

COLORADO STATE TEACHERS COLLEGE BULLETIN

# CATALOG AND YEAR BOOK

NUMBER

FOR THE SESSIONS OF

1932-1933



GREELEY

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MAY, 1932

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## **COLORADO STATE TEACHERS COLLEGE BULLETIN**

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## 1932—THE COLLEGE CALENDAR—1933

The Summer Quarter, 1932, begins June 18 and ends August 27  
First half, June 18-July 23—Second half, July 25-August 27

1932

### FALL QUARTER

*Sept. 22, Thursday*.....Freshman week begins; 10:30, Gunter Hall  
*Sept. 26, Monday*.....Registration of freshmen  
*Sept. 27, Tuesday*.....Registration of upper classmen  
*Sept. 28, Wednesday*.....Classes begin  
*Nov. 24-25, Thursday, Friday*.....Thanksgiving (holiday)  
*Dec. 10, Saturday*.....Advance registration for winter quarter  
*Dec. 15-16, Thursday, Friday*.....Final examinations  
*Dec. 17, Saturday*.....Christmas vacation begins

### WINTER QUARTER

1933

*Jan. 2, Monday*.....Registration of new students; classes begin  
*Mar. 11, Saturday*.....Advance registration for spring quarter  
*Mar. 17-18, Friday, Saturday*.....Final examinations  
*Mar. 19, Sunday*.....Spring vacation begins

### SPRING QUARTER

*Mar. 27, Monday*.....Registration of new students; classes begin  
*May 5, Friday*.....Insignia Day  
*May 30, Tuesday*.....Memorial Day (holiday)  
*June 4, Sunday*.....Baccalaureate  
*June 8-9, Thursday, Friday*.....Final examinations  
*June 10, Saturday*.....Commencement

### SUMMER QUARTER

*June 17, Saturday*.....Registration  
*June 19, Monday*.....Classes begin  
*July 4, Tuesday*.....Independence Day (holiday)  
*July 22, Saturday*.....First half ends (registration for second half  
quarter)  
*July 24, Monday*.....Second half begins  
*Aug. 26, Saturday*.....Summer convocation



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- ARTHUR FRANKLIN ZIMMERMAN, A.B., A.M., B.D., Ph.D. *Professor  
of History;  
College Chaplain*  
A.B., McKendree College; A.M., Columbia University; B.D., Drew  
Theological Seminary; Ph.D., University of Illinois.

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 THE LIBRARY

- ALBERT FRANK CARTER, A.B., M.S. *Head Librarian*  
Diploma and M.S., State Normal School, (Pennsylvania); A.B., Colorado  
State Teachers College; Graduate Student, University of Chicago.
- GRACE LILLIAN CUSHMAN *Assistant Librarian;  
Instructor in Library Administration*  
Diploma, Colorado State Teachers College.
- ANNE MAXVILLE, A.B., B.S. in L.S. *Assistant Librarian*  
A.B., Colorado State Teachers College; B.S. in L.S., University of  
Illinois.
- STELLA MCCLENAHAN, A.B. *Assistant Librarian*  
A.B., Colorado State Teachers College; Student, Monmouth College,  
Monmouth, Illinois; Moody Bible Institute, Chicago; Bible Teachers'  
Training School, New York City.
- DORIS M. PERRY, B.S. *Children's Librarian*  
B.S., Albany State Teachers College.
- ALBERTA M. STILL, A.B. *Reference Librarian*  
A.B., Colorado College; Certificate, Graduate School of Library Science,  
University of California.

## THE CONSERVATORY OF MUSIC

J. DEFORREST CLINE, B.M.

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

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

J. ELBERT CHADWICK, A.B., A.M.

*Instructor in Piano*

A.B., A.M., Colorado State Teachers College; Graduate of Syracuse University, College of Fine Arts; Piano with Iloff 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.

BLANCHE RUMBLEY COLLINS, A.B.

*Instructor in Music*

Music Certificate, University of Colorado; A.B., Colorado State Teachers College.

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. Garlich, E. Sindlinger, Geneva Waters Baker, David Abramowitz, and Paul Lemaitre.

HENRY TRUSTMAN GINSBURG, B.M.

*Instructor in Violin*

B.M., Denver College of Music; Student of Henry Schradieck in theory, violin, composition, and history; Violin with Sametini, Sverenski, Saslovsky, Heifetz, and Thibaud; Head of the Violin Department, Denver College of Music; First Violinist with the Cavallo Symphony Orchestra; First Violinist, Capitol Symphony Orchestra, New York; Director of General Electric Orchestra; First Violinist, Denver String Quartet; Concertmeister, Denver Civic Symphony Orchestra.

J. ALLEN GRUBB

*Instructor in Voice*

Graduate of the Western Conservatory of Music (Chicago); Voice with John F. Jones, University of California; H. W. Owens, William Claire Hall, John C. Wilcox, and Percy Rector Stephens.

RUBY W. HEDGES

*Instructor in Harp*

Pupil of Alberto Salvi and Louise Schellsmidt Koehne. Instructor in Harp, Denver College of Music.

BLANCHE BENNET HUGHES

*Instructor in Piano*

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

\*ESTEL ELGAR MOHR, B.S.

*Assistant Professor of Public School Music*

Public School Music Diploma, Bowling Green Normal College, (Ohio); B.S., Music Education, Teachers College, Columbia University; Graduate Student, Teachers College, Columbia University; Voice, Prof. R. M. Tunnicliffe, Walter Kiesewetter, Madame Aslanoff, Percy Rector Stephens, Dean Harold Butler, Syracuse University.

LESTER EDWIN OPP, B.M.

*Assistant Professor of Music*

B.M., Dana Musical Institute, Cello, L. A. Gregory, Dillon, Moncana, and L. V. Ruhl, Dana Musical Institute (Warren, Ohio); Piano, Margaret Poindexter and L. A. Gregory, M. Salome Wetterholt, and L. V. Ruhl; Graduate Student, Eastman School of Music, University of Rochester.

BEVERLY IVAREA BEIL OPP

*Instructor in Reed Instruments*

Saxophone, J. Dwight Reese, D. S. Strickland, Theil College, (Pennsylvania); Oboe and Saxophone, Professor J. D. Cook, Dana Musical Institute; Graduate Student, Eastman School of Music, University of Rochester.

JAMES J. THOMAS, B.M.

*Assistant Professor of Music*

B.M., Dana Musical Institute (Warren, Ohio); Violin Student, Charles H. Lowry, John Hundertmark, Earl King, Arthur Stanborne, Paul Fink, Carl Kling, Arthur Hartmann; Piano Student, G. P. Andrews, Jacob Schmitt; Brass Instruments, Ross Hickernell; Theory, J. D. Cook, Rei Christopher, Nellie Mae Gwynne; History and Theory, Lynn B. Dana; Graduate Student, University of Southern California.

## SPECIAL FACULTY AND GENERAL LECTURERS

SUMMER QUARTER 1932

- DR. J. M. AIKMAN, Professor of Botany, Iowa State College.
- DR. E. J. ASHBAUGH, Dean of the School of Education, Miami University.
- DR. E. G. BLACKSTONE, Director of Commercial Teacher Training, State University of Iowa.
- MR. WILL FRENCH, Associate Superintendent, Tulsa Public Schools.
- DR. ELBERT K. FRETWELL, Professor of Education, Teachers College, Columbia University.
- DR. RALPH HAEFNER, Research Expert for the Wood-Freeman Typewriter Research, Columbia University.
- DR. HOWARD C. HILL, Professor of the Teaching of History, University of Chicago.
- DR. J. M. GLASS, Professor of Secondary Education, Rollins College.
- DR. BEN D. WOOD, Professor and Director of the Bureau of Collegiate Educational Research, Columbia University.
- DR. J. H. NEWLON, Director of Lincoln School, Teachers College, Columbia University.
- DR. EDWARD HOWARD GRIGGS, Croton-on-Hudson, New York.
- MISS LOUISE NABER, Supervisor of Art Education, Shaker Heights Schools, Cleveland, Ohio.
- MISS ELMA A. NEAL, Assistant Superintendent of Schools, San Antonio, Texas.
- DR. EARLE EUBANK, Professor of Sociology, University of Cincinnati.
- MR. IRA D. PAYNE, Director of Teacher Training, Arizona State Teachers College, Tempe, Arizona.
- DR. MERLE PRUNTY, Superintendent of Schools, Tulsa, Oklahoma.
- MR. JOHN C. UNGER, Superintendent of Schools, Hugo, Colorado.
- MISS E. MURIEL ANSCOMBE, Superintendent Jewish Hospital, St. Louis, Missouri.
- MISS ELIZABETH MELBY, Yale University School of Nursing.
- MR. ROBERT E. NEFF, Administrator of University Hospitals, University of Iowa.

