg
Montana	Montana State Normal School	Dillon
Nebraska	Nebraska State Normal College	Chadron
	Nebraska State Normal School and Teachers College	Kearney
	Nebraska State Normal School and Teachers College	Peru
	Nebraska State Normal School and Teachers College	Wayne
New Hampshire	State Normal School	Keene
	State Normal School	Plymouth
New Jersey	New Jersey State Normal School	Montclair
	New Jersey State Normal School	Paterson
New Mexico	New Jersey Normal School	Trenton
	New Mexico State Teachers College	Silver City
New York	State College for Teachers	Albany
	State Normal School	Brockport
	State Normal School	Cortland
	State Normal School	Geneseo
	State Normal School	New Paltz
	State Normal and Training School	Oswego
	State Normal School	Plattsburg
	State Normal School	Potsdam
	State Normal School	Cullowhee
	State Normal School	Greenville
North Carolina	East Carolina Teachers College	Mayville
	State Teachers College	Minot
North Dakota	State Teachers College	Valley City
	State Teachers College	Dickinson
	State Normal School	Ellendale
	State Normal and Industrial School	Kent
	State Normal College	Alva
	Southeastern State Teachers College	Durant
Ohio	Central State Teachers College	Edmond
	Northwestern State Teachers College	Tahlequah
	Northeastern State Teachers College	Ashland
	Southern Oregon Normal School	Monmouth
Oklahoma	Oregon Normal School	Bloomsburg
	Bloomsburg State Normal School	California
	State Normal School	Clarion
	Clarion State Normal School	East Stroudsburg
	East Stroudsburg State Normal School	Edinboro
	Edinboro State Normal School	Indiana
Oregon	State Normal School	Kutztown
	Kevstone State Normal School	

State	Institution	City
1	2	3
Pennsylvania (continued)	Central State Normal School	Lock Haven
	Mansfield State Normal School	Mansfield
	Millersville State Normal School	Millersville
	Cumberland Valley State Normal	Shippensburg
	Slippery Rock State Normal School	Slippery Rock
Rhode Island	State Normal School	West Chester
	Rhode Island College of Education	Providence
South Dakota	Eastern State Teachers College	Madison
	Spearfish Normal School	Spearfish
Tennessee	Southern State Normal School	Springfield
	East Tennessee State Teachers College	Johnson City
	West Tennessee State Teachers College	Memphis
Texas	West Texas State Teachers College	Canyon
	East Texas State Teachers College	Commerce
	North Texas State Teachers College	Denton
	Sam Houston State Teachers College	Huntsville
	South Texas State Teachers College	Kingsville
	Southwest Texas State Teachers College	San Marcos
Virginia	State Teachers College	East Radford
Washington	State Teachers College	Harrisonburg
	Washington State Normal School	Bellingham
	State Normal School	Cheney
West Virginia	Washington State Normal School	Ellensburg
	Concord State Normal School	Athens
	State Normal School	Fairmont
	Shepherd College State Normal School	Shepherdstown
Wisconsin	West Liberty State Normal School	West Liberty
	State Normal School	La Crosse
	The Stout Institute	Menomonie
	State Normal School	Milwaukee
	State Normal School	Oshkosh
	State Normal School	Platteville
	State Normal School	River Falls
	State Normal School	Stevens Point
	State Normal School	Superior
State Normal School	Whitewater	

Colorado State Teachers College

BULLETIN

Teachers College High School



JUNIOR HIGH SCHOOL

SENIOR HIGH SCHOOL

GREELEY

1928-1929

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SERIES XXVIII

AUGUST

NUMBER 5

1928—The High School Calendar—1929

Fall Quarter

1928

Sept. 25	Tuesday	Registration
Sept. 26	Wednesday	Classes begin
Nov. 11	Sunday	Armistice Day (Holiday)
Nov. 29-30	Thursday-Friday	Thanksgiving (Holiday)
Dec. 15	Saturday	Christmas Vacation begins

Winter Quarter

1929

Jan. 2	Wednesday	Classes begin
Feb. 22	Friday	Washington's Birthday (Holiday)
Mar. 16	Saturday	Spring Vacation begins

Spring Quarter

1929

Mar. 25	Monday	Classes begin
May 3	Friday	Insignia Day (Holiday)
May 30	Thursday	Memorial Day (Holiday)
June 5	Wednesday	Commencement
June 5	Wednesday	Quarter Ends

Summer Quarter

1929

June 17	Monday	Registration
June 18	Tuesday	Classes begin
July 4	Thursday	Independence Day (Holiday)
Aug. 23	Friday	Quarter Ends

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†.....	<i>History</i>
†.....	<i>Science</i>

*On leave.

†To be supplied later.

General Information

Teachers College High School, the secondary school of Colorado State Teachers College, includes both the junior and senior high schools, grades seven to twelve. It is founded on the theory that the highest educational interests of junior and senior high school students and the highest professional interests of prospective junior and senior high school teachers are fundamentally identical.

The school is characterized by modern methods of teaching, rich and diversified curriculums, a superior faculty, unusual housing facilities and educational equipment, individual attention, and an educational atmosphere. Teachers College High School is fully accredited by the North Central Association of Colleges and Secondary Schools.

Enrollment

The enrollment of students is limited to three hundred, or fifty students to each of the six grades of the high school. Limitation of enrollment reacts favorably to the educational progress of the school in many respects. Students who wish to enter Teachers College High School should study carefully the requirements for admission.

Requirements for Admission

Pupils are admitted on the basis of fitness of character, mental ability, and educational achievement. The applicant for admission is investigated carefully. If found to be satisfactory, he is admitted providing there is room in the group which he is prepared to enter. Other things being equal, applications will be considered in the order of their receipt. Because the fall quarter opens nearly a month later than the public schools, a student should not wait until date of registration with any assurance that he will be admitted, unless he has filed an application and has been notified that it has been accepted. Address inquiries to the Principal of the Secondary School.

Tuition and Fees

The tuition rate for the Junior High School, grades 7 to 9, inclusive, is four dollars per quarter. The tuition rate for the Senior High School, grades 10 to 12, inclusive, is twelve dollars per quarter. The regular college swimming fee, one dollar per quarter, is paid by all students of the high school electing swimming. The Associated Students' activity fee which provides for social activities and partially supports publications, etc., is one dollar per quarter. This fee is required of all Senior High School students, and is collected at the time of registration.

Textbooks

Textbooks are furnished to students in the Junior High School. Fees are charged in Woodworking, Leathercraft, etc., to cover actual cost of material used in making articles which then become the property of the student. Senior High School students furnish their own books, which may be purchased at cost at the College Book Room.

Scholarships

Teachers College High School, in recognition of outstanding abilities in students of its own enrollment, granted for the 1928-29 school year the following scholarships:

Music	Woodworking
Art	Leathercraft
Literature	Physical Education
Science	(a) Junior
Foreign Languages	(b) Senior
Home Economics	School Leadership
Commerce	(a) Junior
Printing	(b) Senior

Student Co-operative Government

Every student of the Senior High School is a member of the Associated Students of Teachers College High School and is required to pay the quarterly dues of one dollar. The object of the association is to co-operate with the administration and faculty in the regulation and promotion of the phases of high school life which may be administered by the students with the approval of the faculty.

The following standards have been set up and are enforced by the Student Council and the administration:

1. Students living in houses approved by the College for college students must observe all college regulations.
Students living in houses not approved by the College must have their living arrangements approved by the Director of Girls' Activities or the Principal.
Students not living in College-approved houses must observe regular house rules as applied to College-approved houses.
2. A class or an organization giving a social function shall decide whether or not non-student guests may be invited.
All guests not students at College High School must be approved by the Director of Girls' Activities and the Principal.
3. Non-College dances approved by the College shall be automatically approved by College High School.
Attendance at dances not provided for above shall be approved by the High School—
 - (1) Only if the student is accompanied by parent or Greeley hostess.
 - (2) If proposed attendance has been reported to the Director of Girls' Activities and approved in advance.
4. General college student standards regulating the conduct of college students must also be observed by the students of College High School.
5. Students of College High School shall do nothing to bring discredit either to themselves or the school.
6. It shall be the duty of each member of the School to see that these standards are observed and to report violations of these standards to the Student Council.
7. Violations of these standards shall be investigated by the Student Council and any necessary disciplinary measure may be imposed.

The Summer Session

The school is open for regular school work during the summer quarter. It is the same as any other quarter of the school year, the usual regulations for admission apply, the same credits may be earned, and the program, while less elaborate and more intensive, is rich and diversified and offers many unusual opportunities.

The summer school is maintained to serve two purposes: to enable students to make up incomplete credits or to review subjects in which they experienced difficulties, and to enable students to earn advance credit toward graduation at an earlier date. Often a student, because of unavoidable circumstances, fails or is incomplete in one or more units of his work. Ordinarily this would require an additional year of high school attendance. By doing intensive work such a student might complete one full unit of credit in any one of a number of subjects or might clear up two or more incompleting semester courses. Four hours is the regular high school student's daily class load.

The junior high school program is entirely in the nature of make-up or review work. In the senior high school are both the review or make-up and the advanced credit features. Sociology, economics, and government, the three units of Social Science 12, may be completed in the one quarter by attending the three classes one hour a day each instead of one hour daily for three consecutive quarters, as is the case in the regular school year.

TEACHERS CO



The Training School o

Housing and Equipment—The Secondary School has exclusive use of the entire third floor of the Training School Building and a greater share of the first floor. In addition to the splendid housing facilities thus provided, high school classes utilize many other buildings on the college campus:

Industrial and Fine Arts in the Guggenheim Hall
Physical Education in the Gunter Hall of Health
Home Economics in the Home Economics Building
Commercial Arts in the Administration Building
Social affairs in the Club House

By this plan the students of the High School have available for their use equipment which is far superior to that of the most progressive and advanced secondary schools.

Libraries including 65,000 volumes are available for the use of high school students.

Faculty—A splendidly prepared and thoroughly progressive faculty of teachers, up to date in educational theory and practice, under the supervision of a corps of educational experts in the field of secondary education, makes possible the successful application of the new methods and practices essential to the greatest progress of the student.

Course of Study—The course of study (see pages 8 and 9) offers evidence of an elaborateness and thoroughness possible only in the most progressive schools. Leathercraft, Printing, Little Theater, etc., demand specialized equipment which few schools can afford. A large faculty makes possible a course of study for the small high school which might

HIGH SCHOOL



ate Teachers College

be found in only the larger cities. The requirements for the various years are in keeping with the recent tendencies in secondary education.

Physical Education—The physical education and health program is built on a policy of “physical education for all” rather than emphasizing the building up of a strong team to participate in interscholastic athletic competition. Swimming, boxing, wrestling, basketball, baseball, track, gymnastics, folk dancing, esthetic dancing, hiking, etc., suggest a few of the many activities involved in the physical education program. Teachers College High School is a member of the Platte Valley Athletic Conference.

Size of Classes—Greatest progress and sufficient individual attention are impossible where classes are large. The large faculty and the limited enrollment of the high school makes possible smaller classes, the average of which does not exceed twenty members.

College and University Preparation—Constant contact with learning on the college level prepares the student to enter institutions of higher education upon graduation without going through the usual breaking-in period while he is adapting himself to the change.

Selected Student Body—Students are admitted by a highly selective process based upon ability, seriousness of purpose, and educational qualifications. The student who is interested in his educational advancement finds himself in a highly selected group thereby facilitating his educational progress.

Association—The majority of students plan to continue their school life following graduation in colleges or universities. Association with students of this type has a decided positive influence.

Course of Study The Junior High School

GRADE 7	GRADE 8	GRADE 9
1. English	1. English	1. English
2. History	2. History	2. Social Science, French, Latin or Spanish
3. Geography	3. General Science	3. General Science
4. Mathematics	4. Mathematics	4. Mathematics
5. Music and Physical Educ.	5. Music and Physical Educ.	5. Music and Physical Educ.
6. Elective	6. Elective	6. Elective

Junior High School Electives:

Introductory Art I	Introductory Home Economics I
Introductory Art II	Introductory Home Economics II
Introductory Business Training I	Introductory Industrial Arts I
Introductory Dramatic Art I	Introductory Industrial Arts II
Introductory Dramatic Art II	Band and Orchestral Instruments
	Band and Orchestra—Advanced

Optional Electives—Band, Orchestra, Swimming

1. Upon completion of Music 7 and 8, with the approval of the Director of Music, students in Grade 9 may substitute Band or Orchestra (beginning or advanced) for the Music 9 requirement.
2. Students electing swimming in Grades 7, 8 or 9, with the approval of the Director of Physical Education, may offer it as substitute for the Physical Education requirement.

Course of Study The Senior High School

GRADE 10	GRADE 11	GRADE 12
Required:		
a. English—two years in grades 10 and 11. General English I, General English II, World Literature I, World Literature II, Creative Expression, as prescribed by English Supervisor.		
b. Advanced Science in grade 10 if General Science in grade 9 not taken.		
c. American History in Grade 11 or 12.		
d. Advanced Social Science in Grade 12 (Economics, Sociology and Government) if Social Science 9 not taken.		
e. Physical Education (or Athletics) in grade 10 unless excused by Director of Physical Education to enter Music courses.		
f. One three-hour course in Grades 11 and 12—Debate, Dramatic Art, Journalism, Chorus, Glee Club, Group Piano, Physical Education, unless taking Athletics, Band or Orchestra.		

Required Electives:

ELECT 2	ELECT 1	ELECT 2
European History	Creative Expression	Creative Expression
French	Advanced Social Science	World Literature I
Latin	European History	World Literature II
Spanish	French	Advanced Social Science
Plane Geometry	Latin	French
Music Composition	Spanish	Latin
Advanced Science	Advanced Mathematics	Spanish
	Plane Geometry	Advanced Mathematics
	Music Composition	Music Composition
	Advanced Science	Chemistry (1929-30)
	Chemistry (1929-30)	Physics
	Physics	

Free Electives:

ELECT 1
Art I
Art II
Bookkeeping I
Typewriting I
Dramatic Art I
European History I
World Literature I
The Home I
Food and Clothing I
(1929-30)
Mechanical Drawing I
Leathercraft I
Printing I
Printing II
Woodworking I
Woodworking II
French
Latin
Spanish
Plane Geometry
Applied Music
Music Composition
Advanced Science

ELECT 1
Art I
Art II
Bookkeeping I
Shorthand I
Typewriting I
Typewriting II
Dramatic Art I
Creative Expression
World Literature I
World Literature II
Public Speaking I
European History I
Adv. Social Science
The Home I
Food and Clothing I
(1929-30)
Architectural Draw-
ing II
Mechanical Drawing I
Leathercraft I
Printing I
Printing II
Woodworking I
Woodworking II
French
Latin
Spanish
Plane Geometry
Advanced Mathematics
Applied Music
Music Composition
Advanced Science
Chemistry (1929-30)
Physics

ELECT 2
Art II
Bookkeeping I
Shorthand I
Typewriting II
Creative Expression I
Dramatic Art I
World Literature I
World Literature II
Adv. Social Science
The Home I
Food and Clothing I
(1929-30)
Architectural Draw-
ing II
Mechanical Drawing I
Leathercraft I
Printing I
Printing II
Woodworking I
Woodworking II
French
Latin
Spanish
Advanced Mathematics
Applied Music
Music Composition
Chemistry (1929-30)
Physics
Approved College
Elective

Optional Electives:

Band, Orchestra, Athletics, Swimming

General Requirements

1. Admission to the Senior High School, in addition to educational and mental qualifications, includes the offering of the following four units of credit from Grade 9: Algebra, English, General Science, and Social Science (or Latin, French or Spanish).
2. Only one single unit of Latin, French or Spanish may be presented to apply toward graduation credit. Languages should be taken at least two years.
3. Courses should be selected with respect to grade placement as indicated in the program.
4. Superior students as indicated by mental tests and scholarship record may elect a fifth subject. Four hours of regular classes daily shall be the regular senior high school student load.
5. Superior students who have completed the offering in the high school program in certain fields may elect for high school credit college courses in that field.
6. Ninth grade students are eligible to elect a senior high school elective course, providing they have had at least one year of the subject in the Junior high school; otherwise they must elect the Junior high school elective, i. e., to be eligible to elect Woodworking I in the 9th Grade the student must have had at least one year of Introductory Industrial Arts.

Teachers College High School

1928-29 Program of Classes

8:00—

	Grades	Supervisor	Room
Introduction to Dramatic Art.....	7-9	McLane	209
Latin I.....	9-12	Davis	217
Spanish I.....	9-12	Davis	216
Music Composition.....	10-12	Mohr	16
Band and Orch. Instruments.....	7-12	Opp	Auditorium
Swimming.....	7-12	Doubenmier	Gunter Hall
Boys—Monday and Wednesday			Pool
Girls—Tuesday and Thursday			
Selected—Friday			
Physics Laboratory (2 days).....	11-12	Herman	5

9:00—

Bookkeeping I.....	11-12	Bedinger	204
Shorthand I.....	11-12	Bedinger	205
General English I.....	10	Pooley	210
World Literature I.....	10	Pooley	211
Public Speaking.....	11-12	McLane	208
Architectural Drawing II.....	10-12	Perry	G105
Mechanical Drawing I.....	10-12	Perry	G105
Physics.....	11-12	Herman	5
Music.....	7-9	Mohr	16
Physical Education.....	7-9	Doubenmier	Gym

10:00—

American History.....	11-12	.....	207
European History.....	10	.....	206
French I.....	9-10	Davis	216
Plane Geometry.....	10-11	Mallory	210
Advanced Mathematics.....	11-12	Mallory	211
Advanced Science.....	10-11	Herman	5
Fall—Biology			
Winter—Physiology and Hygiene			
Spring—Botany			
Advanced Social Science.....	11-12	Wrinkle	204
Fall—Economics			
Winter—Sociology			
Spring—Government			
Mathematics.....	7	Kendel	220
English.....	8	Johnson	217
Social Science.....	9	Hackman	221

11:00—

Dramatic Art (3 periods).....	10-12	McLane	209
Journalism (3 periods).....	10-12	Shaw	211
Debate (3 periods).....	10-12	McLane	210
Glee Club (3 periods).....	10-12	Mohr	16
Chorus (3 periods).....	10-12	Mohr	Auditorium
Physical Education (3 periods).....	10 (Req.)	Doubenmier	Gym
Physics Laboratory (3 periods)....			
(Big Bend Division)	11-12	Herman	5
English.....	7	Johnson	217
History.....	8	Hackman	221
Mathematics.....	9	Kendel	220
By Appointment—			
Applied Music.....	7-12	Faculty	Conservatory

1:00—

	Grades	Supervisor	Room
Creative Expression (English 12)	11-12	Pooley	210
Fall—The Novel and Short Story			
Winter—The Drama and Essay			
Spring—Poetry			
Typewriting I	10-12	Bedinger	Ad. 213
Typewriting II	11-12	Bedinger	Ad. 213
Swimming	7-12	Doubenmier	Gunter Hall
Boys—Monday and Wednesday			Pool
Girls—Tuesday and Thursday			
Selected—Friday			
Athletics	10-12	Doubenmier	Gunter Hall
General Science	9	Arvidson	5
Introduction Art I	7-9	Moore	G200
Introduction Art II	8-9	Moore	G200
Introduction Home Economics I	7-9	Newburn	HE305
Introduction Home Economics II	8-9	Newburn	HE305
Introduction Business Training	7-9	Bedinger	Ad. 211
Introduction Ind. Arts I	7-9	Perry	14
Introduction Ind. Arts II	8-9	Perry	14
Shop Drawing	.....	.....	14
Electricity	.....	.....	14
Woodworking	.....	.....	G104
Printing	.....	.....	14
Home Mechanics	.....	.....
Art Metal	.....	.....	G101

2:00—

General English II	11	Pooley	210
World Literature I	11-12	Pooley	211
European History	10	.....	206
Latin I	10-12	Davis	216
Spanish I	10-12	Davis	219
Geography	7	Hackman	221
Science	8	Arvidson	5
English	9	Johnson	217

3:00—

Art I	9-12	Moore	G200
Art II	10-12	Moore	G200
Advanced Dramatic Art I	9-12	McLane	209
Home Economics II	10-12	Newburn	HE305
Leathercraft I	10-12	Schaefer	G100
Printing I	9-12	Bishop	G104
Printing II	10-12	Bishop	G104
Woodworking I	9-12	Perry	14
Woodworking II	10-12	Perry	14
Latin II	10-12	Davis	216
Spanish II	10-12	Davis	217
History	7	Hackman	221
Mathematics	8	Kendel	220

4:00—

Advanced Band and Orchestra	7-12	Opp	Auditorium
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COLORADO STATE TEACHERS COLLEGE

BULLETIN

The Graduate School



Rules and Regulations

1928

Greeley, Colorado

1928

Series XXVIII

SEPTEMBER

Number 6

Published Monthly by Colorado State Teachers College, Greeley, Colorado.
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THE GRADUATE SCHOOL

GEORGE WILLARD FRASIER, Ph.D., LL.D.
President of the College

THE GRADUATE COUNCIL

FRANK COVERT JEAN, Ph.D. *Chairman*
JACOB DANIEL HEILMAN, Ph.D. *Secretary*
Earle U. Rugg, Ph.D.; O. M. Dickerson, Ph.D.; Paul G. McKee, Ph.D.;
W. G. Bowers, Ph.D.; F. L. Whitney, Ph.D.; W. D. Armentrout, Ed.D.;
President and Vice-President of the College ex-officio.

With the appointment of a Graduate Council, advanced study and research work took on a new significance at Colorado State Teachers College. While it is a fact that those students who had been engaged in advanced study made noticeable progress, the reorganization and the appointment of a Graduate Council was accompanied by the adoption of more formal regulations.

Widespread and a constantly growing interest in the Graduate School has followed the changed order, with the result that during the last year there have been 224 students taking graduate work at Colorado State Teachers College and inquiries from prospective students have been received from many additional men and women. These interested persons, practically all of them actively engaged in the profession of teaching, are located in scattered communities, all the way from the Atlantic to the Pacific, and from the Gulf into Canada.

Acceptance of Colorado State Teachers College into full standing in Class A of the American Association of Teachers Colleges and recognition of Teachers College credits at their full value by all of the leading colleges and universities have combined to give further prestige to the Graduate School.

The Graduate School is governed by the Graduate Council. Admission is gained through application to the Registrar of the college.

Detailed information concerning the school is given in the following pages.

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 high school work, (2) 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.

The student's first quarter in the Graduate School is considered to be a test of his ability to do acceptable graduate work. Any student whose record or personal qualifications at the end of the first quarter is 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:

- a. 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

- (1) The Registrar shall promptly notify him of his admission to the graduate School.
- (2) 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.
- (3) 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 only determine that 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 who restrict their graduate work entirely to the summer quarters must complete and have approved by the Graduate Council all requirements including the thesis within five summer quarters, or additional requirements may be made by the Graduate Council.

REQUIREMENTS FOR THE DEGREE

1. Beyond the four-year undergraduate course, the student working for the degree, Master of Arts, must earn graduate credits amounting to 48 quarter hours. Three quarters of work in residence are required, but one quarter of approved graduate work may be transferred from another institution; or 16 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 (32 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 9 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 64 quarter hours of undergraduate and graduate work in his major or closely related subjects.
6. He must have not less than 32 hours of undergraduate and graduate professional work in education and related fields, as educational psychology, educational sociology, and educational biology. If the candidate majors in Education, 64 quarter hours will be required, but only work in education or educational psychology will be accepted for such undergraduate and graduate 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 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 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.

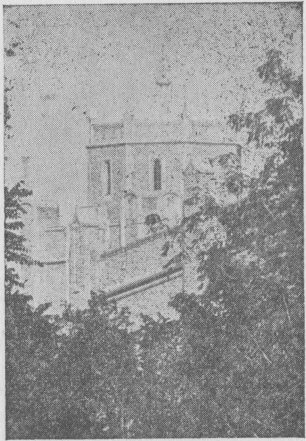
The Master of Arts degree shall be granted only by vote of the Graduate Council.

10. The first part of the book is devoted to a study of the history of the book of Job. The author discusses the various theories regarding the date and authorship of the book, and concludes that it was written in the latter part of the 6th century B.C.

THE BOOK OF JOB

The book of Job is one of the most interesting and instructive books in the Bible. It tells the story of a man who was tested by God in every way, and yet remained faithful to Him.

(continued on next page)



The book of Job is a masterpiece of literature and a profound study of human suffering. It shows us that God is sovereign and that we must trust Him in all circumstances. The story of Job is a powerful reminder that our faith is not based on our circumstances, but on our relationship with God.

Job's story is a powerful reminder that our faith is not based on our circumstances, but on our relationship with God.

COLORADO STATE TEACHERS COLLEGE

BULLETIN

The Junior College Movement

With Special Reference to Educational
and Economic Conditions in Colorado

WHITNEY—SHAW



GREELEY, COLORADO

1928

Series XXVIII

OCTOBER

Number 7

The Junior College Movement

With Special Reference to Educational
and Economic Conditions in Colorado



BY

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Department of Educational Research

and

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Department of Publications

Published by
COLORADO STATE TEACHERS COLLEGE
GREELEY, COLORADO

1928

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The Junior College Movement

I. ARE JUNIOR COLLEGES NEEDED?

The development of the junior college and the increasing establishment of this additional unit to the American educational system suggests beyond doubt the fact that there is a place for the junior college.

From time to time, communities here and there in our nation start a discussion, based on a desire for a junior college. And from time to time the junior college is established, under one form or another, until today there are 146 public junior colleges operating in the United States, as follows:

Arizona	1	Kansas	9	Oklahoma	9
Arkansas	8	Louisiana	3	Pennsylvania	1
California	31	Michigan	6	Philippine Is.	1
Colorado	2	Minnesota	7	Tennessee	1
Florida	2	Mississippi	7	Texas	17
Georgia	1	Missouri	7	Utah	1
Idaho	1	Nebraska	1	Washington	2
Illinois	5	New Mexico	1	West Virginia	1
Iowa	19	North Dakota	2		

This would seem to support the belief that the junior college is a good thing and that it is needed. Leading educational authorities agree that there is a place for the

junior college. That place, they say, is where conditions in the universities and colleges are too crowded to permit proper care and handling of the new students.

In view of this statement, it is well then that the public first of all know what is meant by a junior college. It is a well known fact that the public mind has not fully grasped the meaning of the junior college. In most cases, outside of those centers where the actual need of this new educational unit has warranted the junior college, the agitation for such an institution has been started by a little group, sometimes just one or two individuals. Whatever may have been the origin of the movement, however, the intentions have been well founded. And once started, any movement looking to the establishment of an educational institution quickly gains momentum. Especially is this true where the word "college" is a part of the title.

Individual Citizen Vitaly Concerned

Every community would be proud to have a college in its midst. There is something magnetic about the word. Aside from its magnetism, however, it signifies a cultural influence which any ambitious community counts among its most valuable assets. And so, it takes but the mere hint of a possibility of a college to set a community of even calm people afire with enthusiasm.

One fact should always be borne in mind, and that is that no junior college should be started in this or any other state until those people most concerned know just what it will mean to them.

It is the concensus of educational opinion that the junior college is a local problem. Therefore, the individual citizen in any community where a junior college

is suggested is the one who is vitally concerned. While it is true that in most instances the public junior college is made possible by state legislative enactment, the greater part of the financial burden is thrown back on the local community or district taking advantage of the statute. So, the citizen enthusiastic over the thought of a college should know what a junior college actually means, how it operates, and what it costs. It is for the benefit of this citizen that a careful study of the junior college situation was made and this publication of information prepared.

II. WHAT IS A JUNIOR COLLEGE?

Will C. Wood, former Commissioner of Secondary Schools of California, a state which has the largest number of junior colleges, says :

The junior college is a part of our public school system, and tuition therein should be free.

A junior college is an extension of local high school work to include the thirteenth and fourteenth grades.

In general, it is said that the junior college is an institution offering two years of college work beyond the usual high school level. The North Central Association of Colleges and Secondary Schools adds the statement that the junior college work is based upon or supplements the work of an accredited high school.

One state standardizing agency holds that a junior college is an institution offering one or two years of work EQUIVALENT TO THAT IN THE STATE UNIVERSITY.

Another state standardizing agency speaks in terms of SIXTY SEMESTER HOURS ACCEPTABLE IN THE STATE UNIVERSITY.

Another requires the curriculum to be equal to fifteen 60 minute recitations per week for TWO YEARS ON THE COLLEGIATE LEVEL.

And the general attitude is that the curriculum should be equivalent to that in the first and second years of a standard college and that THE COLLEGE YEAR SHOULD NOT BE SHORTER.

The most inclusive attitude is that the junior college should be located in a school district maintaining a high school and warranting expectation of an enrollment adequate for proper development of the institution.

According to all the most reliable information obtainable on the subject of the junior college there can be no doubt that instruction of collegiate rank must be given. The following definition of the standard of work required is taken from a report on the junior college of California by William M. Proctor, in *The Junior College, Its Organization and Administration*. Stanford University, 1927:

1. The admission requirement must be the same as for the University of California
2. The program of studies must include at least two full-year courses of collegiate grade in English, history, mathematics, foreign language, and science
3. Laboratory equipment must be adequate to afford proper facilities for giving science courses of collegiate grade, and **MUST COST OVER AND ABOVE HIGH SCHOOL REQUIREMENTS FROM \$1,500 to \$3,000**
4. **LIBRARIES MUST BE ENLARGED** to meet the new demands of college work for reference books
5. The degree of master of arts should be considered the minimum scholastic requirement for faculty members
6. **SALARIES MUST BE ADEQUATE** to secure competent instructors for the junior college

These requirements, says Dr. Proctor, have remained the basic standards for accrediting "certificate" courses in the junior colleges of California, and might well be considered minimum requirements by other states.

Leading educational authorities agree that there is a well-defined place for the junior college. They say that establishment of the junior college is governed by certain conditions; and those conditions, which are set forth briefly in four paragraphs following, are borne out by investigations, and by statistics based thereon and given in part in this bulletin. The conditions are:

1. Where work of the high school is perfected to the highest degree and is operating on a high level of efficiency
2. In densely populated districts
3. In states where institutions of higher learning are overcrowded and need relief from giving the first two years of work
4. Where the elementary schools, including the rural schools, are highly efficient

Need Comes When Colleges Are Crowded

It is in states where just such conditions exist that the junior college has been established in sufficient numbers to warrant the declaration that they are a success. According to statistics compiled by the Department of Educational Research of Colorado State Teachers College, there are 146 public junior colleges in the United States; and of this number, nearly one-half of them—67, to be exact—are located in three states. The great majority are concentrated in the thickly populated areas of the state of California. They are concentrated, too, where the high schools are ranked on a high level of efficiency and also where the institutions of higher learning are literally jammed to the doors and crying for relief from the constantly increasing student enrollment.

California has 31 public junior colleges.

Iowa, another leader among the states from the standpoint of education, ranks second in the number of public junior colleges. There are nineteen of them in that state.

Texas has seventeen.

The growth in demand for junior colleges has come within the past four years. Over one-half of the 146 public junior colleges (82) have been established since 1924.

It is appropriate to summarize the purpose of the junior college in states where it has been organized the longest. Significant is the comment on this phase of the subject made by Dr. Proctor, who holds that the junior college must first of all relieve congestion in the state institutions of higher learning and thereby make the first two years of work more efficient:

The great expansion in the size of the student bodies in the colleges and universities of the country, gorging them beyond any possibility of successful instruction, has compelled the creation of the junior college. The large student mortality in the freshman and sophomore years of the great universities has been mortifying and humiliating to thousands of our youth.

III. HOW IS THE JUNIOR COLLEGE CONTROLLED?

Authority for the establishment of junior colleges is differently placed in the several states having legal provisions in the matter.

California, being the leader in junior college operation, as previously pointed out, first makes the blanket provision that junior colleges may be established as part of the secondary school system of the state.

But California also requires a local election initiated by a petition signed by 500 voters and a majority of the high school board. Local elections are required also in Kansas, Iowa, and Minnesota before the local board can act. But in Michigan the board of education in any district may establish a junior college course without appeal to the electorate.

The concurrence of a constituted state authority is required in four states. In Illinois, Missouri, and Iowa, this authority is the state superintendent of schools. In Pennsylvania, the State Council on Education approves any lease of property for collegiate education, and this enables any local board of school directors to offer a part of the school building and equipment to any university or college of the state for the organization of courses beyond the secondary level. Special laws have established branches of the state universities of Idaho and of Tennessee, in the latter case the requirement being that white students only shall be enrolled. In Colorado the law of 1925 authorized the improvement of donated sites for junior colleges at Trinidad and Grand Junction.

Five varieties of administrative unit are provided for in the California law. These are: (1) the junior col-

lege district; (2) the union junior college district; (3) the joint union junior college district; (4) the county junior college district; and (5) the joint county junior college district. As the titles imply, these types of units make possible the inclusion of different areas and the adoption of varying policies of consolidation in accord with the widely diverse geographic and population situations in the state.

As in the case of authorization, matters of organization and control of the junior college are distributed between state and local authorities. A population basis is given in two states. In Michigan, the school district must have at least 25,000 people before a junior college is organized. In Minnesota the minimum is placed at 50,000. A background in high school attendance of at least 400 is necessary in California, but this is placed at 100 in Arizona. In California, a petition signed by a majority of family heads or electors or an act of the county board of supervisors is required for the annexation or exclusion of a high school in a junior college district. The junior college may be discontinued in Arizona in accord with the judgment of the district school board. But in California, if the average daily attendance falls below 75 any year after the second, the local superintendent of schools is *required to suspend the junior college*. Control of administration and operation, including the prescription of courses, is given to the state superintendent of public instruction in Missouri and in Iowa, and to the Chancellor of the University of Montana in that state. The trustees of the University of Tennessee operate, manage, and control their branch, the Tennessee Junior College located at Martin, Tennessee.

The local district board in California becomes the junior college board, if district boundaries are the same. It is a continuous body of five members. It regulates

the course of study (60 semester hours) and other requirements for graduation.

The state board of education approves all curriculums in California and Michigan and prescribes courses in Kansas and Iowa. In Minnesota and Michigan, the state board has general authority over public junior colleges; and in Kansas it inspects and approves private schools. In Oklahoma, the general provision that the state board may approve colleges and universities is extended to junior colleges.

In California, the state board prescribes the details of attendance records in the public junior colleges as a basis for state aid. An annual report is required from the principal, made under oath, and before receiving the last month's salary. This must include total enrollment, average daily attendance, number of teachers, new students, and tuition students. The local superintendent of schools makes a report under similar requirements including data on total enrollment, average daily attendance, number of teachers, and other items found on blanks sent from the office of the state superintendent.

Criteria Offered For the Control

In California, relations with the state university are provided for. Affiliation is voluntary on the part of the local junior college and may include visitation, inspection, and accrediting. If credit for junior college courses is to be given, the qualifications of teachers are prescribed and other matters may be included also. The aim is to have the outside school offer work fully equivalent in quality and amount to that given in the freshman and sophomore years of the state university.

It would be a worth while undertaking to tabulate the details of proposals of the establishment and mainten-

ance of the junior college which have appeared in many states as bills introduced in the legislature but not passed.

Outside of the concrete proposals of standardizing agencies and legislative bodies on what the junior college should be, a number of rather detailed studies have appeared which offer criteria for the establishment and control of this new educational unit.

More Equipment And Higher Salaries

The first of these was made by McDowell¹ for the United States Bureau of Education in 1917. He found at that time but 39 public junior colleges. His recommendation was that "any institution attempting to offer the first two years of college work" should require fifteen units of high school work for admission, 60 semester hours of college work for graduation, a library of at least 2,000 college books, laboratories with equipment costing at least \$1,500 for each science taught, at least five heads of departments in the faculty, and all instructors with at least one year of graduate work beyond the bachelor's degree.

Two other important nation-wide investigations are those of Koos,² giving the figures for 1924, and of Whitney³ completed last June. This last survey makes the following recommendations as to what a public junior college should be:

1. An extension of the public school system in a local school district offering two years of college work beyond the twelfth grade

¹McDowell, F. M. *The Junior College*. Bulletin No. 35. United States Bureau of Education, Washington, D. C. 1919.

²Koos, L. V. *The Junior College*, Vol. I and II. Educational Series, Number 5, University of Minnesota, Minneapolis, May, 1924.

³Whitney, F. L. *The Junior College in America*. Colorado State Teachers College, Education Series, No. 5. Greeley, Colorado.

2. Authorized by the electors of the district by a two-thirds vote at a special election called on petition by 500 or more qualified voters
3. A district population of at least 10,000
4. An assessed valuation of at least \$10,000,000
5. The lower schools, that is, the public schools from the kindergarten including grade twelve, on a high level of efficiency, as compared with those of other similar communities, in respect to curriculum, pupil achievement, teachers' salaries, unit costs, and financial support
6. An average daily attendance in the local high school of at least 400
7. At least 125 graduates from the local high school each year
8. At least 15 per cent of the high school enrollment and 50 per cent of the high school graduates now attending college or university
9. At least five other four-year high schools with 450 enrollment within a radius of twenty miles
10. An annual income of at least \$20,000
11. A separate junior college building
12. Laboratories costing from \$1,000 to \$3,000 for each science taught
13. A library of at least 2,500 volumes with an annual book stock budget of at least \$500
14. An enrollment of at least 150 college students
15. The same entrance requirements as at the state university

16. A curriculum maintaining standards equivalent to that in the first two years at the state university
17. At least five instructors for each 100 students, each with a master's degree
18. Salaries larger than the high school salaries
19. Each instructor teaching his specialty and working fewer hours per week than the high school teachers
20. Not more than 30 students in any class
21. A minimum of 96 quarter hours necessary for graduation

IV. WHEN DOES A STATE NEED JUNIOR COLLEGES?

As previously pointed out, junior colleges are justified under certain conditions. First and most important of such conditions is necessarily need. It would be well then for any state in considering the establishment of junior colleges to determine whether the state is actually in need of this proposed added unit to the educational system, and to examine the facts tending to create or influence the need.

CONDITIONS OF NEED

In the light of information furnished in the foregoing pages, one is bound to conclude that high school education should not be extended to include the junior college, the thirteenth and fourteenth grades:

1. UNLESS existing junior college opportunities in state and private colleges and universities (the freshman and sophomore years) already organized are inadequate because of overcrowded freshman and sophomore enrollment
2. UNLESS state higher education in the already existing institutions of higher learning has reached the highest level of development and efficiency attainable and desirable
3. UNLESS there is a general demand from patrons of higher education throughout the state that existent junior college opportunities be expanded to include a state system of junior college education
4. UNLESS there is adequate detailed knowledge and understanding among all state social, political, and educational leaders, and all taxpayers of

what a state system of public junior colleges involves as an integral part of state higher education

5. UNLESS existent educational opportunities and educational efficiency in the lower schools of the state, the elementary and high schools, both city and rural, have been developed to a desirable and needed level comparable with that in the public schools of other states
6. UNLESS there be no pressing state enterprises involving money expenditure which must be taken up first
7. UNLESS the population of a district in which a junior college is established is sufficient to warrant an adequate enrollment of junior college students

Attendance Comparisons

In the light of the foregoing bases for the establishment of junior colleges, attendance statistics gathered from institutions of higher learning, both public and private, over a wide number of states present conditions which should command careful consideration by any group of citizens of any commonwealth considering the wisdom of extending high school education to include the thirteenth and fourteenth grades.

In the University of California the size of classes in the junior years of these higher institutions often is 600, 700, and sometimes more students. The average sized class in both public and private higher institutions in Colorado is but 25 students.

There is every reason to believe that the general understanding of what a state system of junior colleges involved is not clear. The movement is new, and has reached a state of efficient administration in but one

state, California. But, if legislators and taxpayers have all of the facts from California, they cannot assume that a similar system will positively fit any other state. The economic and social status and public school and university conditions are always quite different.

Much more public money must be used before our existing high schools and elementary schools in Colorado are as good as in other states which lead in educational matters and which have developed a large number of junior colleges. This is true in particular of our rural schools, both secondary and elementary.

According to the *Twenty-Fifth Biennial Report of the State Superintendent of Public Instruction for Colorado* (1925-26), only about 11 per cent of Colorado's high school pupils are graduated, while in 82 high schools in other states, 18 per cent are graduated. The same report also shows that salaries in Colorado are much lower, and no doubt here is one cause and its effect. Highly efficient high school teachers cost more; but they are worth more.

Colorado's city high schools are almost as efficient as most city public school systems in keeping pupils progressing normally as they grow older, but our rural high schools have nearly three times the proportion of over age pupils that is found in six other states. Colorado's attempt to give high school education to her rural pupils can stand considerable more attention.

Notice in Table I the rank of Colorado in school income, expenditure, and salaries. We are not very close to the top (rank 1) in any of the first four items and are lowest in teachers' salaries paid. And, no doubt, this explains in part the fact that we have an average position only in state illiteracy. Much can be done here also.

Notice, finally, in Table II that in five important measures of the type of public education provided in elementary and high schools, while Colorado is very close to the national averages, we are far below the high standards set by California. Item 5, for example, shows

TABLE I

THE RANK OF COLORADO AMONG 48 STATES IN FIVE ITEMS OF PUBLIC SCHOOL EFFICIENCY, 1925-26

Item	Colorado
1. Rank in current school income per child (a)	17
2. Rank in total amount expended per child (b)	12
3. Rank in average salaries paid (b)	22
4. Rank in cost excluding salaries (b)	14
5. Rank in per cent of illiteracy (c)	27
Average rank	18

- a. Norton J. K. *The Ability of the States to Support Education*. Research Bulletin Nos. 1 and 2, Vol. IV. National Education Association, Washington, D. C., 1926.
 b. *Supplement to American School Board Journal*, December, 1924.
 c. *United States Census Reports*, 1920.

TABLE II

A COMPARISON OF FIVE ITEMS OF PUBLIC SCHOOL EFFICIENCY IN CALIFORNIA AND IN COLORADO (a)

State and national averages	United States	California	Colorado
1	2	3	4
1. Value of school property per pupil enrolled	\$ 173	\$ 266	\$ 198
2. Length of school term	170	182	178
3. Number of days of pupil attendance	137	126	135
4. Salaries school faculty	1252	1854	1296
5. Number of years children attend school	6.92	7.42	6.89

- a. Norton, J. K. *The Advance of the American School System*. Research Bulletin No. 4, Vol. V. National Education Association, September, 1927.

that our present school system is less than a seventh grade system, if the actual length of schooling of the average pupil is considered. Ought we not to give the average Colorado pupil at least some high school education before offering free local college education to a very few high school graduates?

No state is justified in adding to the budget for local higher education until the lower schools are raised to a better comparative level of efficiency than is shown above. And this present need is most pressing in Colorado's rural schools.

Leaving out Denver, the fact is that in Colorado districts having no four-year collegiate schools now, there would probably be difficulty in getting together enough junior college students to warrant the organization of efficient junior colleges. *In a junior college, as in a high school, the smaller the school the higher the unit cost, and there is a minimum enrollment below which an efficient organization is not possible.* Authorities in this field have placed this figure at 200 students, or possibly as low as 150.

Dr. Koos¹ says:

That no board of education should undertake an extension of a secondary school to include two more years at the top unless there is a proper background of population in a community and unless a student enrollment of at least 200 is assured.

The probable size of junior college groups available in five representative Colorado districts is shown in Table III. Boulder and Greeley, of course, already have large state institutions of collegiate rank, but columns 2 and 7 say that they do not enroll in freshman and sophomore classes even all available junior college students.

¹Koos, L. V. *The Junior College*. Vols. 1 and 2, Education Series No. 5, University of Minnesota, May, 1924.

TABLE III

POSSIBLE NUMBER OF JUNIOR COLLEGE STUDENTS AVAILABLE IN FIVE COLORADO DISTRICTS AND ACTUAL PRESENT JUNIOR COLLEGE ATTENDANCE, 1927-28

District	Local graduates	Graduates within twenty miles	Total graduates in junior college area (two years)	Per cent of graduates attending junior college	Probable available junior college group	Actual present junior college attendance from local high school
1	2	3	4	5	6	7
1. Boulder	318	218	536	92	493	291
2. Greeley	283	296	579	68	394	193
3. Grand Junction	200	129	329	37	122	74
4. Trinidad	206	216	422	41	173	84
5. Sterling	182	173	355	17	60	31

Smaller the College Greater the Cost

Very small local junior colleges are too costly and have to be relatively inefficient in administration and in teaching results. Every local situation ought to be checked carefully with this in mind before a state system of local junior colleges is decided upon.

There is already provision for free junior college work in Colorado's six state four-year collegiate schools. Junior college work is offered also in four private four-year colleges and in three private junior colleges.

Colorado enrolls proportionately as many junior college students *now* as neighboring states do.

Before any state makes provision for an extension of the public high school system to include two additional years beyond the twelfth grade, an intensive survey should be made of conditions and possibilities in public education in other similar states so that state leaders

V. WHAT DOES THE JUNIOR COLLEGE COST?

After an examination of all the facts bearing on the definition of a junior college, how the same is controlled, and the needs of a commonwealth for junior colleges, the citizen should then examine carefully into the costs of maintaining and operating such institutions. It is the aim here to give him some figures which will enable him to determine for himself whether he can afford to adopt this educational unit as an integral part of the public school system. In short, what will it cost to extend local common school education beyond the high school to include grades thirteen and fourteen?

At the present time, the levy from the general assessment of the state of Colorado for all purposes is 3.84 mills, and 1.59 mills out of this is for higher education, that is for our state colleges and the university and state experiment stations (Table IV). This is but 4 cents (3.8 cents) out of your state tax dollar for higher education. And while there is much complaint over what may seem to be a large expenditure for higher educational purposes, every effort is made to keep the levy as low as possible consistent with the actual needs of this most important phase of government.

The tax levy for higher educational purposes, made for the general state fund, is the same throughout the state and amounts to 1.59 mills. This supports ten budgets for state higher education (University of Colorado, Colorado Agricultural College, Colorado Agricultural College Experiment Station, Fort Lewis School, State School of Mines, Mines Experiment Station, Colorado State Teachers College, Western State College, State

TABLE IV

AVERAGE TOTAL AND SCHOOL MILL TAX LEVIES FOR THE STATE OF COLORADO, 1927

Item	State Average (mills)	
	Total	School
1	2	3
1. State	3.84	1.59 (a)
2. County	8.58	
3. Town	15.97	
4. School	13.77	13.77
Total	42.16 (b)	15.36
School (Item 4)		32.6 per cent
State higher education (Item 1)		3.8 per cent

a. Ten budgets for higher education.

b. This table does not give a complete statement of average tax burdens. The equivalent of large millages are paid as gasoline taxes and for auto licenses. Fines and poll taxes are not included, nor special municipal taxes. If these could be put into the totals, the school taxes would be much smaller proportions.

University Medical School, and Adams State Normal School). In addition to this, however, there is a levy in the individual counties for the general county education fund and a levy for the separate school district fund. These county funds vary, but the average for all counties of the state is 13.77 mills.

Local Taxes Will Be Greatly Increased

Three and eight-tenths cents out of every tax dollar goes to the state for the purpose of higher education. With the county levies added, 36.4 cents out of every

dollar goes for all educational purposes, both state and local.

It is inevitable that, if the local school districts should add two more years to the system, the cost must increase.

In his study under the direction of the Commonwealth Fund of New York, Dr. Koos made estimates of the probable increase in local tax rates in 58 cities of different sizes in two states. The study shows that in the case of the smallest cities the establishment of the public junior college of 200 students would very probably increase the mill levy from about 25 per cent to 50 per cent¹.

Finance Burden on Local Taxpayer

Granted that a state saw fit to provide for the establishment of junior colleges, the small sum which generally is provided in junior college enacting laws for each and every pupil enrolled in said junior colleges would be only a "drop in the bucket." This would be the smallest part of the expense, and the bulk of the burden would of necessity fall on the taxpayers of the local school districts.

Several additional items of cost must be provided for—

FIRST—*Additional school buildings.* It is right to suppose that every public school building is used to the limit of its hour capacity to carry on the work of the existing elementary and secondary school program—a program which educational authorities say is not up to the highest standard in Colorado. It would seem then that, if the local school districts are to add two more grades, they must erect more buildings.

¹Koos, L. V. *The Junior College.* Vols. 1 and 2, Educational Series No. 5, University of Minnesota, Minneapolis, May, 1924.

SECOND—*Instructors*. Not only is the teaching force in all of the public school systems carrying a capacity load, but advanced courses such as are proposed for junior colleges demand instructors of higher professional standing. This means, not only additional salaries, but salaries larger than those paid the high school teachers. Further, the instruction costs in a junior college always constitute 75 per cent to 80 per cent of total cost.

THIRD—*The cost of educating pupils* in the thirteenth and fourteenth grades, the grades of the junior college, runs from \$200 minimum to \$400 for schools with an enrollment of as few as 150 students.

Dr. F. W. Reeves, prominent in the field of education and educational research, who has written extensively on public school costs, in an article in the *North Central Association Quarterly*, December, 1927, says:

“An effective Junior College of 250 or more students should expect to have a cost of approximately \$340 per student. If the enrollment drops to 200, it should be expected that the cost would rise to \$375, and if to 150 it might rise to \$400 per student.”

State Support Would Be Relatively Small

The finance background of twelve Colorado districts with assessed valuation of over \$5,000,000 is given in Table V. Columns 5 and 6 give total school receipts and amounts coming from state funds. Table VI shows the proportion that present state aid for the lower schools is of total local expenditures, and estimates what districts with different populations would receive from the state per junior college student, if state subsidy on the same level were extended to college support (column 3).

TABLE V

FINANCE FACTS HAVING DIRECT BEARING UPON THE FEASIBILITY OF THE ORGANIZATION OF JUNIOR COLLEGES IN ELEVEN COLORADO CITIES, 1928 (a)

City (County)	Population	School tax levy (mills)	Assessed valuation	Total re- ceipts for school purposes	Amount re- ceived from the state (b)
1	2	3	4	5	6
1. Denver (Denver)	300,000	13.80	\$435,127,085	\$6,376,618	\$176,513
2. Colorado Springs (El Paso)	36,000	18.38	45,381,360	774,453	18,960
3. Pueblo Dist. 1 Dist. 20 (Pueblo)	50,000	14.90 14.46	23,431,305 33,040,069	499,483 633,333	17,194 23,510
4. Ft. Collins (Larimer)	14,000	16.38	16,868,790	300,789	7,576
5. Greeley (Weld)	13,000	15.40	16,488,960	289,070	10,325
6. Boulder (Boulder)	12,500	17.50	14,210,435	312,396	6,909
7. Grand Junction (Mesa)	12,500	11.40	11,517,310	173,270	13,721
8. Trinidad (Las Animas)	13,000	15.60	10,947,726	251,644	15,769
9. Long- mont (Boulder)	7,000	10.40	10,759,672	178,131	5,191
10. Sterling (Logan)	7,500	9.88	9,554,730	121,569	11,729
11. La Junta (Otero)	5,500	15.90	7,534,453	150,000	5,732

a. Bradford, Mary C. C. *Twenty-fifth Biennial Report of the State Superintendent of Public Instruction*, State of Colorado, Denver, 1927.

b. This does not include the county bonus of \$75 for teachers' salaries.

TABLE VI

PROBABLE AMOUNT TO BE RECEIVED FROM THE STATE PER JUNIOR COLLEGE STUDENT, IF THE STATE AIDS THE LOCAL DISTRICT TO MAINTAIN A JUNIOR COLLEGE AT THE SAME RATE THAT THE LOWER SCHOOLS ARE AIDED, ASSUMING THE TOTAL ANNUAL STUDENT UNIT COST IN THE JUNIOR COLLEGE TO BE \$200

Systems	Per cent state aid is of total school revenue	Student unit receipt, if the junior college is aided the same as are the lower schools
1	2	3
I. Michigan (a)		
1. 7,000 to 10,000	16.9	\$33.80
2. 10,000 to 20,000	16.1	32.20
3. 30,000 to 100,000	13.4	26.80
II. Minnesota (a)		
1. 5,000 to 10,000	11.2	22.40
2. 10,000 to 20,000	9.1	18.20
III. Colorado		
1. Boulder (12,500)	2.3	4.60
2. Colorado Springs (36,000)	2.5	5.00
3. Denver (300,000)	2.8	5.60
4. Fort Collins (14,000)	2.1	4.20
5. Grand Junction (12,500)	7.9	15.80
6. Greeley (13,000)	3.6	7.20
7. La Junta (5,500)	3.8	7.60
8. Longmont (7,000)	2.9	5.80
9. Pueblo (50,000)		
Number 20	3.7	7.40
Number 1	3.4	6.80
10. Sterling (7,500)	9.6	19.20
11. Trinidad (13,000)	6.2	12.40
Approximate Average		
Michigan	16.0	\$32.00
Minnesota	10.0	20.00
Colorado	3.5	7.00

a. Koos, L. V. *The Junior College*, Vols. I and II. Education Series No. 5. University of Minnesota, Minneapolis, May, 1924.

It is seen that in Michigan and Minnesota this amounts to but about 10 to 16 per cent, and assuming a junior college student unit cost of \$200, this would bring to local districts but about \$20 to \$30 per student. In Colorado, school support is preponderantly local, only about 3.5 per cent coming from state funds and never more than 10 per cent in the eleven districts in which there would be any likelihood at all of the organization of junior college units. This would yield not over \$20 per junior college student, and might be but \$4 and \$5.

But, of course, the desire and expectation in any locality always is that state aid will be increased when a special additional need develops, such as would be presented by the establishment of thirteenth and fourteenth grade extensions of high school education. And this expectation is perhaps reasonable. The figures of Tables V and VI simply show differences in generosity attitudes in three states in the matter of state aid for the lower schools, the guess being that a hint may be derived therefrom on size of state subsidies for education above the lower schools in these states. The fact is that, so far as Colorado is concerned, the figures show that the policy of the state in maintaining and improving the lower schools is not what it is in Michigan and Minnesota.

Heaviest Cost in Freshman Year

In the state of California, the junior college laws of 1917, 1921, and 1927 provide \$2,000 annually for each junior college district and \$100 for each student in average daily attendance the previous year. The local district must furnish an equal amount, and use state money for teachers' salaries alone.

Both the population and the valuation of a community or proposed junior college district must necessarily play a very important part in the cost of operating a junior college. And the smaller the community the greater the tax burden. In this connection, it is significant that those communities in Colorado that can best afford junior colleges now have junior colleges, universities, and institutions of collegiate rank; for example, Boulder, with the University of Colorado; Denver, with Denver University and Colorado Woman's College; Fort Collins, with the State Agricultural College; Golden, with the Colorado School of Mines; Greeley, with Colorado State Teachers College; Gunnison, with Western State College; Colorado Springs, with Colorado College.

It is a well known fact that the student enrollment in four year colleges and universities is heavier in the freshman and sophomore years than in the last two years, and one would expect unit costs to be lower there. This is found to be true in Yale University¹ where the cost in the freshman year is three-fourths of the average yearly cost per student for all four years. In the University of Washington,² freshman and sophomore courses cost over three-fourths as much as the average yearly four year costs.

It may be, then, that a fairer estimate of probable local junior college costs would be from the analogy of lower division four-year higher institution figures. But, even on this level, it would not very probably fall below \$200 per student; and, as a median is but a central tendency in a distribution of a total array of figures, one might expect the best organization of junior college opportunities to cost more than \$200 per student rather than less.

¹Treasurer's Report. Yale University, New Haven, Connecticut, 1922-23.

²Stevens, E. B. and Elliot, E. C. *Unit costs in Higher Education*, p. 171. The Macmillan Company, New York, 1925.

In some institutions, high school education does not cost much above \$100 per pupil in attendance, but as this figure in any high school very probably increases throughout the four years offered and is largest in the senior year no doubt costs in the thirteenth and fourteenth years (the junior college) would be much larger than this. Furthermore, whenever junior college work is offered, it should be an extension of the best type of secondary curriculum in a community capable of supporting it adequately. High schools in such communities do not cost much less than \$200 per pupil (\$175. in Colorado¹ and \$194 in Arizona²), and it may be expected that junior college offerings will cost more.

Evidence on trend of cost increases through successive units of the school system is, perhaps, not very good reasoning; but it is interesting, may throw some light on future facts, and may emphasize a viewpoint which any community is used to and is ready to admit. For it is customary to have high school costs larger than those in the elementary school, whether they should be or not; and it ought not to be hard to establish the validity of a prediction that further extension of public school offerings will cost still more. For example, Uhl³ estimates that high school costs are on the average 2.67 times more than elementary school costs; and Swift says that "It costs approximately two and one-half times as much as to educate pupils attending high schools as pupils attending elementary schools."⁴ The Fifth Yearbook of the Department of Superintendence⁵ reports the ratio of cost per pupil in three adjacent educational units in cities of over

¹Bradford, Mary C. C. *Twenty-Fifth Biennial Report of the State Superintendent of Public Instruction*, Denver, Colorado, 1925-26.

²Judd, C. H. *The Management of High School Finances*. Seventh Yearbook, p. 31. National Association of Secondary School Principals, 1923.

³Uhl, W. L. *Principles of Secondary Education*. Silver Burdette and Company, Chicago, 1925.

⁴Swift, Fletcher H. *A Biennial Survey of Public School Finance in the United States, 1920-1922*. Bulletin No. 47. 1923. United States Bureau of Education, Washington, D. C., 1923.

⁵Broome, E. C. "Junior High School Costs," Chapter VI, pp. 65-66. *The Junior High School Curriculum*. Fifth Yearbook, Department of Superintendence, National Education Association, Washington, D. C., February, 1927.

100,000 population to be 100, 139, 178. In cities under 100,000 the trend is found to be 100, 144, 189. If, with the elementary school situation as the base, junior high school unit costs are found to be 39 and 44 per cent larger and those for the senior high school 78 and 89 per cent larger, it would not be unreasonable to predict that junior college costs would be at least 117 and 133 per cent larger than those in the elementary school. If the figure for high school unit costs of \$175 as given above be inserted into these series, estimated junior college costs are found to be about \$204 and \$230.

High School Most Expensive of Units

It appears, then, that the high school is the most expensive administrative unit of the present local school system, that its pupil costs may rise in the best managed situations to between \$150 and \$175, and that it would not be unreasonable to predict that its extension, the junior college, would necessitate student expenditures of close to \$250 per student per year.

But a number of reports are available on actual unit costs as found in public junior colleges already organized and in operation. In his Commonwealth Fund study¹, Koos found the cost of instruction in fifteen junior colleges as reported in Table VII. It is significant to change these teaching costs to approximate total cost figures on the assumption that they constituted but 75 to 80 per cent of the total. This makes the range of total costs from about \$100 to close to \$300, and the approximate median in the smallest colleges over \$200.

¹Koos, L. V. *The Junior College, Op. cit.*

TABLE VII

COST OF INSTRUCTION PER STUDENT IN FIFTEEN JUNIOR COLLEGES AS RELATED TO SIZE OF STUDENT BODY (a)

Enrollment	Number of colleges	Median cost of instruction	Total cost (b)
1	2	3	4
1. Fewer than 100 students	9	\$169	\$211
2. One hundred to 200 students	5	108	135
3. Over 200 students	1	117	146
Total range		\$83—\$224	\$104—\$280

a. Koos, L. V. *The Junior College*, Vols. I and II. Education Series No. 5. University of Minnesota, Minneapolis, May, 1924.

b. This is on the assumption that teaching costs are 80 per cent of total costs. Column 4 is not taken from Koos.

More Expensive Than High Schools

It is safe to estimate then, that student costs in rather small junior colleges would turn out to be larger than unit costs in the high schools in the same districts and would hover around \$200 per student as an average. In fact, a very recent junior college survey in Indiana¹ estimates that:

1. A good standard junior college of 250 students must cost \$300 per capita
2. A good small junior college of 100 students must cost \$500 per capita

¹Foster, I. O. *Some Phases of the Junior College Movement*. Indiana University, Bloomington, Indiana, 1928.

3. A poor junior college of 200 students must cost \$200 per capita
4. An unsatisfactory junior college of 60 students must cost \$135 per capita

Actual total and unit costs in 38 junior colleges are reported in Table VIII. These are very useful, if any taxpayer wants to know exactly what this proposed junior college really costs in other states. Notice that the expenditure per student is never much below \$100 and rises to nearly \$500, with an average of over \$200 for an average junior college enrollment of nearly 300 students. Furthermore, a little arithmetic shows that on the whole as the size of student body increases the total cost increases also, even though cost per student be lowered by increase of enrollment. In fact, a little more figuring tells us that at least three-fourths of everything about a junior college which makes it cost anything is found in the fact of size of enrollment.

One of the important first things to do then, if any local district is actually considering the organization of a junior college, is to be sure that a sufficient number of students will attend. If the junior college has to be too small, it will not only cost too much but will be hard to make efficient educationally.

Would Cost from \$200 To \$250 For Each Student

The foregoing figures show any interested taxpayer that when local and state school taxes are taken together only about 10 per cent of the total goes to state higher education (1.59 mills out of 15.36 mills), that all school taxes amount to practically one-third of the tax dollar (36.4 per cent) and the proportion would be much less

TABLE VIII

REPORTED COST PER STUDENT ON THE BASIS OF TOTAL ENROLLMENT
IN 38 AMERICAN JUNIOR COLLEGES, 1927 (a)

Enrollment	Total Cost	Cost per Student
1	2	3
135	\$ 63,689.77	\$471.78
160	65,299.50	400.61
163	71,823.36	440.63
163	66,820.08	417.62
254	82,826.31	326.09
57	18,500.00	324.56
328	100,208.57	305.51
116	33,974.51	292.88
600	169,476.76	282.46
363	97,914.38	269.74
28	7,436.80	265.60
383	101,200.00	264.23
285	69,223.30	242.89
171	39,260.00	229.59
634	142,756.27	225.17
94	20,831.00	221.60
479	104,475.30	218.11
229	48,960.55	212.80
100	21,000.00	210.00
152	31,730.00	208.75
213	43,559.96	204.51
83	16,600.00	200.00
132	26,223.06	198.66
250	44,593.62	178.37
49	8,300.00	169.38
159	25,700.00	161.64
762	120,072.22	157.57
385	55,444.00	144.01
1425	202,221.28	141.91
366	51,909.94	141.83
1143	162,000.00	141.73
267	37,163.41	139.19
113	15,000.00	132.74
115	14,192.93	123.42
237	29,194.79	123.18
260	28,334.00	108.98
144	13,742.02	95.43
174	16,375.92	94.11
Average 293.9	\$ 59,685.09	\$223.37
Range 28-1425	\$7,436.80- \$202,221.08	\$94.11-\$471.78

a. Clark, H. F. "Junior College Costs." *The Normal Advance*, Vol. XXXV. Terre Haute, Indiana (April, 1928).

if a complete statement of all taxes could be had, that an increase in taxes for education with junior colleges added will very probably cut the tax dollar in two with a larger part (54.6 per cent) for education. This represents an impossible situation. An increase in taxes of even 5 per cent or 6 per cent is not to be considered, unless it is absolutely necessary.

Further, it is shown that the student unit cost in junior colleges is sure to be two or three times what it is in the high schools, and very probably will be as high as \$200 or \$250 per student.

Finally, it is shown that, in 38 junior colleges already operating, the actual cost per student is an average of over \$200 and rises as high as \$472.

VI. CONCLUSION

In the light of the foregoing information, the people of any community will not wisely extend high school education to include the junior college—the thirteenth and fourteenth grades:

- I. UNLESS local community conditions are right as shown by
 1. A long standing favorable attitude among public leaders toward adequate support of public enterprises
 - a. The city government has been for many years spending adequate sums for city hall, auditorium, parks, sewers, streets, etc.
 - b. The local school district has been for many years progressive in expenditures for new buildings and grounds, equipment and apparatus, teachers' salaries and retirement funds, etc.
- II. UNLESS there is a favorable attitude toward higher education
- III. UNLESS it seems to be possible to put over the correct idea of what *college work* really is, what its objective should be, what it really should do—this in contrast to a general attitude that a junior college is a good thing because a rival town has one, because it will provide just two years more of free public education, etc.

- IV. UNLESS there is no college work, public or private, in the community or in the immediate vicinity (within 25 to 100 miles)
- V. UNLESS there is an adequate school census as a background for junior college enrollment
- VI. UNLESS there is an adequate high school enrollment as a background for junior college enrollment
- VII. UNLESS there are enough high school graduates to insure a proper junior college enrollment
- VIII. UNLESS there is sufficient building room for a junior college without the provision of a new building
- IX. UNLESS a junior college organization is feasible *now* as shown by local attitudes and conditions
 - 1. Local sentiment and desires, as expressed by influential groups and probably agreed to by the majority of tax payers, is in favor of college education
 - 2. A general understanding of what a local junior college would mean in terms of curriculum, cost, etc.
 - 3. City and school finances in condition so that additional expenditure may be undertaken for a local junior college without undue burden to present tax payers or over bonding
 - 4. No municipal or school enterprise more important and insistent before the public so that all interest and public effort can be concen-

trated on the establishment of a local junior college

5. An adequate number of junior college students available from local and neighboring high schools

X. UNLESS community finances are ready, as shown by

1. An attitude of independence of state aid in local enterprises
2. An adequate background of assessed valuation
3. Present size of senior high school salaries
4. Value of school property (per pupil enrolled)
5. Present bonded debt
6. School tax levy
7. Actual total cost of the public schools
8. Total public school budget
9. Average pupil cost per year
10. Probable cost of the junior college per student
11. Probable cost of junior college instruction per teacher
12. Additional housing equipment, etc.
13. Probable smaller class size in the junior college
14. Probable lighter teaching load in the junior college

XI. UNLESS local educational opportunities are adequate in the light of local needs, as shown by

1. Well organized and supported pre-school and kindergarten education
2. Well organized and adequately supported elementary and high school education (grades one to twelve inclusive) conducted on a level of efficiency comparable with that found in other American communities with similar social and economic conditions
3. Well organized and supported adult education
4. Well organized and supported continuation and part time education

The
Problem of Over-Appropriations
and the
Public Bonded Indebtedness
of Colorado



A STUDY

made in cooperation with the
Bureau of Business and Government Research
of the University of Colorado

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THE
PROBLEM OF OVER-APPROPRIATIONS

THE PROBLEM OF OVER-APPROPRIATIONS

The present system of managing state finances has been recognized for years as being hopelessly inadequate to prevent the over-appropriation of revenues and the accumulations of deficits. Twenty-two per cent of the present bonded debt of the state represents bonds issued for meeting the expenses of insurrection and warrants issued for other state expenditures at different times in past years. In 1910 the people approved a bond issue of \$2,115,000 to take care of deficits in current operation of the state between 1887 and 1897.

The first difficulty arises from the fact that the state does not operate on a cash basis. The revenues from the tax levy for general state purposes are not received until from three to nine months after the close of the fiscal period in which it is expended. This leads to uncertainty and indefiniteness as to available funds, and makes accounting control over expenditures extremely difficult if not impossible.

In the second place, the legislative committees which assume complete responsibility for formulating the state financial program pay little or no attention to the estimates of revenues prepared by the responsible financial officers. No doubt the classification of appropriations law contributes toward over-appropriation in that legislators endeavor to gain the favor of certain groups by passing appropriation bills, hoping thereby to gain the recognition and approval of these groups, but knowing all the time that the bills will be thrown into the third, fourth, or fifth classes, where no funds will be available to pay these appropriations in case of a shortage of revenues. Furthermore, the exact amount of total appropriations cannot be determined with any degree of accuracy until after the adjournment of the legislature.

The following table shows the estimated revenues, the appropriations and the amount of over-appropriation for biennial periods since 1911-12:

	Estimated Revenues	Appropria- tion	Over-Appro- priation	Per Cent Over-Appro- priated
1911-12.....	\$2,789,370	\$3,850,583	\$1,061,213	38.0%
1913-14.....	2,656,690	3,441,406	784,716	29.6%
1915-16.....	2,743,700	3,162,700	419,000	15.2%
1917-18.....	2,697,326	3,442,071	724,745	26.8%
1919-20.....	3,646,293	4,698,795	1,052,506	28.9%
1921-22.....	4,152,181	4,749,931	597,750	14.4%
1923-24.....	4,448,443	4,988,214	539,771	12.1%
1925-26.....	4,362,000	5,297,575	935,575	21.4%
1927-28.....	4,351,786	5,953,491	1,601,705	36.8%

During the last fifteen years the amount of over-appropriation has ranged from 12 per cent to 38 per cent of total estimated revenues. State Auditor Leddy in his biennial report of 1911-12 comments as follows on this matter:

“The present state officers and legislature have been severely criticised during the past two years for the great volume of money appropriated by the Eighteenth General Assembly in excess of any possible increase of revenue, and many severe disappointments have been suffered by individuals, as well as by the state departments and state institutions. This is not only true of the last two years but is the usual custom and has been so for many years past.”

The remedy suggested by State Auditor Leddy was to have the Governor veto “a sufficient number of the less meritorious ones, in order that the total appropriations to be satisfied may be within the limit of the revenue of the state.”

State Auditor Kenehan in 1913 pointed out that the status of appropriations of the third, fourth, and fifth classes cannot be determined until half the period has expired and suggested that the state mill levy for educational institutions be revised so that they could know at the beginning of the year the exact amount they were to receive.

The following table shows the total estimated revenues, the actual receipts and surplus for biennial periods since 1913-14:

	Estimated Revenues	Actual Revenues	Surplus	Per Cent Surplus of Estimated Revenues
1913-14.....	\$2,656,690	\$2,796,862	\$ 140,172	5.3%
1915-16.....	2,743,700	3,537,185	793,485	28.9%
1917-18.....	2,697,326	4,092,171	1,594,845	39.2%
1919-20.....	3,646,293	4,853,222	1,206,929	33.0%
1921-22.....	4,151,181	4,768,837	617,656	14.8%
1923-24.....	4,448,443	5,114,410	665,967	14.8%
1925-26.....	4,362,000	5,001,938	639,938	14.7%
1927-28.....	4,351,786			

During the biennial period 1911-12, appropriations greatly exceeded estimated revenues. The first and second class appropriations were paid and about one-half of the third class appropriations were paid, but nothing was available for the fourth and fifth classes. From 1913 to 1926, notwithstanding large over-appropriations, the actual revenues so far exceeded the estimated revenues as to make it possible to pay all appropriations in full. During the last three biennial periods actual revenues have exceeded estimated revenues by 15 per cent. On the other hand, appropriations have exceeded estimated revenues by 16 per cent. The large surpluses built up during the biennial periods 1917-18 and 1919-20, during which time the surplus amounted to over one million dollars, have been available until recently to meet the excess appro-

priations. The estimated surplus available to meet appropriations of the next biennial period has gradually declined from \$725,000 at the close of the year 1920 to only \$100,000 for the biennial period 1927-28.

For the biennial period 1927-28—appropriations exceeded the estimated revenue by \$1,600,000—there will still remain a shortage of funds necessary to meet appropriations of \$950,000. This time, the accumulated surplus of previous years having been exhausted, there is nothing available to meet the emergency. The total of the first and second class appropriations exceed the estimate of revenue which will be available. In order that all the regular departments and institutions may continue to function, there has been a readjustment of the first and second class appropriations as made by the legislature, so that each department may receive some portion of its regular appropriation.

It would seem that the results of this haphazard, wasteful system of managing state finances should be impressed upon the minds of the legislators and state officials, with sufficient clearness, and force at this time, to lead them to adopt an improved system at the next session of the General Assembly.

The character of the changes needed have been outlined by various governors, auditors and treasurers in their biennial reports. The most complete analysis of the problem was made by the Survey Committee of State Affairs which reported in 1917.

The following appear to be the more important changes which should be made:

1. Place the state on a cash basis. This can best be done by changing the fiscal year to close June 30, and by rearranging the dates for assessing property and setting tax levies so that the taxes levied will be collected during the fiscal year in which they are expended. Because the state is a year behind in its tax collections for state general fund purposes, additional funds will have to be provided to enable the state to change to the new system. These funds can be supplied by increasing the state levy for general fund purposes for a year or so or by negotiating a temporary loan, which could be paid off during the next three to five years by making a small increase in the state tax levy. In the past, several auditors have suggested setting aside the receipts from the inheritance tax for the purpose of accumulating a fund sufficient to place the state on a cash basis. It is estimated that this change would effect a cash saving of \$35,000 annually, which represents the amount now paid on in-

terest-bearing warrants, in addition to the larger gains resulting from establishing more accurate and effective control over revenues, appropriations, and expenditures.

2. Place full responsibility for the formulation and preparation of the state budget upon the governor and the administrative officials in direct charge of the various state departments and limit the action of the legislature to a consideration of the budget as presented by the governor. This will necessitate an amendment to the present budget law incorporating such a provision.
3. When once the state has an effective budget system in operation, the law classifying appropriations will become superfluous and should be repealed. Modern budget making has as its primary purpose the balancing of revenues and expenditures. Over-appropriations of estimated revenues would no longer be possible under a proper budget system. Excess appropriations would arise only where actual revenues were less than estimated revenues.

Table I presents a comparison of the state auditor's estimate of revenues, with actual revenues, in detail for biennial periods 1913-14 to 1927-28 inclusive.

Table II shows the amount of expenditures made from appropriations of the various classes for the biennial periods for which this information was published in the biennial report of the state auditor.