- DR. ROBERT B. WITHAM, Director The Children's Hospital, Denver.
- DR. MAURICE REES, Dean of the College of Medicine, and Superintendent, Colorado University Hospital.
- MR. D. M. HIBNER, Superintendent of Schools, Ray, Arizona.
- MISS EDITH JOHNSON, Director of Nursing Education, The Children's Hospital, Denver.
- MR. A. M. HINDS, Supervisor of Penmanship, Louisville, Kentucky, Public Schools.
- MR. N. E. BUSTER, Principal of the William James Junior High School, Fort Worth, Texas.
- MR. I. E. STUTSMAN, Superintendent of Schools, Greeley, Colorado.
- MISS MAUDE PARSON, Assistant Dean in Charge of Surgical Nursing, Cook County School of Nursing, Chicago.
- MR. F. A. OGLE, County Superintendent of Schools, Weld County, Colorado.

## GENERAL INFORMATION

Colorado State Teachers College was established as the State Normal School of Colorado by an act of the Legislature of 1889. The first school year began October 6, 1890. It became a college by an act of the General Assembly in 1911.

### LOCATION

The College is located in Greeley, Weld County, Colorado, on the Union Pacific Railway, fifty-two miles north of Denver. This city is in the valley of the Cache la Poudre river, one of the richest agricultural sections of the state. The altitude is 4,648 feet above sea level. The streets are lined with trees, forming beautiful avenues. The elevation and distance from the mountains render the climate mild and healthful. The city is one of Christian homes and contains churches of all the leading denominations. There are 12,203 inhabitants.

### GOVERNMENT

Colorado State Teachers College is under the management of a board of trustees of seven members, six of whom are appointed by the governor of the state; the state superintendent of public instruction serves ex-officio. The maintenance of the College comes from a state mill tax and from special appropriations made by the legislature.

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

### FUNCTION OF THE COLLEGE

The purpose of the College is to educate teachers. 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 educating supervisors for rural schools, principals, superintendents, teachers and supervisors of home economics, industrial education, fine and applied arts, music, commercial education, teachers for schools of nursing and hospitals, and supervising teachers and instructors in teachers colleges.

While the College is supported for the education 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 sole function the education 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 educate teachers to be ready to serve in and direct the new schools which are in process of being evolved.

The College maintains a bureau to serve graduates seeking positions and school boards and superintendents seeking teachers. The only charge for this service is a small one to cover in part the cost of assembling data concerning nominees and is paid by the applicant. Superintendents

and school boards are invited to visit the College, to make use of the Placement Bureau in looking for teachers, and to meet applicants in whom they are interested.

### THE PLANT

The plant consists of sixteen attractive and substantial buildings, with interiors designed with a view to maximum service.

CRANFORD HALL houses the administrative offices, the Little Theater, and classrooms. The LIBRARY forms the central unit of a group of three buildings forming a link between CRANFORD HALL on the west and KEPNER HALL on the east. KEPNER HALL is the home of the Teachers College High School and Elementary School, and the children's library. GUGGENHEIM HALL accommodates the departments of industrial education and art. CRABBE HALL accommodates the departments of home economics, physics and English. GUNTER HALL, with its spacious gymnasiums and swimming pool, accommodates the departments of physical education for women, and athletics and physical education for men. The CONSERVATORY OF MUSIC is now housed in what was formerly the president's home. The HOME ECONOMICS PRACTICE HOUSE is used for demonstrations in home furnishings and housekeeping. The STUDENT CLUB HOUSE is the center of student social life on the campus. The FACULTY CLUB is the latest building to be erected on the campus.

### 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 in honor of Charles N. Jackson, Greeley member of the Board of Trustees. The field covers twenty-three acres and affords ample space for the varied lines of sport incident to college life.

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.

### DORMITORIES FOR GIRLS

On a plot of ground south of the campus proper the College maintains a Dormitory Triangle on which three attractive and serviceable units accommodate a limited number of women students. BELFORD HALL is the largest of the three. It has accommodations for fifty-two girls. DECKER HALL is located east of Belford and has accommodations for thirty-one girls. GORDON HALL, south and west of Belford, has accommodations for thirty-one girls.

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

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

Two pairs of sheets, 72" by 108" in size, for a single bed

Three pillow cases of 42-inch tubing

Two blankets, one comforter and necessary towels

One quilted mattress pad 36" by 76"



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

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

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

### DORMITORY FOR MEN

In 1931, the College opened Hays Hall, its first dormitory for men. The building is new, attractive and well planned for the life of students. This hall has a dining room for men. The price for room and meals is \$7.00 per week per student. Students who make application for accomodation in Hays Hall will deposit \$7.00 to pay for the first week's charge. All rooms must be rented by the quarter. Charges are due two weeks in advance. Send deposit to dean of men. The college furnishes one blanket and all bed linen, and students need only to bring extra blankets for cold weather.

### HOUSING REGULATIONS

The College requires all students to live in approved rooming houses. For this reason, it is necessary that students apply to the associate dean of women or the dean of men for a list of approved rooms. No student should rent a room by mail. Students are urged to come a few days before the opening of the quarter to select their rooms. No rooming houses will be allowed on the approved list if they do not have single beds and comfortable bathing and heating facilities. No basement rooms are allowed for sleeping purposes. The offices of the deans are open during the month of September for the purpose of consulting with students and placing them in approved houses. All students and householders are required to sign a contract covering arrangements concerning rent, moving, extra fees, heat, light, and hot water. No student is allowed to move within a quarter except under unusual circumstances and with permission from the dean of men or the associate dean of women.

### HEALTH SERVICE

All students will be required to pay a health service fee of \$1.00 each quarter. In return for this they will have off-campus health service. Each morning a member of the medical and nursing staff will visit all students too ill to attend classes. Provision also has been made for hospitalization of students.

### 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. Average expenses per quarter should not be higher than \$90.00 for board and room, \$15 for college fees, and \$5.00 for student association fees.

#### TUITION—

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

## FEES—

## 1. MATRICULATION FEE—\$5.00

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

## 2. INCIDENTAL FEE—\$15.00 each quarter.

This fee includes all incidental costs of students for one quarter. It includes physical education, library, and laboratory fees in all classes. These fees are for the fall, winter, and spring quarters only. See Summer School Bulletin for fees for the summer quarter.

## 3. HEALTH SERVICE FEE—\$1.00 each quarter.

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

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

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

BOARD AND ROOM—The dormitory triangle provides housing for 114 women students and Hays Hall accommodates 33 men. Students who live outside the dormitories pay rates equivalent to those at the dormitories.

## FELLOWSHIPS, SCHOLARSHIPS, AND LOAN FUNDS

## TEACHING FELLOWSHIPS

Several graduate teaching fellowships will be available for the school year 1932-33. 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's degree and who is an exceptionally capable student. Fellows are required to teach at least six hours per week and may not register for more than twelve hours of courses per quarter. Application for these fellowships should be made to the vice-president of the College.

## BOARD OF TRUSTEES SCHOLARSHIPS

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

## JOINT HONOR SCHOLARSHIPS

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

1. Scholarships are to be granted by the high school authorities.
2. Each scholarship will be good for four years tuition or fees in ANY state institution of higher learning in Colorado. (This does

not include student association fees, matriculation fee; neither does it include laboratory fees for certain state institutions, nor does it apply to the professional schools of the University of Colorado.)

3. One scholarship will be granted for each twenty-five graduates, or any part thereof, up to five scholarships, which is the maximum to be granted by any high school. The following table will show the number to be granted:
 

1 to 25 graduates	1 scholarship
26 to 50 graduates	2 scholarships
51 to 75 graduates	3 scholarships
76 to 100 graduates	4 scholarships
Over 100 graduates	5 scholarships
4. Each scholarship must be granted on the basis of academic standing alone. If only one scholarship is granted, it must be given to the one having the highest average scholarship. If five are granted, they must go to the five highest in scholarship.
5. Scholarships will be honored only when presented by the person to whom granted, and no substitutions will be allowed.
6. Only graduates having two full years of work in the senior high school from which they graduate are eligible.
7. The graduate earning one of these scholarships must enter college at the opening of the following fall term, or it will not be honored.
8. If the holder of a scholarship fails to make an average grade of 3.5 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.

#### WAIVER OF FEES

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

#### SCHOLARSHIP TROPHIES

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

**HONORARY EDUCATIONAL FRATERNITY CUPS**—The honorary educational fraternities on the campus, Sigma Pi Lambda, Phi Delta Kappa, and Kappa Delta Pi, offer four silver cups to outstanding all around students as evidenced by scholarship, citizenship, and general college activity

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

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

**SIGMA PI LAMBDA AWARD**—Sigma Pi Lambda, honorary educational fraternity for women, offers an award of a twenty-dollar gold piece to the graduate woman student who, in the estimation of the committee, is best qualified to meet the requirements of scholarship and personality.