TABLE I

DETAILED STATEMENT OF ESTIMATED AND ACTUAL REVENUES FOR BIENNIAL PERIODS 1913-14 TO 1927-28.
 COMPILED FROM BIENNIAL REPORTS OF THE STATE AUDITOR

	1927-1928		1925-1926			1923-1924		
	Estimated	Actual	Estimated	Actual	Difference	Estimated	Actual	Difference
Tax Levy.....	\$1,232,286	\$654,000	\$1,296,000	\$572,183	\$-723,817	\$1,944,331	\$887,275	\$-1,057,056
Sec. of State Fees.....	250,000	127,541	270,000	250,965	-19,035	225,000	267,653	42,653
Auditor, Fees.....								
Treas. Fees and License.....		54						
Boiler Insp. Fees.....	19,000	10,250	20,000	19,110	-890	18,000	19,980	1,990
Bank Comm. Fees.....	45,000	25,847	50,000	41,304	-8,636	50,000	46,869	-3,131
Dairy Comm. Fees.....	13,000	6,294	12,000	13,293	1,293		11,950	11,950
Bldg. and Loan Fees.....	7,500	3,995	5,000	7,186	2,186	3,500	4,619	1,119
Inheritance Tax.....	1,200,000	589,286	1,200,000	1,186,560	-13,440	800,000	1,150,627	350,627
Insurance.....	1,100,000	596,731	950,000	1,134,210	184,210	850,000	910,000	60,000
Int. on Deposits.....	200,000	103,386	200,000	224,003	24,003	125,000	245,858	120,858
Int. on Delinquent Tax.....	10,000		20,000	5,691	-14,309	15,000	15,053	53
Oil Inspector.....	125,000	11,667	120,000	124,049	4,049	50,000	111,647	61,647
Real Estate License.....	15,000	13,206		9,091	9,091			
Liquor License.....								
Blind Benefit Surplus.....	20,000	10,900		28,770	28,770			
State Engineer.....		3,006						
Detective License.....		8,000		1,100	1,100	1,500	1,100	-400
Board of Health.....		1,412		1,876	1,876		518	518
Supreme Court Fees.....								
Mine Inspector.....								
Surplus.....	100,000	8,408	215,000	609,302	394,302	363,112	524,555	161,443
All Other Sources.....		39,102		17,880	17,880		1,696	1,696
Miscellaneous.....	15,000	6,548	4,000	305	-3,695	3,000		-3,000
Totals Actual Revenue.....		2,219,633		4,246,938	-115,062		4,199,410	-249,033
Due from Tax Levy Estimated..		650,000		655,000	655,000		715,000	715,000
Due from Inheritance Tax Est..				100,000	100,000		200,000	200,000
Totals.....	\$4,351,786		\$4,362,000	\$5,001,938	\$639,938	\$4,448,443	\$5,114,410	\$665,967

TABLE I (Continued)

	1921-1922			1919-1920			1917-1918		
	Estimated	Actual	Difference	Estimated	Actual	Difference	Estimated	Actual	Difference
Tax Levy.....	\$1,812,181	\$844,874	\$-967,307	\$1,594,180	\$806,190	\$-787,990	\$1,450,326	\$730,280	\$-720,046
Sec. of State Fees.....	275,000	221,430	-53,570	250,000	275,073	25,073	280,000	333,927	53,927
Auditor, Fees.....									
Treas. Fees & License									
Boiler Insp. Fees.....	17,000	18,905	1,905	18,000	18,420	420	18,000	18,385	385
Bank Comm. Fees.....	50,000	51,627	1,627	50,000	54,980	4,980	30,000	45,144	15,144
Dairy Comm. Fees.....									
Bldg. & Loan Fees.....	3,000	3,788	788	3,000	2,814	-186	3,000	2,838	-162
Inheritance Tax.....	600,000	603,275	3,275	350,000	725,263	375,263	300,000	413,143	113,143
Insurance.....	700,000	845,000	145,000	500,000	645,000	145,000	500,000	537,500	37,500
Int. on Deposits.....	120,000	179,717	59,717	75,000	132,308	57,308	50,000	90,078	40,078
Int. on Delinq. Tax.....	10,000	9,448	-552	10,000	7,204	-2,796	15,000	4,944	-10,056
Oil Inspection.....	50,000	45,023	-4,977	60,000	58,259	-1,741	35,000	58,385	23,385
Real Estate License..									
Liquor License.....									
Blind Benefit Surplus									
State Engineer.....	12,000		-12,000	10,000	9,071	-929	14,000	11,246	-2,754
Detective License.....	1,000	1,700	700	500	900	400	800		-800
Board of Health.....		357	357	250	303	53	200		-200
Supreme Court Fees..							1,000		-1,000
Mine Inspector.....									
Surplus.....	500,000	809,824	309,824	725,113	986,087	260,974		586,070	586,070
All Other Sources.....		3,017	3,017		34,393	34,393		61,059	61,059
Miscellaneous.....	2,000	202	-1,798	250	46	-204		2,052	2,052
Totals Actual Rev.....		3,638,187	-513,994		3,756,311	110,018		2,895,051	197,725
Due from Tax Levy									
Estimate.....		1,030,650	1,030,650		957,857	957,857		827,810	827,810
Due from Inher. Tax		100,000	100,000		139,054	139,054		369,310	369,310
Totals.....	\$4,152,181	\$4,768,837	\$616,656	\$3,646,293	\$4,853,222	\$1,206,929	\$2,697,326	\$4,092,171	\$1,394,845

TABLE I (Continued)

	1915-1916			1913-1914		
	Estimated	Actual	Excess Actual Over Estimated	Estimated	Actual	Excess Actual Over Estimated
Tax Levy.....	\$1,574,000	\$745,809	\$-828,191	\$1,461,190	\$629,600	\$-831,590
Sec. of State Fees.....	270,000	*271,704	1,704	*325,000	273,556	-51,444
Auditor Fees.....	200	138	-62		191	191
Treas. Fees & License.....	40,000		-40,000	120,000	2,866	-117,134
Boiler Insp. Fees.....	16,000	18,400	2,400	15,000	15,830	830
Bank Comm. Fees.....	30,000	27,792	-2,208	14,000	26,315	12,315
Dairy Comm. Fees.....				1,500	292	-1,208
Bldg. & Loan Fees.....	3,000	2,899	-101	3,500	3,056	-444
Inheritance Tax.....	250,000	912,025	662,025	200,000	349,784	149,784
Insurance.....	460,000	486,000	26,000	405,000	459,917	54,917
Int. on Deposits.....	55,000	54,250	-750	50,000	54,979	4,979
Int. on Delinquent Tax.....		7,312	7,312	12,000	6,825	-5,175
Oil Inspector.....	18,000	28,419	10,419	23,000	13,412	-9,588
Real Estate License.....						
Liquor License.....		38,409	38,409		103,025	103,025
Blind Benefit Surplus.....						
State Engineer.....	25,000	13,814	-11,186	26,000	25,405	-595
Detective License.....		1,000	1,000		900	900
Board of Health.....	500	194	-306		452	452
Supreme Court Fees.....	2,000	907	-1,093		1,714	1,714
Mine Inspector.....		107	107		3,945	3,945
Surplus.....		38,771	38,771		73,389	73,389
All Other Sources.....		1,324	1,324	500	1,410	910
Miscellaneous.....		258	258			
Totals Actual Revenue.....		2,649,532	94,168		2,046,863	-609,828
Due from Tax Levy Est... ..		762,663	762,663		650,000	650,000
Due from Inheritance Tax.....		125,000	125,000		100,000	100,000
Totals.....	\$2,743,700	\$3,537,195	\$793,495	\$2,656,690	\$2,796,863	\$140,173

*Includes Flat Tax.

[11]

TABLE II

APPROPRIATIONS AND ACTUAL EXPENDITURES BY CLASSES OF APPROPRIATIONS

Biennial Period	FIRST CLASS			SECOND CLASS			THIRD CLASS			
	Appropriation	Expended	Per Cent	Appropriation	Expended	Per Cent	Appropriation	Expended	Per Cent	
1925-1926.....	\$2,367,556	\$2,247,612	95	\$2,504,641	\$2,265,792	90	291,900	\$216,490	74	
1923-1924.....	2,502,207	2,405,002	96	2,040,097	2,030,226	99	331,033	318,345	91	
1921-1922.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1919-1920.....	2,351,245	2,161,562	92	1,784,896	1,617,296	91	131,000	126,105	96	
1917-1918.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1915-1916.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1913-1914.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1911-1912.....	1,790,551	1,500,596	84	969,200	952,438	98	729,018	382,389	52	
	FOURTH CLASS			FIFTH CLASS			TOTAL			
	Appropriation	Expended	Per Cent Expended	Appropriation	Expended	Per Cent	Appropriation	Expended	Excess	Per Cent Expended
1925-1926.....	\$ 75,000	\$ 27,503	37	\$ 58,478	\$ 33,839	58	\$5,297,575	\$4,791,236	\$506,338	91
1923-1924.....	113,665	112,668	100	1,212	1,212	100	4,988,214	4,867,453	120,761	97.5
1921-1922.....	.....	.....	.....	.....	.....	.....	4,749,931	4,331,375	418,556	91.4
1919-1920.....	134,850	79,262	59	296,808	245,733	83	4,698,799	4,229,959	468,840	90
1917-1918.....	.....	.....	.....	.....	.....	.....	3,422,071	3,218,970	203,101	94
1915-1916.....	.....	.....	.....	.....	.....	.....	3,162,700	3,068,790	93,910	97.3
1913-1914.....	.....	.....	.....	.....	.....	.....	3,441,406	3,248,599	192,807	94.5
1911-1912.....	175,250	None	.....	186,565	None	.....	3,850,583	2,835,411	1,015,172	72.7

[12]

THE PUBLIC BONDED INDEBTEDNESS
OF COLORADO

INTRODUCTION

The following tables are designed to show the history of the public bonded indebtedness in Colorado for a period sufficiently long to give an accurate picture of the trend of such indebtedness. In the formulation of any plan designed to improve our system of state taxation it is necessary to keep in mind the debt service charge the state will be called upon to pay. It also seems desirable to know the bonded debt history of the civil divisions within the state in order that an estimate can be made of the total amount of debt service charges the public can be expected to have to pay. Data have been collected for the last twenty-three years, and they show a constantly increasing trend of public indebtedness and the costs that are incident thereto. It is not possible to say positively that the trend will continue upward in the immediate future, but it seems reasonable to expect it to do so. Even though the trend should turn downward it is certain that the cost of the public debt will not decrease very rapidly for a number of years due to the fact that it is customary to have retirement payments increase as interest payments decrease. The importance of the public debt in our fiscal system is apparent when we realize that in 1927 it amounted to \$110,181,708, with an annual interest charge of \$5,405,789. Of this amount \$12,002,700 was state indebtedness and \$585,778 was interest paid by the state.

STATE BONDED INDEBTEDNESS

In addition to the amount of the outstanding bond issues from 1905 to 1927, Table I gives the estimated population for each year. The early figures were computed from the census on a straight line average. After 1920 they were taken from the Statistical Abstract. The assessed valuation is given in thousands. Outstanding interest-bearing warrants and certificates of indebtedness are given for the end of each biennial period. Interest paid on bonds, total disbursements by the state, and the per cent that bond interest was of total disbursements are given from 1913 to 1927. Total bonded indebtedness per capita and the per cent that bonded indebtedness was of assessed valuation is shown for each year from 1905 to 1927. Total interest-bearing indebtedness is given for the end of each biennial period.

TABLE I
COLORADO STATE BONDED INDEBTEDNESS, 1905-1927

	1905	1906	1907	1908	1909	1910
1. Population	669,362	695,292	721,225	747,157	773,090	799,024
2. Assessed Valuation						
(000 Omitted)	\$349,242	\$356,245	\$367,343	\$375,285	\$400,804	\$414,886
3. Outstanding Int.-Bearing Warrants		2,022,849		1,784,574		1,869,011
4. Certificates of Indebtedness.....		770,787		770,787		76,561
5. Capitol Building Bonds.....	300,000	300,000				
6. Casual Deficiency Bonds.....	100,000	100,000	100,000	100,000	100,000	50,000
7. Cripple Creek Insurrection.....	70,500	70,500	70,500	70,500	70,500	None
8. Leadville Insurrection.....	223,000	223,000	223,000	223,000	223,000	223,000
9. Insurrection Bonds of 1909.....						847,300
10. Funding Bonds of 1910.....						
11. Insurrection Bonds of 1914.....						
12. National Defense Bonds.....						
13. Highway Bonds of 1921.....						
14. Highway Bonds of 1923.....						
15. Total Bonded Debt.....	693,500	693,500	393,500	393,500	393,500	1,020,300
16. Total Interest Bearing Debt.....		3,487,136		2,948,861		3,015,872
17. Bonded Debt per Capita.....	\$1.04	\$1.00	\$0.54	\$0.53	\$0.51	\$1.28
18. Bonded Debt per Cent of Assessed Valuation .....	.20%	.19%	.11%	.11%	.10%	.25%
19. Interest Paid on Bonds.....						
20. Total Disbursements						
21. Bond Interest per Cent of Total Disbursements.....						

TABLE I (Continued)

	1911	1912	1913	1914	1915	1916	1917	1918	1919
1.	13,084	827,144	841,204	855,264	869,326	883,386	897,446	911,506	925,566
2.	\$413,835	\$422,723	\$1,306,690	\$1,311,210	\$1,249,199	\$1,211,697	\$1,305,286	\$1,422,113	\$1,495,214
3.		2,009,773		1,300,027		562,053		584,168	
4.		19,600		151,459					
5.									
6.									
7.									
8.	223,000	223,000	223,000	188,000	163,000	139,000	100,000	64,000	40,000
9.	876,430	921,400	930,000	931,600	932,000	932,000	932,000	932,300	932,300
10.			780,000	1,997,400	1,997,500	1,997,500	1,997,500	1,997,500	1,997,500
11.				525,600	681,500	694,200	706,100	718,000	720,000
12.								740,000	625,000
13.									
14.									
15.	1,099,430	1,144,400	1,933,000	3,642,600	3,774,000	3,762,700	3,735,600	4,451,800	4,314,800
16.		3,173,773		5,094,086		4,324,753		5,035,968	
17.	\$1.35	\$1.38	\$2.30	\$4.56	\$4.34	\$4.26	\$4.16	\$4.88	\$4.66
18. ....	.27%	.27%	.15%	.28%	.30%	.31%	.28%	.31%	.29%
19.			139,479	139,479	123,044	123,044	121,358	160,912	151,684
20.			4,622,015	4,622,016	4,642,860	4,642,861	8,486,958	8,486,959	10,252,558
21.			3.02%	3.02%	2.65%	2.65%	1.43%	1.89%	1.48%

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TABLE I (Continued)

	1920	1921	1922	1923	1924	1925	1926	1927	*1928
1.	947,000	968,000	983,000	1,001,000	1,023,000	1,040,000	1,059,000	1,074,000	
2.	\$1,591,307	\$1,578,257	\$1,548,618	\$1,543,260	\$1,540,501	\$1,540,620	\$1,545,948	\$1,547,702	
3.	914,588		1,857,837		1,499,997		925,770		
4.	79,660		57,441		15,020		79,999		
5.									
6.									
7.									
8.	17,000								
9.	932,300	932,300	932,300	932,300	764,600	571,400	383,000	353,500	45,000
10.	1,997,500	1,972,500	1,902,500	1,872,500	1,802,500	1,740,300	1,699,300	1,694,300	1,632,900
11.	725,500	725,500	725,500	725,700	725,900	725,900	725,900	725,900	725,900
12.	515,000	586,000	1,166,000	1,000,000	906,000	720,500	554,000	429,000	229,000
13.		2,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
14.				1,500,000	2,500,000	3,500,000	4,400,000	3,800,000	3,200,000
15.	4,187,300	6,216,300	9,726,300	11,030,500	11,699,000	12,258,100	12,762,200	12,002,700	10,832,800
16.	5,181,548		11,641,078		13,194,017		13,767,969		
17.	\$4.42	\$6.42	\$9.89	\$11.02	\$11.44	\$11.78	\$12.05	\$11.18	
18. ....	.26%	.39%	.63%	.72%	.76%	.80%	.83%	.78%	
19.	82,236	141,716	264,121	449,206	449,206	526,301	542,163	585,778	
20.	10,252,559	15,063,321	15,063,321	16,191,208	16,191,208	16,157,083	16,157,083	16,744,293	
21. ....	.80%	.94%	1.75%	2.77%	2.77%	3.26%	3.36%	3.50%	

*As of September 5.

The foregoing table shows that the total bonded indebtedness of the state was \$693,500 in 1905. This consisted of \$300,000 Capitol Building Bonds, \$100,000 Casual Deficiency Bonds, and the balance Insurrection Bonds. The Capitol Building Bonds were retired in 1907, reducing the bonded indebtedness of the state to \$393,500. This was the lowest point it reached during the twenty-three-year period, and it was not changed until 1910, when it was increased by \$847,300 new Insurrection Bonds and decreased by retiring \$50,000 Casual Deficiency Bonds. At the end of 1914 Funding Bonds to the extent of \$1,997,400 had been issued to redeem outstanding interest-bearing warrants. The history of interest-bearing warrants deserves considerable attention. The following statement is taken from the Auditor's Report of 1909 and 1910:

OUTSTANDING INTEREST-BEARING WARRANTS

Issue of 1887 and prior.....	\$ 130,776.71
Issue of 1888.....	277,555.65
Issue of 1889.....	418,227.54
Issue of 1891.....	115.20
Issue of 1892.....	5,204.58
Issue of 1893.....	5,932.53
Issue of 1894.....	32,316.13
Issue of 1895.....	93.91
Issue of 1896.....	161.54
Issue of 1897.....	2,495.98
Issue of 1898.....	12.00
Issue of 1899.....	26.69
Issue of 1901.....	21.60
Issue of 1903.....	42.64
Issue of 1904.....	4.50
Issue of 1905.....	8.75
Issue of 1906.....	16.75
Issue of 1908.....	10.40
Issue of 1909.....	75,051.68
Issue of 1910.....	800,292.29
Outstanding Capitol Buiding Interest-Bearing Warrants.....	120,644.42
Outstanding Certificates of Indebtedness.....	76,561.00
Estimated interest on warrants.....	1,154,744.06
Estimated interest on certificates of indebtedness.....	37,000.00
Gross floating debt.....	3,137,316.55

This statement shows the danger of issuing interest-bearing warrants to meet current expenses. During the twenty-three-year period from 1887 to 1910 there were only four years when the revenue was large enough to redeem all the interest-bearing warrants which had been issued. Those were the years of 1890, 1900, 1902, and 1907. The main reason why it has always been necessary to issue interest-bearing warrants is the fact that taxes for any particular year are not collected until the following year, but they are spent during the year for which they are levied. For example, taxes for

1927 are appropriated and used by issuing interest-bearing warrants during 1927. They are not collected, however, until 1928 and following years. Consequently it is possible to issue interest-bearing warrants for an amount greater than is actually collected.

The legislature in 1909 proposed an amendment to the Constitution authorizing the funding by a bond issue not to exceed \$2,115,000 of the outstanding warrants and the accrued interest thereon for the years 1887, 1888, 1889, 1892, 1893, 1894, and 1897 (S. L. 1909, Page 316). This was adopted November 8, 1910. By 1914 most of them were converted into Funding Bonds, Series of 1910.

The principal amount of the warrants it was proposed to redeem was \$873,071.84, and the accrued interest was \$1,241,691.10, making a total of \$2,114,762.96 (S. L. 1909, Page 316). The largest amount of these bonds outstanding at any one time was \$1,997,500. The sinking fund provision stipulates that 2½ per cent of the amount issued shall be set aside each year for every year beginning with the eleventh year to provide for their retirement. That will mean an annual amount of about \$50,000 for forty years to retire the bonds. Presuming that amount is retired each year and that interest is reduced accordingly, interest charges would amount to about \$1,800,000. Total principal and interest charges would be about \$3,797,500. That is to say, it will cost the State of Colorado \$3,797,500 to pay obligations that originally amounted to \$873,071.80.

In order to take care of emergency expenditures arising during the interim between sessions of the General Assembly, and for which no appropriations have been made, the law provides for the issuance of certificates of indebtedness. They are issued by the auditor with the approval of the Governor and Attorney General (C. L. 1921, Section 304). The amount of these certificates is reported to the General Assembly and a deficiency appropriation is passed covering the amount of the certificates issued. These certificates have usually been issued to meet current deficits in the operation of state institutions. They have also been issued in the past to pay part of the expenses incurred by the State Militia in suppressing insurrection. The following statement shows the amounts and purposes for which they have been issued in recent years:

CERTIFICATES OF INDEBTEDNESS AUTHORIZED 1919-1926

	State Hospital	Soldiers' & Sailors' Home	Penitentiary	Reformatory	Dependent Children's Home	Dept. of Safety
1925-26....	\$79,999	.....	.....	.....	.....	.....
1923-24....	15,020	.....	.....	.....	.....	.....
1921-22....	.....	\$15,000	\$36,692	\$5,749	.....	.....
1919-20....	.....	23,969	36,325	.....	\$642	\$18,723

In 1914 it was necessary to issue bonds to pay the expenses of calling out the National Guard during the strike in the coal fields during 1913 and 1914. \$1,000,000 was authorized but never more than \$725,900 has been outstanding at any one time.

In 1917 a \$2,500,000 bond issue was authorized to pay the expenses incurred in preparing the National Guard for service in the World War. Only \$740,000 was issued at that time. The Legislature of 1921 authorized the sale of \$290,000 of the National Defense Bonds to pay the expenses of the Rangers up to December 31, 1922. Of this amount \$288,702.24 was used. The same Legislature authorized the sale of \$200,000 of the National Defense Bonds to be used by the Governor for any unforeseen emergency. Bonds to the amount of \$160,000 were actually sold, with which bills to the amount of \$141,304.06 were paid and \$18,695.94 was transferred to surplus. That explains the increase of this issue in 1922.

It can be seen that after the \$300,000 Capitol Building bonds were retired in 1906 until Highway bonds were issued in 1921 none of the state's bonded indebtedness represented an outlay for public works or permanent improvements. They represented expenses incurred in meeting insurrections, warrants issued in previous years to meet the state's current expenses, and expenses incurred in preparing the National Guard for service in the World War. That fact should have suggested the wisdom of making the life of the bond issues as short as possible in order to reduce the interest charges, but apparently it was not considered, the funding bonds being for fifty years and the others ranging from twenty to thirty years.

The Legislature of 1921 authorized the issuance of \$5,000,000 Highway bonds. Fifty per cent of this issue was divided among the various counties of the state according to the mileage of state routes and state highways within the respective counties. The remaining fifty per cent was spent by the State Highway Commission only to meet and accept federal aid awarded to the state by United States congressional acts (C. L. 1921, Chap. 159, Sec. 8).

The Legislature of 1923 authorized an issue of \$6,000,000 Highway bonds. This had been provided for by a constitutional amendment in 1922. The proceeds from this bond issue were to be used by the State Highway Department to meet and accept Federal aid (S. L. 1923, Chapter 129, Sec. 9).

From the table it can be seen that the bonded indebtedness of the state increased from \$693,500 in 1905 to \$12,002,700 in 1927, or an increase of nearly 1800 per cent. The per capita bonded indebtedness increased from \$1.04 to \$11.18, or an increase of about 1,000 per cent. The bonded indebted-

ness was .20 per cent of the assessed valuation in 1905 and .27 per cent in 1912. After 1912, assessment was based on true cash value and was increased from \$422,723 to \$1,306,690. Consequently, the bonded indebtedness was only .15 per cent of the assessed valuation in 1913. This was increased to .776 per cent in 1927. Interest paid on bonds increased from \$139,479 in 1913 to \$585,778 in 1927. In 1913 interest payments were 3.02 per cent of the total disbursements, and in 1927 they were 3.50 per cent.

The following statement gives summarized information concerning state bond issues as of September 5, 1928:

INFORMATION CONCERNING STATE BOND ISSUES

	Date	Due	Life in Years	Authorized	Issued	Outstanding Sept. 5, 1928	Rate	Sinking Fund to Begin	Optional After	Per Cent of Sinking Fund Yearly
Insurrection.....	1897	1922	25	\$225,000	\$223,000	None	4%	1912	1912	10%
Insurrection.....	1909	1929	20	950,000	932,300	\$45,000	3%	1923		20%
Funding.....	1910	1960	50	2,115,000	1,997,500	1,632,900	3%	1920	1920	2½%
Insurrection.....	1914	1944	30	1,000,000	725,900	725,900	4%	1933	1934	10%
Defense.....	1917	1922 1941	*	2,500,000	1,166,000	229,000	4½%	*	*	*
Highway, 1921	1921	1951	30	2,000,000	2,000,000	2,000,000	5%	1926	1931	5%
Highway, 1921	1922	1952	30	3,000,000	3,000,000	3,000,000	5%	1926	1932	5%
Highway, 1923	1923	1934 1945	†	6,000,000	4,400,000	3,200,000	5%	†	†	†

*NOTE.—\$125,000 due annually 1922 to 1941, inclusive. All bonds are optional whenever there is a surplus in the sinking fund.

†NOTE.—\$500,000 due annually 1934 to 1941, inclusive. \$1,500,000 becomes optional in the order of their maturities in 1924, 1926, 1929 and 1933. (S. L. 1923, Page 371.)

Of the bond issues which were outstanding on September 5, 1928, the Insurrection Bonds of 1909, the Funding Bonds of 1910, and Insurrection Bonds of 1914 are provided for by tax levies. Although the Insurrection Bonds are not optional they have been purchased for the sinking fund and are practically retired. It is likely that in another year all of them will have been retired. This money will then be available for other purposes. The Funding Bonds of 1910 are being called in at the rate of about \$50,000 per annum. At that rate it will take until 1960 to retire them. It is likely, however, that as interest payments decrease retirement payments will be increased and that they will be retired somewhat sooner. The sinking fund for the Insurrection Bonds of 1914 does not start until 1933 and they do not become optional until 1934.

The National Defense Bonds of 1917 are being retired very rapidly, due to the fact that the proceeds of the Corporation Annual Franchise Tax has been appropriated to pay their interest and principal. In 1926 this tax produced \$183,615 in revenue from which \$4,753 was deducted for collection expense. At that rate these bonds will be retired by 1930 or before. This money will then be available for other purposes.

The Highway Bonds of 1921 are provided for by a tax levy and are not optional until 1931. Since the sinking fund began in 1926 it is likely that some of these bonds will be purchased and retired before then.

One-half of the amount collected from Motor Vehicle Registration License Fees, after deducting collection expenses, has been appropriated to pay the interest and sinking fund provisions of the Highway Bonds of 1923 (S. L. 1923, Chapter 129, Section 6). The other one-half is credited to the county road funds. The total collections in 1926 were \$1,498,975. The cost of the plates was \$43,364, clerk hire in the various counties was \$21,900, and other collection expense was \$70,000. There was distributed to the counties \$677,794, and \$679,590 was transferred to the interest and redemption fund of the Highway Bonds. One year's interest at 5 per cent on \$3,200,000 is \$160,000. If collections continue to be as large in the future as they were in 1926, over one-half million bonds can be retired each year. That will mean that the Highway Bonds of 1923 should all be retired by 1934 or possibly by 1933. This money will then be available for other road purposes.

COUNTY BONDED INDEBTEDNESS

Table Number II contains population and assessed valuation statistics from the same sources as Table Number 1. The bonded indebtedness figures from 1905 up to and including 1921 were compiled from the State and Municipal Compendiums of the *Commercial and Financial Chronicle*. For 1922 they were taken from *Public Debt*, published by the United States Department of Commerce, Bureau of the Census. These figures were approximately the same as those in the *Commercial and Financial Chronicle*. After 1922 they were taken from the *Colorado Yearbook*, published by the State Board of Immigration.

Interest was computed by assuming that the average rate was $4\frac{1}{2}$ per cent.

The table shows that county bonded indebtedness has decreased during the past twenty-three years, being \$3,776,100 in 1905 and \$2,284,500 in 1927. This decrease was quite uniform throughout the period. In 1905, \$3,110,000 of the \$3,776,100 worth of bonds outstanding were either funding or refunding bonds. In 1927, \$1,546,500 of \$2,284,500 worth of bonds outstanding were either funding or refunding. This indicates that counties are not issuing bonds for permanent improvements to any great extent, and are slowly retiring a bonded indebtedness that was incurred in the early history of the state.

TABLE II
COUNTY BONDED INDEBTEDNESS

	1905	1906	1907	1908	1909	1910	1911
1. Population	669,362	695,292	721,225	747,157	773,090	779,024	813,084
2. Assessed Valuation (000 omitted)	\$349,242	\$356,245	\$367,343	\$375,285	\$400,804	\$414,886	\$413,835
3. Bonded Debt Gen. County.....	3,776,100	3,904,700	3,685,900	3,454,400	3,684,500	3,616,200	3,587,300
4. Per Capita Bonded Debt.....	\$5.64	\$5.62	\$5.11	\$4.62	\$4.77	\$4.53	\$4.41
5. Bonded Debt Per Cent of As- sessed Valuation.....	1.08%	1.09%	1.00%	.92%	.92%	.87%	.87%
6. Estimated Interest Payments at 4½%							

	1912	1913	1914	1915	1916	1917	1918	1919
1.	827,144	841,204	855,264	869,326	883,386	897,446	911,506	925,566
2.	\$422,723	\$1,306,390	\$1,311,210	\$1,249,199	\$1,211,697	\$1,305,286	\$1,422,113	\$1,495,214
3.	3,579,700	3,428,300	3,276,900	3,003,200	2,621,400	2,676,700	2,478,700	2,322,100
4.	\$4.33	\$4.08	\$3.83	\$3.57	\$2.97	\$2.98	\$2.72	\$1.51
5. ....	.85%	.26%	.25%	.25%	.21%	.20%	.17%	.15%
6.		\$154,274	\$147,461	\$139,644	\$117,963	\$120,452	\$111,542	\$104,495

	1920	1921	1922	1923	1924	1925	1926	1927
1.	947,000	968,000	983,000	1,001,000	1,023,000	1,040,000	1,059,000	1,074,000
2.	\$1,591,307	\$1,578,257	\$1,548,618	\$1,543,260	\$1,540,501	\$1,540,620	\$1,545,948	\$1,547,702
3.	2,312,800	2,656,000	2,657,800	2,359,600	2,695,630	2,708,630	2,511,700	2,284,500
4.	\$1.44	\$2.74	\$2.70	\$2.36	\$2.64	\$2.60	\$2.37	\$2.13
5. ....	.14%	.17%	.17%	.15%	.17%	.18%	.16%	.14%
6.	\$140,076	\$119,520	\$119,601	\$106,182	\$121,303	\$121,888	\$113,027	\$102,803

SCHOOL DISTRICT BONDED INDEBTEDNESS

In Table Number III the population and assessed valuation figures are the same as those used in previous tables. The data down to and including Total School Disbursements were taken from the biennial reports of the Superintendent of Public Instruction. From these figures the data in the balance of the table were computed.

TABLE III
BONDED INDEBTEDNESS FOR SCHOOL DISTRICTS AND COUNTY AND UNION HIGH SCHOOLS.

	1905	1906	1907	1908	1909
1. Population (Statistical, Abstract and Computed).....	669,362	695,292	721,225	747,157	773,090
2. Assessed Valuation (000 Omitted).....	\$349,242	\$356,245	\$367,343	\$375,285	\$400,804
3. Enrollment in Public Schools.....	138,194	144,007	149,307	160,264	162,660
4. Average Daily Attendance.....	91,997	104,980	101,113	104,270	103,157
5. Value of School Property.....	\$8,808,205	\$9,513,458	\$10,293,181	\$11,449,534	\$12,872,186
6. School District Bonds.....	-----	-----	-----	-----	-----
7. County or Union H. S. Bonds.....	-----	-----	-----	-----	-----
8. Total Bonded Indebtedness.....	\$2,753,076	\$3,215,371	\$2,313,130	\$3,028,932	\$3,201,900
9. Registered Warrants.....	711,693	643,837	597,748	593,883	774,212
10. Not Registered Warrants.....	26,656	19,456	33,554	26,381	76,525
11. Bonded and Floating Indebtedness.....	3,491,425	3,878,664	2,944,432	3,649,196	4,052,637
12. Redemption Bonds.....	172,257	165,123	100,257	182,481	272,855
13. Payment of Overdrafts.....	-----	-----	-----	-----	-----
14. Interest on Bonds.....	148,846	141,973	149,348	127,105	144,515
15. Interest on Warrants.....	47,420	47,042	32,769	35,102	39,259
16. Total Debt Cost.....	368,523	354,138	282,374	344,688	456,629
17. For Temporary Loans and Interest Thereon.....	43,696	40,035	60,365	47,473	50,255
18. Total School Disbursements.....	4,191,786	4,529,817	4,739,257	4,626,132	4,722,372
19. Per Capita Bonded Debt.....	\$4.11	\$4.62	\$3.20	\$4.05	\$4.14
20. Per Cent Bonded Debt is of Assessed Valuation.....	.78%	.90%	.63%	.80%	.79%
21. Per Pupil Bonded Debt.....	\$19.92	\$22.32	\$15.49	\$18.89	\$19.68
22. Per Cent Bonded Debt is of Value of School Property.....	31.25%	33.79%	22.47%	26.45%	24.87%
23. Value of School Property per Pupil.....	\$63.73	\$68.84	\$68.94	\$71.44	\$79.13
24. Per Cent of Redemption of Bonds to Bonded Debt.....	6.25%	5.13%	4.33%	6.02%	8.52%
25. Per Cent of Redemption of Bonds to Total Disbursements.....	4.10%	3.64%	2.11%	3.94%	5.77%
26. Per Cent of Redemp. of Warrants to Total Disbursements.....	-----	-----	-----	-----	-----
27. Per Cent of Int. on Bonds to Total Disbursements.....	3.55%	3.13%	3.15%	2.74%	3.06%
28. Per Cent of Int. on Warrants to Total Disbursements.....	1.13%	1.03%	.69%	.75%	.83%
29. Per Cent of Debt Cost to Total Disbursements.....	8.79%	7.81%	5.95%	7.45%	9.66%

TABLE III (Continued)

	1910	1911	1912	1913	1914	1915	1916	1917	1918
1.	799,024	813,084	827,144	841,204	855,264	869,326	883,386	897,446	911,506
2.	\$414,886	\$413,835	\$422,723	\$1,306,690	\$1,311,210	\$1,249,199	\$1,211,697	\$1,305,286	\$1,422,113
3.	168,798	173,229	177,428	172,196	178,392	178,811	184,471	192,372	191,199
4.	107,520	118,245	120,326	117,833	118,972	112,178	134,758	134,157	127,723
5.	\$12,461,253	\$13,040,544	\$14,281,916	\$15,613,819	\$15,760,089	\$15,396,544	\$15,349,431	\$15,212,622	\$16,035,965
6.	-----	-----	-----	-----	-----	-----	-----	5,216,514	5,967,984
7.	-----	-----	-----	-----	-----	-----	-----	246,400	351,900
8.	\$3,221,490	\$3,878,575	\$4,157,339	\$4,346,999	\$4,778,811	\$4,894,340	\$5,086,800	\$5,462,914	\$6,319,884
9.	1,298,445	946,530	954,991	1,363,746	1,299,025	1,088,585	930,085	935,634	1,180,035
10.	59,220	42,381	65,972	118,736	49,985	86,218	178,071	203,706	310,835
11.	4,579,155	4,867,486	5,178,302	5,829,481	6,127,821	6,069,843	6,194,956	6,602,254	7,810,754
12.	217,019	240,760	264,759	268,725	282,657	280,538	317,601	273,349	265,009
13.	-----	-----	-----	-----	-----	-----	-----	-----	-----
14.	191,931	182,471	194,349	191,609	199,617	264,535	260,854	255,260	299,263
15.	40,408	42,508	51,169	56,993	72,077	65,190	60,034	54,669	58,960
16.	449,348	465,739	510,277	517,327	554,351	610,263	638,489	583,278	623,232
17.	58,452	96,883	72,844	166,354	119,420	161,361	143,822	99,122	28,887
18.	5,798,517	6,239,059	7,002,258	6,935,164	7,009,786	7,160,497	7,984,750	8,814,052	10,172,250
19.	\$4.03	\$4.77	\$5.02	\$5.16	\$5.58	\$5.63	\$5.75	\$6.08	\$6.93
20. ....	.77%	.93%	.98%	.33%	.36%	.39%	.42%	.41%	.44%
21.	\$19.08	\$22.39	\$23.43	\$25.24	\$26.78	\$27.37	\$27.57	\$28.39	\$33.05
22.	25.48%	29.74%	29.10%	27.84%	30.32%	31.78%	33.14%	35.91%	39.41%
23.	\$73.82	\$75.27	\$80.49	\$90.67	\$88.34	\$86.10	\$83.20	\$79.07	\$83.87
24.	6.73%	6.20%	6.36%	6.18%	5.91%	5.73%	6.24%	5.00%	4.19%
25.	3.74%	3.85%	3.78%	3.87%	4.03%	3.91%	3.97%	3.10%	2.60%
26.	-----	-----	-----	-----	-----	-----	-----	-----	-----
27.	3.31%	2.92%	2.77%	2.76%	2.84%	3.69%	3.26%	2.89%	2.94%
28. ....	.69%	.68%	.73%	.82%	1.02%	.91%	.75%	.62%	.58%
29.	7.75%	7.46%	7.28%	7.46%	7.90%	8.52%	7.99%	6.61%	6.12%

TABLE III (Continued)

	1919	1920	1921	1922	1923	1924	1925	1926	1927
1.	925,566	947,000	968,000	983,000	1,001,000	1,023,000	1,040,000	1,059,000	1,074,000
2.	\$1,495,214	\$1,591,307	\$1,578,257	\$1,548,618	\$1,543,260	\$1,540,501	\$1,540,620	\$1,545,948	\$1,547,702
3.	209,819	229,344	235,619	243,004	249,813	247,195	255,115	250,087	251,615
4.	130,118	150,090	168,873	170,426	174,484	179,476	186,165	182,374	180,508
5.	\$21,107,470	\$24,645,616	\$29,857,165	\$33,518,134	\$35,713,150	\$43,100,821	\$48,803,695	\$54,643,686	\$56,232,652
6.	6,999,335	11,558,803	-----	-----	18,476,202	22,639,490	26,279,528	27,737,588	30,177,800
7.	349,000	721,500	-----	-----	756,030	1,060,000	977,000	960,000	868,000
8.	\$7,348,335	\$12,280,303	\$14,638,488	\$16,175,270	\$19,232,232	\$23,699,490	\$27,256,528	\$28,697,588	\$31,045,800
9.	1,595,071	1,894,802	3,417,139	3,449,121	2,977,034	2,798,880	2,129,608	2,006,364	1,863,650
10.	376,764	411,678	533,854	467,753	465,320	474,642	511,631	660,705	712,932
11.	9,320,170	14,586,783	18,589,481	20,092,144	22,674,586	26,973,012	29,897,767	31,364,657	33,622,382
12.	478,245	252,415	292,108	353,528	476,504	429,182	451,821	486,527	879,632
13.	-----	-----	-----	106,068	161,506	276,501	361,789	302,710	450,467
14.	333,153	405,521	585,943	861,484	914,327	1,016,063	1,348,099	1,460,882	1,521,100
15.	77,567	96,371	130,597	182,999	187,170	181,953	165,206	121,341	136,260
16.	888,965	754,307	1,008,648	1,504,079	1,739,507	1,903,699	2,326,915	2,371,460	2,987,459
17.	93,249	111,914	114,855	61,378	118,526	61,987	121,343	250,856	234,419
18.	10,580,779	13,590,992	17,162,358	19,579,543	20,867,248	23,244,009	26,720,801	26,888,074	24,518,450
19.	\$7.93	\$12.96	\$15.12	\$16.45	\$19.21	\$23.16	\$26.20	\$27.09	\$27.91
20. ....	.49%	.77%	.92%	1.04%	1.24%	1.53%	1.76%	1.85%	2.00%
21.	\$35.02	\$53.54	\$62.12	\$66.56	\$76.98	\$95.87	\$105.84	\$114.75	\$123.38
22.	34.81%	49.82%	49.02%	48.25%	53.85%	54.98%	55.84%	52.51%	55.20%
23.	\$100.59	\$107.46	\$126.71	\$137.93	\$142.96	\$174.35	\$191.30	\$218.49	\$223.49
24.	6.50%	2.05%	1.99%	2.18%	2.47%	1.81%	1.65%	1.69%	2.83%
25.	4.52%	1.85%	1.70%	1.80%	2.28%	1.84%	1.69%	1.80%	3.58%
26.	-----	-----	-----	.54%	.77%	1.18%	1.35%	1.12%	1.83%
27.	3.14%	2.98%	3.41%	4.40%	4.38%	4.37%	5.04%	5.43%	6.20%
28. ....	.73%	.70%	.76%	.93%	.89%	.78%	.61%	.45%	.55%
29.	8.40%	5.55%	5.87%	7.68%	8.33%	8.18%	8.70%	8.81%	12.18%

The foregoing table reveals some very interesting information. During the twenty-three-year period the outstanding interest-bearing warrants increased from \$711,693 to \$1,863,650 and non-registered warrants from \$26,656 to \$712,932. This seems to indicate that school districts are not paying their current expenses out of current revenue. If that is correct, the practice should not be allowed to continue. If it is continued, school officials will find themselves burdened with debts contracted by previous administrations and for which there are no permanent improvements to show. It is encouraging to see that the high point of \$3,449,121 shown in 1922 has gradually been reduced to nearly half that amount in 1927.

Bonded indebtedness increased from \$2,753,076 in 1905 to \$31,045,800 in 1927. This represents a per capita increase of from \$4.11 to \$27.91, and a per pupil increase of from \$19.92 to \$123.38. At the same time the value of school property per pupil increased from \$63.74 to \$223.49. This would seem to indicate that school children have much better school buildings and equipment than ever before.

In 1905 school property was bonded for 31.26 per cent of its value and in 1927 for 55.21 per cent of its value. This increase has been rather steady since 1914.

The fact that the redemption of bonds was 6.26 per cent of total bonded indebtedness in 1905 and only 2.83 per cent in 1927 indicates that the bonded indebtedness is growing much faster than redemption of bonds. Most of this decrease began with 1920, reached a low point in 1925, and has increased since then, the actual redemptions in 1927 being nearly twice what they were in any previous year. Likewise the per cent of total disbursements that was used to retire bonds did not show much change until 1920, at which time there was an abrupt drop from 4.52 per cent to 1.86. This remained about the same until 1927, when it increased to 3.59 per cent.

The per cent of total disbursements that was used to pay interest on bonds remained about the same until 1922, when it began to increase very rapidly. In 1905 it was 3.55 per cent, in 1921 it was 3.41 per cent, and in 1927 it was 6.20 per cent.

The total debt cost was 8.97 per cent of total school disbursements in 1905 and 8.82 in 1926. The average for the twenty-two-year period was 7.65 per cent. In 1927, however, it shows an abrupt increase to 12.18 per cent. This increase in 1927 is quite largely accounted for by the increase in redemptions of bonds. This increase in bond redemptions was something to be expected after the large increase in bonded indebtedness for school purposes since 1920.

CITY AND TOWN BONDED INDEBTEDNESS

Table Number IV contains population and assessed valuation statistics from the same sources as previous tables. The bonded indebtedness figures from 1905 to 1921 inclusive were taken from the State and Municipal Compendiums of the *Commercial and Financial Chronicle*. For 1922 figures were taken from *Public Debt* and after 1922 from the *Colorado Yearbook* and the *Commercial and Financial Chronicle*. Wherever possible, special assessment indebtedness was kept separate from general obligation indebtedness.

Interest was computed by assuming that the average interest rate for general obligation loans was 4½ per cent and for special assessments loans was 6 per cent.

The following table shows there has been a large increase in the bonded indebtedness of cities and towns during the past twenty-three years. This increase was fairly constant up to about 1920, but has been particularly rapid since then. Most of this indebtedness represents permanent improvements. The largest single item is waterworks. Others of importance are sewer bonds, city hall bonds, power plant bonds, park and playground bonds, and paving bonds. The special assessment loans are almost exclusively for sidewalks, paving, or sewers.

TABLE IV
CITY AND TOWN BONDED INDEBTEDNESS

	1905	1906	1907	1908	1909	1910	1911
1. Population	669,362	695,292	721,225	747,157	773,090	799,024	813,084
2. Assessed Val. (000 Omitted).....	\$349,242	\$356,245	\$367,343	\$375,285	\$400,804	\$414,886	\$413,835
3. General Obligation.....	-----	-----	-----	-----	9,061,600	9,202,500	9,465,500
4. Special Assessment.....	-----	-----	-----	-----	6,447,700	6,176,200	6,682,700
5. Total Bond Debt.....	6,140,600	8,585,600	12,795,400	13,264,500	15,509,300	15,378,700	16,148,200
Estimated Int. Payments.....	-----	-----	-----	-----	-----	-----	-----
6. General Obligations.....	-----	-----	-----	-----	-----	-----	-----
7. Special Assessments.....	-----	-----	-----	-----	-----	-----	-----
8. Total Int. Payments.....	-----	-----	-----	-----	-----	-----	-----

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	1912	1913	1914	1915	1916	1917	1918	1919
1.	827,144	841,204	855,264	869,326	883,386	897,446	911,506	925,566
2.	\$422,723	\$1,306,690	\$1,311,210	\$1,249,199	\$1,211,697	\$1,305,286	\$1,422,113	\$1,495,214
3.	10,974,000	11,199,900	11,425,800	11,723,400	12,008,600	11,510,200	15,393,500	17,117,600
4.	7,637,700	8,794,300	9,951,000	9,388,800	8,983,500	8,549,800	8,735,200	8,786,500
5.	18,611,700	19,994,200	21,376,800	21,112,200	20,992,100	20,060,000	24,128,700	25,904,100
6.	-----	503,996	514,161	527,553	540,387	517,959	692,707	770,292
7.	-----	527,658	597,060	563,328	539,010	512,988	524,112	527,190
8.	-----	1,031,654	1,111,221	1,090,881	1,079,397	1,030,947	1,216,819	1,297,482

	1920	1921	1922	1923	1924	1925	1926	1927
1.	947,000	968,000	983,000	1,001,000	1,023,000	1,040,000	1,059,000	1,074,000
2.	\$1,541,307	\$1,578,257	\$1,548,618	\$1,543,260	\$1,540,501	\$1,540,620	\$1,545,948	\$1,547,702
3.	20,804,400	26,215,700	33,912,000	34,714,300	36,611,700	40,509,123	45,386,809	46,320,959
4.	9,220,900	9,908,900	10,903,000	10,288,900	11,283,400	15,396,421	16,679,491	18,527,749
5.	30,025,300	36,124,600	44,815,000	45,003,200	47,895,100	55,905,544	62,066,300	64,848,708
6.	936,198	1,179,706	1,526,040	1,526,144	1,647,527	1,822,911	2,042,406	2,084,443
7.	553,254	594,534	654,180	617,334	677,004	923,785	1,000,769	1,111,665
8.	1,489,452	1,774,240	2,180,220	2,179,478	2,324,531	2,746,696	3,043,175	3,196,108

PUBLIC BONDED INDEBTEDNESS IN COLORADO

In Table Number V the public bonded indebtedness is given for each of the four main divisions: state, school district, county and municipal. Municipal indebtedness includes special assessment bond issues. Drainage and irrigation district bonds amounting to about \$6,800,000, the Pueblo Conservancy District bonds amounting to about \$3,000,000, and the Moffat Tunnel Improvement District bonds amounting to \$12,720,000 on September 21, 1927, are not included.

All of the statistics are the same as those given in the preceding tables. Interest payments are given from 1913 to 1927 inclusive. State and school district interest payments are the actual figures as given in their biennial reports. County and municipal interest payments were computed by using $4\frac{1}{2}$ per cent as the average interest charge. The special assessment bonds which are included in the municipal figures were assumed to be paying 6 per cent interest.

TABLE V
PUBLIC BONDED INDEBTEDNESS OF COLORADO

	1905	1906	1907	1908	1909	1910	1911	1912
1. Population (Stat., Abs. and Computed).....	669,362	695,292	721,225	747,157	773,090	799,024	813,084	827,144
2. Assessed Valuation (000 omit.)	\$349,242	\$356,245	\$367,343	\$375,285	\$400,804	\$414,886	\$413,835	\$422,723
3. State Bonded Indebtedness.....	693,500	693,500	393,500	393,500	393,500	1,020,300	1,099,430	1,144,400
4. School District and County H. S. Bonds.....	2,753,076	3,215,371	2,313,130	3,028,932	3,201,900	3,221,490	3,878,575	4,157,339
5. County Bonded Indebtedness....	3,776,100	3,904,700	3,685,900	3,454,400	3,684,500	3,616,200	3,587,300	3,579,700
6. City and Town Bonded Indebt.	6,140,600	8,585,600	12,795,400	13,264,500	15,509,300	15,378,700	16,148,200	18,611,700
7. Total Public Bonded Indebt.....	13,363,276	16,399,171	19,187,930	20,141,332	22,789,200	23,236,690	24,713,505	27,493,139
8. Bonded Debt per Capita.....	\$18.96	\$23.58	\$26.60	\$26.95	\$29.47	\$29.08	\$30.39	\$33.23
9. Bonded Debt per cent Ass. Val.	3.82%	4.60%	5.22%	5.36%	5.68%	5.60%	5.97%	6.50%
10. State Bond Interest Payments..	.....	.....	.....	.....	.....	.....	.....	.....
11. School Bond Interest Payments	.....	.....	.....	.....	.....	.....	.....	.....
12. County Bond Int. Payments.....	.....	.....	.....	.....	.....	.....	.....	.....
13. City & Town Bond Int. Paym'ts	.....	.....	.....	.....	.....	.....	.....	.....
14. Total Bond Interest Payments..	.....	.....	.....	.....	.....	.....	.....	.....

	1913	1914	1915	1916	1917	1918	1919	1920	1921
1.	841,204	855,264	869,326	883,386	897,446	911,506	925,566	947,000	968,000
2.	\$1,306,690	\$1,311,210	\$1,249,199	\$1,211,697	\$1,305,286	\$1,422,113	\$1,495,214	\$1,541,307	\$1,578,257
3.	1,933,000	3,642,600	3,774,000	3,762,700	3,735,600	4,451,800	4,314,800	4,187,300	6,216,300
4.	4,346,999	4,778,811	4,894,340	5,086,800	5,462,914	6,319,884	7,348,335	12,280,303	14,638,488
5.	3,428,300	3,276,900	3,103,200	2,621,400	2,676,700	2,478,700	2,322,100	2,312,800	2,656,000
6.	19,994,200	21,376,800	21,112,200	20,992,100	20,060,000	24,128,700	25,904,100	30,025,300	36,124,600
7.	29,702,499	33,075,111	32,883,740	32,463,000	31,935,214	37,379,084	39,889,335	48,805,703	59,635,388
8.	\$35.31	\$38.67	\$37.82	\$36.74	\$35.58	\$41.01	\$43.10	\$51.54	\$61.61
9.	2.27%	2.52%	2.63%	2.67%	2.44%	2.62%	2.66%	3.06%	3.77%
10.	139,479	139,479	123,044	123,044	121,358	160,912	151,684	82,236	141,716
11.	191,609	199,617	264,535	260,854	255,260	299,263	333,153	405,521	585,943
12.	154,274	147,461	139,644	117,963	120,452	111,542	104,495	140,076	119,520
13.	1,031,654	1,111,221	1,090,881	1,079,397	1,030,947	1,216,819	1,297,482	1,489,452	1,774,240
14.	1,517,016	1,597,778	1,618,104	1,581,258	1,528,017	1,788,536	1,886,814	2,081,285	2,621,419

TABLE V (Continued)
PUBLIC BONDED INDEBTEDNESS OF COLORADO

	1922	1923	1924	1925	1926	1927	1928
1.	983,000	1,001,000	1,023,000	1,040,000	1,059,000	1,074,000	
2.	\$1,548,618	\$1,543,260	\$1,540,501	\$1,540,620	\$1,545,948	\$1,547,702	
3.	9,726,300	11,030,500	11,699,000	12,258,100	12,762,200	12,002,700	
4.	16,175,270	19,232,232	23,699,490	27,256,528	28,697,588	31,045,800	
5.	2,657,800	2,359,600	2,695,630	2,708,630	2,511,700	2,284,500	
6.	44,815,000	45,003,200	47,895,100	55,905,544	62,066,300	64,848,708	
7.	73,374,370	77,625,532	83,989,220	98,128,802	106,037,788	110,181,708	
8.	\$74.64	\$77.54	\$82.10	\$94.35	\$100.13	\$102.51	
9.	4.73%	5.03%	5.45%	6.36%	6.85%	7.11%	
10.	264,121	449,206	449,206	526,301	542,163	585,778	
11.	861,484	914,327	1,016,063	1,348,099	1,460,882	1,521,100	
12.	119,601	106,182	121,303	121,888	113,027	102,803	
13.	2,180,220	2,179,478	2,324,531	2,746,696	3,043,175	3,196,108	
14.	3,425,426	3,649,193	3,911,103	4,742,984	5,159,247	5,405,789	

Table Number V clearly demonstrates the importance of the public bonded indebtedness in the state's fiscal system. From 1905 to 1925 it increased from \$13,363,276 to \$110,181,708. A study of the table will show that it is doubling itself every eight years. In 1913, eight years after 1905, it is a little better than twice as large as it was in 1905. In 1921, eight years after 1913, it is again a little more than twice as large as it was in 1913. In 1927, six years after 1921, it is almost twice as large as it was in 1921, and if the increase is as large in the next two years as it was in the last two years it will have more than doubled itself again. This, of course, cannot go on indefinitely, but it shows the significance of the present trend.

Bonded debt per capita increased from \$18.96 in 1905 to \$102.59 in 1927. This increase was fairly constant up until 1919, but since that time has been particularly rapid. In 1913 when the assessment of property was raised to its true cash value the public was bonded for 2.27 per cent of its assessed valuation. By 1927 this had increased to 7.12 per cent of its assessed valuation. Interest payments have increased accordingly, until in 1927 about \$5,400,000 was paid out in interest.

The question naturally arises as to how Colorado's public bonded indebtedness compares with that of other states. Such a comparison has been made in Table Number VI. The information is for the year 1922 and was secured from *Public Debt* compiled by the United States Department of Commerce, Bureau of the Census. Totals are expressed in thousands. The funded or fixed debt includes debt to public trust funds, not evidenced by formal certificates of indebtedness, and other forms of debt not considered current. It compares Colorado with the other ten mountain states and with the per capita figures of the United States. In some cases it was necessary to compute the per capita figures and they have been so designated in footnotes. Otherwise the figures are the same as those in *Public Debt*.

TABLE VI
PUBLIC BONDED INDEBTEDNESS OF MOUNTAIN
STATES IN 1922

000 omitted

	State	Counties	Incorporated Places	Special Assessment	School District	Other Special Civil Divisions	Total Public Bonded Debt
Arizona.....	\$2,913	\$20,570	\$10,156	\$2,276	\$9,928	\$341	\$46,184
California...	76,453	52,458	192,946	34,723	91,113	66,804	514,497
Colorado.....	9,727	6,119	33,912	11,404	15,327	14,497	90,986
Idaho.....	5,928	9,474	9,696	12,426	11,447	9,929	58,900
Montana.....	4,598	28,636	9,909	6,693	11,709	2,868	64,413
Nevada.....	1,602	2,763	1,278	38	878	405	6,964
New Mexico	4,751	3,286	4,208	8,921	4,326	.....	25,492
Oregon.....	45,759	18,384	41,343	21,946	8,191	8,494	144,117
Utah.....	9,910	5,160	12,620	1,837	11,416	5,426	46,369
Washington	12,523	23,298	61,782	32,713	23,438	17,465	171,219
Wyoming....	3,804	1,905	8,203	571	4,100	.....	18,583

PER CAPITA OF FUNDED OR FIXED DEBT

	State	Counties	Incorporated Places	School (1) Districts	Total (1)	Population (2)
Arizona.....	(3)	\$53.46	\$67.49	\$27.58	\$128.29	360,000
California.....	\$20.93	16.31	69.77	25.03	141.35	3,640,000
Colorado.....	9.76	8.40	55.73	15.83	93.99	968,000
Idaho.....	12.08	16.63	41.96	25.17	130.02	453,000
Montana.....	7.29	40.59	32.94	20.05	110.30	584,000
Nevada.....	20.70	34.00	27.06	11.40	89.95	77,000
New Mexico..	12.37	6.90	40.09	11.79	69.46	367,000
Oregon.....	48.12	19.28	73.26	10.16	178.81	806,000
Utah.....	19.26	10.44	36.34	24.55	99.72	465,000
Washington..	8.72	14.35	62.63	16.74	98.93	1,400,000
Wyoming.....	18.37	7.50	71.69	20.10	91.09	204,000
Average for Group..	16.15	20.71	52.63	18.95	111.99	
Average for U. S.....	8.12	11.11	59.65	8.96	87.19	
Colorado.....	9.76	8.40	55.73	15.83	93.99	

- NOTES.—(1) Computed by using funded or fixed debt and estimated population.
- (2) Annual mid-year estimate Statistical Abstract of 1926, page 8.
- (3) Sinking fund assets exceed funded or fixed debt.

Table Number VI shows that Colorado ranks eighth in state bonded indebtedness per capita. The average for the eleven mountain states is \$16.15, for the United States is \$8.12, and for Colorado is \$9.76. In comparison with the other states our per capita bonded indebtedness for counties is exceedingly low. Colorado ranks eighth with \$8.40 per capita in comparison with a group average of \$20.71 and an average for the United States of \$11.11.

Colorado ranks sixth in bonded indebtedness per capita for incorporated places. It is \$55.73, which is slightly above the average of \$52.65 for the group, but below the average of \$59.65 for the United States.

Colorado, with a bonded indebtedness per capita of \$15.83 for school purposes, is sixth in the group. It is also slightly under the average of \$18.95 for the group but is considerably more than the average of \$8.96 for the United States.

Colorado ranks eighth in the total public bonded indebtedness per capita. With a per capita of \$93.99 it is considerably below the average for the group of \$111.99 and somewhat larger than the average for the United States of \$87.19.

This study seems to indicate that in 1922 Colorado had a relatively low funded or fixed debt when compared with states similarly located. Since Colorado's public bonded indebtedness has increased considerably since 1922, it is likely that at the present time it is in a higher relative position.

CONCLUSION

The facts show that the public debt of Colorado has been contracted in two principal ways: First, by making expenditures in excess of revenues and, second, by borrowing money to acquire capital assets. The large amount of refunding bonds indicates that the taxing units have not made proper provision for retiring bonds at maturity.

Twenty-two per cent of the present state bonded debt consists of bonds issued to take care of deficits in current operation. Sixty-eight per cent of the total county bonds are either funding or refunding. School districts in 1926 had over two million dollars in registered warrants outstanding which constituted 7.4 per cent of total expenditures. The floating indebtedness of towns and cities in 1922 was \$1,726,000. For the same year the floating indebtedness of all taxing units in Colorado was ten million dollars. These facts indicate the extent to which expenditures have been made in excess of revenues in Colorado.

The following recommendations seem pertinent to the situation:

1. Every taxing subdivision should be placed on a cash basis as soon as possible. Floating indebtedness should be funded and the maturities of the funding bonds should be for as short a term as possible. This will effect large savings in interest as soon as all taxing units operate on a cash basis.
2. Effective budget systems should be installed so that appropriations and expenditures would be limited to available revenue.
3. The laws governing the issuance of bonds by counties, municipalities, and school districts should be amended to prohibit the further issuance of sinking fund bonds. It should provide that all future bond issues shall be serial in character and that the first payment shall not be deferred for a longer period than two years.
4. The maturity dates for refunding bonds range from twenty years in the case of school district refunding bonds to thirty-five years for municipal refunding issues. The laws should be changed to provide that refunding bonds may not be issued to mature over a longer period than ten years.
5. In so far as possible all taxing units should adopt the pay as you go policy of acquiring capital assets and provide for recurring annual expenditures for permanent improvements from current revenues.
6. Plans for capital expenditures should be laid out in advance for a five- or ten-year period, and a definite capital budget should be prepared and followed.

COLORADO STATE TEACHERS COLLEGE

BULLETIN

New Courses in
Nursing Education
For Graduate Nurses

SUMMER QUARTER

(Second Half)

Greeley, Colorado, July 22--August 24
1929

Volume XXVIII

March, 1929

Number 9

Published Monthly by Colorado State Teachers College, Greeley, Colorado
Entered as second class matter at the Postoffice at Greeley, Colorado, under
the Act of August 24, 1912.

Please Post Where Your Nurses May Read

Colorado State League of Nursing Education



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Director of School of Nursing, St. Joseph's Hospital, Denver

FRIEDA OFF, R. N.
.....Director of Education, Denver General Hospital, Denver

For the third successive year Colorado State Teachers College will conduct a School for Nurses as a part of its 1929 Summer School Program.

At the suggestion and with the aid of the Colorado State League of Nursing Education, the College sought to make it possible for nurses in the vast Rocky Mountain region to advance in their profession at a minimum of inconvenience and expense. It was with this in mind that arrangements were made with one of the country's leading specialists in nursing education to give some courses in advanced nursing education in Teachers College Summer School in Greeley.

It was found that a large number of women engaged in the profession not only in the immediate Rocky Mountain region but in a wide territory east and west were interested and anxious to take advantage of this opportunity. In consequence, the college has found it advisable to continue the work. Many nurses, anxious to develop in the profession, have been denied the privilege because of the long distances they would have to travel to the only schools where education in the nursing profession was offered and the expense attendant thereon. It was necessary to go to the Pacific coast or to the east. The establishment of a school in Greeley as a part of the Teachers College, where the professional standing of the college and the assurance of recognized college credit to those who matriculate and meet the requirements, has brought this advanced education within reach of the nurse.

Such opportunity is not confined to those nurses engaged in institutional work. The courses offered in this special school are helpful to all graduate nurses whether on private, public or institutional duty.

The best evidence of the need of such a school was found in the attendance. Miss Carolyn Elizabeth Gray, who has opened such schools in different parts of the country, in commenting on the attendance at the special school in Greeley said: "The largest and most successful new school I have ever presided over; at none has there been the large attendance, enthusiasm, and perfection of operation as that attending the first Nursing Education School conducted at Colorado State Teachers College."

This success is attributed in very large part to the Colorado State League of Nursing Education, which was the organization that interested the administration in the project and which played an important part in arranging the program and putting it through.

COURSES OFFERED

The special course of study, which carries a combined credit of six hours, is as follows:

NURSING EDUCATION 102 — ADMINISTRATION IN SCHOOLS OF NURSING—Second half quarter. Three hours.

A study of the principles on which successful administration is based and their application to the problems of the several groups carrying administrative responsibilities in Hospitals and Schools of Nursing.

NURSING EDUCATION 103—THE CURRICULUM FOR SCHOOLS OF NURSING—Second half quarter. Three hours.

A study of the curriculum published by the National League of Nursing Education, the principles on which it is based and its use in Schools of Nursing. Planned for Principals, Instructors, Supervisors and Head Nurses in Schools of Nursing.

In order that students taking these courses may carry a full program if they care to, the following supplemental courses, which will be found helpful to those engaged in the nursing profession are suggested:

EDUCATION 150—FOUNDATIONS OF METHOD—Either half or full quarter. Two or 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.

PSYCHOLOGY 3—CHILD DEVELOPMENT—Full quarter. Four hours.

Purposes of the course (a) to point out the child's requirements during the different stages of his physical development; (b) to describe the nature of the child's mental development and discuss what kind of behavior and activities may be expected of him in any stage of development; (c) to encourage the student to form the habit of observing the behavior of the child and to interpret the significance of such behavior; (d) to give the student a sympathetic and understanding attitude toward child life.

PSYCHOLOGY 109—PSYCHO-CLINICAL PRACTICE—Second half quarter. Two hours.

Purpose of this course is to give the student practice in the kind of work treated in other courses, especially in Psychology 106. Another practical purpose is to improve the physical and mental conditions of the children of the Training School and remove hindrances to their school progress.

HOUSEHOLD SCIENCE 105—CHILD CARE—Full quarter. Four hours.

The subject matter of the course treats of such topics as training for parenthood; heredity and eugenics; prenatal care; the physical care of children from infancy through adolescence. The historical development of the child-welfare movement, the work of the various agencies which are promoting child welfare, methods of organizing and conducting such work in schools and communities, and sources of available material are included.

PHYSICAL EDUCATION 121 — KINESIOLOGY — Full quarter. Three hours.

This course deals with the action of muscles in exercises of different kinds. It is taken up primarily from the corrective standpoint.

CHEMISTRY—The Chemistry department offers a wide variety of courses from which students may select subjects of particular application and benefit to their profession.

Those students engaged in School Nursing will find especially helpful Psych. 3, 109, and H. Sc. 105.

Having scheduled the foundation courses, however, the student may then select any additional courses which she desires so long as her program is in keeping with the regulations as found set forth on page 22 of the official summer school bulletin. The college offers nearly 500 courses during the summer quarter, from any of which students in the Nursing School may choose.

ADMISSION

The courses are open to graduate nurses from accredited schools of nursing, and to such others as may have the necessary credits for admission to the College.

Provision may be made for the admission of nurses who may be interested in the course but who have not had the credits to meet the college entrance requirements. In such cases credit will be withheld until the student matriculates.

Students enrolling in this course will be registered as special students. Those meeting the college entrance requirements may become candidates for the Bachelor of Arts degree. Credits in the nursing education course will count toward such degree.

CREDITS

The number of credits will depend on the subjects chosen. For instance, the special nursing courses offered, Nursing Education 102, and Nursing Education 103, carry 3 hours credit each.

Students taking these courses are advised to supplement them by courses in psychology, education or chemistry. All of the regular courses offered by the College, however, are open to these students, and additional credits may be earned at no additional cost.

While students registering in this course are primarily interested in nursing and nursing topics, still the student who is anxious

for professional advancement will seek wider educational contacts and with this in mind, it is recommended that other subjects such as psychology, education, chemistry or physiology be included in the program, with possibly some work in English if the student finds time.

CALENDAR

Saturday, July 20..... Registration
 Monday, July 22..... Classes Begin
 Saturday, August 24..... Classes End

THE COST

Tuition (Regular summer tuition, half quarter)	\$16.00
Special fee (for each nursing course \$3.50)	7.00
Library Fee	2.00
Total	\$25.00

Non-residents of Colorado are required to pay an additional fee of \$2.50 for the half quarter.

LIVING

Private homes in the vicinity of the college provide rooms for students at moderate rates. All rooms are under the strict supervision of the College. All rooms must be approved. The cost of rooms is from \$10.00 to \$12.00 a month for each student where two students occupy a room; for one student in a room the cost is from \$12.00 to \$18.00.

The dormitory triangle, adjoining the campus, provides accommodations for a limited number of students. Each room is provided with two beds and complete accommodations for two students. The demand for rooms in the dormitories is so great that reservations must be made very early if one expects to obtain accommodations therein. Rooms in the dormitories cost from \$15.00 to \$18.00 per half-quarter. Students in the dormitories are required to furnish their own bed linen and towels.

Additional information concerning rooms may be had and reservations made by writing to the head of the housing bureau.

Students board in private houses. The average cost for board is \$6.00 per week.

RECREATION

Students attending Colorado State Teachers College find ample opportunity for wholesome, invigorating and pleasant recreation. Because of the location of the college so close to the mountains, less than an hour's drive from the gateway to Rocky Mountain (Estes) National Park, students are able to make frequent outings to this wonderful playground. Week-end trips to the mountains are a feature of student life during the summer quarter at Colorado State Teachers College.

Detailed information concerning the full program of courses offered by the college in the summer quarter will be found in the regular college bulletin. Copies of this bulletin and any additional information desired by those interested may be had by addressing

GEORGE WILLARD FRASIER, *President*
Colorado State Teachers College, Greeley, Colorado.

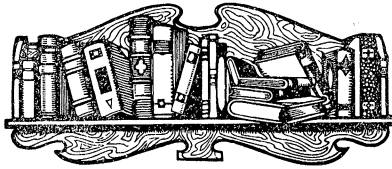
REFERENCE AND TEXTBOOKS

- Democracy and Education—*Dewey*
Trades and Professions—*Palmer*
The Meaning of a Liberal Education—*Martin*
Women Professional Workers—*Adams*
Nursing and Nursing Education in the U. S.—*Goldmark*
The Curriculum—*Bobbit*
Curriculum Construction—*Charters*
Cooperative System of Education Bulletin No. 37—1916—*Park*
The Foreman and His Job—*Allen*
Source Book in Philosophy of Education—*Kilpatrick*
Medical Essays—*Holmes*
Elementary School Standards—*McMurry*
The Recitation—*Betts*
Principles of Teaching—*Sr. John Gabriel*
Psychology for Nurses—*Muse*
Anatomy and Physiology—*Kimber and Gray*
Brief Course in Psychology—*James*
Medical Education—*Flexner*
A Five Year Program for the Committee on the Grading of Schools of
Nursing—*Burgess*
Nurses, Patients and Pocketbooks—*Burgess*
Time Study of Nursing Procedures Used in a Variety of Surgical Cases—
Tracy
Records of Schools of Nursing—*Bell*
Short History of Nursing—*Dock & Stewart*
History of Nursing—*Nutting & Dock*
A Sound Economic Basis for Schools of Nursing—*Nutting*
The Principal and His School—*Cubberley*
Methods and Principles of Teaching—*Harmer*
Tendencies in College Administration—*Kelly*
Hospital Service in the United States—*Chapman*
Bulletin No. 1 and 2 Yale School of Nursing
New York State Series of Training School Records
A case for shorter hours in schools of Nursing
23rd Report—*National League of Nursing Education 1927*



A Class in the School for Graduate Nurses at Colorado State Teachers College

Lectures
Entertainments and
Book Reviews



Summer Quarter 1928, June 18 to August 25

State Teachers College
Greeley, Colorado

Lectures, Entertainments and Book Reviews



For the Summer Quarter of 1928 the college is providing as usual a series of open lectures, entertainments, plays, and book-reviews open to students and the public. All these are given without admission charge except the few entertainments and plays that are brought at a considerable expense and are given as benefits for some college enterprise or organization.

College Assemblies and Evening Lectures: There will be an all-college assembly with required attendance and roll call once a week, usually on Wednesday at 7:00 P. M. in the Gymnasium. Attendance at other evening assemblies and lectures is urged, because they will be well worth while, but is voluntary.

Book Reviews: Book reviews and occasional free open lectures will be held usually three times a week at 4:00 P. M. in the Little Theater. Open to all.

Plays and Entertainments: A few plays and entertainments will be given in the Little Theater on certain evenings at 8:00 o'clock when there is no assembly or evening lecture. Small admission fees will be charged.

College Dances: Attendance of students at public dances is not permitted, but each Friday evening from 8:30 to 11:30 there will be a dance in the Woman's Gymnasium, Gunter Hall. These dances are given under the direction of the college and are properly chaperoned. Attendance is limited to college students, faculty, and guests with tickets issued by the Dean of Women upon due request of students. Good music. Admission 40c.

FIRST WEEK: June 18, Monday to June 22, Friday—

- 7:00 p. m. Monday, all college assembly, Gunter Hall.
Address by President George Willard Frasier
- 4:00 p. m. Tuesday, Book Review, Mrs. Satis Coleman.
Schauffler's *The Poetry Cure*—a Medicine
Chest of Verse, Music, and Pictures.
- 7:00 p. m. Tuesday, Program presented by the Teaching
Staff of the Conservatory of Music. Open
to Students and Public. No admission
Charge.
- 7:00 p. m. Wednesday, Open Lecture. Dr. Jesse H. New-
lon, Director of Lincoln School, Teachers
College, Columbia University.
- 4:00 p. m. Thursday, Book Review. Dr. Jesse H. New-
lon, Beard's *Rise of American Civilization*.
- 8:00 p. m. Thursday, Play in the Little Theater, Dal-
ton's *Adam's Apple*. Student and Faculty
Group. Seats 50c.
- 8:00 p. m. Friday, Second night of *Adam's Apple*.

SECOND WEEK: June 25 to 30—

- 4:00 p. m. Monday, Book Review, Mr. A. L. Threlkeld,
Book to be selected.
- 7:00 p. m. Monday, Lecture, Dr. Edward Howard
Griggs, Great Leaders and their Influence
on Civilization, I. Jefferson: The Phi-
losopher of Democracy.
- 4:00 p. m. Tuesday, Book Review, Mr. George A.
Barker, Book to be selected.
- 7:00 p. m. Tuesday, Lecture, Dr. Edward Howard
Griggs, II. Hamilton: The Making of
Our Government.
- 4:00 p. m. Wednesday, Lecture, Dr. Edward Howard
Griggs, III. Carlyle: The Man of Let-
ters as Prophet and Interpreter.
- 7:00 p. m. Wednesday, Lecture, Dr. Edward Howard
Griggs, IV. Emerson: Spiritual Leader-
ship in Democracy.
- 4:00 p. m. Thursday, Book Review, Dr. George Willard
Frasier, Book to be selected.
- 7:00 p. m. Thursday, Lecture, Dr. Edward Howard
Griggs, V. Tolstoy: The Moral Leader
in Mysterious Russia.
- 8:00 p. m. Saturday, The Chicago Art Theater in Three
Plays, Little Theater. Admission with
Reserved Seat, 75c.

THIRD WEEK: July 2 to 6—

- 4:00 p. m. Monday, Book Review, Dr. Earle U. Rugg, "Books of the Month," 1927-28, "The Literary Guild," 1927-28.
- 4:00 p. m. Tuesday, Book Review with Readings, Dr. E. A. Cross, Arthur Goodrich's *Capponsacchi*.
- 4:00 p. m. Thursday, Book Review, Mr. James H. Riskey, Bruce Barton's *What Can A Man Believe?*
- 7:00 p. m. Thursday, Concert, St. Olaf's Quintet, The Little Theater. Admission: 50 cents.

FOURTH WEEK: July 9 to 13—

- 4:00 p. m. Monday, Book Review, Miss Carolyn Tobey, Michael Pupin's *The New Reformation*.
- 7:00 p. m. Monday, Lecture, Dr. George Earle Raiguel, *The World Today: Politics and War*.
- 4:00 p. m. Tuesday, Book Review, Dr. George Earle Raiguel, Ludwig Lewisohn's *The Island Within*.
- 7:00 p. m. Tuesday, Lecture, Dr. George Earle Raiguel, *The Presidential Campaign*.
- 7:00 p. m. Wednesday, Lecture, Dr. George Earle Raiguel, *The Far Eastern Question: Russia, China, Japan*.
- 4:00 p. m. Thursday, Book Review, Mr. Alfonso Iannelli, Lewis Mumford's *Sticks and Stones*.
- 7:00 p. m. Thursday, Band Concert. The Greeley Band, J. DeForest Cline, Director.
- 8:00 p. m. Thursday, Illustrated Lecture, Mr. H. N. Wheeler, U. S. Forestry Service, Little Theater. No charge.

FIFTH WEEK: July 16 to 20—

- 4:00 p. m. Monday, The Work of the Junior Red Cross.
- 4:00 p. m. Tuesday, Book Review, Rev. Alfred W. Swan, Will Durant's *Transition*.
- 7:00 p. m. Wednesday, Lecture, Mr. Alfonso Iannelli, *The Appreciation of Art*.
- 8:00 p. m. Thursday, The Faculty Players in the English three act comedy *Devonshire Cream* by Eden Phillpotts. The Little Theater. Reserved seats 50c.
- 4:00 p. m. Thursday, Book Review.
- 8:00 p. m. Friday, The Faculty Players. Second performance of *Devonshire Cream*.

SIXTH WEEK: July 23 to 27—

- 4:00 p. m. Monday, Book Review, Rev. W. S. Dando, Dan Brummitt's *Shoddy*.
- 4:00 p. m. Tuesday, Book Review, Rev. Samuel E. West, Book to be selected.
- 7:00 p. m. Wednesday, Lecture, Dr. Ernest Horn, The Trend in Elementary Education.
- 4:00 p. m. Thursday, Book Review, Mr. Robert Pooley, Millin's *God's Stepchildren*.
- 8:00 p. m. Thursday, Alberto Salvi, Concert Harpist, Gunter Hall. Admission 50 cents.

SEVENTH WEEK: July 30 to August 3—

- 4:00 p. m. Monday, Book Review, Mr. Merle Prunty, von Ziekursch's *Where the Waters Turn*.
- 4:00 p. m. Tuesday, Book Review, Dr. Clare B. Cornell, Dorsey's *Why We Behave Like Human Beings*.
- 8:00 p. m. Tuesday, The Coffey-Miller Players in *A Marriage of Convenience* by Alexander Dumas. The Little Theater. Reserved seats 50c.
- 7:00 p. m. Wednesday, Lecture, Mr. Rollo Walter Brown
- 8:00 p. m. Wednesday, The Coffey-Miller Players in *The Rivals* by Richard Brinsley Sheridan. The Little Theater. Reserved seats 50c.
- 4:00 p. m. Thursday, Book Review, Mr. E. M. Pfutzenreuter, Edwin Avery Park's *New Backgrounds for a New Age*.
- 7:00 p. m. Thursday, Band Concert by the Greeley Band, J. DeForest Cline, Director, North Campus.

EIGHTH WEEK: August 6 to 10—

- 4:00 p. m. Monday, Book Review, Dr. W. D. Armentrout, Thornton Wilder's *The Bridge of San Luis Rey*.
- 4:00 p. m. Tuesday, Book Review, Mr. Rollo Walter Brown, Book to be selected.
- 7:00 p. m. Wednesday, Lecture, Mr. Rollo Walter Brown
- 4:00 p. m. Thursday, Book Review, Mrs. Gertrude Spaulding, Rebecca Lowry's *Cambric Tea*.
- 8:00 p. m. Thursday, Cameron McLean, Scotch Baritone, Gunter Hall. Admission 50 cents.

NINTH WEEK: August 13 to 17—

- 4:00 p. m. Monday, Book Review, Miss Frances Tobey,
"The Poetry of Thomas Hardy."
4:00 p. m. Tuesday, Book Review, Dr. O. M. Dickerson,
Rupert Hughes' *Life of Washington*.
7:00 p. m. Wednesday, Lecture, Mr. Merle Prunty.
4:00 p. m. Thursday, Book Review, Dr. Carleton Wash-
burne, Dr. Washburne's new book, *Better
Schools*.
8:00 p. m. Thursday, Denver Concert Quartette, Gunter
Hall. Admission 50 cents.