### LOAN FUNDS

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

Applications for loans are made to the treasurer of the College, who, as chairman of the Loan Fund Committee, carefully investigates the record of the applicant. The committee grants the petition only in case it is satisfied that the applicant is worthy of such help, will be in a position to repay the loan within a reasonable time, is doing at least average work in college, and will be a credit to Colorado State Teachers College after graduation. The student furnishes a note acceptable to the treasurer and makes arrangement for its payment when due.

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

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

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

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

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

**THE WILLIAM PORTER HERRICK MEMORIAL FUND**—This fund, the gift of Mrs. Ursula D. Herrick, in memory of her husband, the late William

Porter Herrick, consists of the principal sum of \$5,000. The proceeds or income of said fund are to be paid over to 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 \$1,100 to be used as a loan fund for men students.

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

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

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

## THE RELIGIOUS ASSOCIATIONS

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

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

## HONORARY FRATERNITIES

**PHI DELTA KAPPA**—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**—A national honorary fraternity in education open to both men and women students of upper class rank. It was founded at

the University of Illinois in June, 1911. The chapter at Colorado State Teachers College was established on February 28, 1920, as the eighth chapter of the fraternity and the first chapter in a teachers college. Membership in Kappa Delta Pi is open to upper class students who have ten quarter hours in education, who have been in residence for three quarters, and who meet certain scholastic and character qualifications.

**SIGMA PI LAMBDA**—Honorary educational fraternity for women of senior college and graduate rank. It was founded at Colorado State Teachers College in May, 1926. Its purpose is to encourage research and progress among women in the field of education, and to maintain high ideals of personality and scholarship. Membership is by invitation to students who meet the requirements in residence, and certain scholastic and personality qualifications.

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

**ALPHA PSI OMEGA**—An honorary dramatic fraternity which was installed on the campus of Colorado State Teachers College in 1926. Membership in this organization is by invitation and is open to men and women students who have done outstanding work in acting and directing and staging dramatic productions on the campus.

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

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

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

**PI OMEGA PI**—National honorary fraternity in commercial education. It was founded at the Missouri State Teachers College, Kirksville, Missouri, on June 13, 1923. The Zeta Chapter in Colorado State Teachers College was organized in May, 1928. The aims of the organization include the encouragement and creation of interest and scholarship in commerce. The qualifications for membership are fifteen or more quarter hours of credit in commercial education and seven and a half quarter hours credit in education, superior standing in all commercial studies and average standing in all other subjects.

**LAMBDA SIGMA TAU**—Honorary science fraternity. The purpose of this organization is to stimulate among teachers of science progress in scholarship, methods, cooperation, ethical standards and humanitarianism. Membership is open to majors in the fields of chemistry, biology,

physics, and mathematics majors who minor in one of the three fields above and who have demonstrated that they are above the average scholastically and of good character.

## EXTENSION DEPARTMENT

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

**EXTENSION CLASSES**—Every effort is made to organize classes in those communities where a group of people wish to study the same course. In addition to the off-campus classes the Extension Department will upon demand of fifteen or more students organize classes to meet upon the campus during late afternoons, evenings or Saturdays. All classes taught upon the campus carry residence credit.

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

**LIMITATIONS OF EXTENSION CREDIT**—Twenty-four quarter hours of extension credit (all types) is the total number of hours which may be applied toward meeting requirements for the completion of the two-year course; thirty-six quarter hours is the total of extension credit which may be applied toward meeting requirements for the completion of the three-year course; forty-eight quarter hours is the total of extension credit which may be applied toward meeting the requirements for the completion of the Bachelor of Arts degree.

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

## STUDENT TEACHING

Teachers College provides a complete elementary school and a secondary school; from the pre-school and kindergarten to the twelfth grade. These schools have a three-fold function. First, they educate college students in the theory and art of teaching. Second, they maintain as nearly as possible an ideal elementary and secondary organization. Third, they serve as a research laboratory.

The fundamental purposes of these schools is to serve as a research laboratory, and a laboratory in which the student verifies his educational theory and principles. Opportunity is provided student teachers who have an adequate knowledge of subject matter and the theory and principles of education to clarify these and receive practice in the solution of the daily problems and management under the supervision of expert supervising 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. These 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 qualified teacher, one chosen with the greatest care, whose personality, native intelligence, and education fit him for the double duty of teaching student teachers to teach and teaching children. The supervising teacher is at all times responsible for the entire work of his grade or subject. These schools are planned on the theory that the best interests of student teachers and the best interests of the elementary and secondary pupils can be made to harmonize. Whatever interferes with the proper development of one interferes with the proper development of the other.

A minimum of eight quarter hours of student teaching credit is required for the Limited Certificates. A minimum total of eight hours of student teaching credit is required for the Bachelor of Arts degree. A student taking a four-year course should not postpone both quarters of student teaching to the senior year. Student teaching includes lesson planning, observation, teaching, testing, conferences, etc. Provision is made for group and individual conferences.

#### ELEMENTARY SCHOOL

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

The Elementary School is for experimentation and observation by 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 and in teaching special subjects. 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 Teachers College Elementary School. Each student must pass satisfactorily an achievement test as one of the prerequisites for student teaching.

The courses in pre-teaching observation (Ed.55 or 56) enable students to orient themselves in their major field, to learn how the supervising teacher applies principles of teaching to actual classroom situations, to observe the work of the pupils in a given grade, and to become familiar with the subject matter of the grade observed. It also enables students to learn the names of the pupils and to distinguish outstanding characteristics of the pupils whom they will teach the following quarter.

A more detailed description of the work in observation will be found on page 58.

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

#### SECONDARY SCHOOL

The Secondary 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 educate that group of teachers who expect to enter the field of secondary education. Three years of college are prerequisite to student teaching in grades ten, eleven,



and twelve. In the high school, the student teacher spends about two-fifths of his time in teaching and the remainder in observation.

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

#### EXTRA-MURAL STUDENT TEACHING

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

#### REQUIREMENTS IN STUDENT TEACHING

1. No student is eligible for student teaching whose college grades average below 2.5 prior to the quarter of student teaching. No credit will be given for less than a full quarter of teaching.

2. As a prerequisite to the first quarter of student teaching each student shall be required to spend one quarter in a systematic scheduled class in observation (Ed. 55 or 56). All pre-teaching observation is conducted in the campus school.

3. Each student shall be required to pass satisfactorily an achievement test.

4. The minimum credit to be earned in student teaching for the two and three-year courses is eight quarter hours. Additional work may be elected in student teaching in completing work for the bachelor's degree, but the total amount which may be earned during the four-year course should not exceed sixteen quarter hours.

5. Mature students who submit the required evidence of at least three years' satisfactory experience may substitute for the required course in student teaching a course in college upon the approval of the director of student teaching under the following conditions:

- a. A score above average on the classification test
- b. A score above average on the English exemption test
- c. A grade of "B" on the achievement test
- d. A scholarship average for college work of at least C (3 on the point scale)
- e. No exemption is granted where students have changed their major and have had no teaching experience in the new field
- f. A formal application must be made for exemption prior to the quarter of graduation and filed with the director of student teaching. All students will be held for the requirements for exemption in effect at the time of application
- g. No course taken prior to the application for exemption will be accepted for substitution; nor shall this course be a core or departmental required. It must furthermore be carried on as a residence course

## THE GRADUATE SCHOOL

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

### DEGREE OF MASTER OF ARTS

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

### DEGREE OF DOCTOR OF PHILOSOPHY

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

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

## ADMISSION TO COLLEGE

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

1. Graduation from a high school or secondary school fully accredited by the North Central Association of Colleges and Secondary Schools or by the state university of the state in which the high school is situated. The student must have passed in a minimum of twelve regular high school units in grades 10, 11, and 12. The college does not prescribe what the high school subjects shall be. It accepts any units that have been accepted for graduation by the secondary school.

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

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

**GRADUATES OF UNACCREDITED HIGH SCHOOLS**—Applicants graduating from unaccredited high schools may be unconditionally admitted

if they make scores in the matriculation examinations high enough to convince the Committee on Admissions of their ability to do college work successfully. All other students are conditionally admitted. Success in studies during the first quarter of residence removes the student's name from the probation list and makes him or her a regular student subject to the same rules and regulations as apply to graduates of accredited schools.

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

2. All applicants for admission are required before receiving permanent registration cards to take a series of matriculation examinations to determine as nearly as possible the probability of success. These examinations are:
  - a. A standard intelligence test
  - b. A standard English test
  - c. A standard achievement test (knowledge of the subject-matter of the common branches taught in the public elementary and junior high schools)

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

3. The applicant for admission must be recommended by the principal of the high school from which the student graduated, or by some one authorized to act for him, as being to the best of his knowledge of good moral character.
4. The applicant is required to pass a health examination given by the College physicians. Those who have an active communicable disease or such physical defects as would interfere with their success as teachers are not accepted.

#### 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.

#### MATRICULATION OF FRESHMEN

September, 1932

*The Application for Admission blank used by Colorado State Teachers College requires the completion of a questionnaire by the applicant (Part I) and a transcript of the high school record, and other data (Part II) by the Principal or Superintendent. Forms will be mailed to the high school before the close of the school year. Applicants who plan to enroll should complete Part I before graduation and request the proper high school official to complete Part II and mail to the College by June 30. Applicants who are uncertain about enrollment should have the record sent to the College by September 15 or before to avoid delay in registration. Since all high school graduates are accepted unconditionally, or conditionally if recommended by the principal or superintendent, an advance report*

*will not be sent to applicants. Adult students who are not high school graduates should consult the registrar before taking the matriculation tests.*

**FRESHMAN WEEK**—All freshmen enrolling for the first time in this College are required to appear on the campus Thursday, September 22, 1932. The first freshman assembly will be held in Gunter Hall at half past ten o'clock Thursday. At that time the complete freshman week program will be announced. With the high school record submitted in advance, nothing further should be done about enrollment until direction is given at the first freshman assembly.

**FRESHMEN SECTIONS**—The freshman class will be divided into three sections designated X, Y, and Z. Students in Section X have their core required courses coming in a certain sequence; those in Section Y in another sequence; and those in Section Z in still another. In the diagram on page 36 the subjects are arranged for each of these three groups of students.

## QUALITY OF WORK REQUIRED

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

1. **THE TEN-HOUR RULE.** A student in any quarter who fails to pass in ten hours of a regular program of not less than fifteen hours is warned in writing of his failure and has the following notation made on his permanent record: "Came under ten hour rule. Readmitted one quarter on probation." Such a student may continue in College on probation. For a second failure under this rule the student is notified in writing that he is indefinitely dropped from the College rolls. Likewise, a student carrying a limited program (less than fifteen hours) is required to pass in two-thirds of his program.

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

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

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

Typical example: Mary A. Black

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

**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

"WF," Failing at time of withdrawal

A course marked "Incomplete" must be made up within three months, or during the succeeding quarter, if credit is to be recorded. In case of summer school students who do not attend during the regular year, an "Incomplete" must be made up before the end of the following summer quarter or during the next succeeding quarter in residence, provided it comes within a twelve months period.

If a student withdraws from a class or from College without making formal arrangements with the registrar, he or she will receive an F in all subjects. Should the student be obliged to leave because of an emergency, a letter giving all facts must be filed with the registrar.

## CERTIFICATES AND DEGREES

### I. THE LIMITED RURAL CERTIFICATE

A limited certificate valid for a period of two years in the rural schools will be issued upon completion of the prescribed two-year course in the rural school curriculum. This certificate may be renewed for two years upon satisfactory evidence of one year successful teaching and an additional sixteen quarter hours of acceptable college work.

### II. THE LIMITED ELEMENTARY CERTIFICATE

A limited certificate valid for a period of five years, in the elementary schools, will be issued upon completion of the prescribed three-year course in the kindergarten-primary, intermediate or the upper grades curricula. A life certificate to teach in the elementary schools will be issued upon completion of the fourth year in the same curriculum in which the limited elementary certificate was received.

### III. THE LIFE CERTIFICATE

A life certificate is given only upon the award of a degree. The diploma given upon the award of the Bachelor of Arts or the Master of Arts is a life certificate to teach in either the elementary or secondary schools of the state.

The above applies to students matriculating after September 1, 1932. Students who have declared themselves to be candidates for the limited and life certificates prior to that time will be permitted to complete their courses according to the requirements effective at time of matriculation, provided said courses are completed before September 1, 1934.

**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. Those who have taken the three-year course must spend at least one additional quarter in residence for the degree. For the maximum amount of extension credit allowed, see page 25.

Correspondence students when enrolling in residence should apply to the Extension Department for an extension of time which will permit

the completion of correspondence courses at a time when the student is not enrolled in residence courses. Students in residence are not permitted to enroll in correspondence courses during vacations except during the vacation between the end of the summer quarter and the beginning of the fall quarter.

## CREDITS

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

**TIME LIMIT FOR THE COMPLETION OF COURSES**—Candidates for the Limited Rural Certificate (two year course) will be allowed three years to complete requirements effective at matriculation. Another three years will be allowed to complete the work of the third and fourth years under the requirements effective at the time the student begins resident work of the third year. Candidates for the Limited Elementary Certificate (three-year course) will be allowed four years to complete the requirements under conditions effective at matriculation. Two additional years will be allowed to complete requirements for the Bachelor of Arts degree effective at the time the student begins resident work of the fourth year. Adjustment to current requirements seldom involves hardship if the same major and minor courses are followed.

**UNIT OF COLLEGE CREDIT**—All credit toward graduation is computed in "quarter-hours." The term "quarter-hour" means a subject given one day a week through a quarter of a year, approximately twelve weeks. Most of the College courses call for four recitations a week. These are called four-hour courses. A student usually selects sixteen quarter-hours, the equivalent of four courses each meeting four times a week, as his regular work.

**STUDENT LOAD**—The normal load for junior college students is seventeen hours, including a physical exercise course carrying a credit of one hour. The normal load for all other students is sixteen hours. However, students who are unable to make out a satisfactory sixteen hour schedule may register for fifteen or seventeen hours, but the total number of hours for any three consecutive quarters must not be more than one hour in excess of the normal load. During his first quarter, the student whose score on a reliable intelligence test falls above the 93rd percentile point for college students shall be allowed to carry a load of twenty hours; the student whose score falls between the 84th and the 93rd percentile points, inclusive, shall be allowed to carry a maximum of eighteen hours. During subsequent quarters a student whose grade average is 4 or above will be allowed to carry two to four hours above the normal load, depending upon such factors as health, test scores, and time required to complete graduation. The student whose average grade falls below 2.5 will be required to carry two to four hours below the normal load. These regulations apply also to students attending the summer quarter.

**CREDIT FOR PHYSICAL EXERCISE COURSES**—A physical exercise course is required of all freshmen and sophomores during the Fall, Winter, and Spring quarters, unless physical disability is certified by the College physicians. Such releases shall be filed in writing with the registrar before permanent registration of the quarter to which the release applies. No credit will be allowed for physical exercise courses in the senior college and not more than six hours will be accepted in the junior college; however, this does not apply to majors or minors in either of the two departments involved.

**EXCESS CREDIT IN THE UNDERGRADUATE SCHOOL**—Excess undergraduate work taken in Colorado State Teachers College may be applied toward the Master of Arts degree provided the student files with the registrar, prior to the time the work is done, a statement from the director of the Graduate School granting him the privilege to do this. Such credit will

be granted only to students who in their fourth year do not need all of their time for the completion of their undergraduate work. The graduate class card (pink) must be used by students who wish credit for courses taken under this provision.

CREDIT FROM OTHER COLLEGES—Full credit is allowed for work done in other accredited colleges on the basis of our own credit standards. Substitutions may be made for required courses if equivalent work has been taken. Credentials shall be filed with the registrar in accordance with instructions which will be released upon request. All advanced standing is provisionally allowed pending the satisfactory completion of matriculation tests and a minimum of one quarter's work.

## THE CURRICULA

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

Colorado State Teachers College is a technical school whose sole function is to prepare teachers for the teaching profession in the same sense that medical colleges prepare physicians and surgeons, engineering schools prepare engineers, etc. For this reason its curricula are sharply differentiated from those of other technical schools and also from those of the colleges of liberal arts.

The curricula in Colorado State Teachers College are formulated on the basis of four years of work with the exception of the two-year rural school curriculum. The degree course is planned to occupy twelve quarters. Upon the completion of 192 quarter hours, exclusive of physical exercise courses, the degree of Bachelor of Arts and the Life Certificate will be granted. The prescribed course leading to the (two year) Limited Rural Certificate requires ninety-six quarter hours and six hours of physical exercise courses. A limited certificate valid for a period of five years in the elementary schools will be issued upon the completion of three years work (144 hours exclusive of physical exercise courses) in the kindergarten-primary, intermediate, or upper grades curricula. The Bachelor of Arts degree and the Life Certificate will be granted upon the completion of an additional year (48 hours) in the same curriculum in which the Limited Elementary Certificate was received.

The following departments prepare teachers to receive the Bachelor of Arts degree:

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

## SELECTION OF MAJORS AND MINORS

One major of forty-eight hours and two minors of twenty-four hours each are required in most departments for graduation.