TENTH WEEK: August 20 to 25—

- 4:00 p. m. Monday, Book Review, Mr. F. E. Merrill,
John K. Winkler's, *Hearst, an American
Phenomenon*.
4:00 p. m. Tuesday, Book Review, Dr. A. H. Noyes,
Sidney B. Fay's *Origins of the World War*.
7:00 p. m. Wednesday, Lecture, Dr. Carleton Washburne.
4:00 p. m. Thursday, Book Review, Mr. John Crowe
Ransom, Readings from his own poems.
7:00 p. m. Thursday, Grand Council Fire, Camp Fire
Girls.
10:30 a. m. Saturday: The Summer Convocation.



COLORADO STATE TEACHERS COLLEGE

BULLETIN



SUMMER QUARTER

June 15—August 24
1929

GREELEY, COLORADO

SERIES XXVIII

FEBRUARY

NUMBER 11

IMPORTANT ANNOUNCEMENT

THE SUMMER QUARTER OPEN TO ALL

Any person twenty years of age or over, whether a high school graduate or not, may enroll in the College for the summer quarter and take such subjects as he is interested in and able to carry. A record of attendance and a list of the subjects taken will be kept. College credit toward graduation is given only to those who meet the entrance requirements as stated on pages 19, 20, 21. Students who attend the summer quarter without submitting high school credentials may later present these and have their marks previously earned transferred to the regular credit records of the College.

Those students who consider themselves candidates for graduation should make sure that proper matriculation has been effected. Since the summer quarter is open to all, students who have attended during summer quarters only should not assume that their admission has been formally determined. Your case may need adjustment under current credit standards. In the case of students who entered and earned credit prior to September 1, 1923, care should be taken to determine whether an adjustment is required. (See pages 19, 20, 21 under "Admission, Certification, and Graduation.") A matriculation fee of \$5.00 is charged. This covers all tests, transfer of records, etc. Those students who desire to matriculate and to become candidates for graduation should give notice of such desire at the time of temporary registration.

The number of students who wish merely to audit classes must necessarily be limited on account of lack of room. Students enrolled for credit must be given preference. Any student desiring to enter as an auditor for one or more classes must secure a special permit from the registrar. Fees are the same as for the course when taken for credit.

The College, as usual, divides the summer quarter into two equal half-quarters for the convenience of the few students who can attend for only a part of the time. Only those courses which are designated "First Half," "Second Half," or "Either Half" carry credit for less than the full quarter. All other courses must be carried for the full quarter, if taken for college credit. Note: A required course should not be taken for half credit by a candidate for graduation.

PERSONAL CHECKS

All students not identified at the Greeley banks are urged to bring letters of credit or sufficient money in travelers' checks to pay all bills until such time as they may be able to transfer their account to Greeley or make arrangements with the Greeley banks to cash their checks. All regular college bills, such as tuition, dormitory rent, and music, may be paid by the personal check of the student provided it is made out for the amount of the bill. The college is always willing to help out in all financial matters but does not assume the responsibility of cashing students' personal checks.

EVENING LECTURES AND SPECIAL LECTURE COURSES

See the notice concerning the afternoon and evening lectures under Special Courses of Lectures, on Page 13.

COLORADO STATE TEACHERS COLLEGE

BULLETIN

SUMMER QUARTER
1929

THE QUARTER

June 15-August 24

First Half
June 15-July 20

Second Half
July 22-August 24

Published Monthly by Colorado State Teachers College, Greeley, Colorado
Entered as second class matter at the Postoffice at Greeley, Colorado,
under the Act of August 24, 1912

Current numbers of any of the College Publications may be had on application
to the President of the College, Greeley, Colorado.

ORDER OF REGISTRATION

All students who expect to be in attendance for the full quarter should make up a program for the full quarter. Fees may be paid all at once, or, for the student's convenience, in two parts, namely, one-half on the designated dates of permanent registration for each half quarter.

I. TEMPORARY REGISTRATION

Temporary registration will take place in Gunter Hall Saturday, June 15, beginning at 7:00 A. M.

Class cards will not be given out until the opening date of permanent registration. The following blanks will be provided:

1. Personal data cards
2. Temporary enrollment card
3. Status card.

The personal data card must be filled out each quarter.

The temporary enrollment card when completed shows your proposed schedule of classes and the amount of your fees. Do not make changes in your originally approved schedule without referring such changes to your adviser.

Class tickets are used when the enrollment in any class is limited. A complete list of limited classes will be found in the printed instructions which you will receive as a part of the registration material.

When the student presents himself for registration, detailed printed instructions will be supplied.

Students who desire to matriculate and become candidates for graduation should give notice of such desire at this time.

II. PERMANENT REGISTRATION

The "Student's Daily Schedule" and "Class Cards" (permanent blanks) will not be given out until after June 15. Attend classes by presenting the Temporary Enrollment Card to teachers until you, your adviser and teachers are satisfied with the proposed schedule. If you are ready to transfer to permanent blanks June 21, the opening date of permanent registration, do so. Permanent registration, which includes payment of fees, will be conducted through the offices in the Administration Building on the following dates: June 21, 24, 25, 26, 27.

III. LATE REGISTRATION

A late registration fee of \$1.00 will be charged if temporary registration has not been completed and approved by 4:00 P. M., June 15. Transfer to the permanent blanks must be completed by 5:00 P. M., June 27, the closing date of permanent registration, or another fee of \$1.00 will be imposed. The same late registration fees will be charged for the second half of the quarter.

Except by special permission of the registrar, no student, after the first quarter of work who registers after the first day of the quarter, shall, under any consideration, be allowed to take more than sixteen hours of work. If the student is more than two days late, the total number of hours on his program will be reduced in proportion to the time lost.

IV. LEAVING BEFORE FINAL EXAMINATIONS

Any student absent from class on the last day of the quarter will have his quarter report for that class turned in as "failure," unless he has a written permission from the vice-president of the College to leave before the close of the quarter. Application for such a permit shall be made in writing. No teacher has authority to excuse a student from any class before the close of the quarter.

OFFICERS OF GOVERNMENT AND ADMINISTRATION.

HARRY V. KEPNER, Sc.D.

President of the Board of Trustees

GEORGE WILLARD FRASIER, Ph.D., LL.D.

President of the College

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J. S. DOUBENMIER, A.B., Assistant Professor of Physical Education, Teachers College Elementary and Secondary Schools.

*On leave.

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RICHARD G. ELLINGER, A.B., Associate Professor of Art.
GEORGE WILLIAM FINLEY, M.S., Professor of Mathematics.
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CHARLES MEAD FOULK, Pd.M., Professor of Industrial Arts.
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MINNIE B. JAMES, B.S., Acting Instructor in Commercial Education.
FRANK COVERT JEAN, Ph.D., Professor of Biology, Chairman of the Graduate Council.
ALICE JOHNSON, Ph.B., Associate Professor of Secondary English.
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MARGARET JOY KEYES, A.M., Associate Professor of Physical Education.
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ELLEN GERTRUDE LEE, Instructor in Camp Fire Training.
ELIZABETH LEHR, B.S., Assistant Professor of Elementary Education.
LESLIE D. LINDOU, A.M., Assistant Professor of English and Literature.
FLORENCE LOWE, A. M., Assistant Professor of Art.
ELIZABETH LUZMOOR, B.S., Assistant Professor of Elementary Education.
GENEVIEVE L. LYFORD, A.M., Professor of Kindergarten Education.
THOMAS JEFFERSON MAHAN, Ph.D., Professor of Education, Dean of Men.
ARTHUR ERNEST MALLORY, A.M., Professor of Mathematics.
ANNIE MCCOWEN, A.M. Professor of Elementary Education.
PAUL MCKEE, Ph.D., Professor of Elementary Education.
LUCY NEELY MCLANE, A.M., Associate Professor of Secondary English.
ESTELLE ELGAR MOHR, B.S., Assistant Professor of Public School Music.

*On leave.

JUNIA L. MORSE, A.M., Assistant Professor of English; Head of Housing Bureau.

GEORGIA ETHEL MOORE, B.S., Assistant Professor of Art.

ROBERT HUGH MORRISON, A.M., Director of Extension Service, Professor of Extra-Mural Education.

MARGARET MULRONEY, Ph.D., Associate Professor of Foreign Languages.

VERA NEWBURN, M.S., Assistant Professor of Household Arts.

*A. EVELYN NEWMAN, A.M., Professor of English Literature, Dean of Women.

LESTER EDWIN OPP, B.M., Assistant Professor of Music.

*ORA BROOKS PEAKE, A. M., Associate Professor of History.

KENNETH F. PERRY, A.M., Instructor in Secondary Industrial Arts.

ETHEL BLANCHE PICKETT, A.M., Associate Professor of Household Science.

PAULINE C. POGUE, A.M., Instructor in Social Sciences; Dean of High School Girls.

ROBERT CECIL POOLEY, A.M., Assistant Professor of Secondary English.

CLAIRE MORELAND PRESTON, A.M., Assistant Professor of Elementary Education.

JAMES H. RISLEY, A.M., Professor of Extra-Mural Education.

MARTEN L. ROBERTSON, A.B., Instructor in Secondary Science.

LUCY LYNDE ROSENQUIST, B.S., Associate Professor of Primary Education.

MARGARET MOORE ROUDEBUSH, Ph.B., Professor of Household Arts.

EARLE UNDERWOOD RUGG, Ph.D., Professor of Education.

CHARLES R. SATTGAST, A.M., Assistant Professor of Extra-Mural Education.

WILLIAM H. SAUNDERS, B.S., Assistant Professor of Men's Physical Education.

OTTO WILLIAM SCHAEFER, Associate Professor of Industrial Arts.

EDITH MARIE SELBERG, A.M., Assistant Professor of Biology.

JOHN HENRY SHAW, Director of Journalism, Editor of Official Publications.

MARY IONE SIMPSON, A.M., Acting Assistant Professor of Education.

HELEN ETTA SPRINGER, B.S., Instructor in Physical Education for Women.

JAMES J. THOMAS, A.C.M., Assistant Professor of Music.

A. L. THRELKELD, A.M., Professor of Extra-Mural Education.

FRANCES TOBEY, A.B., Professor of English.

FLOSS ANN TURNER, Ph.B., Associate Professor of Primary Education.

CHARLES FRANKLIN VALENTINE, A.M., Professor of Physics.

SUSAN HART VAN METER, B.S., Associate Professor of Elementary Education.

EDWARD VON DEN STEINEN, M.D., Professor of Physical Education; Medical Adviser of Men.

WALLACE THEODORE WAIT, Ph.D., Assistant Professor of Educational Psychology.

RUSSELL EDSON WAITT, A.B., S.T.B., Instructor in Sociology.

*On leave.

FREDERICK LAMSON WHITNEY, Ph.D., Director of Educational Research,
Professor of Education.

EDITH GALE WIEBKING, A.M., Associate Professor of Household Arts.

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of Religious Activities.

WILLIAM WRINKLE, A.M., Principal Teachers College High School; Asso-
ciate Professor of Secondary Social Science.

A. F. ZIMMERMAN, Ph.D., Assistant Professor of History.

THE CONSERVATORY OF MUSIC

J. DEFOREST CLINE, Director of the Conservatory of Music; Professor of
Public School Music.

EUGENE SHAW CARTER, Instructor in Violin.

J. ELBERT CHADWICK, Instructor in Piano.

LUCY DELBRIDGE, Pd.B., Instructor in Violin.

J. ALLEN GRUBB, Instructor in Voice.

BLANCHE BENNETT HUGHES, Instructor in Piano.

ESTELL ELGAR MOHR, B.S., Assistant Professor of Public School Music.

LESTER EDWIN OPP, B.M., Assistant Professor of Music.

BEVERLY IVAREA BEIL OPP, Instructor in Reed Instruments.

ANGIE S. K. SOUTHARD, A.B., Instructor in Music Appreciation.

JAMES J. THOMAS, B.M., Assistant Professor of Music.

THE LIBRARY

ALBERT FRANK CARTER, A.B., Head Librarian.

GRACE LILLIAN CUSHMAN, Assistant Librarian

ANN MAXVILLE, A.B., Library Assistant.

WILLIAM BIDWELL PAGE, M.D., Assistant Librarian.

CORA MAY THOMAS, Classifier and Cataloger.

IVA CATHERINE WATSON, B.S., Reference Librarian.

ELIZABETH BLAIR SCHILPP, Children's Librarian.

SPECIAL FACULTY AND GENERAL LECTURERS

SUMMER QUARTER 1929

In addition to the regular faculty, which will serve almost its entirety through the summer quarter, the College will bring in a number of outside lecturers and teachers, leaders in their respective fields, who will conduct courses in the different departments. Some of those who will thus supplement the already strong faculty personnel are:

- 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. THRELKELD, 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, Las Animas, Colorado. 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.
- MR. F. A. OGLE, County Superintendent of Schools, Weld County, Colorado. Courses in Education.
- MR. W. D. BLAINE, Superintendent of Schools, Glenwood Springs, Colorado. Courses in Geography.
- MR. EARLE C. MOORE, Scout Executive, Boy Scouts of America. Courses in Scout Master Work.
- MR. G. E. BROWN, Superintendent of Schools, Greeley, Colorado. Courses in Education.

COLORADO STATE TEACHERS COLLEGE

Summer Quarter 1929

Training teachers for public school service is the mission of Colorado State Teachers College. Being supported by public taxation of all the property of the State of Colorado, the College aims first to prepare teachers for all the kinds of public schools maintained within the State of Colorado. This includes rural schools, kindergartens, primary, intermediate grades, upper grades, 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 teachers, teachers of defective and atypical children, and teachers for adult night schools.

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 the process of being evolved.

LOCATION

Teachers and students who have attended Colorado State Teachers College know of the beautiful campus and ideal location of the College. For the benefit of thousands of others into whose hands this issue of the bulletin is sent, the following information is given:

The College campus covers sixty-five and a half acres, on an eminence overlooking the city of Greeley. Greeley is a beautiful city, with 14,000 population. The streets are wide and graveled, and great spreading trees on practically all of the streets in the city form continuous avenues of shade. Attractive homes and beautiful lawns add to the appearance of the city.

Greeley is located on the Union Pacific and the Colorado & Southern railways, fifty-two miles from Denver, and just thirty miles from the gateway to Rocky Mountain National (Estes) Park. The latter forms the playground each week-end for many students at Colorado State Teachers College.

The location of the College so close to the Rocky Mountains is in itself a distinct advantage. This, together with the altitude of the city—4,567 feet above sea level—makes an ideal location for summer study. Clear, dry air, sunny days, and cool nights, distinguish Greeley from other communities where the heat and humidity make work in the summertime almost unbearable. The cool snow-laden air from the mountains sweeps over Greeley and the College campus, cooling the atmosphere and making the days pleasant, even in the middle of summer. Seldom does the night temperature go above 70 degrees, and 60 to 65 degrees at night is usual.

RECREATION

The week-end excursions to the Rocky Mountain National Park, conducted under the direction of the Outing Committee of Colorado State Teachers College, have become widely known. They have become a fixed and highly appreciated part of the life of the College.

Busses leave the campus at frequent intervals, thus affording ample opportunity to one or more individuals to take the park trip practically when the spirit moves. Students and faculty members of Colorado State Teachers College get a special round trip rate of \$5.00.

The Outing Committee of Colorado State Teachers College, cooperating with the Rocky Mountain Parks Transportation Company, has arranged a series of excursions, each week-end, to the wildest and most rugged parts of the Rocky Mountain National Park. These outings are organized with Camp Olympus as a base, so that teachers and faculty members may go in groups of ten or more to the summit of the Continental Divide, Grand Lake, or other points of major interest in the Rocky Mountain National Park at approximately half price.

Many tourists take the circle trip—Denver, Estes Park, Milner Pass, and Grand Lake—at a cost of \$25.00. It is possible, however, for students of Teachers College to get a round trip ticket to the Park for \$5.00 and the round trip ticket from Camp Olympus to Grand Lake and return for \$7.00; in this way, for \$12.00, plus the meals and lodging at Camp Olympus (\$1 for lodging and fifty cents for meals), to get a trip that is as wonderful and inspiring as the trip for which the tourists pay the higher rate. Trips to other interesting points in the Colorado Rocky Mountain region are arranged.

Students desiring to enter the summer school at Greeley and at the same time to enjoy the privileges of a two weeks' stay in the heart of the Rockies can get this combination by enrolling for one of the pre-summer school extension courses given at Camp Olympus from June 1st to 14th. If interested in these courses write the Extension Department, Colorado State Teachers College.

FEES AND EXPENSES

BOARD—Students board in private houses. The average cost of board is \$6.00 per week.

ROOMS—There is an extensive list of approved houses, in the vicinity of the College, for students. With two students in a room the cost is \$10.00, \$11.00, or \$12.00 a month for each student; for one student in a room the cost is from \$12.00 to \$18.00. Student standard regulations are the same during the summer quarter as for the regular year, save that there are no zoning restrictions.

DORMITORIES—The Dormitory Triangle provides accommodations for 114 women students. Each room is provided with two beds, and complete accommodations for two students. Because of the great demand in the summer for rooms for a half quarter only, the College has decided to rent dormitory rooms for either half or full quarter. These rooms will cost from \$25.00 to \$28.00 for the whole quarter, or from \$15.00 to \$18.00 for either half-quarter. Students in the dormitories are required to furnish their own bed linen and towels.

It is much more satisfactory for students to see rooms in private homes before renting them. They are urged, therefore, to come a few days before the opening of the quarter, in order that they may personally select their rooms. If information concerning rooms is desired, students may write to the head of the housing bureau.

LIGHT HOUSEKEEPING—A few rooms in houses allowing light house-keeping privileges are available for a reasonable rental. The price varies from \$18.00 to \$26.00 per month.

COLLEGE FEES—The state provides funds for the maintenance of the College for three quarters in the year. The summer quarter has the use of the College buildings and equipment, but it is necessary to draw financial support largely from student fees. Each student pays \$16.00 for a half quarter, or \$32.00 for the full quarter, plus a library fee of \$2.00. The library fee is paid by all students, whether they take either a half or full quarter. Students not citizens of Colorado pay an additional fee of \$5.00 for the full quarter or \$2.50 for a half quarter.

All students who expect to be in the College for the full quarter are expected to make out their programs of studies for the full time. The fees, however, may be paid in two parts, one half on June 15, and the other July 20.

Books—New books may be bought from the College bookroom.

APPROXIMATE EXPENSE FOR FULL QUARTER

The table below represents a median of expense—neither the least possible nor the highest—and covers the principal items:

Room	\$ 42.00
Board	72.00
College Fees	32.00
Library Fee	2.00
Books and Supplies	10.00
Total	<u>\$158.00</u>

THE DAILY PROGRAM

For the summer quarter, the class periods are arranged as follows:

- 7:00 to 7:50—First Class Period
- 8:00 to 8:50—Second Class Period
- 9:00 to 9:50—Third Class Period
- 10:00 to 10:50—Fourth Class Period
- 11:00 to 11:50—Fifth Class Period
- 12:00 to 12:50—Sixth Class Period
- 2:00 to 2:50—Ed. 100d—Unit Courses in Education
- 3:00 to 3:50—Ed. 100a—Unit Courses in Education
- 4:00 to 4:50—Book Reviews
- 7:00 to 8:00—General Lectures in Gunter Hall

STUDENT STANDARD REGULATIONS

1. Rooms shall be engaged for the quarter of three months. In absence of other contract it is to be understood that rent is to be paid by the calendar month.
2. In the event of a change of rooming place, permission should be obtained from the head of the housing bureau or dean of men.
3. Each rooming house shall have a responsible head continually in charge.
4. Men students and women students shall not room in the same house.

5. All rooming houses must be kept in healthful, sanitary condition. Comfortable single beds are required. All rooms which girls occupy for living and study purposes should be kept at a heat of 68 to 70 degrees Fahrenheit during the winter, spring and fall. Rooms must be lighted with at least sixty watt globes for study purposes. Bathing facilities must be such that a daily warm bath may be had. Students should have the use of the parlor three evenings a week. Two of these evenings shall be weekend evenings. Halls must be lighted until ten o'clock at night.

6. Men and women students are expected to observe quiet and orderly conduct in their rooming and boarding places, to take due care of the furniture and premises, and to be in their rooms by ten o'clock on school nights. After dinner hours, it is permissible that a social time be observed, providing that it is not prolonged so as to interfere with study hours. It is expected that the hours after 8 o'clock in the evening, except Friday and Saturday, shall be observed as study hours and that there shall be quiet in the houses.

7. Junior college students (students having fewer than 96 hours credit) shall be permitted to have three dates per week with either a man or a girl. One mid-week date may be counted as one of these three, provided it ends by 10 P. M.

a. The number of dates for senior college students (students having 96 hours credit) shall not be restricted, provided these dates end at the same hour set for junior college students, and do not interfere with the work to the extent of leading to unsatisfactory grade, or with the standards of the College.

8. There must be no attending of out-of-town dances without permission of the dean of women for the women or the dean of men.

9. Non-college persons may be invited to student social activities with the permission of the dean of women.

10. All chaperones must be approved by the dean of women.

11. The College requests that cases of illness among the students in the rooming or boarding houses be reported immediately by the householder to the dean of women and to the medical adviser of women.

12. The College reserves the right to decide, upon due investigation, when above Student Standards of Conduct are disregarded by the householder or boarding house proprietor, that the establishment shall be removed from its approved list.

SPECIAL COURSES OF LECTURES

The College Assembly and Evening Lectures—For seventeen years the College has maintained a general lecture course with a series of lectures by the most eminent teachers and lecturers obtainable. This annual series of lectures through these years has been the means for thousands of progressive teachers of keeping in touch with the newest developments in the evolution of educational philosophy and practice, from year to year.

In addition to the evening lectures, students are to have an extended opportunity to hear these outstanding teachers. There will be three lecture hours in the afternoons. Two of these will be devoted to unit courses in education, and the third to book reviews. There will be a different lecturer for each period each day.

Following up the success of a few book review hours given first in the summer quarter of 1924-25, the College is continuing a book review hour, three days a week through the quarter. Members of the regular faculty, visiting teachers, and special lecturers will review the out-

standing current books in education, philosophy, history and political science, literature, science, religion, and like fields of interest. The course of lectures is open to all without registration or extra fee. One may attend all the lectures regularly or drop in only occasionally when a book of special interest to him is being discussed. There is no credit for the course.

TRAINING SCHOOLS

The Training School is an educational laboratory where useful problems are being worked out under the direction of skilled experts. New methods that save time, new schemes for better preparing the children for life, new curricula and courses of study are continually being considered by this school and are 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 Elementary and Secondary Training Schools strive to be leaders in the state in all that is new and modern. Effort is made to maintain such standards of excellence in the work that they may at all times be offered as a demonstration of good teaching under conditions as nearly normal as possible in all respects.

Students who expect to teach in the Training Schools during the summer quarter are asked to correspond with the principal of the elementary or the secondary school before the opening of the quarter.

REQUIREMENTS IN STUDENT TEACHING

1. No student is eligible for student teaching whose college grades show thirty per cent D's or F's prior to his application for student teaching.

2. The required amount of student teaching for the life certificate shall be one quarter. No credit will be given for less than a full quarter of teaching.

3. 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 Pre-Teaching Observation (Ed. 2a) with the training teacher with whom he is to teach the following quarter.

4. The course in observation (Ed. 2a) shall consist of two regular observation hours each week and one conference hour every two weeks with the training teacher. This course shall also include assigned readings, method and content, which will supplement the observations and prepare the student for the subsequent course in student teaching. This course in observation (Ed. 2a) carries one hour credit.

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

6. Students 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 (Ed. 2b) is not permitted further enrollment in the Training Schools.

7. 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).

8. Two quarters of student teaching may be elected in either the junior college for the life certificate or in the senior college for the degree.

9. Additional prerequisites for student teaching in the junior college are: Ed. 1, Ed. 2a, and the method courses required for the majors listed on page 76 of the Year Book, 1928-29. The prerequisites for student teaching in the senior college are Ed. 101 and at least one method and one content course in the student's major.

10. A full quarter of student teaching carries five hours of credit. This requires five hours of teaching a week and in addition group conferences.

11. 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 standard college entrance test
- b. A score above average on the English exemption test
- c. A grade of B on the achievement test
- d. A formal application must be made for this 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.
- 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.

EXTENSION DEPARTMENT

The College maintains an Extension Department to enable teachers in service to keep in touch with educational progress and to aid those teachers who have had less than standard preparation for their work to obtain a part of their professional education while teaching. For a full explanation of this work write for the Extension Bulletin. The general Catalog and Year Book explains the work of this department of the College in some detail.

Summer quarter students should understand clearly that work begun in residence and left incomplete cannot be completed through the Extension Department. Nor can unfinished work begun either in individual correspondence courses or in extension group courses be completed in residence courses.

PLACEMENT BUREAU

The Placement Bureau of the College looks after obtaining positions for the graduates of the College. When superintendents and other school officials request the bureau to nominate a teacher for a vacancy the bureau will recommend the best teacher available for the place and the salary offered. Teachers applying for positions through the bureau will be recommended for the very best positions they are qualified by personality, education and experience to fill. The bureau will be open and active through the entire summer.

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.

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, in his department 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*.

- 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.

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 after September 1, 1927, during any one of the regular academic quarters (fall, winter, or spring) must complete and have approved by the Graduate Council all graduate work including the thesis within two years from the time graduate work is begun, or additional requirements may be made by the Graduate Council.
2. Students who restrict their graduate work entirely to the summer quarters must complete and have approved by the Graduate Council all requirements including the thesis within five summer quarters, or additional requirements may be made by the Graduate Council.

REQUIREMENTS FOR THE DEGREE

1. Beyond the four-year undergraduate course, the student working for the degree, Master of Arts, must earn graduate credits amounting to 48 quarter hours. Three quarters of work in residence are required, but one quarter of approved graduate work may be transferred from another institution; or 16 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 (32 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 9 hours credit may be granted for this research.
3. Every student must register for Research 223 in his major department during his first full quarter of regular graduate work.
4. The student must have at least 64 quarter hours of undergraduate and graduate work in his major or closely related subjects.

5. He must have not less than 32 hours of undergraduate and graduate professional work in education and related fields, as educational psychology, educational sociology, and educational biology. If the candidate majors in Education, 64 quarter hours will be required, but only work in education or educational psychology will be accepted for such undergraduate and graduate work.
6. At least 4 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.
7. At least 2 weeks before the date upon which the degree is to be conferred, the complete thesis in final form must be approved and 2 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.
8. 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)

9. 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 Council, assisted by the head of his major department.

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.

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

ADMISSION, CERTIFICATION AND GRADUATION

Prior to the school year 1923-24, students were admitted to this College upon presentation of a minimum of fifteen standard high school units, regardless of groups. Beginning with the school year 1923-24 certain designated groups were required. Unconditional admission is limited to graduates of high schools, accredited by the North Central Association of Colleges and Secondary Schools or by state universities. These requirements were revised by a joint committee of Colorado high school principals and the Admission and Credits Committee of the College, with the result that the following regulations were adopted beginning September 1, 1924, and are now effective:

GROUP I. (Required) Minimum of four units must be presented

- 1. English 3
- 2. Social Science (History, Civics, Sociology, Economics)..... 1

GROUP II. (Required) Minimum of five units must be presented

- 3. Foreign Languages (A single unit will be accepted in one foreign language, but not in more than one) } .
- 4. Mathematics (may include Advanced Arithmetic, after Algebra, but does not include Commercial Arithmetic) } 5
- 5. The Physical and Natural Sciences (Physics, Chemistry, Biology, General Science, Botany, Zoology, Physical Geography, Physiology, Hygiene, Agriculture) }

Note: Excess units above what is actually required in Groups I and II may be counted in Group III as electives

- 6. Music and Fine Arts } .
- 7. Commercial Arts } 6
- 8. Home Economics } .
- 9. Manual Arts } .
- 10. Normal Training (Maximum of two units) }

Note: If more than four units are presented in any special field (Nos. 6, 7, 8, 9), they will be accepted for entrance only in the same special field of work in the College.

All candidates for admission must satisfactorily pass a physical examination and also make an acceptable score in a standard classification test. Students from non-accredited high schools may gain admission to the college by presenting the same kind of credentials for admission as are required of students from accredited schools. The College will, however, give more attention to the classification test score and scholarship the first quarter, if admitted. The fee for the classification test is one dollar.

CONDITIONAL ADMISSION—Any applicant who is not a high school graduate but who is credited with 14 high school units may be admitted to the College upon presenting a transcript from a reputable high school, showing the completion of 14 units in designated groups. A special recommendation from the high school principal or superintendent will be required. Such students are limited to a maximum program of 12 hours per quarter in the College, and must make up the deficient high school unit in Teachers College High School during their first year in the College. The student cannot be enrolled for the second year until the entrance condition has been removed.

Adult students (twenty years of age or over) may be admitted to the College upon passing an English test and the standard classification test, provided the scores are sufficiently high to assure the College that the student has the ability to carry on College work, even though he may have had no high school training, or only a partial high school course.

GRADUATION

Since September 1, 1921, credit has been given only for regular College work in institutions uniformly recognized as standard colleges or colleges maintained primarily for the training of teachers. On that date Colorado State Teachers College discontinued giving college credit for teaching experience, handwriting certificates, music certificates, drawing certificates, private study, private lessons of any kind or work in business colleges, conservatories of music, dramatic schools, county institutes, reading circles, or for any other kind of work done in an institution other than one ranked as a standard normal school, college, junior college, teachers college, or university, by a recognized accrediting agency, such as the North Central Association of Colleges and Secondary Schools.

Students coming up for graduation since September 1, 1924, are required to meet standard requirements for the certificate or degree no matter what the requirement might have been at the time the student first enrolled in the College. This means that the student must meet the entrance requirements outlined above. It also means that credit for life experience, teaching experience, handwriting, art and music certificates; private lessons in art, music, and the like; excessive credit for a quarter's work, and especially the excessive credit formerly given for the summer term of six weeks, will not be included in the total now required for graduation.

The College will continue up to June 15, 1931, to grant the Limited Certificate in departments listed on page 23, the Bachelor of Arts and the Master of Arts degrees, but under the conditions of entrance which became effective September 1, 1924, and the conditions of graduation which became effective September 1, 1924. Students whose entrance was approved under the requirements announced for the school year 1923-24 are not required to make any adjustments because of the revision made as shown above which became effective September 1, 1924.

Ninety-six quarter-hours are required in the courses wherein the Limited Certificate is granted upon the completion of two years of work. One hundred and ninety-two quarter-hours are required for the Bachelor of Arts degree.

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 which 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 already in the institutions from which the students come. No advanced standing is granted for additional units above the usual sixteen earned in the four-year high school course.

UNIT OF COLLEGE CREDIT—All credits toward graduation are calculated in "quarter-hours." The term "quarter-hour" means a subject given one day a week through a quarter of a year, approximately twelve weeks. Most of the College courses call for four recitations a week. These are called four-hour courses. A student usually selects sixteen quarter-hours, the equivalent of four courses each meeting four times a week, as his regular work.

MAXIMUM AND MINIMUM HOURS OF CREDIT—A student registers usually for fifteen, sixteen, or seventeen hours each quarter. The average shall be not more than sixteen hours for any three consecutive quarters, 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.

THE TEN HOUR RULE—A student failing to pass in ten hours of college work out of a full quarter's program of from 12 to 16 hours will be dropped at the end of the quarter and may not enroll again except by special permission of the vice-president, and then only on probation for one quarter. The second failure to pass in ten hours of work permanently excludes the student from the College.

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 (48) quarter-hours of credit. If the student's first graduation is with the Bachelor of Arts degree, only three quarters are required. Students who have already taken the Life Certificate (two-year course) must spend in residence at least two additional quarters for the Bachelor of Arts degree. Extension group classes conducted by members of the College faculty are considered as resident work and may be counted as such to the extent of one quarter for the Life Certificate (two-year course) and one of the two resident quarters required beyond that for the Bachelor of Arts degree. The resident requirement in the Graduate School is shown on page 17.

THE GRADING SYSTEM—The system of weighted credits which was in effect for some years was abandoned by faculty action October 1, 1924. However, extra credit earned under that system while in effect is not to be discounted because of the change. 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 given for it. By special arrangement in advance with the vice-president or registrar and the teacher a longer time may be given.

A course marked "withdrawn" may not be made up.

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 for a teachers college, for it gives teachers in active service an opportunity equal to any of securing a complete education while teaching.

CERTIFICATES AND DEGREES

THE TWO-YEAR COURSE—A student must do full work in residence during at least three quarters before being granted any certificate. Thus, not more than forty-eight of his ninety-six hours may be granted on advanced standing or for extension courses. See page 23 for list of departments in which a Limited Certificate is granted.

THE FOUR-YEAR COURSE—At the end of the fourth year of study, and upon the completion of one hundred and ninety-two quarter-hours of credit, the degree of Bachelor of Arts will be conferred. This degree is a life license to teach in any of the public schools of Colorado and will be granted to all students who have completed the requirements of the course they are pursuing.

THE FIVE-YEAR COURSE—See "Graduate Work," pages 16, 17, 18.

REGULATIONS CONCERNING OVERLAPPING OF A.B. AND A.M. WORK—To prevent overlapping of time and consequent misunderstanding the Admission and Credits Committee grants advanced standing never in excess of one hundred and forty-four quarter-hours to applicants who fall short of admission to the graduate school. Students transferring to Colorado State Teachers College when they are within one or two quarters of the Bachelor of Arts degree must expect to lose some time by making the transfer.

COURSES—Each student is required to select one of the courses given in detail under the departments of the College. If a student has taken subjects elsewhere similar to those specified in his group course, he may, with the consent of the head of the department in which he is specializing, be allowed to substitute the work he has already had for required Colorado State Teachers College work. The student may not, however, be excused from the "Professional Core" shown above, except by the vice-president.

TIME LIMITS 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.

TRANSFER OF CREDIT FROM OTHER COLLEGES—Since Colorado State Teachers College is a college for training teachers, its courses of study are technical. Those who come from universities or liberal arts colleges with one, two, or three years of advanced credits may find that some of these will not apply upon the course of study they may select here. Colorado State Teachers College accepts all credits from accredited colleges on the basis of the maximum a student is permitted to earn in this College in a given period. For the most part these credits will apply as electives in our own courses of study. Colorado State Teachers College does not guarantee that a student having had a year's work in another school will be able to complete a two-year course in three more quarters. Many of the students are able to apply their

previous work upon the courses selected here without loss of time, but often students find it necessary to remain in Colorado State Teachers College somewhat longer than they had expected because of the number of required technical courses in a given curriculum. Get more complete information about the procedure to be followed at the registrar's office.

THE COURSE OF STUDY

(For student who matriculate before Sept. 1, 1929)

Throughout this catalog courses numbered 199 are primarily first and second-year subjects: 100-199 are third and fourth year. Those numbered 200 and above are graduate courses.

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, and engineering schools prepare engineers.

For this reason its curriculum is sharply differentiated from that of other technical schools and also from that of the college 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' work. The following departments shall prepare teachers to receive the Bachelor of Arts degree:

Biology	Fine and Applied Arts
Commercial Education	Geology, Physiography, and
Education	Geography
Superintendents	History and Political Science
Principals for	Home Economics
Elementary Schools	Hygiene and Physical Education
Junior High Schools	Industrial Arts
Senior High Schools	Literature and English
Supervisors and Teachers for	Mathematics
Kindergarten-Primary	Music
Intermediate	Physical Sciences
Upper Grades	Chemistry Physics
Rural Schools	Romance Languages and Latin
Educational Psychology	Social Sciences

Any student who wishes a Limited Certificate entitling him to teach in the elementary schools before the completion of the full four-year departmental curriculum in which he is majoring, must complete all the required work in the first two years of the curriculum for that department in which he elects to take his certificate. The following departments are those referred to:

Kindergarten-Primary	Fine Arts
Intermediate Grades	Manual Training
Junior High School	Home Economics
Rural	Commercial Education
Music	

Each student selects a department in which he expects to specialize. The head of the department selected becomes the student's permanent adviser throughout his college course. The choice of a course may be made at the opening of the student's first college quarter. But if the student is undecided, he may register for one quarter as unclassified and defer the selection of his major subject until the beginning of his second quarter.

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 the Limited Certificate until the full degree course is completed. One

who finally expects to complete a degree course in some other department than the nine listed for the Limited certificate may, however, begin his course as a major in one of the nine listed curricula and at the same time elect the departmental requirements of the first two years of the curriculum he finally expects to use as his major. At the end of two years he may take his Limited Certificate with a major, for example, in junior high school teaching. He would at that time have completed all the core requirements and departmental requirements of the junior high school 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 history major, or a geography major, and go on and complete his four-year curriculum and receive the degree of Bachelor of Arts in the field finally chosen. During the first two years this student would register as a major in one of the nine designated departments. 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—Each course is planned to occupy twelve quarters. A quarter is approximately twelve weeks in length. Upon the completion of the course the degree of Bachelor of Arts will be granted. The courses shown just preceding are so arranged that they may be divided in the middle. The first part of these courses may be completed in six quarters. The student who chooses to be graduated at the end of the two-year course receives a Limited Certificate but no degree. This certificate is a life license to teach in the elementary schools of Colorado and is honored in most of the other states.

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.

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: Biology 1, English 4 (unless excused for proficiency), Hygiene 1, Civilization 1, Civilization 2, Education 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, and a Physical Exercise course each quarter.

THIRD AND FOURTH YEAR: For majors in elementary school work, supervision, etc. Education 102 (student teaching), Education 111, Psychology 104 and 108a, and Sociology 105.

THIRD AND FOURTH YEARS: For majors expecting to become high school teachers, supervisors, and principals. Education 101, 103 (student teaching), 111, 116 or 113, Psychology 105 and 108b, and Sociology 105.

ART

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1. FINE ARTS METHODS FOR INTERMEDIATE GRADES AND JUNIOR HIGH SCHOOL—Full quarter. Four hours. Fee 50 cents.

2. FINE ARTS METHODS FOR PRIMARY GRADES—Full quarter. Four hours. Fee 50 cents.

3. FREEHAND DRAWING I—Full quarter. Four hours.

4a. ART STRUCTURE II—Full quarter. Three hours.