In choosing a major and minors, the student should select in accordance with his interests and the demand for service after graduation. A survey of the vacancies reported to the Placement Bureau during the past six years and the studies of Whitney of Colorado, Woody of Michigan and Buckingham of Ohio State indicate definite subject combinations are desirable from the viewpoint of placing the graduate.

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

MAJOR	MINOR
Art	Music, English, Spanish
Athletics and Physical Education for Men	Industrial Arts, Physics, Chemistry, Mathematics
Biology	Chemistry, Physics, Mathematics
Chemistry	Physics, Mathematics, Biology
Commercial Educa- tion	There are many positions for Commercial Educa- tion majors without minors if they can teach Book- keeping, Shorthand, and Typewriting.
Education	This subject is fundamental for all teachers. Ex- perienced teachers with Education as a major se- cure positions as superintendents, principals or supervisors. Seldom does a person without ex- perience secure an attractive supervisory position. Many city schools are giving preference to grade teachers who hold the Bachelor of Arts degree. Majors in Education who have had experience in the grades and who have completed the work for the Master of Arts degree are in demand for col- lege training school positions.
English	Latin, History, Geography, Mathematics, Library Science.
Spanish	Latin, English, History.
Geography	History, Biology, General Science, Sociology.
History	English, Public Speaking, Men's Athletics, Geog- raphy, Sociology.
Home Economics	Chemistry, General Science, Biology.
Industrial Education	Men's Athletics, Physics, Chemistry, Mathematics.
Mathematics	Physics, Chemistry, Men's Athletics.
Music	Art, English, History.
Physical Education for Women	Biology, General Science.
Physics	Chemistry, Mathematics, Biology.
Sociology	An understanding of the fundamental principles of Sociology is essential for successful teaching. Sociology is taught as a subject, however, in very few high schools. Sociology courses are usually taught in high schools by the history teacher.

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

In choosing teachers, principals and superintendents are always anxious to find applicants who are able to handle extra-curricular ac-



tivities. From the viewpoint of getting a position, it is desirable for teachers to prepare themselves to direct glee clubs, coach athletics, coach debating teams, manage student publications, and supervise high school clubs of various kinds. Men teachers can increase their salaries and obtain better positions if they understand and know how to coach boys' athletics.

#### THE CURRICULA IN DETAIL

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

**THE CONSTANTS OR CORE REQUIRED SUBJECTS:** Each of the curricula differs somewhat from the others in the subjects required by the various departments but each curriculum contains certain subjects common to all. These are shown in the diagram on page 36 and are known as core required subjects or constants.

**THE DEPARTMENTAL REQUIREMENTS—**In addition to the "core" subjects required of all, each student takes a number of prescribed courses in the department which he chooses for his major. In addition to the major, the student selects two minors of twenty-four hours each in most departments. Core required subjects may be counted towards minors in their respective fields.

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

Art .....	40	Mathematics .....	101
Athletics and Physical Edu- cation for Men .....	46	Music .....	103
Commercial Education .....	49	Nursing Education .....	107
Education .....	54	Physical Education for Women .....	111
English and Literature .....	72	Sciences—	
Foreign Languages .....	77	Biology .....	117
Geography .....	81	Chemistry .....	121
History and Political Science .....	84	Physics .....	124
Home Economics .....	91	Sociology and Anthropology .....	128
Industrial Education .....	94		

## THE CORE REQUIRED SUBJECTS

Sec. X		Sec. Y		Sec. Z	
Fall					
Eng. 41	4 hrs.	Eng. 41	4 hrs.	Eng. 41	4 hrs.
Soc. 1	4 hrs.	Hyg. 1	4 hrs.	Ed. 1	4 hrs.
Sci. 3	4 hrs.	Sci. 3	4 hrs.	Soc. 1	4 hrs.
Phys. Ed.	1 hr.	Phys. Ed.	1 hr.	Phys. Ed.	1 hr.
Winter					
Ed. 1	4 hrs.	Soc. 1	4 hrs.	Hyg. 1	4 hrs.
Eng. 42	4 hrs.	Eng. 42	4 hrs.	Eng. 42	4 hrs.
Sci. 4	4 hrs.	Sci. 4	4 hrs.	Sci. 3	4 hrs.
Phys. Ed.	1 hr.	Phys. Ed.	1 hr.	Phys. Ed.	1 hr.
Spring					
Hyg. 1	4 hrs.	Ed. 1	4 hrs.	Eng. 43	4 hrs.
Eng. 43	4 hrs.	Eng. 43	4 hrs.	Sci. 4	4 hrs.
Sci. 5	4 hrs.	Sci. 5	4 hrs.	Hist. 25	4 hrs.
Phys. Ed.	1 hr.	Phys. Ed.	1 hr.	Phys. Ed.	1 hr.

## SECOND YEAR

Fall					
Math. 50	4 hrs.	Math. 50	4 hrs.	Hist. 26	4 hrs.
Hist. 25	4 hrs.	Mus. 25	4 hrs.	Sci. 5	4 hrs.
Phys. Ed.	1 hr.	Phys. Ed.	1 hr.	Phys. Ed.	1 hr.
Winter					
Hist. 26	4 hrs.	Hist. 25	4 hrs.	Hist. 27	4 hrs.
Mus. 25	4 hrs.	Art 1	4 hrs.	Math. 50	4 hrs.
Phys. Ed.	1 hr.	Phys. Ed.	1 hr.	Phys. Ed.	1 hr.
Spring					
Hist. 27	4 hrs.	Hist. 26	4 hrs.	Mus. 25	4 hrs.
Art 1	4 hrs.	Hist. 27	4 hrs.	Art 1	4 hrs.
Phys. Ed.	1 hr.	Phys. Ed.	1 hr.	Phys. Ed.	1 hr.

REQUIRED JUNIOR YEAR, Soc. 105; SENIOR YEAR, Ed. 195. Time placement of observation and student teaching varies with the length of the course.

DEPARTMENTAL REQUIREMENTS FOR RURAL MAJORS<sup>1</sup>

Sec. X		Sec. Y		Sec. Z	
Fall					
Ed. 76	4 hrs.	Ed. 31	4 hrs.	Ed. 76	4 hrs.
Winter					
Ed. 3	4 hrs.	Ed. 76	4 hrs.	Ed. 3	4 hrs.
Spring					
Ed. 4	4 hrs.	Ed. 3	4 hrs.	Ed. 4	4 hrs.
				Ed. 55	4 hrs.
SECOND YEAR					
Fall					
Ed. 31	4 hrs.	Ed. 4	4 hrs.	Ed. 58	8 hrs.
Ed. 55	4 hrs.	Soc. 90	2 hrs.		
		H. E. 26	2 hrs.		
Winter					
Ed. 58	8 hrs.	Ed. 30	4 hrs.	Geog. 12	4 hrs.
		Ed. 55	4 hrs.	Ed. 30	4 hrs.
				Soc. 90	2 hrs.
				H. E. 26	2 hrs.
Spring					
Geog. 12	4 hrs.	Geog. 12	4 hrs.	Ed. 31	4 hrs.
Ed. 30	4 hrs.	Ed. 58	8 hrs.		
Soc. 90	2 hrs.				
H. E. 26	2 hrs.				

<sup>1</sup>Upon completion of the two-year course as prescribed above a Limited Certificate to teach in the rural schools is granted. 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. Rural majors are not required to take Hist. 27.

DEPARTMENTAL REQUIREMENTS

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DEPARTMENTAL REQUIREMENTS FOR KINDERGARTEN-PRIMARY MAJORS<sup>2</sup>

FIRST YEAR

Sec. X	Sec. Y	Sec. Z
Fall Eng. 121 4 hrs.	Eng. 121 4 hrs.	Eng. 121 4 hrs.
Winter Geog. 50 2 hrs. Geog. 196 2 hrs.	Geog. 50 2 hrs. Geog. 196 2 hrs.	Geog. 50 2 hrs. Geog. 196 2 hrs.
Spring Ed. 76 4 hrs.		Sci. 1 4 hrs.

SECOND YEAR

Fall Ed. 5 4 hrs.	Ed. 76 4 hrs.	Eng. 13 4 hrs.
Winter Ed. 6 4 hrs. Eng. 13 4 hrs.	Ed. 5 4 hrs. Eng. 13 4 hrs.	Ed. 76 4 hrs. Ed. 5 4 hrs.
Spring Ed. 126 4 hrs. Ed. 55 4 hrs.	Ed. 6 4 hrs.	Ed. 6 4 hrs. Ed. 126 4 hrs.