- 4b. DESIGN—First half or full quarter. Two or four hours.
5. WATER COLOR PAINTING—Either half or full quarter. Two or four hours.
6. ART APPRECIATION—Full quarter. One hour.
7. CONSTRUCTIVE DESIGN—Either half or full quarter. Two or four hours. Fee 50 cents.
Prerequisite Art 4a or 4b or the equivalent.
9. HISTORY OF ART—Full quarter. Three hours.
13. INDUSTRIAL ARTS METHODS FOR PRIMARY GRADES—Full quarter. Four hours. Fee \$1.50.
14. INDUSTRIAL ARTS METHODS FOR INTERMEDIATE GRADES AND JUNIOR HIGH SCHOOL—Full quarter. Four hours. Fee \$1.50.
16. FREEHAND DRAWING II—First half or full quarter. Two or four hours.
Prerequisite—Art 3 or equivalent.
17. LETTERING AND POSTER COMPOSITION— Either half quarter. Two hours.
100. SUPERVISION OF FINE ARTS EDUCATION—Full quarter. Two hours.
101. DRAWING FROM THE FIGURE—Full quarter. Four hours.
104. COLOR THEORY AND COMPOSITION—Full quarter. Four hours.
105. WATER COLOR PAINTING—Either half or full quarter. Two or four hours.
106. ADVANCED ART APPRECIATION—Full quarter. One hour.
109. ADVANCED HISTORY OF ART—Full quarter. Three hours.
116. ADVANCED FREE HAND DRAWING—Either half or full quarter. Two or four hours.
117. LETTERING AND DESIGN—Full quarter. Four hours.
120. OIL PAINTING—Either half or full quarter. Two or four hours.
223. RESEARCH IN ART—Full quarter. Three 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 ART EDUCATION—Full quarter. Three hours. This is the thesis course for graduate students in their second quarter.
225. RESEARCH IN ART EDUCATION—Full quarter. Three hours. A continuation of Art 224.

ATHLETICS & PHYSICAL EDUCATION FOR MEN

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1. INDIVIDUAL AND SOCIAL HYGIENE—Daily. First half quarter. Three hours.
3. FIRST AID—Two periods. Second half quarter. Two hours.
36. TENNIS—Three periods. First half quarter. One hour.
40. ELEMENTARY SWIMMING—Three periods. Either half or full quarter. One or two hours.
52. MAT WORK AND ELEMENTARY TUMBLING—Either half quarter. One hour.

165. FOOTBALL COACHING—Five periods. First half quarter. Two hours.
 166. BASKETBALL COACHING—Five periods. First half quarter. Two hours.
 168. TRACK COACHING—Five periods. First half quarter. Two hours.
 169. BASEBALL COACHING—Five periods. First half quarter. Two hours.
 180. ATHLETIC TRAINING—First half quarter. Two hours.

BIOLOGY

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1. EDUCATIONAL BIOLOGY—Full quarter. Three hours. Fee \$1.00.
 Required of all junior college students.
 223. RESEARCH IN BIOLOGY—Full quarter. Three hours.
 Taken in first quarter of graduate work.
 224. BIOLOGICAL RESEARCH—Full quarter. Three hours.
 225. BIOLOGICAL RESEARCH—Full quarter. Three hours.
 A continuation of Biological Research 224.

BOTANY

101. SYSTEMATIC BOTANY—Full quarter. Four hours. Fee \$1.00.
 103. PLANT PHYSIOLOGY—Full quarter. Four hours. Fee \$1.50.
 Prerequisite Botany 1.
 223. RESEARCH IN BOTANY—Full quarter. Three hours.
 Taken in first quarter of graduate work.
 224. BOTANICAL RESEARCH—Full quarter. Three hours. Fee \$3.00.
 225. BOTANICAL RESEARCH—Full quarter. Three hours. Fee \$1.00.
 A continuation of Botanical Research 224.

ZOOLOGY

2. GENERAL ZOOLOGY—Full quarter. Four hours. Fee \$1.00.
 Prerequisite Zoology 1.
 3. BIRD STUDY—Full quarter. Three hours. Fee \$1.00.
 223. RESEARCH IN ZOOLOGY—Full quarter. Three hours.
 Taken in the first quarter of graduate work.
 224. ZOOLOGICAL RESEARCH—Full quarter. Fee \$3.00.
 225. ZOOLOGICAL RESEARCH—Full quarter. Fee \$1.00.
 A continuation of Zoological Research 224.

BIOTICS

101. GENETICS AND EUGENICS—Full quarter. Four hours.
 Prerequisite Biology 1.
 201. GENETICS AND EUGENICS—Full quarter. Four hours.
 Prerequisite Biology 1.

ELEMENTARY SCIENCE

1. ELEMENTARY SCIENCE—Either half quarter. Four hours. Fee \$1.00.
 2. ELEMENTARY SCIENCE—Full quarter. Four hours. Fee \$1.00.

GENERAL SCIENCE

1. GENERAL SCIENCE—Full quarter. Four hours. Fee \$1.50.

CHEMISTRY

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1. GENERAL CHEMISTRY—Full quarter. Three hours. Fee, \$3.00.
 2. GENERAL CHEMISTRY—Full quarter. Three hours. Fee, \$3.00.
 4. GENERAL CHEMISTRY—Full quarter. Four hours. Fee, \$4.00.
 5. GENERAL CHEMISTRY—Full quarter. Four hours. Fee, \$4.00.
 7. QUALITATIVE ANALYSIS—Either half or full quarter. Two or four hours. Fee, according to hours of credit.
 108. ORGANIC CHEMISTRY—Full quarter. Three hours. Fee, \$3.00.
 109. ORGANIC CHEMISTRY—Full quarter. Three hours. Fee, \$3.00.
 110. ORGANIC CHEMISTRY—Full quarter. Four hours. Fee, \$4.00.
 111. ORGANIC CHEMISTRY—Full quarter. Four hours. Fee, \$4.00.
 114. QUANTITATIVE ANALYSIS—Either half or full quarter. Two or four hours. Fee, \$4.00 for each course.
 117. THE TEACHING OF CHEMISTRY—Full quarter. Three hours.
 Given on request.
 223. RESEARCH IN CHEMISTRY—Full quarter. Three 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.

COMMERCIAL EDUCATION

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1. PRINCIPLES OF SHORTHAND I—Full quarter. Four hours.
 3. SECRETARIAL PRACTICE I—Full quarter. Four hours.
 11. PRINCIPLES OF TYPEWRITING I—Full quarter. Two hours.
 12. PRINCIPLES OF TYPEWRITING II—Full quarter. Four hours.
 13. PRINCIPLES OF TYPEWRITING III—First half quarter. Three hours.
 14. METHODS OF TEACHING TYPEWRITING—Second half quarter. One hour.
 16. MATERIAL AND METHODS FOR TEACHING FILING—Full quarter. Four hours.
 36. HANDWRITING METHODS—Either half or full quarter. One or two hours.
 37. BUSINESS MATHEMATICS—First half or full quarter. Two or four hours.
 53. SALESMANSHIP—First half or full quarter. Two or four hours.
 105. SECRETARIAL PRACTICE II—Full quarter. Four hours.
 138.—COMMERCIAL LAW—First half or full quarter. Two or four hours.

139. AN INTRODUCTION TO BUSINESS—First half or full quarter. Two or four hours.
150. PRINCIPLES OF ACCOUNTING I—First half or full quarter. Two or four hours.
152. PRINCIPLES OF ACCOUNTING III—Full quarter. Four hours.
212. COMMERCIAL EDUCATION IN SECONDARY SCHOOLS—First half quarter. Two hours.
213. COMMERCIAL EDUCATION CURRICULA—Second half quarter. Two hours.
223. RESEARCH IN COMMERCIAL EDUCATION—Full quarter. Three 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 COMMERCIAL EDUCATION—Full quarter. Three hours.
225. RESEARCH IN COMMERCIAL EDUCATION—Full quarter. Three hours.

EDUCATION

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

I. COURSES PRIMARILY FOR JUNIOR COLLEGE STUDENTS

1. INTRODUCTION TO EDUCATION—Full quarter. Four hours.
Required of all first year students.
- 2a. PRE-TEACHING OBSERVATION—Full quarter. One hour.
- 2b. STUDENT TEACHING IN THE ELEMENTARY AND JUNIOR HIGH SCHOOL—Full quarter. Hours according to schedule.
- 3a. PRIMARY METHODS—READING, LANGUAGE, AND SPELLING—Either half or full quarter. One and a half or three hours.
- 3b. PRIMARY METHODS—ARITHMETIC, SOCIAL SCIENCE, AND HEALTH—Either half or full quarter. One and a half or three hours.
- 3c. PRIMARY METHODS—LITERATURE AND THEORY OF GAMES FOR KINDERGARTEN-PRIMARY GRADES—Either half or full quarter. One and a half or three hours.
- 4a. INTERMEDIATE GRADE METHODS—READING, LANGUAGE, AND SPELLING—Either half or full quarter. Two or four hours.
- 4b. INTERMEDIATE GRADE METHODS—ARITHMETIC, SOCIAL SCIENCE, AND HEALTH—Either half or full quarter. Two or four hours.
5. PRINCIPLES OF TEACHING—Not given summer 1929.
10. AN INTRODUCTION TO CURRICULUM MAKING, FORMERLY THE ELEMENTARY SCHOOL CURRICULUM—Full quarter. Three hours.
Prerequisites, Ed. 1 and Sophomore standing.
15. EDUCATIONAL GUIDANCE—Full quarter. Three hours.
16. ELEMENTARY TRAINING COURSE FOR CAMP FIRE GIRLS LEADERSHIP—Either half quarter. One hour.
- 16a. ADVANCED TRAINING COURSE FOR CAMP FIRE GIRLS LEADERSHIP—Either half quarter. One hour.

- 17. BOY SCOUT WORK—First half quarter. One hour.
- 20. AGRICULTURAL EDUCATION—Either half or full quarter. Two or four hours.
- 21. RURAL SCHOOL PROBLEMS—Either half quarter. Three hours.
- 23. RURAL SCHOOL MANAGEMENT AND METHODS—Either half or full quarter. Two or four hours.
- 24. THE RURAL COMMUNITY—Second half quarter. Two hours.
- 28. SCHOOL AND HOME GARDENS—First half quarter. Two hours.
- 52. KINDERGARTEN MATERIALS—Either half or full quarter. One and a half or three hours.

II. COURSES PRIMARILY FOR SENIOR COLLEGE STUDENTS

100a. PROBLEMS OF EDUCATION—Either half or full quarter. One or two credit hours each half. (Fifteen or more lecturers.)

A course dealing with major fields of knowledge, emphasizing recent developments in theory and practice.

100d. UNIT COURSES IN CREATIVE EDUCATION—One credit hour.

Unit 6—Appraisal of Creative Education—will be given by Dr. Harold Rugg, Teachers College, Columbia University. Dr. Rugg will cover phases of his recent book, *The Child-centered School*, in this unit, June 17-27 inclusive.

100e. UNIT COURSES IN EDUCATION—County Superintendents, June 17 to 27, inclusive. Each course for two weeks. Each carries one hour's credit. Any one or more may be taken.

The following units will be given this summer: Unit 11—Educational Finance; Unit 12—Supervision; Unit 13—School Law and Legal Aspects.

100f. UNIT COURSES IN EDUCATION—Parent-Teacher Activities. Each one credit hour.

Unit 1 will cover the more elementary, descriptive phases of this movement. Unit 2 will cover the organizing principles and essential administration of the movement. Both courses will cover between July 22 and August 1.

101. PRINCIPLES OF HIGH SCHOOL TEACHING—Full quarter. Four hours.

102. ADVANCED STUDENT TEACHING IN THE ELEMENTARY TRAINING SCHOOL—Full quarter. Five hours.

102a. STUDENT SUPERVISION IN THE ELEMENTARY TRAINING SCHOOL—Full quarter. Five hours.

103. STUDENT TEACHING IN THE SECONDARY TRAINING SCHOOL—Full quarter. Five hours.

104. THE PROJECT METHOD OF TEACHING—Not given, summer, 1929.

105. PRACTICAL PROJECTS IN THE PRIMARY GRADES—Second half quarter. Two hours.

106. ELEMENTARY TYPES OF TEACHING—Not given summer, 1929.

(Those students who may have been required to take Ed. 106 may take Ed. 105, Ed. 107, or Ed. 108 as a substitute.)

107. METHODS OF IMPROVING READING AND STUDY HABITS OF ELEMENTARY SCHOOL CHILDREN—Either half or full quarter. Two or four hours.

108. EDUCATIONAL SUPERVISION—Either half or full quarter. Two or four hours.

First half—Supervision of Skill Subjects; Second half—Supervision of Content Subjects.)

109. SUPERVISED STUDY—Not given, summer, 1929.

110. EXTRA-CURRICULAR ACTIVITIES—Second half quarter. Two hours.

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

111. PHILOSOPHY OF EDUCATION—Full quarter. Four hours. Required fourth year.

113. ORGANIZATION AND ADMINISTRATION OF THE JUNIOR HIGH SCHOOL—Full quarter. Four hours.

(Primarily for Junior High School majors. Senior college and graduate students take Ed. 215.)

114. PRIMARY SUPERVISION—Either half or full quarter. Two or four hours.

115. ORGANIZATION AND ADMINISTRATION OF THE ELEMENTARY SCHOOL—Either half or full quarter. Two or four hours.

116. ORGANIZATION AND ADMINISTRATION OF THE SENIOR HIGH SCHOOL—Full quarter. Four hours.

117. PROBLEMS OF SCHOOL DISCIPLINE—First half. Two hours.

This course will consider recent investigation of actual concrete situations in which discipline is involved and suggested principles for promoting good discipline in the school.

118. PROBLEMS OF CHARACTER AND MORAL EDUCATION—Second half. Two hours.

This course is planned to give the teacher a practical method of attacking the problem in the classroom. Approval of the present program will be made, investigations in the field canvassed and specific techniques discussed.

123. EDUCATIONAL RESEARCH COURSE—Either half or full quarter. Two or four hours.

Arrange for this course with the head of the department. Qualified senior college students may register in this course only with the approval of the head of the department.

125. RURAL EDUCATION, FORMERLY Ed. 25—Either half or full quarter. Two or four hours.

127. SPECIAL RURAL SCHOOL METHODS—Second half quarter. Two hours.

128. COUNTY ADMINISTRATION—Second half quarter. Two hours.

129. CURRENT EDUCATIONAL THOUGHT, FORMERLY Ed. 229.—Either half or full quarter. Two or four hours.

130. VISUAL EDUCATION—First half quarter. Two hours.

133. HISTORY OF EDUCATION WITH SPECIAL REFERENCE TO MODERN TIMES—Not given, summer, 1929.

134. HISTORY OF EDUCATION IN THE UNITED STATES—Full quarter. Three hours.

140. GUIDANCE PROBLEMS OF DEANS OF GIRLS—First half quarter. Two hours.

141. ADMINISTRATION FOR TEACHERS—Not given, summer, 1929.

142. SCHOOL ADMINISTRATION—Either half or full quarter. Two or four hours.

143. SCHOOL ADMINISTRATION—Either half or full quarter. Two or four hours. (Replaces Ed. 112 and Ed. 120.)

144. SCHOOL PUBLICITY—First half quarter. Two hours.

147. EDUCATIONAL SURVEYS—First half quarter. Two hours.

148. PROBLEMS OF INDIVIDUAL INSTRUCTION—Not given, summer, 1929.

150. FOUNDATIONS OF METHOD—Either half or full quarter. Two or four hours.

151. THE PRE-SCHOOL—Either half or full quarter. Two or four hours.

152. THE CHILD AND HIS SCHOOL—Not given, summer, 1929.

154. RECENT INVESTIGATIONS IN ELEMENTARY EDUCATION—Not given, summer, 1929.

155. RECENT INVESTIGATIONS IN KINDERGARTEN EDUCATION—First half. Two hours.

168. PROBLEMS OF RELIGIOUS EDUCATION—Either half or full quarter. Two or four hours.

190. THE ADMINISTRATION OF NORMAL SCHOOLS AND TEACHERS COLLEGES—First half quarter. Two hours.

192. TRAINING SCHOOL PROBLEMS IN THE PROFESSIONAL EDUCATION OF TEACHERS—Second half quarter. Two hours.

194. THE JUNIOR COLLEGE—Second half quarter. Two hours.

III. COURSES FOR GRADUATE STUDENTS AND FOR QUALIFIED SENIOR COLLEGE STUDENTS WITH THE CONSENT OF THE INSTRUCTOR. (JUNIOR COLLEGE STUDENTS MAY NOT REGISTER FOR THESE COURSES.)

210. PROBLEMS OF THE CURRICULUM—First half quarter. Three hours.

211. CONCEPTIONS OF MIND IN EDUCATIONAL THEORY—Either half or full quarter. Two or four hours.

215. PROBLEMS OF THE JUNIOR HIGH SCHOOL WITH SPECIAL REFERENCE TO THE CURRICULUM—Either half or full quarter. Two or four hours.

(Given in successive summers as Ed. 213, 214, and 215. Students may earn up to 12 hours.)

217. PROBLEMS OF SECONDARY EDUCATION—Either half or full quarter. Two or four hours.

(Given in successive summers as Ed. 216, 217, and 218. Students may earn up to 12 hours.)

223. RESEARCH IN EDUCATION—Full quarter. Three hours.

Graduate students in their first quarter and candidates for the Master of Arts degree are required to take this course. In subsequent quarters such students register in the research courses in their major department. In Education these courses are Ed. 224 and Ed. 225.

224. RESEARCH IN EDUCATION—Full quarter. Three hours.

This is the thesis course for graduate students in their second quarter.

225. RESEARCH IN EDUCATION—Full quarter. Three hours.

This is the thesis course for graduate students in their third quarter.

230. HISTORY OF PHILOSOPHY—First half. Two hours.

240. WOMEN IN ADMINISTRATION—Not given, summer, 1929.

243. PROBLEMS IN EDUCATIONAL ADMINISTRATION—Either half or full quarter. Two or four hours.

(Given in successive summers as Ed. 242, 243, and 244. Students may earn up to 12 hours.)

258. PROBLEMS OF ELEMENTARY EDUCATION (SPELLING, READING, AND LITERATURE)—Either half or full quarter. Two or four hours.

259. PROBLEMS OF ELEMENTARY EDUCATION (SOCIAL SCIENCE, PROBLEM METHOD, SOCIALIZED RECITATION)—Either half or full quarter. Two or four hours.

260. PROBLEMS OF ELEMENTARY EDUCATION (HANDWRITING, COMPOSITION, ARITHMETIC)—Either half or full quarter. Two or four hours.

EDUCATIONAL PSYCHOLOGY

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

2. EDUCATIONAL PSYCHOLOGY:

a. Second year. Five hours recitation. Either half quarter. Three hours.

Required of all students.

b. Second year. Five hours recitation. Either half quarter. Three hours.

Required of all students.

3. CHILD DEVELOPMENT—Second year. Full quarter. Four hours.

This course is planned to meet the needs of those who are interested in the physical and mental development of the elementary school child.

100. UNIT COURSES IN EDUCATIONAL PSYCHOLOGY—One hour credit for each course. Summer quarter. Units "a" and "b" are offered the first half quarter and units "c" and "d" the second half quarter.

Each of these courses will extend over a period of nine days, Monday to Friday the first week and Monday to Thursday the second week. All of the unit courses will deal with some phase of child nature. A student may take from one to all of these courses.

Unit "a" is a course in mental hygiene and will be given by Dr. F. G. Ebaugh, Psychopathic Hospital of Denver, Colo. The topics of this course are: Contributions of mental hygiene to the success of the parent and teacher; the emotional needs of the child and their significance; discussion of case studies of emotional needs; some phases of problem behavior; negativism in the child; the causes of day dreaming and phantasy; disorders of behavior; mental hygiene for schools and college. First half quarter. One hour.

Unit "b" deals with certain aspects of nature and nurture. The course will be offered by Dr. J. D. Heilman of Colorado State Teachers College.

The purpose of the course is to present to the student the results of some of the recent investigations on the effect of certain environmental factors upon intelligence and the effect of intelligence upon achievement.

Some of the topics are: the effect of intelligence upon achievement; the effect upon intelligence of early training, similar home conditions, improved home conditions, Siamese twins, physical conditions, adolescence and specialized training. First half quarter. One hour.

Units "c" and "d" are courses in abilities, talents and defects. Both of them will be given by Dr. Lightner Witmer, head of the Department of Psychology of the University of Pennsylvania. The topics of unit "c" are: The differentiation of efficiency and intelligence, motivation and control, mentality and intellect, trainability, educability and surpassance. Second half quarter. One hour.

The topics of unit "d" are: The anagenic treatment of human abilities, talents, deficiencies and defects. Second half quarter. One hour.

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

Purposes: This course is designed to meet the needs of those who are interested in secondary school work, either as teachers, administrators or advisers of boys and girls. The course serves the same purpose for the adolescent level that Course three does for the earlier levels of childhood. See Course Three.

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 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—Third year. Either half or full quarter. Two or four hours.

Required of students who teach or supervise elementary or junior high school work.

105. PSYCHOLOGY OF SENIOR HIGH SCHOOL SUBJECTS—Third year. Either half or full quarter. Two or four hours.

Required of senior high school teachers and principals.

107. MENTAL TESTS AND MEASUREMENTS—Full quarter. Four hours.

Required of all Education majors.

108a. EDUCATIONAL TESTS AND MEASUREMENTS—Fourth year. Either half or full quarter. Two or four hours.

Required of students who are preparing to teach or supervise elementary or junior high school work.

108b. EDUCATIONAL TESTS AND MEASUREMENTS—Fourth year. Either half or full quarter. Two or four hours.

109a. CLINICAL PSYCHOLOGY—Third or fourth year. Second half quarter. Two or four hours.

Part I. A demonstration with children of methods of testing and results.

Part II. A demonstration with children of the diagnostic educational treatment.

116. PSYCHOLOGY OF COMMERCIAL SUBJECTS—Third and fourth years. Either half or full quarter. Two or four hours.

Required of all commercial majors preparing to teach in the senior high school.

118. GRAPHIC METHODS OF PRESENTING FACTS—First half. Two hours.

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

212. PSYCHOLOGICAL AND STATISTICAL METHODS APPLIED TO EDUCATION—Full quarter. Four hours.

222. EXPERIMENTAL TECHNIC AND ITS APPLICATION—Full quarter. Four hours.

223. RESEARCH IN EDUCATIONAL PSYCHOLOGY—Full quarter. Three 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—THESIS—Full quarter. Three hours. Taken in the second quarter of graduate work.

225. RESEARCH IN EDUCATIONAL PSYCHOLOGY—THESIS—Full quarter. Three hours. Taken in the third quarter of graduate work.

ENGLISH AND LITERATURE

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

O. FUNDAMENTALS IN ENGLISH—Either half quarter.

No college credit. Required of all whose scores on a standardized English test place them in the lower half of entering college freshmen.

1. CHILDREN'S LITERATURE—Intermediate Grades. Full quarter. Four hours.

Required of Intermediate 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 of preference.

2. CHILDREN'S LITERATURE—(NEW)—Junior High School. Full quarter. Four hours.

Required 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.

2. THE TEACHING OF WRITTEN ENGLISH IN JUNIOR HIGH SCHOOL (OLD)—Full quarter. Three hours.

4. SPEAKING AND WRITING ENGLISH—Either half or full quarter. Three hours.

Required of all students unless they pass the English Exemption Test.

6. AMERICAN LITERATURE—Full quarter. Four hours.

9. A SURVEY OF ENGLISH LITERATURE—1625-1798—Full quarter. Four hours.

11. THE ENGLISH LANGUAGE FOR TEACHERS—Full quarter. Four hours.

12. ORAL EXPRESSION—Either half. Three hours.
13. THE ART OF STORY TELLING—Either half quarter. Three hours.
14. DRAMATIC ART—Prerequisite Eng. 12. Full quarter. Four hours.
15. TYPES OF LITERATURE—Full quarter. Three hours.
16. TYPES OF CONTEMPORARY LITERATURE—Full quarter. Four hours.
20. ADVANCED COMPOSITION—Full quarter. Four hours.
102. JOURNALISM—Full quarter. Three hours.
105. ORAL ENGLISH IN THE HIGH SCHOOL—Second half quarter. Two hours.
107. COMPARATIVE LITERATURE—Greek and Latin. Full quarter. Four hours.
112. THE CHILDREN'S THEATER—First half quarter. Two hours.
114. PLAY PRODUCTION—Full quarter. Four hours.
122. VICTORIAN POETRY—Full quarter. Four hours.
126. NINETEENTH CENTURY PROSE—Full quarter. Four hours.
128. SHAKESPEARE'S HISTORICAL PLAYS—Full quarter. Four hours.
130. ELIZABETHAN DRAMA EXCLUSIVE OF SHAKESPEARE—Full quarter. Four hours.
133. THE MODERN NOVEL—Full quarter. Four hours.
160. OLD TESTAMENT LITERATURE—Full quarter. Three hours.

The three courses that follow are to be given by Professor Allan Abbott of Teachers College, Columbia University.

106. THE TEACHING OF COMPOSITION AND LITERATURE IN THE SENIOR HIGH SCHOOL—Either half or full quarter. Two or four hours.

124. POETRY FOR TEACHERS—Either half or full quarter. Two or four hours.

224. PROBLEMS IN RESEARCH IN ENGLISH AND LITERATURE—Full quarter. Four hours.

A seminar meeting Tuesdays and Thursdays for a two-hour period. A graduate course mainly for students working on master's thesis, but may be elected by any senior or graduate student interested.

FOREIGN LANGUAGES

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

The department will conduct a French and Spanish table each evening at dinner for those interested in conversation outside of class.

FRENCH

1, 2, 3. ELEMENTARY FRENCH—Full quarter. Twelve hours.

This class meets twice daily five days a week, and covers the entire first year of College French.

5. INTERMEDIATE FRENCH—Full quarter. Four hours.

This course covers the first quarter of second year College French, and includes a grammar review and some reading. The second and third quarters may be taken by correspondence.

SPANISH

1, 2, 3. ELEMENTARY SPANISH—Full quarter. Twelve hours.

This class meets twice daily five days a week, and covers the entire first year of College Spanish.

5. INTERMEDIATE SPANISH—Full quarter. Four hours.

This course covers the first quarter of second year College Spanish, and includes a grammar review and some reading. The second and third quarters are offered by correspondence.

105. ADVANCED SPANISH—Full quarter. Four hours.

Covers the first quarter of third year College Spanish. The second and third quarters may be taken by correspondence.

GERMAN

1. ELEMENTARY GERMAN—Full quarter. Four hours.

The first quarter of beginning German is covered in this course. Since particular emphasis will be laid on learning to read, the course is especially recommended to candidates for the degree of Doctor, of Philosophy. The second and third quarters are offered by correspondence.

FOREIGN LANGUAGE

110. ITALIAN—Full quarter. Two hours.

Beginning course especially designed for music students, but open to others.

131. TEACHING OF MODERN LANGUAGES—Full quarter. Four hours.

223. RESEARCH IN FOREIGN LANGUAGES—Full quarter. Three hours.

Required seminar course for graduate students who are working on their masters' investigations.

GEOLOGY, PHYSIOGRAPHY AND GEOGRAPHY

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

5. GEOGRAPHY OF THE NEW EUROPE—Full quarter. Four hours.

12. METHODS IN INTERMEDIATE GEOGRAPHY—Full quarter. Four hours.

15. METHODS AND MATERIALS OF JUNIOR HIGH GEOGRAPHY—Full quarter. Four hours.

52. GEOGRAPHY OF SOUTH AMERICA—Full quarter. Four hours.

100. GEOLOGY—Full quarter. Four hours.

150. GEOGRAPHY OF COLORADO—Full quarter. Four hours.

223. RESEARCH IN GEOGRAPHY—Full quarter. Three hours.

(Taken in 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.

HISTORY AND POLITICAL SCIENCE

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

For a full statement of the requirements in this department and for a detailed statement of courses see the Yearbook.

1. FOUNDATIONS OF AMERICAN NATIONALITY—Full quarter. Four hours.

2. DEVELOPMENT OF AMERICAN NATIONALITY—Full quarter. Four hours.

6. MODERN EUROPE—Full quarter. Four hours.

10. SOCIAL AND INDUSTRIAL HISTORY OF THE UNITED STATES—Full quarter. Four hours.

13. TEACHING OF HISTORY AND CIVICS IN THE ELEMENTARY SCHOOL—First half quarter. Three hours.

27. CONTEMPORARY WORLD HISTORY—Either half or full quarter. Two or four hours.

102. ANCIENT SOCIAL HISTORY, GREECE AND THE ORIENT—Either half or full quarter. Two or four hours.

202. ANCIENT SOCIAL HISTORY. ROME AND HER COLONIES—Full quarter. Four hours.

The two courses listed immediately above cover in an expanded way the material scheduled for History 102 in the Yearbook. There have been marked contributions to our knowledge of the ancient world in recent years. Many new discoveries have been made. There is a marked revival of interest in ancient history. To meet this need ancient history is given prominent treatment in this session. These courses will be given by one of the outstanding younger university men in the field of ancient history who will be on the campus for the full session.

209. SLAVERY, SECESSION, CIVIL WAR AND RECONSTRUCTION, 1850-1870—Either half or full quarter. Two or four hours.

224. RESEARCH IN HISTORY—Full quarter. Three hours.

225. RESEARCH IN HISTORY—Full quarter. Three hours.

POLITICAL SCIENCE

1. GOVERNMENT OF THE UNITED STATES—Full quarter. Four hours.

203. POLITICAL SCIENCE THEORIES—Full quarter. Four hours.

HOME ECONOMICS

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

Students majoring in the department are advised to take the full quarter's work. Majors from other departments are cordially welcomed into many of our courses.

HOUSEHOLD SCIENCES

1. FOODS AND COOKERY—Full quarter. Four hours. Fee \$3.00.

This is the first of three consecutive courses in foods required of all majors in home economics. The relation of foods to health is the keynote of the course.

5. FOODS AND COOKERY FOR HOMEMAKERS—First half or full quarter. Two or four hours.

A course similar to H. Sc. 3 described in Year Book.

7a. HOUSEHOLD MANAGEMENT—Either half quarter. Two hours.

7b. PRACTICAL COURSE—Residence in Practice Cottage. Two hours.

To be arranged at registration. Required of all majors who have finished 1, 2, and 7a.

103. DIETETICS—Full quarter. Four hours. Fee \$3.00.

105. CHILD CARE—Full quarter. Four hours.

106. HOME CARE OF THE SICK—Full quarter. Four hours. Fee \$1.00.

200. SEMINAR—Full quarter.

HOUSEHOLD ARTS

3. GARMENT MAKING—Full quarter. Four hours.

4. MILLINERY—Either half or full quarter. Two or four hours.

5. PATTERN DESIGNING—First half or full quarter. Two or four hours.

6. ELEMENTARY DRESSMAKING—Full quarter. Four hours.

Prerequisite H. A. 3.

- 10. DRESS APPRECIATION—Full quarter. Four hours.
- 108. COSTUME DESIGN—Full quarter. Four hours. Fee 50 cents.
- 112. HOME DECORATION—Full quarter. Four hours.
- HOME ECONOMICS EDUCATION 111—Full quarter. Four hours.
- 223. RESEARCH IN HOME ECONOMICS—Full quarter. Three hours.
- 224. RESEARCH IN HOME ECONOMICS—Full quarter. Three hours.

INDUSTRIAL ARTS

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

- 1. TECHNIC AND THEORY OF WOODWORKING 1—Either half or full quarter. Two or four hours. Fee \$1.00 or \$2.00.
- 2. TECHNIC AND THEORY OF WOODWORKING 2—Either half or full quarter. Two or four hours. Fee \$1.00 or \$2.00.
- 5. PRINCIPLES OF TEACHING PRACTICAL ARTS SUBJECTS—Either half or full quarter. One and one-half or three hours.
- 8a. ART METAL—Either half or full quarter. Two or four hours. Fee \$1.00 or \$2.00.
- 13. PRINCIPLES OF ARCHITECTURAL DRAWING II—Either half or full quarter. Two or four hours. Fee \$1.00.
- 19. WOODTURNING—Full quarter. Four hours. Fee \$2.00.
- 31a. ELEMENTARY PRINTING—Either half or full quarter. Two or four hours.
- 31b. ELEMENTARY PRINTING—Either half or full quarter. Two or four hours.
- On request.
- 32a. INTERMEDIATE PRINTING—Either half or full quarter. Two or four hours.
- 32b. INTERMEDIATE PRINTING—Either half or full quarter. Two or four hours.
- Given on request.
- 41b. ELEMENTARY BOOKBINDING—Either half or full quarter. Two or four hours. Fee \$1.00.
- 41c. ELEMENTARY BOOKBINDING—Either half or full quarter. Two or four hours. Fee \$1.00.
- 42b. INTERMEDIATE BOOKBINDING—Either half or full quarter. Two or four hours. Fee \$1.00.
- 42c. INTERMEDIATE BOOKBINDING—Either half or full quarter. Two or four hours. Fee \$1.00.
- 100. WOODSHOP PROBLEMS—Full quarter. Four hours.
- On request.
- 105. ADVANCED ARCHITECTURAL DRAWING—Full quarter. Four hours. Fee \$1.00.
- On request.
- 109a. ART METAL—Either half or full quarter. Two or four hours. Fee \$1.00 or \$2.00.
- 118. ELEMENTS OF MACHINE DESIGN II—Either half or full quarter. Two or four hours. Fee \$1.00.
- 119. MEDIEVAL AND MODERN ARCHITECTURE—Full quarter. One hour.

125. CLASS MANAGEMENT—On request. Full quarter. Four hours.
- 133a. ADVANCED PRINTING—Either half or full quarter. Two or four hours.
- 133b. ADVANCED PRINTING—Either half or full quarter. Two or four hours.
136. SHOP MANAGEMENT IN PRINTING—Full quarter. Two hours. On request.
- 143a. ADVANCED ART BINDING AND LEATHER CRAFT—Either half or full quarter. Two or four hours. Fee \$1.00.
- 143b. ADVANCED LEATHER CRAFT AND COMMERCIAL BINDING—Either half or full quarter. Two or four hours. Fee \$1.00.
- 143c. ADVANCED LEATHER CRAFT AND BLANK BOOK AND LOOSE LEAF BINDING—Extra Bound in Full Leather. Either half or full quarter. Two or four hours. Fee \$1.00.
144. SHOP MANAGEMENT IN BOOKBINDING—Full quarter. Two hours. On request.
145. SECRETARIAL SCIENCE IN SHOP ACCOUNTING—Four hours. On request.
201. SEMINAR—On request. Two or four hours. Hours by arrangement.

LIBRARY SCIENCE

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

106. CHILDREN'S LITERATURE AND JUVENILE LIBRARY SERVICE—Full quarter. Four hours.

MATHEMATICS

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

5. COLLEGE ALGEBRA—Either half or full quarter. Two or four hours.
7. PLANE TRIGONOMETRY—Either half or full quarter. Two or four hours.
9. ANALYTIC GEOMETRY—Either half or full quarter. Two or four hours.
101. DIFFERENTIAL CALCULUS—Either half or full quarter. Two or four hours.
102. INTEGRAL CALCULUS—Either half or full quarter. Two or four hours.
104. THE TEACHING OF ARITHMETIC—Either half or full quarter. Two or four hours.

This course takes up a discussion of the recent tendencies in the teaching of arithmetic. It attempts to give those things which will actually help the teacher in presenting arithmetic in the classroom.

107. JUNIOR HIGH SCHOOL MATHEMATICS—Either half or full quarter. Two or four hours.

The formation of the Junior High School has given rise to a great deal of discussion as to just what sort of mathematics should be taught in the seventh and eighth grades, in particular, and just what methods should be used. This course is given over to a study of these questions from the standpoint of the practical teacher.

109. THE TEACHING OF ALGEBRA—Either half or full quarter. Two or four hours.

200. ADVANCED CALCULUS—Either half or full quarter. Two or four hours.

223. RESEARCH IN MATHEMATICS—Full quarter. Three 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.

MUSIC

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1a. RUDIMENTS AND METHODS—Five periods. Three hours.

Kindergarten and Primary first half—Intermediate second half.

1b. SIGHT SINGING—Five periods. First half quarter. Three hours.

1c. ADVANCED SIGHT SINGING—Five periods. Second half quarter. Three hours.

Prerequisite Music 1b.

2. TONE THINKING AND MELODY WRITING—Five periods. Second half quarter. Three hours.

Introductory course to beginning harmony.

3. HARMONY—Five periods. First half quarter. Three hours.

Prerequisite Music 2.

4. HARMONY—Five periods. Second half quarter. Three hours.

Continuation of Music 3. Prerequisite, Music 3.

10. KINDERGARTEN-PRIMARY METHODS—Five periods. First half quarter. Three hours.

Required. Music Majors only. Prerequisites Music 1b, 1c.

11. INTERMEDIATE METHODS—Five periods. Second half quarter. Three hours.

Prerequisites. Music 1b, 1c, 10. Required. Music Majors only.

20. HISTORY OF ANCIENT AND MEDIEVAL MUSIC—Five periods. First half quarter. Three hours.

21. MODERN HISTORY—Five periods. Second half quarter. Three hours.

Prerequisite, Music 20.