THIRD YEAR

Fall Sci. 1 4 hrs. Ed. 145 4 hrs. Ed. 58 8 hrs.	Sci. 1 4 hrs. Ed. 145 4 hrs. Ed. 55 4 hrs.	Ed. 6 4 hrs. Ed. 145 4 hrs.
Winter Mus. 1a 4 hrs. Ed. 162 4 hrs. Art 2 4 hrs.	Art 2 4 hrs. Ed. 162 4 hrs. Ed. 58 8 hrs.	Ed. 162 4 hrs. Ed. 55 4 hrs. Mus. 1a 4 hrs.
Spring Geog. 10 4 hrs.	Geog. 10 4 hrs. Mus. 1a 4 hrs. Ed. 126 4 hrs.	Ed. 58 4 hrs. Art 2 4 hrs. Geog. 10 4 hrs.

FOURTH YEAR

Fall Ed. 110 4 hrs. Soc. 160 4 hrs.	Ed. 110 4 hrs. Soc. 160 4 hrs.	Ed. 110 4 hrs. Soc. 160 4 hrs.
Winter Ed. 111 4 hrs. Biol. 101 4 hrs.	Ed. 111 4 hrs. Biol. 101 4 hrs. Ed. 195 4 hrs.	Ed. 111 4 hrs. Biol. 101 4 hrs.
Spring Ed. 112 4 hrs. Ed. 195 4 hrs.	Ed. 112 4 hrs.	Ed. 112 4 hrs. Ed. 195 4 hrs.

Desirable electives: Eng. 110, Hist. 10, 13a, Sci. 2, Pol. Sci. 102 and Art 113.

<sup>2</sup>For Kindergarten-Primary majors the Limited Certificate is granted those who complete the three-year course as prescribed. The Life Certificate and the Bachelor of Arts degree is granted on completion of the fourth year. For one of six required quarters of active physical exercise take P. E. 11; for a second quarter, take P. E. 5; other four quarters of active physical exercise to be selected by student.

DEPARTMENTAL REQUIREMENTS FOR INTERMEDIATE MAJORS<sup>3</sup>

## FIRST YEAR

Sec. X		Sec. Y		Sec. Z	
Fall					
Eng. 121	4 hrs.	Eng. 121	4 hrs.	Eng. 121	4 hrs.
Winter					
Eng. 13	4 hrs.	Eng. 13	4 hrs.	Eng. 13	4 hrs.
Spring					
Ed. 76	4 hrs.				

## SECOND YEAR

Fall					
Ed. 8	4 hrs.	Ed. 76	4 hrs.	Ed. 76	4 hrs.
Winter					
Ed. 9	4 hrs.	Ed. 8	4 hrs.	Ed. 8	4 hrs.
Geog. 10	4 hrs.	Geog. 10	4 hrs.	Geog. 10	4 hrs.
Spring					
Geog. 11	4 hrs.	Ed. 9	4 hrs.	Ed. 9	4 hrs.
Ed. 55	4 hrs.	Geog. 11	4 hrs.	Geog. 11	4 hrs.

## THIRD YEAR

Fall					
Ed. 58	8 hrs.	Ed. 55	4 hrs.	Ed. 9	4 hrs.
Sci. 1	4 hrs.	Ed. 145	4 hrs.	Ed. 145	4 hrs.
Ed. 145	4 hrs.				
Winter					
Mus. 1a	4 hrs.	Ed. 58	8 hrs.	Ed. 55	4 hrs.
		Art 2a	4 hrs.	Art 2a	4 hrs.
				Mus. 1a	4 hrs.
Spring					
Art 2a	4 hrs.	Ed. 126	4 hrs.	Ed. 58	8 hrs.
Ed. 126	4 hrs.	Sci. 1	4 hrs.	Sci. 1	4 hrs.
		Mus. 1a	4 hrs.	Ed. 126	4 hrs.

## FOURTH YEAR

Fall					
Ed. 110	4 hrs.	Ed. 110	4 hrs.	Ed. 110	4 hrs.
Soc. 160	4 hrs.	Soc. 160	4 hrs.	Soc. 160	4 hrs.
Winter					
Ed. 111	4 hrs.	Ed. 195	4 hrs.	Ed. 111	4 hrs.
Biol. 101	4 hrs.	Ed. 111	4 hrs.	Biol. 101	4 hrs.
Geog. 194	4 hrs.	Biol. 101	4 hrs.	Geog. 194	4 hrs.
		Geog. 194	4 hrs.		
Spring					
Ed. 112	4 hrs.	Ed. 112	4 hrs.	Ed. 112	4 hrs.
Ed. 195	4 hrs.			Ed. 195	4 hrs.

Desirable electives: Eng. 110, Hist. 10, 13b, Pol. Sci. 102, Art 114, Sci. 2.

<sup>3</sup>For Intermediate majors the Limited Certificate is granted those who complete the three-year course as prescribed. The Life Certificate and the Bachelor of Arts degree is granted on completion of the fourth year. For one of six required quarters of active physical exercise take P. E. 11; for a second quarter, take P. E. 5; other four quarters of active physical exercise to be selected by student.

DEPARTMENTAL REQUIREMENTS FOR UPPER GRADES-JUNIOR HIGH SCHOOL<sup>4</sup>

Sec. X		FIRST YEAR Sec. Y		Sec. Z	
SECOND YEAR					
Fall					
Minor*	4 hrs.	Minor	4 hrs.	Minor	4 hrs.
Winter					
Minor	4 hrs.	Minor	4 hrs.	Minor	4 hrs.
Spring					
Minor	4 hrs.	Minor	4 hrs.	Minor	4 hrs.
THIRD YEAR					
Fall					
Ed. 76	4 hrs.	Minor	4 hrs.	Minor	4 hrs.
Minor	4 hrs.				
Winter					
Ed. 65	4 hrs.	Ed. 76	4 hrs.	Ed. 65	4 hrs.
Minor	4 hrs.	Ed. 65	4 hrs.		
Spring					
Minor	4 hrs.			Ed. 76	4 hrs.
Ed. 56	4 hrs.				
FOURTH YEAR					
Fall					
Ed. 117	4 hrs.	Ed. 117	4 hrs.	Minors	16 hrs.
Ed. 58	8 hrs.	Ed. 56	4 hrs.		
Minor	4 hrs.				
Winter					
Ed. 117	4 hrs.	Ed. 58	8 hrs.	Ed. 56	4 hrs.
Minors	12 hrs.	Minors	8 hrs.	Minors	12 hrs.
Spring					
Ed. 126	4 hrs.	Ed. 126	4 hrs.	Ed. 117	4 hrs.
Minors	12 hrs.	Minors	12 hrs.	Ed. 58	8 hrs.
				Ed. 126	4 hrs.
FOURTH YEAR					
Fall					
Ed. 145	4 hrs.	Ed. 145	4 hrs.	Ed. 145	4 hrs.
Soc. 160	4 hrs.	Soc. 160	4 hrs.	Soc. 160	4 hrs.
Minors	8 hrs.	Minors	8 hrs.	Minors	8 hrs.
Winter					
Minors	16 hrs.	Minors	12 hrs.	Minors	16 hrs.
		Ed. 195	4 hrs.		
Spring					
Ed. 195	4 hrs.	Minors	16 hrs.	Ed. 195	4 hrs.
Minors	12 hrs.			Minors	12 hrs.

\*Minor here means take one of the prescribed subjects within one of the three subject matter minors you are completing as outlined "suggested junior high school minor," page 55.

<sup>4</sup>For Upper Grade majors the Limited Certificate is granted those who complete the three-year course as prescribed. The Life Certificate and the Bachelor of Arts degree is granted on completion of the fourth year. For one of six required quarters of active physical exercise take P. E. 11; for a second quarter, take P. E. 5; other four quarters of active physical exercise to be selected by student.

## COURSES OF INSTRUCTION

### ART

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

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

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

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

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

#### A FOUR-YEAR CURRICULUM IN ART

In addition to the core subjects listed on page 36, the following courses are required of majors in this department: First year—Art 3, 3a, 4; second year—Art 5, 10, 16, 17; third year—Art 101, 105a, 106, 112, 115a; fourth year—Art 103, 109, 120, Ed. 116 for students intending to teach in high school.

Art majors are required to elect twelve quarter hours from the following group of courses or to take the entire group of twenty-four hours as a minor: Art 104a, 107, 107a, 108, 111; Bookbinding, two hours; Mechanical Drawing, two hours; Art Metal or Printing, four hours; Woodwork, four hours. Home Economics 107 is recommended as an elective. Art 100 is a desirable elective course for all art teachers and supervisors.

Courses for students from other departments who choose a minor in Art: Art 3a or 103a, 3 or 103, 4 or 104, 17 or 117. Elect four hours from Art 2, 2a, 110 or 111, 113, 114, and six hours from either of the following groups: Art 5, 16, 112, 115, 120 or 104a, 107, 107a, 108, 118, 121.