22. MUSIC APPRECIATION—Five periods. First half quarter. Three hours.

23. MUSICAL LITERATURE—Five periods. Second half quarter. Three hours.

30. INDIVIDUAL VOCAL LESSONS—One-half period. Full quarter. One hour.

31. INDIVIDUAL PIANO LESSONS—One-half period. Full quarter. One hour.

32. INDIVIDUAL VIOLIN LESSONS—One-half period. Full quarter. One hour.

33. INDIVIDUAL PIPE ORGAN LESSONS—One-half period. Full quarter. One hour.

34. CLASS PIANO METHODS—Either half quarter. One hour.

35. INDIVIDUAL LESSONS FOR BRASS AND REED INSTRUMENTS—One-half period. Full quarter. One hour.

36. INDIVIDUAL CELLO LESSONS—One-half period. Full quarter. One hour.

40. BEGINNING ORCHESTRA—One period. Full quarter. One hour.
43. ADVANCED ORCHESTRA—Full quarter. One hour.
44. ADVANCED BAND—Full quarter. One hour.
45. ORCHESTRAL INSTRUMENTS—Full quarter. One hour.
101. COLLEGE CHORUS—Full quarter. One hour.
103. BEGINNING COUNTERPOINT—First half quarter. Three hours.
105. BEGINNING ORCHESTRATION—First half quarter. Three hours.
106. ADVANCED ORCHESTRATION—Second half quarter. Three hours.
110. SUPERVISOR'S COURSE—Five periods. Second half quarter. Three hours.
- Prerequisites, Music 1b, 1c, 2, 10, 11.
111. CONDUCTING (by assignment)—Four periods. Full quarter. Two hours.
114. METHODS IN CONDUCTING—First half quarter. Two hours.
122. MUSIC APPRECIATION—(For the Concertgoer.)—First half quarter. One hour.
130. INDIVIDUAL VOCAL LESSONS AND METHODS—One-half period. Full quarter. One hour.
131. INDIVIDUAL PIANO LESSONS AND METHODS—One-half period. Full quarter. One hour.
132. INDIVIDUAL VIOLIN LESSONS AND METHODS—One-half period. Full quarter. One hour.
133. INDIVIDUAL PIPE ORGAN LESSONS AND METHODS—One-half period. Full quarter. One hour.
134. INDIVIDUAL CELLO LESSONS AND METHODS—Every quarter. One hour. Fee \$24.00.

223. RESEARCH IN MUSIC—Full quarter. Three 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.

NURSING EDUCATION

(For detailed description of courses see year book)

Candidates for graduation should not take a required course for a half credit.

102. ADMINISTRATION IN SCHOOLS OF NURSING—Second half quarter. Three hours.

A study of the principles on which successful administration is based and their application to the problems of the several groups carrying administrative responsibilities in Hospitals and Schools of Nursing.

103. THE CURRICULUM FOR SCHOOLS OF NURSING—Second half quarter. Three hours.

A study of the curriculum published by the National League of Nursing Education, the principles on which it is based and its use in Schools of Nursing. Planned for Principals, Instructors, Supervisors and Head Nurses in Schools of Nursing.

PHYSICAL EDUCATION AND ATHLETICS FOR WOMEN

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

The courses offered during the summer are for those students majoring in this department. However, we offer a few general courses for those who wish an activity class during this quarter.

A deposit will be charged for all locker keys.

COURSES OFFERED TO THE GENERAL STUDENT

H. Ed. 1a.—PERSONAL HYGIENE FOR WOMEN—DAILY. Either half quarter. Three hours.

1. CLOG AND ATHLETIC DANCING—Three periods. Either half or full quarter. One-half or one hour.

2. NATURAL DANCING—Three periods. First half or full quarter. One-half or one hour.

Two quarters of dancing a prerequisite to this course.

5. BEGINNING FOLK DANCING—Three periods. Either half or full quarter. One-half or one hour.

6. ADVANCED FOLK DANCING—Three periods. Either half or full quarter.

One-half or one hour P. E. 5 or its equivalent a prerequisite.

11. PLAYS AND GAMES—Three periods. Either half or full quarter. One-half or one hour.

13. TENNIS—Three periods. Either half or full quarter. One-half or one hour.

15. BASEBALL—Three periods. First half quarter. One-half hour.

16. HOCKEY—Three periods. Second half quarter. One-half hour.

18. TRACK—Three periods. Either half or full quarter. One-half or one hour.

26. BEGINNING SWIMMING—Four periods. Either half quarter. One hour.

27. INTERMEDIATE SWIMMING—Four periods. Either half quarter. One hour.

31. DANISH GYMNASTICS AND APPARATUS—Four periods. First half quarter. One hour.

32. DANISH GYMNASTICS AND APPARATUS—Four periods. Second half quarter. One hour.

This course is primarily for majors but is open to general students desiring the work.

COURSES PRIMARILY FOR MAJORS

107. NATIONAL AND CHARACTERISTIC DANCING FOR MAJORS—Four periods. Either half or full quarter. One or two hours.

113. COACHING METHODS—Four periods. Either half or full quarter. One or two hours.

121. KINESIOLOGY—Three periods. Full quarter. Three hours.

132. THEORY OF INDIVIDUAL GYMNASTICS—Four periods. First half quarter. Two hours.

135. HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION—Four periods. Full quarter. Four hours.

136. SUPERVISION OF PHYSICAL EDUCATION—Daily. Full quarter. Five hours.

PHYSICS

(For detailed description of courses see year book)

Candidates for graduation should not take a required course for a half credit.

1. ELEMENTARY PHYSICS—THE FUNDAMENTAL NATURE OF ENERGY AND MATTER—Full quarter. Four hours. Fee \$3.00.

3. ELEMENTARY PHYSICS—THE UTILIZATION OF ENERGY—Full quarter. Four hours. Fee \$3.00.

10. HOUSEHOLD PHYSICS—Five periods. Second half quarter. Three hours.

103. THEORY OF RADIO RECEPTION—Four periods. First half quarter. Two hours.

104. THEORY OF RADIO TRANSMISSION—Four periods. Second half quarter. Two hours.

107. MODERN PHYSICS—Four periods. First half quarter. Two hours.

118. PHOTOGRAPHY—Four periods. Second half quarter. Two hours. (Follows Visual Education 130)

223. RESEARCH IN PHYSICS—Full quarter. Three hours. (Taken in the first quarter of graduate work)

224. RESEARCH IN PHYSICS—On request. Three hours.

SOCIOLOGY, ANTHROPOLOGY, AND ECONOMICS

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1. AN INTRODUCTION TO THE SOCIAL SCIENCES—Either half or full quarter. Two or four hours.

3. EDUCATIONAL SOCIOLOGY—Full quarter. Three hours.

18. RURAL SOCIOLOGY—Full quarter. Three hours.

34. CHILD WELFARE—Full quarter. Two hours.

92. THE FAMILY—Full quarter. Three hours.

101. THE ORIGIN AND ANTIQUITY OF MAN—Either half or full quarter. Two or four hours.

105. THE PRINCIPLES OF SOCIOLOGY—Full quarter. Four hours. Required of third year students.

110. PRINCIPLES OF ECONOMICS—Full quarter. Four hours.

122. COMPARATIVE RELIGION—First half or full quarter. Two or four hours.

This course comprises a study of the world's great religions.

125. SOCIAL PROBLEMS—Either half or full quarter. Two or four hours.

130. SOCIAL PSYCHOLOGY—Either half or full quarter. Two or four hours.

140. DEVELOPMENT OF SOCIAL THOUGHT—Full quarter. Two hours.

151. RACES AND RACE PROBLEMS—Either half or full quarter. Two or four hours.

This course will be based primarily on the studies and experiences of the instructor, Dr. I. W. Howerth, on his recent trip around the world, during which he came into intimate contact with all the leading races of mankind.

205. THE SOCIAL THEORY OF EDUCATION—Full quarter. Four hours. Doctrines of Education based upon Organic Psychic and Social Evolution. Text, Dr. Howerth's Theory of Education.

209. SEMINAR—Either half or full quarter. Two or four hours.

223. RESEARCH IN SOCIOLOGY—Full quarter. Three 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.

INSTRUCTIONS CONCERNING REGISTRATION

Note—Take this copy of the CATALOG with you when you register.

1. TIME AND PLACE FOR REGISTRATION—All registration takes place in Gunter Hall from 7:00 to 12:00 and from 1:00 to 4:00, Saturday, June 15.

2. ORDER OF REGISTRATION—Read page 2.

(a) Fill out the personal data card with pen and present it for registration material.

(b) Fill out the temporary enrollment card with pen and have it signed by your faculty adviser. The latter card will admit you to class until you have registered permanently. It must be signed by each of your teachers before permanent registration.

(c) Fill out status card.

The temporary card must be exchanged for permanent cards at the registrar's office. This exchange must be completed by 5:00 P. M. of the last day for permanent registration, June 27. Permanent cards, approved by the registrar, and marked "audited" by the treasurer, must be presented to your teachers not later than the date thus arranged. All students who have not complied with the provision on or before this date will be dropped from class. However, **DO NOT ATTEMPT THIS EXCHANGE UNTIL YOU AND YOUR TEACHERS ARE COMPLETELY SATISFIED WITH YOUR SCHEDULE.** Be sure to get a copy of further instructions to be given out on registration day.

3. STUDENT PROGRAM SIXTEEN HOURS—The normal program of a student is sixteen hours. Students whose outside work takes up a considerable part of their time should enroll for twelve to fifteen hours. Any student may make up a program of fifteen, sixteen, or seventeen hours; but if seventeen hours are taken in one quarter, fifteen must be taken at a later quarter, so that any three consecutive quarters *dating from the first quarter in residence* may not average more than sixteen hours. This rule applies during summer quarter. Those wishing to take seventeen or eighteen hours regularly must take the Classification Test,

given at 1:30 P. M. on registration day, Little Theater, Administration Building, unless a permit has been previously issued by the registrar. No schedules will be approved for more than eighteen hours under any condition.

4. LATE REGISTRATION—A fee of \$1.00 is charged for registration after 4:00 P. M. the regular day, June 15. This fee is also exacted of students who register after the final date for permanent registration. Students more than two days late will have their programs cut in proportion to the time they miss from recitations.

5. PHYSICAL EXAMINATIONS—A health examination is required of each student who is a candidate for graduation in the summer quarter.

6. ENGLISH 0 and 4 are required of all candidates for graduation, no matter what English courses they may have had elsewhere in high school or college, unless they are excused from taking English 0 or both after passing the English Exemption Test. This test is given at the opening of each quarter, time and place to be announced. Students who have been formally graduated from any accredited normal school or teachers college are exempt from all junior college core subjects, including English 0 and 4.

7. Students who have been admitted to the College before October 1, 1923, should determine to their satisfaction that such admission is in accordance with regulations which have been in effect since that date. Students should determine also if they are affected by the new requirements for graduation which went into effect September 1, 1924. See page 19, "Admission, certification, and graduation."

8. HALF QUARTER COURSES—Credit is not given for a full quarter course carried for only a half quarter. Tentative conditional credit may be given by special arrangement with the teacher of the course and the registrar.

9. Candidates for graduation should NOT take a required course for half credit.

FEES

Incidental fee, paid by all, \$32.00 per quarter; \$16.00 for the half quarter. Additional to non-residents of Colorado, \$5.00 for the full quarter; \$2.50 for the half quarter.

Library fee, paid by all, \$2.00.

Fees for less than a full program of sixteen hours:

1-2 quarter hours	\$ 5.00
3 quarter hours	7.50
4 quarter hours	10.00
5, 6, 7, 8 quarter hours	16.00
9 quarter hours (if taken during one half)	16.00
9 quarter hours (if taken during whole quarter)	20.00
10-11 quarter hours	25.00
12, 13, 14, 15, 16 quarter hours	32.00

Fees for Laboratory and Materials

Art

Art 1, 2, 7	\$0.50
Art 13, 14	* 1.50

*Fees are one-half the figures when courses are taken for half quarter.

Biology

Biology 1, 225	\$1.00
Biology 224	3.00
Botany 101, 225	1.00
Botany 103	1.50
Botany 224	3.00
Elementary Science 1, 2	1.00
General Science 1	1.50
Zoology 2, 3, 225	1.00
Zoology 224	3.00

Chemistry

Chemistry, per quarter hour	\$1.00
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Commercial

Commercial Ed. 11, 13, 16	1.00
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Home Economics

H. A. 4	\$2.50
H. A. 5, 10850
H. Sc. 1, 103	3.00
H. Sc. 106	1.00

Industrial Arts

Ind. Art 1, 2, 8a, 19, 109a	*\$2.00
Ind. Art 13, 105, 118	1.00
Bookbinding, all courses	1.00

Music

Music 30, 31, 32, 33, 34, 35, 36, 130, 131, 132, 133, and 134, individual lessons.
 Fees paid before taking lessons. For fees see Mr. Cline, Director of the Conservatory.

*Fees are one-half the figures when courses are taken for half quarter.

Nursing Education

Nursing Ed. 102, 103	\$3.50
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Physics

Phys. 1, 3, 103, 118	*\$3.00
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Physical Education

P. E. 26, 27 (per half quarter)	2.00
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SCHEDULE OF CLASSES (Summer Quarter, 1929)

KEY to room abbreviations: Ad—Administration Building; Con—Conservatory of Music; G—Guggenheim Hall; GH—Gunter Hall; HE—Home Economics; L—Library; T—Training School.

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
7:00-7:50						
Art 1	Fine Art Methods for Intermediate	TWThF	Full Quarter	4	Moore	G-204
Art 2	Fine Art Methods for Primary	MTThF	Full Quarter	4	Baker	G-200
Art 3	Freehand Drawing I	MTWTh	Full Quarter	4	Reitzel	G-203
Biol. 1	Educational Biology (2 hrs. lab. by appt.)	MTF	Full Quarter	3	Arvidson	Ad-301
Bot. 103	Plant Physiology (Lab. 2:00-4:00 Mon. & Wed.)	MTWTh	Full Quarter	4	Jean	Ad-304
El. Sci. 1	Elementary Nature Study (Field trips arr.)	TWThF	Full Quarter	4	Selberg	L-13
Zool. 3	Bird Study (Field trips arranged)	MTThF	Full Quarter	3	Harrah	Ad-300
Chem. 108	Organic Chemistry (Lab. by appt.)	MW	Full Quarter	3	Bowers	Ad-1
Chem. 110	Organic Chemistry (Lab. by appt.)	MW	Full Quarter	4	Bowers	Ad-1
Com. Ed. 11	Principles of Typewriting I	TWThF	Full Quarter	2	Knies	Ad-213
Com. Ed. 36	Handwriting Methods (Palmer)	TWThF	First Half	1	O'Hara	Ad-214
Com. Ed. 36	Handwriting Methods (Zaner)	TWThF	Second Half	1	Doull	Ad-214
Com. Ed. 138	Commercial Law	TWThF	First Half or Full Qr.	2 or 4	Bedinger	Ad-211
Ed. 1	Introduction to Education	MTWTh	Full Quarter	4	C. M. Frasier	
Ed. 3b	Primary Methods (Arith., soc., sci., health)	TThF	Ei. Half or Full Qr.	1½ or 3	Rosenquist	
Ed. 3c	Primary Methods (Literature and theory of games)	MTW	Ei. Half or Full Qr.	1½ or 3	Preston	
Ed. 52	Kindergarten Materials	TThF	Ei. Half or Full Qr.	1½ or 3	Harrison	
Ed. 110	Extra-Curricular Activities	MTWTh	Second Half	2	Rugg	
Ed. 110b	Citizenship Education—Intermediate Grades	MTThF	First Half	2	Lehr	
Ed. 114	Primary Supervision	TWThF	Ei. Half or Full Qr.	2 or 4	Turner	
Ed. 130	Visual Education	MTWTh	First Half	2	Valentine	
Ed. 134	History of Education in the U. S.	MTTh	Full Quarter	3	Mahan	
Ed. 210	Problems of the School Curriculum	Daily	First Half	3	Rugg	

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Ed. 224	Research—Thesis Course—2nd Qr. Grad.	Grad.				
	Students in Education	Arrange	Full Quarter	3	Rugg	
Ed. 225	Research—Thesis Course—3rd Qr. Grad.	Grad.				
	students in education	Arrange	Full Quarter	3	Rugg	
Eng. 4	Speaking and Writing	Daily	First Half Qr.	3	Allen	
Eng. 4	Speaking and Writing	Daily	Second Half Qr.	3	Allen	
Geog. 12	Methods in Intermediate Geography	MTWTh	Full Quarter	4	Blaine	GH-203
H. A. 4	Millinery (double period)	TWThF	Ei. Half or Full Qr.	2 or 4	Roudebush	HE-301
H. Sc. 7a	Household Management	MTWTh	Ei. Half Qr.	2	Newburn	HE-305
H. Sc. 103	Dietetics (double period)	MTWTh	Full Quarter	4	Pickett	207
History 6	Modern Europe	TWThF	Full Quarter	4	Zimmerman	104
History 209	Slavery, Secession, Civil War and Reconstruction	MTWTh	Ei. Half or Full Qr.	2 or 4	Dickerson	L-1
Ind. A. 1	Technic and Theory of Woodworking I. (Lab. by appt)	MTWTh	Ei. Half or Full Qr.	2 or 4	Foulk	G-1
Ind. A. 8a	Art Metal (Lab. by appt)	MTWTh	Ei. Half or Full Qr.	2 or 4	Hadden	G-101
Ind. A. 31a	Elementary Printing (Lab. by appt)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	HE-102
Ind. A. 32a	Intermediate Printing (Lab. by appt)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	HE-102
Ind. A. 41b	Elementary Bookbinding (Lab. by appt)	TWThF	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Ind. A. 42b	Intermediate Bookbinding (Lab. by appt)	TWThF	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Ind. A. 109a	Art Metal (Lab. by appt)	MTWTh	Ei. Half or Full Qr.	2 or 4	Hadden	G-101
Ind. A. 143a	Advanced Art Binding and Leather Craft (Lab. by appt)	TWThF	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Math. 104	The Teaching of Arithmetic	MTWTh	Ei. Half or Full Qr.	2 or 4	Finley	
Mus. 1a	Rudiments & Methods for Kind. and Prim. majors	Daily	First Half Qr.	3	Mohr	T-2
Mus. 110	Supervisors Course	Daily	Second Half Qr.	3	Mohr	T-2
P. E. 15	Baseball	TThF	First Half Qr.	½	Brooks	GH-114
P. E. 16	Hockey	TThF	Second Half Qr.	½	Brooks	GH-114
P. E. 13	Tennis	MTTh	Ei. Half or Full Qr.	½ or 1	Cave	GH-107
Phys. 118	Photography	MTWTh	Second Half Qr.	2	Valentine	
					& Ass'ts	HE-106
Psych. 2a	Educational Psychology	Daily	First Half	3	Denney	T-13
Psych. 2b	Educational Psychology	Daily	Second Half	3	Denney	T-13
Psych. 3	Child Development	MTWF	Full Quarter	4	Wait	Ad-204

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Gr. Hrs.	Teacher	Room
Psych. 212	Statistical Methods	MTWTh	Full Quarter	4	Heilman	T-12
Soc. 34	Child Welfare	TTh	Full Quarter	2	Waitt	Ad-208
Soc. 92	The Family	MWF	Full Quarter	3	Waitt	Ad-208
Soc. 140	Development of Social Thought	WTh	Full Quarter	2	Binnewies	
8:00-8:50						
Art 2	Fine Art Methods for Primary	MTThF	Full Quarter	4	Baker	G-200
Art 4a	Art Structure II	MWF	Full Quarter	3	Moore	
Art 4b	Design	MTWTh	First Half or Full Qr.	2 or 4	Reitzel	G-202
Art 7	Constructive Design	MTThF	Ei. Half or Full Qr.	2 or 4	Lowé	G-204
Art 101	Drawing from the figure	MTWTh	Full Quarter	4	Ellinger	G-203
Ath. 52	Mat Work & El. Tumbling	MTWTh	Either Half Qr.	1	Von den Steinen	Gym
Ath. 169	Baseball Coaching	Daily	First Half Qr.	2	Brown	Field
Biol. 1	Educational Biology (2 hrs. lab. by appt)	MTTh	Full Quarter	3	Harrah	Ad-301
Bot. 101	Systematic Botany (Lab. and field trips Tues. 2:00-5:00)	MTWTh	Full Quarter	4	Jean	Ad-304
Chem. 109	Organic Chemistry (Lab. by appt.)	MW	Full Quarter	3	Bowers	Ad-1
Chem. 111	Organic Chemistry (Lab. by appt.)	MW	Full Quarter	4	Bowers	Ad-1
Com. Ed. 1	Principles of Shorthand I	TWThF	Full Quarter	4	James	Ad-214
Com. Ed. 12	Principles of Typewriting II (Full quarter)	TWThF	Full Quarter	4	Knies	Ad-213
Com. Ed. 53	Salesmanship	MTWTh	First Half or Full Qr.	2 or 4	Bedinger	Ad-211
Ed. 3c	Primary Methods (Literature and Theory of Games)	MTW	Ei. Half or Full Qr.	1½ or 3	Preston	
Ed. 4a	Intermediate Methods (Read., Lang., Spell.)	MTWTh	Ei. Half or Full Qr.	2 or 4	McCowen	
Ed. 21	Rural School Problems.	Daily	Either Half	3	Ogle	
Ed. 105	Practical Projects in the Primary Grades	MTWTh	Second Half	2	Lyford	
Ed. 111	Philosophy of Education	MTWTh	Full Quarter	4	Mahan	
Ed. 116	Org. and Admin. of the Senior H. S.	MTWTh	Full Quarter	4	Prunty	
Ed. 123	Sen. College Educ. Research	MTWTh	Ei. Half or Full Qr.	2 or 4	Rugg	
Ed. 125	Rural Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Hargrove	
Ed. 155	Recent Investigations in Kindergarten	MTWTh	First Half	2	Lyford	
Ed. 224	Research—Thesis Course—2nd Qr. Grad. Students in Education	Arrange	Full Quarter	3	Rugg-Cornell	

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Ed. 225	Research—Thesis Course—3rd Qr. Grad. Students in Education	Arrange	Full Quarter	3	Rugg-Cornell	
Ed. 258	Problems of Elementary Education, (Spell., read., Lit.)	MTWTh	Ei. Half or Full Qr.	2 or 4	McKee-McBroom	
El. Sci. 1	Elementary Nature Study (Second period at 10:00 compulsory. Field trips arranged)	TWThF	Either Half Qr.	4		L-13
Eng. 1	Lit. for the El. School	MTThF	Full Quarter	4	Tobey	
Eng. 16	Contemporary Literature	MTThF	Full Quarter	4	Lindou	
Eng. 126	Nineteenth Century Prose	MTThF	Full Quarter	4	Allen	
Eng. 130	Elizabethan Drama	MTThF	Full Quarter	4	Hawes	
Fren. 1, 2, 3	Elementary French (Second recitation at 11:00 compulsory)	Daily	Full Quarter	12	Gibert	
Geog. 12	Methods in Intermediate Geography	MTWTh	Full Quarter	4	Blaine	GH-203
H. A. 3 (or)	Garment Making (double period)	MTThF	Full Quarter	4	Wiebking	HE304
H. A. 6	Elementary Dressmaking (double period)	MTThF	Full Quarter	4	Wiebking	HE304
History 1	Origins of American Nationality	TWThF	Full Quarter	4	Zimmerman	Ad-104
History 102	Ancient Social History—Greece and the Orient	MTWTh	Ei. Half or Full Qr.	2 or 4	Larsen	L-1
History 224	Research	F		3	Dickerson	Ad-104
Ind. A. 133a	Advanced Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	HE-102
Ital. 110	Italian (Course especially for music majors)	WF	Full Quarter	2	Mulroney	
Math. 101	Differential Calculus	MTWTh	Ei. Half or Full Qr.	2 or 4	Finley	
Math. 102	Integral Calculus	MTWTh	Ei. Half or Full Qr.	2 or 4	Finley	
Math. 109	The Teaching of Algebra	MTThF	Ei. Half or Full Qr.	2 or 4	Reeve-Mallory	
Math. 200	Advanced Calculus	MTWTh	Ei. Half or Full Qr.	2 or 4	Finley	
Mus. 2	Tone Thinking and Melody Writing	Daily	Second Half Qr.	3	Opp	T-2
Mus. 40	Beginning Orchestra	TTh	Full Quarter	1	Thomas	Con-14
Mus. 45	Orchestral Instruments	MW	Full Quarter	1	Thomas	Con-14
P. E. 13	Tennis	TThF	Ei. Half or Full Qr.	½ or 1	Brooks	GH-107
P. E. 121	Kinesiology	MTTh	Full Quarter	3	Cave	GH-205
Phys. 1	Elementary Physics	MTF	Full Quarter	4	Valentine and Assts.	HE-106
Psych. 103	Psychology of Adolescence	MTWF	Full Quarter	4	Waitt	T-12
Psych. 104	Psych. Elementary Sch. Sub.	MTWTh	Ei. Half or Full Qr.	2 or 4	Heilman	T-13

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Soc. 1	Intro. to the Social Sciences	MTWTh	Ei. Half or Full Qr.	2 or 4	Howarth	Ad-208
Soc. 3	Educational Sociology	MWF	Full Quarter	3	Binneweis	
Span. 1, 2, 3	Elementary Spanish (Second recitation at 11:00 compulsory)	Daily	Full Quarter	12	Davis	
9:00 to 9:50						
Art 5	Water Color Painting	MTWTh	Ei. Half or Full Qr.	2 or 4	Reitzel	G-203
Art 13	Industrial Art Methods for Primary	MTThF	Full Quarter	4	Lowe	G-200
Art 17	Lettering and Poster Composition	MTWTh	Ei. Half Quarter	2	Ellinger	G-204
Art 105	Water Color Painting	MTWTh	Ei. Half Quarter	2 or 4	Reitzel	G-203
Art 117	Lettering and Design	MTWTh	Full Quarter	4	Ellinger	G-204
Ath. 1	Ind. and Social Hygiene	Daily	First Half Quarter	3	Von den Steinen	GH-205
Ath. 40	EI. Swimming	Daily	Ei. Half or Full Qr.	1 or 2	{ Brown Doubenmier	Pool
Ath. 165	Football Coaching	Daily	First Half Quarter	2	Saunders	Gym
Biol. 1	Educational Biology (2 hrs. lab. by appt.)	MTTh	Full Quarter	3	Harrah	Ad-301
Biot. 101	Genetics and Eugenics	MTWTh	Full Quarter	4	Jean	
Biot. 201	Genetics and Eugenics (Adv.)	MTWTh	Full Quarter	4	Jean	
Chem. 7	Qualitative Analysis (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bowers	Ad-6
Chem. 114	Quantitative Analysis (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bowers	Ad-2
Com. Ed. 13	Principles of Typewriting III	Daily	First Half Quarter	3	Knies	Ad-213
Com. Ed. 14	Methods of Teaching Typewriting	TW	Second Half Qr.	1	Knies	Ad-213
Com. Ed. 150	Principles of Accounting I	MTWTh	First Half or Full Qr.	2 or 4	Colvin	Ad-214
Ed. 1	Introduction to Education	TWThF	Full Quarter	4	Buster	
Ed. 2a	Pre-Teaching Observation (Elem. or Sec- ondary school)	TW	Full Quarter	1		
Ed. 4b	Intermediate Methods (Arith., soc., sci., health)	MTWTh	Ei. Half or Full Qr.	2 or 4	McCowen	
Ed. 10	Introduction to Curriculum Making	MTTh	Full Quarter	3	Mahan	
Ed. 24	The Rural Community	MTWTh	Second Half	2	Ogle	
Ed. 28	School and Home Gardens	MTWTh	First Half	2	Hargrove	
Ed. 113	Org. and Admin. of the Jr. H. S.	MTWTh	Full Quarter	4	Stutsman	
Ed. 115	Org. and Admin. of the Elem. Sch.	MTWTh	Ei. Half or Full Qr.	2 or 4	Risley-Brown	
Ed. 127	Special Rural School Methods	MTWTh	Second Half	2	Hargrove	

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Ed. 142	School Administration—First course	MTWTh	Ei. Half or Full Qr.	2 or 4	Cornell	
Ed. 190	Admin. Problems in a Teachers College	MTWTh	First Half	2	Frasier, Cross Rugg, Morrison Carson	
Ed. 192	Training School Problems	MTWTh	Second Half	2		Armentrout
Ed. 215	Problems of the Junior H. S.	MTWTh	Ei. Half or Full Qr.	2 or 4	Prunty	
Ed. 224	Research—Thesis Course—2nd Qr. grad. students in education	Arrange	Full Quarter	3	Rugg	
Ed. 225	Research—Thesis Course—3rd Qr. grad. students in education	Arrange	Full Quarter	3	Rugg	
Ed. 230	History of Philosophy	MTWTh	First Half	2	Armentrout	
Ed. 259	Problems of Elem. Educ. (Soc., sci., problem method, socialized recitation)	MTWTh	Ei. Half or Full Qr.	2 or 4	McKee-McBroom	
Eng. 6	American Literature	MTThF	Full Quarter	4	Hawes	
Eng. 12	Oral Expression	Daily	First Half Qr.	3	Blackburn	
Eng. 12	Oral Expression	Daily	Second Half Qr.	3	Blackburn	
Eng. 102	Journalism	MWTh	Full Quarter	3	Shaw	
Eng. 105	Oral Eng. in the H. S.	MTThF	Second Half Qr.	2	McLane	
Eng. 112	Children's Theater	MTThF	First Half Qr.	2	McLane	
Eng. 122	Victorian Poetry	MTThF	Full Quarter	4	Tobey	
El. Sci. 1	Elementary Nature Study	MWF	Full Quarter	4	Arvidson	Ad-300
Geog. 150	Geography of Colorado	MTThF	Full Quarter	4	Barker	GH-203
Gen. Sci. 1	General Science (Lab. Wed. 2:00-4:00)	TWThF	Full Quarter	4	Selberg	L-13
H. A. 5	Pattern Designing (double period)	MTThF	First Half or Full Qr.	2 or 4	Roudebush	HE-301
H. Ed. 1a	Personal Hygiene for Women	Daily	Ei. Half or Full Qr.	3	Bryson	GH-201
H. Sc. 105	Child Care and Welfare	MTThF	Full Quarter	4	Pickett	HE-207
History 27	Contemporary World History	MTWTh	Ei. Half or Full Qr.	2 or 4	Larsen	Ad-104
History 224	Research	F		3	Dickerson	104
Ind. A. 2	Technic and Theory of Woodworking II	MTWTh	Ei. Half or Full Qr.	2 or 4	Foulk	G-1
Ind. A. 13	Principles of Architectural Drawing II (Lab. by appt)	TWThF	Ei. Half or Full Qr.	2 or 4	Hadden	G-106
Ind. A. 31a	Elementary Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	HE-102
Ind. A. 32a	Intermediate Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	HE-102
Ind. A. 41c	Elementary Bookbinding (Lab. by appt.)	TWThF	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Ind. A. 143b	Advanced Leather Craft and Blank Book and Loose Leaf Binding, Extra Binding in full Leather (Lab. by appt.)	TWThF	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Math. 7	Trigonometry	MTThF	Ei. Half or Full Qr.	2 or 4	Mallory	
Math. 9	Analytic Geometry	MTWTh	Ei. Half or Full Qr.	2 or 4	Mallory	
Math. 107	Teaching Jr. High School Math.	MTWTh	Ei. Half or Full Qr.	2 or 4	Finley-Reeve	
Mus. 3	Harmony	Daily	First Half Qr.	3	Thomas	Con-6
Mus. 22	Music Appreciation	Daily	First Half Qr.	3	Opp	Con-14
Mus. 23	Music Literature	Daily	Second Half Qr.	3	Opp	Con-14
Nurs. Ed. 102	Administration in Schools of Nursing	Daily	Second Half Qr.	3	Gray	
P. E. 13	Tennis	TThF	Ei. Half or Full Qr.	½ or 1	Brooks	GH-114
P. E. 135	History and Principles of Phys. Ed.	MTWTh	Full Quarter	4	Cave	GH-205
Phys. 3	Elementary Physics	MTF	Full Quarter	4	Valentine and Assts.	HE-106
Pol. Sci. 203	Political Science Theories	MTWTh	Full Quarter	4	Dickerson	L-1
Psych. 2a	Educational Psychology	Daily	Ei. Half Quarter	3	Waitt	T-13
Psych. 108a	Ed. Tests and Meas.	MTWTh	Ei. Half or Full Qr.	2 or 4	Heilman	T-12
Psych. 116	Psych. of Commercial Subjects	MTWTh	Ei. Half or Full Qr.	2 or 4	Hertzberg	T-204
Psych. 222	Experimental Technic and its Application	Arrange	Full Quarter	2 or 4	Whitney	
Soc. 13	Rural Sociology	MWF	Full Quarter	3	Binnewies	
Soc. 101	Origin and Antiquity of Man	MTWTh	Ei. Half or Full Qr.	2 or 4	Howerth	Ad-208
Soc. 110	Principles of Economics	MTThF	Full Quarter	4	Waitt	Ad-208
Span. 5	Intermediate Spanish	MTWTh	Full Quarter	4	Mulroney	
10:00 to 10:50						
Art 2	Fine Art Methods for Primary	MTThF	Full Quarter	4	Lowe	G-200
Art 14	Industrial Art Methods for Intermediate	TWThF	Full Quarter	4	Moore	G-204
Art 16	Freehand Drawing II	MTThF	First Half or Full Qr.	2 or 4	Baker	G-203
Art 116	Freehand Drawing	MTThF	Ei. Half or Full Qr.	2 or 4	Baker Von den	G-203
Ath. 3	First Aid	MTWTh	Second Half Qr.	2	Steinen	Gym
Ath. 166	Basketball Coaching	Daily	First Half Qr.	2	Brown Von den	Gym
Ath. 180	Athletic Training	MTWTh	First Half Qr.	2	Steinen	GH-205
Biol. 1	Educational Biology (2 hrs. lab. by appt.)	MWF	Full Quarter	3	Arvidson	Ad-301

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Chem. 1	General Chemistry (Lab. by appt.)	MW	Full Quarter	3	Bowers	1
Chem. 4	General Chemistry (Lab. by appt.)	MW	Full Quarter	4	Bowers	1
Com. Ed. 16	Methods of Teaching Filing	MTWTh	Full Quarter	4	James	213
Com. Ed. 37	Business Mathematics	TWThF	First Half or Full Qr.	2 or 4	Bedinger	211
Com. Ed. 152	Principles of Accounting II	MTWTh	Full Quarter	4	Colvin	214
Ed. 1	Introduction to Education	TWThF	Full Quarter	4	Buster	
Ed. 3b	Primary Methods (Arith., soc., sci., health)	TThF	Ei. Half or Full Qr.	1½ or 3	Rosenquist	
Ed. 4a	Intermediate Methods (Read., lang., spell.)	MTWTh	Ei. Half or Full Qr.	2 or 4	McCowen	
Ed. 20	Agricultural Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Hargrove	
Ed. 101	Principles of Teaching in H. S.	MTWTh	Full Quarter	4	Stutsman	
Ed. 107	Methods of Improving Reading	MTWTh	Ei. Half or Full Qr.	2 or 4	Davis	
Ed. 143	School Adm.—Second Course	MTWTh	Ei. Half or Full Qr.	2 or 4	Cornell	
Ed. 144	School Publicity	MTWTh	First Half	2	Shaw-Risley	
Ed. 217	Problems of Secondary Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Prunty	
Ed. 224	Research—Thesis Course—2nd Qr. Grad. Students in Education	Arrange	Full Quarter	3	{ Rugg, Armentrout Mahan	
Ed. 225	Research—Thesis Course—3rd Qr. Grad. Students in Education	Arrange	Full Quarter	3	{ Rugg, Armentrout Mahan	
Ed. 260	Problems of Elem. Education (Handwriting, composition, arith.)	MTWTh	Ei. Half or Full Qr.	2 or 4	McKee-McBroom	
El. Sci. 1	Elementary Nature Study (First period at 8:00 compulsory. Field trips arranged)	TWThF	Either Half Qr.	4		
Eng. 4	Speaking and Writing	MTThF	Full Quarter	3	Hawes	
Eng. 14	Dramatic Art	TWThF	Full Quarter	4	Blackburn	
Eng. 15	Types of Literature	MWF	Full Quarter	3	Cross	
Eng. 124	Poetry for Teachers	TWThF	Ei. Half or Full Qr.	2 or 4	Abbott	
Eng. 128	Shakespeare's Historical Plays	MTThF	Full Quarter	4	Allen	
Eng. 133	The Modern Novel	MTThF	Full Quarter	4	Lindou	
For. Lang. 131	Teaching of Modern Languages	MTThF	Full Quarter	4	Davis	
Geog. 15	Methods and Materials in Junior High Geography	MTWTh	Full Quarter	4	Barker	GH-203
German 1	Elementary German	MTThF	Full Quarter	4	Gibert	
H. Sc. 4	Children's Food Problems	MTWTh	Full Quarter	4	Newburn	HE-305
H. Sc. 5	Foods and Cookery for Homemakers (double period)	MTThF	First Half or Full Qr.	2 or 4	Pickett	HE-207

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
H. Sc. 106	Home Care of the Sick	MTThF	Full Quarter	4	Wiebking	
History 2	Development of American Nationality	TWThF	Full Quarter	4	Zimmerman	L-1
History 225	Research	F	Full Quarter	3	Dickerson	Ad-104
Ind. A. 118	Elements of Machine Design (Lab. by appt.)	TWThF	Ei. Half or Full Qr.	2 or 4	Hadden	G-106
Ind. A. 133b	Advanced Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	HE-102
Lib. Sci. 106	Children's Literature and Juvenile Library Service	MTThF	Full Quarter	4	Carter	L-6
Math. 107	Teaching of High School Math.	MTThF	Ei. Half or Full Qr.	2 or 4	Reeve-Mallory	
Mus. 103	Beginning Counterpoint	Daily	First Half Quarter	3	Thomas	Con-6
Mus. 114	Methods in Conducting	MTWTh	First Half Quarter	2	Cline	Con-14
P. E. 1	Clog and Athletic Dancing	MTTh	Ei. Half or Full Qr.	½ or 1	Cave	GH-107
P. E. 18	Track	TThF	Ei. Half or Full Qr.	½ or 1	Brooks	GH-114
P. E. 27	Swimming (Inter.)	MTWTh	Ei. Half Quarter	1	Doubenmier	Pool
Phys. 103	Elementary Radio	MTTh	First Half Quarter	2	Valentine and Assts.	HE-106
Phys. 104	Advanced Radio	MTWTh	Second Half Qr.	2	Valentine and Assts.	HE-106
Pol. Sci. 1.	Government of the United States	MTWTh	Full Quarter	4	Dickerson	104
Psych. 100a	Unit Course—Nature & Nurture July 1 to 11 inc.	Daily	First Half Quarter	1	Heilman	T-12
Psych. 100b	Unit Course—Mental Hygiene July 17 to 27 inc.	Daily	First Half Quarter	1	Ebaugh	T-12
Psych. 100c	Unit Course—Abilities, Talents and Defects. July 22 to Aug. 1 inc.	Daily	Second Half Qr.	1	Witmer	T-12
Psych. 100d	Unit Course—Abilities, Talents and Defects. Aug. 5 to Aug. 15 inc.	Daily	Second Half Qr.	1	Witmer	T-12
Psych. 105	Psych. Sr. High School Sub.	MTWF	Ei. Half or Full Qr.	2 or 4	Watt	T-204
Psych. 107	Mental Tests and Meas.	MTWTh	Full Quarter	4	Hertzberg	T-Ad-13
Psych. 224	Research in Ed. Psych.—Thesis	Arrange	Full Quarter	3	Heilman	
Psych. 225	Research in Ed. Psych.—Thesis	Arrange	Full Quarter	3	Heilman	
Soc. 105	Principles of Sociology	MTWTh	Full Quarter	4	Howerth	208
Soc. 122	Comparative Religion	MTWTh	First Half or Full Qr.	2 or 4	Wilson	
Soc. 125	Social Problems	MWThF	Ei. Half or Full Qr.	2 or 4	Binnewies	

Time and
Catalog No.