#### 1. ART APPRECIATION. Four hours.

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

An introduction to the elements and fundamental principles of the space arts; how to recognize and understand these principles at work in simple harmonies. Study illustrations of rhythm, balance, and proportion in art objects such as sculpture, painting, architecture, clothing, and furnishings; simple facts about color and how to use color intelligently; appreciation of color as a source of enjoyment; art in the home; knowledge of good spacing, color and value relations in making the home and the community more attractive and satisfying.

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

The purposes of the course are: (a) to present the aims and purposes of the teaching of art in the elementary school; (b) to consider essentials of creative art expression and ways of developing creative ability in the kindergarten and the first four grades; (c) to formulate standards of art appreciation as they relate to the small child; (e) to plan organization of art problems and projects for kindergarten and the lower grades.

Discussions will include the child's native equipment and interests as they relate to creative expression and appreciation based upon an understanding of art structure. Exercises will be done in free brush drawing, painting, and drawing to build a vocabulary of symbolic forms, color design, and lettering.

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

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

The content includes practice in creative art expression, in organization of subject content, and in lesson planning. The subjects considered are freehand drawing, perspective, composition, color, design, art appreciation, art in costume, in the home and community life.

#### 3. FREEHAND DRAWING I. Four hours.

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

#### 3a. INTRODUCTION TO THE STUDY OF ART. Four hours.

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

#### 4. DESIGN. Four hours.

Prerequisites 3, 3a, or equivalent.

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

#### 5. WATER COLOR PAINTING. Two hours.

Prerequisite Art 3 or equivalent.

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

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

#### 5a. WATER COLOR PAINTING. Two hours.

A continuation of Art 5 with more advanced problems in creative composition.

#### 10-110. ART METHODS. Four hours.

For art majors and art minors.

The purposes are, (a) to make the student familiar with the art needs of the elementary and high school student; (b) to make him acquainted with the subject matter related to the teaching of fine art; (c) to present methods of teaching; (d) to discuss organization and adaptation of art subject matter for the child mind.

The topics covered are: Objectives in the teaching of fine art, relating art subject matter to the needs of the child, psychological sequence in the

development of art problems, practice in drawing and painting for expression, symbolic drawing, perspective, drawing from nature and from life, lettering, design, illustration.

**11-111. INDUSTRIAL ART METHODS. Four hours.**

A course for art majors and art minors. This course presents the industrial needs of the child from the first grade through junior high. Methods of teaching and organization of work into units or projects related to the great industries of man.

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

**16. COMPOSITION AND FREEHAND DRAWING. Four hours.**

Prerequisite Art 3 or equivalent.

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

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

**17. LETTERING I. Two hours.**

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

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

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

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

**100. SUPERVISION OF ART EDUCATION. Four hours.**

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

**101. FIGURE DRAWING. Four hours.**

Objective: To gain a knowledge of the human figure in its relation to artistic expression.

The course consists of a study of the figure as a whole, proportion, essentials of artistic anatomy, the figure in action, rhythm, drawing from life model and from memory, the figure in composition, work in a variety of media including clay modeling.

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

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

\*Given also by extension.



**103. COMPOSITION. ADVANCED. Four hours.**

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

The content includes theory of composition, analysis of art structure in the great works of art; design, principles, the aesthetics of line, line plans of old masters, dark and light patterns, aesthetics of dark and light, organization of color, dynamic symmetry, assigned problems in composition in a variety of media.

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

**103a. ADVANCED COMPOSITION. Four hours.**

For description of course see Art 3a.

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

**104. DESIGN. Four hours.**

For description of course see Art 4.

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

**104a. DESIGN IN TEXTILES. Two hours.**

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

**105. WATER COLOR PAINTING. Two hours.**

The purpose of the course is to give the student a technical command of the medium, to develop individual expression in creative painting. Problems will be adapted to the individual needs of the students. This work may be continued for two additional hours as Art 105a.

**106. TEACHING ART APPRECIATION. Two hours.**

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

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

**107. CRAFT PROCESSES AND DESIGN. Two or four hours. Prerequisites 4, 4a, or the equivalent.**

The purpose of the course is to develop appreciation and interests in the different crafts of the world; to study the harmonious relationships of the construction and design of artistic products; to teach correct use of materials; to stimulate good craftsmanship and create appropriate designs.

Actual designing and construction of problems in tooled leather, pine and reed basketry, lampshades, batik, gesso, painted glass and brass toys, are developed.

This work may be continued as Art 107b for two or four hours credit.

**107a. DESIGN IN WEAVING. Two or four hours.**

A course of instruction in pattern designing for woven fabrics and hooked rugs. The technic of simple and pattern weaving will develop on hand and foot power looms.

This course may be continued as Art 107c for two or four hours credit.

**108. POTTERY. Two hours.**

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

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

**109. HISTORY OF ART. Four hours.**

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

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

**110. FINE ARTS METHODS. Four hours.**

For description of course see Art 10.

**111. INDUSTRIAL ARTS METHODS.**

For description of course see Art 11.

**112. COLOR THEORY AND COMPOSITION. Four hours.**

Prerequisite Art 4.

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

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

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

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

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

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

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

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

**ART 115. FREEHAND DRAWING II. Two hours.**

Prerequisite Art 3.

Provides an opportunity for students to do advanced work in drawing. Emphasis is placed upon sound draughtsmanship and upon developing the expressive qualities peculiar to the medium employed. Work will be done in a variety of mediums: charcoal, pastel, crayon and pencil.

**ART 115a. FREEHAND DRAWING III. Two hours.**

Prerequisite Art 115.

A continuation of Art 115. Work in a variety of mediums: Pen and ink, ink and wash, lithograph, crayon, and the etching process.

This course may be continued for two or four additional hours as 115b.

**116. COMPOSITION AND FREEHAND DRAWING. Four hours.**

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

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

**117. LETTERING II. Two hours.**

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

**118. STAGECRAFT AND PAGEANTRY. Two hours.**

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

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

**119. ADVANCED POSTER COMPOSITION. Two hours.**

Prerequisite, Art 17.

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

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

**120. OIL PAINTING. Two hours.**

Prerequisites, Art 3, 16.

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

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

**120a. OIL PAINTING. Two hours.**

For description of course see Art 120.

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

**121. MODELING. On request. Two or four hours.**

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

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

This course may be continued for two or four hours as 121a.

**122. TESTS IN ART EDUCATION. Two hours.**

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

**123. PRINT MAKING.**

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

**ART 126. INDUSTRIAL ARTS DESIGN. Four hours.**

This course is planned to give an understanding of art principles in the constructive field, and aims to develop creative resources in the design of industrial arts projects. Special attention will be given to the development of original designs for specific industrial arts projects in leather, wood and metal.

**ART 127. CONTEMPORARY ART. Two hours.**

The art of today as a social and aesthetic expression is an essentially vital subject. This course aims to study the force and trends in the contemporary field and the works of the creative leaders in design painting, sculpture and architecture.

**200. SUPERVISION OF ART EDUCATION. Four hours.**

For description of course see Art 100.

**212. ADVANCED COLOR THEORY. Four hours.**

Prerequisite Art 112.

Research in the field of color aesthetics.

**220. ADVANCED OIL PAINTING (Given on request).****222. INDIVIDUAL STUDIES IN ART. Two or four hours.****223. RESEARCH IN ART EDUCATION. Four hours.**

Taken in the first quarter of graduate work.

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

**224. RESEARCH IN ART EDUCATION. Four hours.**

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

**225. RESEARCH IN ART EDUCATION. Two hours.**

A continuation of Art 224.

## ATHLETICS AND PHYSICAL EDUCATION FOR MEN

First and second year men are required to take an activity course each quarter. This requirement is made to cultivate athletic skills, interests, and healthful exercise habits. It cannot be met by taking more than one activity course in a quarter.

All men are required to take an annual physical examination. This examination will be made by the medical adviser for men. Appointments are made at the time of temporary registration. Failure to keep medical appointments will result in an additional fee of \$1.00. The medical adviser only has authority to postpone or remake appointments.

Applications for excuses from the activity requirements must be made directly to the director of physical education for men. Such requests must be accompanied by recommendations from the College physician or the student's adviser.

Students in activity classes are required to furnish their own uniform, shoes, and locks for their lockers. The uniform shall consist of an ordinary track outfit, either gray or white in color, and gymnasium shoes. A combination lock must be used. Such a lock can be obtained from the property man by making a \$1.00 deposit, which is refunded upon return of the lock at either the end of the quarter or year.

## A FOUR-YEAR CURRICULUM IN ATHLETICS AND PHYSICAL EDUCATION FOR MEN

Majors in physical education are required to have two minors. The required courses are so arranged that a minor in biology is obtained on the completion of the major. The second minor must be arranged independently by the student. Attention is called to the studies of the Research Department on desirable minors for majors in this field.