Descriptive Title of Course

Days

May Be Taken
for Credit

Qr. Hrs.

Teacher

Room

11:00 to 11:50

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Art 6	Art Appreciation	Th	Full Quarter	1	Reitzel	G-200
Art 9	History of Art	MTW	Full Quarter	3	Reitzel	G-200
Art 14	Industrial Art Meth. for Intermediate	TWThF	Full Quarter	4	Moore	G-204
Art 100	Supervision of Art Education	TTh	Full Quarter	2	Baker	
Art 106	Advanced Art Appreciation	Th	Full Quarter	1	Reitzel	G-200
Art 109	Advanced History of Art	MTW	Full Quarter	3	Reitzel	G-200
Art 120	Oil Painting	MTWTh	Ei. Half or Full Qr.	2 or 4	Ellinger	G-203
Ath. 36	Tennis	MWF	First Half Quarter	1		
Ath. 168	Track Coaching	Daily	First Half Quarter	2	Saunders	Field
Chem. 2	General Chemistry (Lab. by appt.)	MW	Full Quarter	3	Bowers	Ad-1
Chem. 5	General Chemistry (Lab. by appt.)	MW	Full Quarter	4	Bowers	Ad-1
Com. Ed. 3	Secretarial Practice I	MTWTh	Full Quarter	4	James	Ad-214
Com. Ed. 139	An Introduction to Business	MTWTh	First Half or Full Qr.	2 or 4	Colvin	Ad-211
Ed. 1	Introduction to Education	TWThF	Full Quarter	4	Hunt	
Ed. 3a	Primary Methods (Read., lang., spell.)	TThF	Ei. Half or Full Qr.	1½ or 3	Turner	
Ed. 4b	Intermediate Methods (Arith., soc., sci., health)	MTWTh	Ei. Half or Full Qr.	2 or 4	McCowen	
Ed. 15	Educational Guidance	MTTh	Full Quarter	3	Mahan	
Ed. 23	Rural School Management	MTWTh	Ei. Half or Full Qr.	2 or 4	Hargrove	
Ed. 107	Methods of Improving Reading	MTWTh	Ei. Half or Full Qr.	2 or 4	Dobson	
Ed. 129	Current Educational Thought	MTWTh	Ei. Half or Full Qr.	2 or 4	Brown	
Ed. 147	Educational Surveys	MTWTh	First Half	2	Risley	
Ed. 151	Pre-School Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Lyford	
Ed. 224	Research—Thesis Course—2nd. Qr. grad. students in education	Arrange	Full Quarter	3	{ Rugg, McKee, Prunty	
Ed. 225	Research—Thesis Course—3rd Qr. grad. students in education	Arrange	Full Quarter	3	{ Rugg, McKee, Prunty	
Ed. 211	Conceptions of Mind in Educ. Theory	MTWTh	Ei. Half or Full Qr.	2 or 4	Armentrout	
Ed. 243	Problems in Educ. Admin.—Second advanced course	MTWTh	Ei. Half or Full Qr.	2 or 4	Cornell	
El. Sci. 2	Elementary Science	TWThF	Full Quarter	4	Selberg	L-13
Eng. 0	Fundamentals	MTThF	Full Quarter	10	Lindou	
Eng. 2	Lit. for the Jr. H. S. (new)	MTThF	Full Quarter	4	Tobey	

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Eng. 9	English Lit. 1625-1798	MTThF	Full Quarter	4	Hawes	
Eng. 13	Story Telling	Daily	First Half Qr.	3	Blackburn	
Eng. 13	Story Telling	Daily	Second Half Qr.	3	Blackburn	
Eng. 20	Advanced Composition	MTThF	Full Quarter	4	Allen	
Eng. 106	Teaching Lit. and Comp. in Sr. H. S.	TWThF	Ei. Half or Full Qr.	2 or 4	Abbott	
Fren. 1, 2, 3	Elementary French (First recitation at 8:00 compulsory)	Daily	Full Quarter	12	Gibert	
Fren. 5	Intermediate French	MTThF	Full Quarter	4	Mulroney	
Geog. 5	Geography of the New Europe	MTWTh	Full Quarter	4	Pogue	
Geog. 100	Geology	MTThF	Full Quarter	4	Barker	GH-203
H. A. 10	Dress Appreciation	MTThF	Full Quarter	4	Wiebking	
H. A. 108	Costume Design	MTWTh	Full Quarter	4	Roudebush	HE-301
H. Ed. 1a	Personal Hyg. for Women	Daily	Ei. Half Qr.	3	Bryson	GH-201
History 13	Teaching of History and Civics in the Elementary School	Daily	First Half Qr.	3	Dickerson	Ad-104
History 202	Ancient Social History—Rome	MTWTh	Full Quarter	4	Larsen	L-1
Ind. A. 5	Principles of Teaching Practical Art Subjects	MTW	Ei. Half or Full Qr.	1½ or 3	Hadden	G-104
Ind. A. 19	Wood Turning (Lab. by appt.)	MTThF	Full Quarter	4	Fouk	G-5
Ind. A. 31a	Elementary Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	HE-102
Ind. A. 32a	Intermediate Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	HE-102
Ind. A. 41c	Elementary Bookbinding (Lab. by appt.)	TWThF	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Ind. A. 42c	Intermediate Bookbinding (Lab. by appt.)	TWThF	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Ind. A. 119	Medieval and Modern Architecture	Th	Full Quarter	1	Hadden	G-104
Ind. A. 133a	Advanced Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	HE-102
Ind. A. 143c	Advanced Leather Craft and Blank Book and Loose Leaf Binding (Lab. by appt.)	TWThF	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Math. 5	College Algebra	MTThF	Ei. Half or Full Qr.	2 or 4	Mallory	
Math. 104	The Teaching of Arithmetic	MTWTh	Ei. Half or Full Qr.	2 or 4	Reeve-Finley	
Mus. 4	Harmony	Daily	Second Half Qr.	3	Thomas	Con-6
Mus. 20	Ancient History	Daily	First Half Qr.	3	Cline	Con-14
Mus. 21	Modern History	Daily	Second Half Qr.	3	Cline	Con-14
Nurs. Ed. 103	The Curriculum for Schools of Nursing	Daily	Second Half Qr.	3	Gray	
P. E. 5	Beginning Folk Dancing	TThF	Ei. Half or Full Qr.	½ or 1	Keyes	GH-202
P. E. 26	Swimming (beginning)	MTWTh	Ei. Half Qr.	1	Springer	Pool

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
P. E. 31	Danish Gymnastics & Tumbling (beginning)	MTWTh	First Half Qr.	1	Cave	GH-107
P. E. 32	Danish Gym & Tumbling (Advanced)	MTWTh	Second Half Qr.	1	Cave	GH-107
Phys. 10	Household Physics	Daily	Second Half Qr.	3	Valentine and Ass'ts.	HE-106
Phys. 107	Modern Physics	MTWTh	First Half Qr.	2	Valentine and Ass'ts.	HE-106
Psych. 2b	Educational Psychology	Daily	Ei. Half Quarter	3	Hertzberg	T-13
Psych. 109a	Clinical Psychology (double period) Part I. Demonstration of Testing Children Part II. Demonstration of Diagnostic Ed. Treatment of Children	MTWTh	Second Half Qr.	2	Witmer	T-12
Soc. 130	Social Psychology	MTWThF	Second Half Qr.	2	Witmer	T-12
Soc. 151	Races and Race Problems	MTWTh	Ei. Half or Full Qr.	2 or 4	Binnewies	
Span. 1, 2, 3	Elementary Spanish (First recitation at 8:00 compulsory)	Daily	Ei. Half or Full Qr.	2 or 4	Howerth	
Zool. 2	General Zoology (Lab. Mon. 1:00-5:00)	MTThF	Full Quarter	12	Davis	
			Full Quarter	4	Harrah	Ad-302
12:00 to 12:50						
Art 13	Industrial Art Methods for Primary	MTThF	Full Quarter	4	Lowe	G-200
Art 104	Color Theory and Composition	MTWTh	Full Quarter	4	Ellinger	G-202
Biol. 1	Educational Biology (2 hrs. lab. by appt.)	MThF	Full Quarter	3	Robertson	Ad-301
Com. Ed. 36	Handwriting Methods (Palmer and Zaner methods)	MTWTh	First Half or Full Qr.	1 or 2	O-Hara-Doull	Ad-214
Com. Ed. 105	Secretarial Practice II	MTWTh	Full Quarter	4	James	Ad-213
C. E. 212	Commercial Education in Secondary Schools	MTWTh	First Half Quarter	2	Colvin	Ad-211
C. E. 213	Commercial Education Curricula	MTWTh	Second Half Qr.	2	Colvin	Ad-211
Ed. 1	Introduction to Education	MTWTh	Full Quarter	4	C. M. Frasier	
Ed. 3a	Primary Methods (Read., lang., spell.)	MTW	Ei. Half or Full Qr.	1½ or 3	Dulin	
Ed. 100e	Unit Course—County Superintendents (No. 11—Educ. Finance—June 17-27)	Daily	Ei. Half or Full Qr.	1	Cornell	
Ed. 108	Educational Supervision	MTWTh	Full Quarter	2 or 4	Dobson	
Ed. 117	Problems of School Discipline	MTWTh	First Half	2	Hunt	
Ed. 118	Problems of Character Education	MTWTh	Second Half	2	Hunt	
Ed. 128	County Administration	MTWTh	Second Half	2	Ogle	
Ed. 140	Guidance Problems for Deans of Girls	MTWTh	First Half	2	Adams	

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Ed. 150	Foundations of Method	MTWTh	Ei. Half or Full Qr.	2 or 4	Risley-Brown	
Ed. 168	Problems of Religious Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Wilson	
Ed. 194	The Junior College	MTWTh	Second Half	2	Bishop	
El. Sci. 1	Elementary Nature Study (Field trips arr.)	TWThF	Full Quarter	4	Arvidson	L-13
Eng. 2	Written Eng. for the Jr. H. S. (old)	MWF	Full Quarter	3	Johnson	
Eng. 4	Speaking and Writing	MTThF	Full Quarter	3	Lindou	
Eng. 11	The Eng. Language for Teachers	MTWTh	Full Quarter	4	Morse	
Eng. 107	Greek and Latin Lit.	MTThF	Full Quarter	4	Tobey	
Geog. 52	Geography of South America	MTThF	Full Quarter	4	Barker	GH-203
H. A. 112	Home Decoration	MTThF	Full Quarter	4	Wiebking	HE-304
History 10	Social and Industrial History of the U. S.	MTWTh	Full Quarter	4	Zimmerman	Ad-104
Mus. 1a	Rudiments and Meth. Inter. Majors	Daily	Second Half Qr.	3	Mohr	T-2
Mus. 1b	Sightsinging (beginning)	Daily	First Half Qr.	3	Opp	T-14
Mus. 1c	Sightsinging (advanced)	Daily	Second Half Qr.	3	Opp	T-14
Mus. 10	Primary Methods	Daily	First Half	3	Mohr	T-2
P. E. 6	Folk Dancing (advanced)	TThF	Ei. Half or Full Qr.	½ or 1	Keyes	GH-202
P. E. 26	Swimming (beginning)	MTWTh	Ei. Half Qr.	1	Springer	Pool
P. E. 113	Coaching Methods	MTWTh	Ei. Half or Full Qr.	1 or 2	Brooks	GH-107
Psych. 108b	Ed. Tests and Meas. Sr. High School	MTWTh	Ei. Half or Full Qr.	2 or 4	Hertzberg	T-13
Psych. 118	Graphic Methods	MTWTh	First Half Qr.	2	Bishop	G-106
Span. 105	Advanced Spanish	MTWTh	Full Quarter	4	Mulroney	
2:00 to 2:50						
Ed. 16	Camp Fire Leadership—Elementary	MT	Either Half Qr.	1	Lee	
Ed. 16a	Camp Fire Leadership—Advanced	WTh	Either Half Qr.	1	Lee	
Ed. 17	Boy Scout Masters' Training Course	MW	First Half	1	Moore	
Ed. 100d	Creative Education (No. 6, Appraisal June 17-27 inclusive)	Daily	First Half	1	Harold Rugg	
Ed. 100e	Unit Courses—County Superintendents (No. 12—Supervision—June 17-27)	Daily	First Half	1	McKee	
Ed. 100f	Unit Course—Parent-Teacher Activity (Elementary) July 22-Aug. 1st, inclusive	Daily	Second Half	1	Wood	
Ed. 223	Research in Education—1st Qr. thesis course for grad. students	MTW	Full Quarter	3	Whitney	

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Eng. 114	Play Production	MWThF	Full Quarter	4	Blackburn	
Eng. 224	Problems in Research in English (for graduate students (double period))	TTh	Ei. Half or Full Qr.	2 or 4	Abbott	
H. Ec. Ed. 111	Methods	MTWTh	Full Quarter	4	Roudebush	HE-301
H. Sc. 1	Foods and Cookery (double period)	MTThF	Full Quarter	4	Pickett	HE-207
Mus. 11	Intermediate Methods	Daily	Second Half	3	Mohr	T-2
Mus. 34	Class Piano Methods	TTh	Either Half Quarter	1	Hughes	Con-3
Mus. 105	Beg. Orchestration	Daily	First Half	3	Cline	Con-1
Mus. 106	Adv. Orchestration	Daily	Second Half	3	Cline	Con-1
Mus. 122	Appreciation for Concert goer	MW	First Half	1	Southard	Con-114
P. E. 2	Natural Dancing (Beg.)	MTTh	First Half or Full Qr.	½ or 1	Springer	GH-107
P. E. 11	Plays and Games	TThF	Ei. Half or Full Qr.	½ or 1	Keyes	GH-202
3:00 to 3:50						
Ed. 100a	Problems of Education	MTWTh	Ei. Half or Full Qr.	1 to 4	10 Visiting Teachers	
Ed. 100e	Unit Courses—County Superintendents (No. 13—School Law and Legal Aspects)—June 17-27 inclusive	Daily	First Half	1	Ogle	
Ed. 100f	Unit Courses—Parent-Teacher Activity (Advanced) July 22-Aug. 1st incl.	Daily	Second Half	1	Wood	
Eng. 160	Old Testament Literature	MWF	Full Quarter	3	Wilson	
Mus. 43	Adv. orchestra	MW	Full Quarter	1	Thomas	Con-14
Mus. 44	Adv. Band	TTh	Full Quarter	1	Thomas	Con-14
P. E. 13	Tennis	TThF	Ei. Half or Full Qr.	½ or 1	Springer	GH-114
P. E. 27	Swimming (Inter.)	MTWTh	Either Half	1	Doubenmier	Pool
P. E. 107	National & Characteristic Dancing (majors)	TWThF	Ei. Half or Full Qr.	1 or 2	Keyes	GH-107
4:00 to 4:50						
P. E. 13	Tennis	MTTh	Ei. Half or Full Qr.	½ or 1	Keyes	GH-107
P. E. 132	Theory of Individual Gymnastics	MTWTh	First Half	2	Springer	GH-205
8:00 to 8:50						
Mus. 101	Chorus	M	Full Quarter	1	Cline	Con-14

TEXTBOOKS

- Art**
1. How Children Learn to Draw, Sargent & Miller.
 2. The Beginnings of Art in Public Schools, Mathias.
 3. Elementary Freehand Perspective, Norton.
 9. Art Through The Ages, Gardner.
 - 13 and 14. Industrial Arts for Elementary Schools, Bonser and Mossman.
- Biology**
- Bact. 100. General Bacteriology, Buchanan.
- Biol. 1. Educational Biology, General Biology, Burlingame, Martin, Heath, Pierce.
- Biot. 101. Heredity & Eugenics. Genetics, Walter, and Applied Eugenics, Popenoe & Johnson.
- Bot. 2. Textbook of General Botany, Holman and Robins.
- Bot. 103. Plant Physiology, Textbook of Botany, Coulter, Barnes, and Cowles.
- Bot. 101. Taxonomy, New Manual of Rocky Mountain Botany, Coulter & Nelson.
- Ele. Sci. 1. Elementary Science, Our Living World, Downing.
- Gen. Sci. 1. General Science Methods. The Teaching of Science in the Schools, Downing.
- Zool. 2. College Zoology, Hegner.
- Zool. 3. Bird Study. Western Bird Guide, Reed.
- Chemistry**
- 1, 2, 3, 4, 5, 6. Introductory College Chemistry, Gordon;
 7. Qualitative Analysis, W. W. Scott.
 - Laboratory Exercises in Chemistry, Noyes & Hopkins.
 - Chemistry 108, 109, 110, 111. Organic Chemistry, Remsen & Orndorff; Laboratory Manual of Organic Chemistry, W. R. Orndorff.
 - 112-113. Household Chemistry, Vulte.
 114. Quantitative Analysis, Popoff.
- Commercial Education**
- 1, 2 and 3. Gregg Shorthand Manual; Gregg Speed Studies.
 - 11, 12, 13. Twentieth Century Typewriting Manual.
 16. Yawman & Erbe Filing Equipment and Modern Filing.
 37. Smith's Arithmetic of Business.
 36. Palmer Method Manual and Freeman's Correlated Handwriting Manual.
 53. Principles of Salesmanship, Whitehead.
 105. Rational Dictation, Gregg.
 138. Commercial Law, Conyngton.
 139. An Introduction to Business, Maynard and Weidler.
 150. Introductory Accounting, Powelson.
 152. Introductory Accounting, Powelson.
- Education**
- Ed. 1. Beginning Teaching, Avent; Introduction to Education, Frasier and Armentrout.
 - Ed. 3a. The Primary School, Moore; How to Teach Reading, Pennell & Cusack.
 - Ed. 3b. Teaching Arithmetic in the Primary Grades, Morton.
 - Ed. 109. Supervised Study in the Elementary School, Hall-Quest.

- Ed. 3c. Spontaneous and Supervised Play, Sies; International Kindergarten Union, Selected List of Poetry and Stories.
- Ed. 4a. Reading Objectives, Anderson & Davidson; Fourth Yearbook, Department of Superintendence.
- Ed. 4b. Corrective Arithmetic, Osburn.
- Ed. 5. General Methods of Teaching in the Elementary Schools, Parker.
- Ed. 10. Principles of Education, Chapman & Counts; How to Make a Curriculum, Bobbitt.
- Ed. 15. Educational and Vocational Guidance, Proctor.
- Ed. 16 and 16a. Symbol Books, Song Books, and Manuals. Camp Fire Girls.
- Ed. 20. Rural Life and Education, Cromwell.
- Ed. 21. Problems of the Rural Teacher, Pittman.
- Ed. 23. Rural School Methods, Ritter & Wilmarth.
- Ed. 24. The Rural Community, MacGarr.
- Ed. 28. School and Home Gardens, Quear.
- Ed. 52. Textbook for Training Kindergarteners, Lyford; Unified Kindergarten and First Grade, Parker & Temple.
- Ed. 101. Modern Methods in High School Teaching, Douglass.
- Ed. 104. Project Method of Teaching, Stevenson.
- Ed. 105. Brief Guide to the Project Method, Holic & Case.
- Ed. 106. Types of Elementary Teaching and Learning, Parker.
- Ed. 107. Twenty-fourth Yearbook, Part I, National Society for the Study of Education; Summary of Investigations Relating to Reading, Gray.

- Ed. 108. Supervision of Instruction, Nutt.
- Ed. 110. Twenty-fifth Yearbook, Part II, National Society for the Study of Education.
- Ed. 111. Source Book in the Philosophy of Education, Kilpatrick; Syllabus in the Philosophy of Education, Kilpatrick.
- Ed. 113. Junior High School Procedure, Touton & Struthers; Junior High School, Briggs.
- Ed. 114. Supervision of Instruction, Barr & Burton.
- Ed. 115. The Principal and His School, Cubberley.
- Ed. 116. High School Administration, Cook.
- Ed. 125. Rural Education, Brim.
- Ed. 126. An Experiment with a Project Curriculum, Colliings.
- Ed. 134. Public Education in the United States, Cubberley.
- Ed. 142. Public School Administration, Cubberley.
- Ed. 143. An Introduction to Public School Finance, Pit-tenger; Handbook of Instructions for Recording Disbursements.
- Ed. 147. The School Survey, Sears.
- Ed. 150. Foundations of Method, Kilpatrick.
- Ed. 151. Child Guidance, Blanton & Blanton.
- Ed. 210. Twenty-sixth Yearbook, Parts I & II, National Society for the Study of Education.
- Ed. 211. What Is the Mind, Patrick.
- Ed. 215. The Junior High School, Koos.
- Ed. 217. Principles of Secondary Education, Uhl.
- Ed. 230. Philosophic Bases in Education, Rusk.
- Ed. 240. The Dean of Women, Mathews.
- Ed. 242. Problems of Educational Administration, Strayer & Engelhardt.

English and Literature

0. The Little Grammar and the Little Book of English Composition, Cross.
1. Children's Literature, Curry-Clippenger.
2. Reorganization of Secondary English, Dep't of Interior, Washington, D. C.
4. Woolley's Hand Book, Practice Leaves in English Fundamentals Form C.
8. English Prose and Verse, Pancoast.
11. Fundamentals in English, Cross.
13. Stories and How to Tell Them, Esenwein and Stockard.
14. A Technique in Dramatic Art, Bosworth.
20. New Hand Book of Composition, Woolley.
31. The Short Story, Cross.
105. Speech Training and Public Speaking for Secondary Schools, Drummond.
106. Bulletin No. 2, 1917, Department of the Interior; Reorganization of English in Secondary Schools.
114. A Technique in Dramatic Art, Bosworth.
121. English Poetry of the 19th Century, Elliott and Foerster.
127. Shakespeare's Complete Works (one volume), Cambridge Edition.
134. An Outline of Contemporary Drama, Dickinson.
161. Literature of the Old Testament, Bewer.

Foreign Languages

- Spanish 1, 2, 3. Hills and Ford, Spanish Grammar for Colleges; Hills and Cano, Cuentos y Leyendas.
- Spanish 5. Seymour and Carnahan, Short Review Grammar; Juan Manuel, El Conde Lucanor.

Spanish 105. Hartzenbusch, Los Amantes de Teruel; Echegaray, El Gran Galeoto; Tomayo y Baus, Un Drama Nuevo.

French 1, 2, 3. Camerlynch's France 1, 2, 3.

French 5. Carnahan's Short Review Grammar and a Selection of short stories.

Romance Languages 131. Händschin's Methods of Teaching Modern Languages.

Italian 110. Wilkins, First Italian Book.

German 1. Heyd, Anfanger Deutsch.

History

1. Foundation of American Nationality, Greene.
2. Expansion and Conflict, Dodd.
6. Europe Since 1815, Vol. I, Hazen.
10. American Economic History, Faulkner.
13. Teaching of History, Johnson.
- Pol. Sc. 1. American Government and Politics, Beard.

Mathematics

Solid Geometry. Essentials of Solid Geometry, Wentworth-Smith.

College Algebra, Hart.

Trigonometry, Rothrock.

Analytic Geometry, Wilson & Tracey.

Calculus, Granville.

Astronomy, Moulton.

Teaching Junior High School Mathematics, Smith & Reeve.

Teaching Arithmetic, Morton.

Music

School Music Handbook, Cundiff-Dykema.
Music Teacher Manual, Hollis Dann.
Counterpoint Simplified, Francis L. York.
Beginners Harmony, Preston Ware Oren.
Lessons in Music Form, Percy Goetschius.
Essentials in Music History, Tapper-Goetschius.
Melodia, Cole-Lewis.
Collective Training, Clippinger.
Instrumentation, Prout.
Methods in Conducting, Gehrkins.

Psychology

- 2a. Psychology for Students of Education, Gates.
- 2b. Same text as for 2a, and Educational Psychology, Jordan, Henry Holt & Company.
3. Psychology of Childhood, Norsworthy and Whitley, Macmillan Co.

103. Psychology of the Adolescent, Leta Stetter Hollingworth, D. Appleton Co. 64
104. Psychology of Elementary School Subjects, Reed.
- 105a. Psychology of Secondary School Subjects, Judd.
- 105b. Same text as for 105a.
107. Measurement of the Intelligence, Terman.
- 108a. Educational Tests and Measurements (Revised), Monroe, DeVoss & Kelly.
- 108b. Measurement in Secondary Education, Symonds.
112. Psychology of Musical Talent, Seashore.
116. Learning to Typewrite, William Book, Gregg Publishing Company.
118. Graphic Methods in Education, J. H. Williams, Houghton Mifflin Co.
212. Statistics in Psychology and Education, Garrett.
214. Educational Psychology, Vol. II, Thorndike.
222. How to Experiment in Education, McCall.

THE CALENDAR

FOR THE
SUMMER QUARTER
1929

June 15—Saturday *Registration Day for the Summer Quarter*

June 17—Monday *Classes begin*

A fee of one dollar is collected for late registration, after Saturday, June 15. Also one dollar is charged for late registration for the second half, July 21.

July 20—Saturday..... *The first half of the Summer Quarter closes.*

Students, if possible, should enroll June 15 for the full quarter, but they have the privilege of enrolling for either half quarter independent of the other. Many courses run through the first half quarter only. Some run through the second half quarter only. Most of the courses, especially the required courses, must be taken throughout the whole quarter before any credit will be given.

July 20—Saturday..... *New enrollment for the second half quarter.*

July 22—Monday *Classes begin*

Aug. 24—Saturday..... *The Summer Quarter closes. Graduation Day*



COLORADO STATE TEACHERS COLLEGE

BULLETIN



COURSES AND SPECIAL FEATURES
IN
THE DEPARTMENT OF EDUCATION

SUMMER QUARTER

June 15—August 24

FIRST HALF
June 15—July 20

SECOND HALF
July 22—August 24

SERIES XXVIII

MAY, 1929

NUMBER 12

Published Monthly by Colorado State Teachers College, Greeley, Colorado. Entered as Second-Class Matter at the Postoffice at Greeley, Colorado, under the Act of August 24, 1912.

1. CLASSES OF COURSES OFFERED

The following classification is suggestive of the types of courses to be offered. (See the Summer Bulletin, 1929, and the Year Book, 1929-30, for detailed descriptions of these Education courses.)

A. TYPES OF COURSES:

1. Introductory courses: 1, 100a, 100d, 100e, 100f, 129.
2. Methods courses: 3a, 3b, 3c, 4a, 4b, 101, 105, 107, 117, 118, 150, 151.
3. Curriculum: 10, 52, 127, 210, 215.
4. Philosophy: 111, 211, 230.
5. Administration and supervision: 108, 113, 114, 115, 116, 142, 143, 144, 147, 190, 217, 243.
6. History of Education: 134.
7. Rural Education: 20, 21, 23, 24, 28, 125, 127, 128.
8. Activity courses: 15, 16, 16a, 17, 28, 105, 110, 110b, 130, 140.
9. Courses in allied departments: Biology 1, Biotics 101, 201; Psychology 104, 105, 107, 108, 212, 222; Sociology 105, 130.

B. COURSES IN:

1. Elementary Education: 1, 3a, 3b, 3c, 4a, 4b, 10, 21, 23, 24, 52, 105, 107, 110, 110b, 111, 115, 150, 151, 258, 259, 260.
2. Junior and Senior High School Education: 110, 111, 113, 116, 210, 215, 217.
3. Education for Principals, Supervisors, and Critic Teachers: 108, 110, 111, 113, 114, 115, 116, 142, 143, 147, 150, 190, 192, 210, 215, 217, 243, 258, 259, 260.
4. Education for Superintendents: 110, 111, 113, 115, 116, 142, 143, 144, 147, 148, 210, 217, 243, 258, 259, 260.
5. Research in Education: 123, 210, 215, 217, 223, 224, 225, 243, 258, 259, 260.

II. FACULTY OF THE DEPARTMENT OF EDUCATION

A. The following members of the Department will give courses in the summer of 1929:

Professors Rugg, Armentrout, Cornell, Hargrove, McKee, and Mahan.

B. Besides the courses offered by resident instructors, the following special teachers and lecturers will cooperate in giving courses in Education:

1. Administration

Mr. J. H. Risley, Superintendent of Schools, Pueblo, Colorado
Mr. I. E. Stutsman, Superintendent of Schools, Sterling, Colorado.

2. Special Lecturers

Dr. G. W. Frasier, President, Colorado State Teachers College, Greeley, Colorado (Normal School Administration)
Dr. E. A. Cross, Vice-President, Colorado State Teachers College, Greeley, Colorado (Normal School Administration)
Mr. R. M. Carson, Registrar, Colorado State Teachers College, Greeley, Colorado (Normal School Administration)
Dr. Harold Rugg, Teachers College, Columbia University
Dr. J. W. Withers, Dean, School of Education, New York University

Dr. I. L. Kandel, International Institute, Teachers College, Columbia University.

Mr. A. L. Threlkeld, Superintendent of Schools, Denver, Colorado (Administration)

Rev. Dr. Lawrence Wilson, Pastor, Mission Hills Congregational Church, San Diego, California

Mr. H. A. Wood, Superintendent of Schools, Munising, Michigan (Lectures in Parent-Teacher Work)

3. Elementary Education

Miss Maude McBroom, Principal, University Elementary School, State University of Iowa, Iowa City, Iowa

4. Secondary Education

Mr. Merle Prunty, Principal, Central High School, Tulsa, Oklahoma

5. Rural Education

Mr. F. A. Ogle, County Superintendent of Schools, Weld County, Greeley, Colorado

6. Research

Dr. F. L. Whitney, Director of Educational Research, Colorado State Teachers College, Greeley, Colorado

7. Assisting in the Department

Mr. N. E. Buster, Junior High School Principal, Fort Worth, Texas

Mr. W. B. Dobson, Supervisor, Elementary Grades, Fort Worth, Texas

Mr. Clark Frasier, Director of Training Schools, Normal School, Lewiston, Idaho

Mr. R. L. Hunt, Superintendent of Schools, Las Animas, Colorado

Miss E. Gertrude Lee, Director of Camp Fire, Greeley, Colorado

Mr. Earl B. Moore, Scout Executive, Weld-Morgan Counties, Colorado

Mr. J. H. Shaw, Director of Journalism, Colorado State Teachers College, Greeley, Colorado

Miss Grace Wilson, Director of Religious Education, Colorado State Teachers College, Greeley, Colorado.

III. COURSES FOR GRADUATE STUDENTS

The Department of Education is making special provision for graduate students by offering several courses for such students. Graduate students may also take courses numbered above 100.

Special Graduate Courses in Education and Psychology:

Ed. 210. Problems of the School Curriculum—Rugg

Ed. 211. Conceptions of Mind in Educational Theory—Armentrout

Ed. 215. Problems of the Junior High School—Prunty

Ed. 217. Problems of Secondary Education—Prunty

Ed. 223-225. Research Courses in Education—(Thesis adviser)

Ed. 230. History of Philosophy—Armentrout

Ed. 243. Problems in Educational Administration—Cornell

Ed. 258-260. Problems of Elementary Education—McKee-McBroom

Psych. 212. Psychological and Statistical Methods Applied to Education—Heilman

Psych. 222. Experimental Technic and Its Application—Whitney.

The following courses are also suggested for graduate students in Education: Ed. 108, 110, 115, 134, 142, 143, 147, 190, 192; Biotics 101, 201; Psych. 104, 105, 107, 108; Soc. 105, 130.

See the Year Book and Rules and Regulations of the Graduate School for Requirements for the Master of Arts Degree. (Year Book and Summer Bulletin sent upon request.)

IV. SPECIAL FEATURES

1. Problems of Education (Ed. 100a). Either half or full quarter. One or two credits each half quarter. Three o'clock, MTWTh.

Lecturers to include: Dr. Harold Rugg, Dr. W. D. Reeve, Dr. I. L. Kandel, Professor Allen Abbott, Professor Marquis Reitzel, Dr. J. O. Larson, Professor F. D. Cheydeleur, Dean J. W. Withers, Rev. Dr. Lawrence Wilson, and Mr. A. L. Threlkeld. Lectures to deal for a week at a time each with the following: Creative Education; Life Applications of Mathematics; Comparative Education; Trends in Poetry; Contributions of Fine Arts; Trends in the Social Sciences; Contributions of the Foreign Languages; Tendencies in Teacher Training; New Tendencies in Religion; and Trends in Philosophy.

(This year this course will endeavor to bring to the student recent movements in several of the subject matter fields. With one exception—social science—all work for one week will be presented by one lecturer.)

2. Unit Courses in Creative Education (Ed. 100d), No. 6. Appraisal will be given June 17-27 inclusive by Dr. Harold Rugg. One credit. Dr. Rugg will evaluate the movement basing his appraisal on his recent book—*The Child Centered School* (World Book Company).
3. Unit Courses for County (Ed. 100e). Three Units—all between June 17-27. Each two weeks. Each one hour credit.
 - Unit 11—Educational Finance—Dr. Cornell. Twelve o'clock.
 - Unit 12—Educational Supervision—Dr. McKee. Two o'clock.
 - Unit 13—School Law and Legislation—Mr. Ogle. Three o'clock.

Three more unit courses continue—from the summers of 1927 and 1928—our short courses for county superintendents. Three additional credits (in new courses) may be earned during the first two weeks of the 1929 summer session.

4. Unit Courses in Parent-Teacher Activity. July 22-August 1, inclusive. Each one credit hour.
 - Elementary (First) Course—Activities of Parent-Teacher Organizations—Two o'clock. Mr. H. A. Wood.
 - Advanced (Second) Course—Educational Fundamentals of Parent-Teacher Associations—Three o'clock. Mr. H. A. Wood.
5. New and innovating courses, Summer, 1929
 - Ed. 118. Problems of Character and Moral Education—Mr. Hunt
 - Ed. 130. Visual Education—Professor Valentine
 - Ed. 151. The Pre-School—Professor Lyford
 - Ed. 230. History of Philosophy—Dr. Armentrout

School Dates

June 11

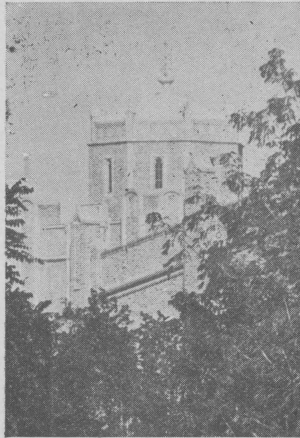
to

June 16

Greeley, Colorado



If Interested
Write Dr. C. B. Cornell
Director



School
FOR
Custodians
Janitors
AND
Engineers

JUNE 11 to 16, 1928

An opportunity for all persons
intrusted with the care of schools
and other public buildings to obtain
practical instruction in the scientific
care and operation of property.

Colorado State
Teachers College
Greeley, Colorado

RECOGNIZING the need for better training on the part of men who have the care of public school buildings, Colorado State Teachers College four years ago established the first school of instruction for janitors and engineers.

The school conducted last summer was attended by men from fourteen counties in Colorado with representatives from Kansas, Nebraska, and Wyoming. The Denver Board of Education sent thirty men. The enthusiastic interest on the part of students and the Boards of Education indicates that the school is filling a definite need. Teachers College is therefore continuing this service and invites the cooperation of men in the field, superintendents, and boards of education to assist in extending its influence.

THE COURSE

The course of study is divided into three sections: (1) Heating and Ventilating; (2) Maintenance; (3) Sanitation. In order to complete the work in any course the student must attend two sessions and only two courses may be carried at any one session.

The content of the various courses is essentially as follows:

1. HEATING AND VENTILATING

First year:

Firing, cleaning, maintenance, repairing, adjusting systems of an elementary type.

Second year:

Types of heating and ventilating systems. Theories of ventilation. Use, care and operation.

2. MAINTENANCE OF THE SCHOOL PLANT

First year:

Upkeep and repair of buildings. Care of floors, walls, furniture, rugs, curtains, laboratories, equipment.

Second year:

Upkeep of grounds, Landscaping, care of lawns, trees and shrubbery. Playground apparatus. Outdoor equipment.

3. SANITATION:

First year:

Cleaning of floors, walls, blackboards, furniture, windows, woodwork, drinking fountains, and lavatories.

Second year:

Theories of sanitation. Fundamentals of public health and social hygiene. Practical training in modern methods of cleaning and proper materials and facilities.

QUALIFIED MEN NECESSARY

School administrators have long since begun to appreciate the necessity of having properly qualified men in charge of the care and operation of buildings. The health, safety, and morals of children and teachers are involved, in addition to the efficiency of instruction.

For these reasons the course is an attempt to professionalize this group of workers. It combines theory and practice.

THE FACULTY

Eight men of outstanding ability and wide practical experience have been selected as instructors. All are now actively engaged in school work and will bring their special contributions to the men who attend.

The Place:

The School will be held on the beautiful campus of the Colorado State Teachers College. Here there is ample opportunity for observation of the best methods of the care and operation of school buildings and grounds. One day is set aside for a field trip to Denver for the purpose of visiting the school plants in that city.

The Time:

Registration begins at 8:00 a. m. June 11. Classes continue throughout the week and end at noon Saturday, June 16.

The Expense:

Costs are kept down to a minimum. An enrollment fee of \$10 is charged which covers instruction, laboratory, field trips, and the annual banquet. Arrangements have been made for free camping space in the city Tourist Camp. Board and room can be obtained at reduced rates.

How to Enroll:

Write Dr. C. B. Cornell, Director, in care of State Teachers College, Greeley, Colorado.