In addition to the core subjects listed on page 36, the following courses are required of majors in this department: Ath. 2, 3, and 4 must be taken in the six hours of college core requirements. Ath. 50, 120, 121, 123, 125, 170, 180, and two of the courses from 165 to 169 inclusive. P. E. 37, 38, 120, 121, 132, and 135. Biology 11, 12, 101, and 117. Ed. 116, 125.

The student teaching requirement of eight hours must be met by four hours of teaching in the major and four hours in one of the minors.

Recommended electives are P. E. 50, 133, Chem. 1, 2, and Ed. 141, courses from Ath. 165-169, P. E. 37 and 38.

Courses for students from other departments who choose a minor in Athletics and Physical Education for Men: Ath. 2, 3, 4, Ath. 50, 120, 170, 180, and two of the courses from 165-169, P.E. 37 and 38.

## ACTIVITY COURSES

1. SPEEDBALL AND TOUCHBALL. Three periods. One hour.  
Fall outdoor activities.
2. ELEMENTARY SWIMMING. Three periods. One hour.  
A course for the beginner in swimming.
3. GYMNASTICS. Three periods. One hour.  
Exercise on horizontal bar; parallel bars; horse, rings.
4. MAT WORK. Three periods. One hour.  
Tumbling and elementary mat work.
5. TENNIS. Three periods. One hour.  
A recreational course for all men students.
6. CROSS COUNTRY. Three periods. One hour.  
The men in this course are trained for a cross-country run of three miles, an event held on Homecoming Day.
7. MODIFIED GAMES. Three periods. One hour.  
Winter indoor activities.
8. ELEMENTARY WRESTLING. Three periods. One hour.  
Fundamentals and personal proficiency.
9. BOXING. Three periods. One hour.  
Fundamentals for class and individual work.
10. PLAYGROUND BASEBALL. Three periods. One hour.  
A recreational game for all men students.
11. GOLF. Two periods. One hour. Small fee.
12. ADVANCED MAT WORK. Three periods. One hour.
13. DOUBLE TUMBLING. Three periods. One hour.
14. SPRING FOOTBALL. Three periods. One hour.  
This course offers the practical application of theory courses in football coaching. Fundamentals, forward pass defense, situation play, kicking, line shifting, and formations in use at the present time are stressed.
15. INTRA-MURAL. One hour.  
An assortment of group games suitable for all the men students who are unable to take part in college sports.
25. BAND. Four periods. One hour.  
Drill and figure marching.

### VARSIY SPORTS

30. FRESHMAN FOOTBALL. One hour.
31. VARSITY FOOTBALL. Daily. One hour.
32. VARSITY BASKET BALL. Daily. One hour.
33. VARSITY SWIMMING. Daily. One hour.
34. VARSITY GYMNASICS. Daily. One hour.
35. VARSITY WRESTLING. Daily. One hour.
36. VARSITY TRACK. Daily. One hour.
37. VARSITY BASEBALL. Daily. One hour.
38. VARSITY TENNIS. Daily. One hour.

### THEORY COURSES

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

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

50. FIRST AID. Two periods. Two hours.

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 all majors, but open to all.

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

A third year subject dealing with the various theories and philosophies of play, the development of play interest in both sexes at different age levels, and the selection of games or play activities to meet particular group requirements.

121. GYMNASIIC METHODS. Three periods. Two hours.

An introduction for majors to the formal gymnastic program. The work consists of handling gymnastic classes in drill, heavy and light apparatus, the day's order in free exercise, mimetics, tumbling, and pyramid building.

123. PHYSICAL EXAMINATION AND NORMAL DIAGNOSIS. Two periods. Two hours.

This course takes up the study of physical examination in regard to the points to be examined, the type of card to use, 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.

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

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

165. FOOTBALL COACHING. Four periods. Four hours.

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

166. BASKETBALL COACHING. Four periods. Four hours.

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

## 168. TRACK COACHING. Two periods. Two hours.

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

## 169. BASEBALL COACHING. Two periods. Two hours.

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

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

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

No student may register for senior college coaching classes without two years of intercollegiate competition or its equivalent in the particular sport.

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

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

## COMMERCIAL EDUCATION

This department offers a complete program of courses carefully planned and organized for the training of commercial teachers for secondary schools, junior colleges, and teacher training institutions. No attempt has been made to adapt the courses or the content to the needs of students who plan to do office work; the education of commercial teachers is the sole aim of the department.

Students who have had courses similar in content to any that are required in this department will be excused from taking the same work again upon satisfying the instructors that they have had equivalent training. Students who have had one year of typewriting in the secondary school, or the equivalent, can not take Com. Ed. 11. Students who have had two years of shorthand in the secondary school, or the equivalent, can not take Com. Ed. 1 and Com. Ed. 2. Students who have had two years of typewriting in the secondary school, or the equivalent, can not take Com. Ed. 11 and Com. Ed. 12.

## A FOUR-YEAR CURRICULUM IN COMMERCIAL EDUCATION

In addition to the core subjects listed on page 36 the following courses are required of majors in this department: Com. Ed. 1, 2, 11, 12, 14, 150, 151, 155, 157; Ed. 116, and 176. In addition to the above requirements, majors in commercial education are required to elect courses carrying a total of twelve hours of credit within the major department, and a social science minor outlined as follows: Geog. 7, Com. Ed. 60, Soc. 125, Hist. 101, Com. Ed. 138, and Geog. 199. In addition to this one minor of twenty-fours must be taken in another department.

Courses for students from other departments who choose a minor in Commercial Education:

- I. STENOGRAPHIC—Com. Ed. 1, 2, 10, 11, 12, and 14
- II. SECRETARIAL—Com. Ed. 3, 10, 14, 15, 16, and 105
- III. ACCOUNTING—Com. Ed. 16, 36, 37, 138, 150, 151, and 157
- IV. ECONOMICS—Com. Ed. 40, 60, 101, 139, 155, and 160
- V. SELLING—Com. Ed. 42, 53, 60, 138, 155, and 160

**1. SHORTHAND I. Four hours.**

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

**2. SHORTHAND II. Four hours.**

Prerequisite, Com. Ed. 1 or the equivalent.

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

**3. SECRETARIAL PRACTICE I. Four hours.**

Prerequisite, Com. Ed. 2 or the equivalent.

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

**10. OFFICE APPLIANCES. Four hours.**

Prerequisite, Com. Ed. 12 or the equivalent.

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

**\*11. TYPEWRITING I. Four hours.**

This course is required of all majors in commercial education except those who have had one or more years of typewriting in the secondary schools or the equivalent amount of training in other institutions. It is a beginning course for those who have had no typewriting before.

**\*12. TYPEWRITING II. Four hours.**

Prerequisite, Com. Ed. 11 or the equivalent.

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

**14. METHODS OF TEACHING SHORTHAND, TYPEWRITING, AND ALLIED SUBJECTS. Four hours.**

Prerequisite, C. E. 2 and 12 or the equivalent.

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

**15. BUSINESS REPORTS AND COMPOSITIONS. Four hours.**

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

**16. THE TEACHING OF FILING. Two hours.**

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

\*Given also by extension.



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

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

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

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

**\*40. ELEMENTARY PRINCIPLES OF INVESTMENTS. Four hours.**

This course attempts to cover the field of investments in a clear, concise, and non-technical manner. The tests by which a sound investment is analyzed are studied, together with the methods of applying these tests to securities. The following aims are set forth for the course: To discourage a tendency toward speculation; to create a tendency toward thrift; to aid the individual in finding suitable investment possibilities; and to prepare teachers to teach similar content material in the public schools.

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

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

**\*42. ADVERTISING. Four hours.**

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

**\*53. SALESMANSHIP. Four hours.**

This course attempts to reconcile sound economics with practical business practice and procedure in selling. 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 efforts.

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

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

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

**\*101. APPLIED ECONOMICS. Four hours.**

The visual and concrete aspects of economics are given special emphasis in this course. The course aims to present the problems of economics

\*Given also by extension.

in the form in which the student will meet them in actual life experiences. The relationship between theory of economics and practice will be kept constantly in mind. Illustrations from modern business practice will be used whenever possible for the practical applications of economic laws.

**105. THE TEACHING OF SHORTHAND TRANSCRIPTION. Four hours.**

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

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

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

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

**139. MARKETING. Four hours.**

A general course in marketing dealing with the most common methods and agencies used in the distribution of goods. Special attention will be directed to the marketing of agricultural products. Some of the topics treated are: The farmer and marketing; local markets; specialized production; minimizing market risks; cooperative marketing; the handling of perishable freight; the advertising of foodstuffs; federal standards for farm products.

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

Prerequisite, Com. Ed. 138 or the equivalent.

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

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

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

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

Prerequisite, Com. Ed. 150 or the equivalent.

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

**155. THE ECONOMICS OF RETAILING. Four hours.**

The course begins with a brief historical sketch of the development of the retail business and methods of distribution of goods. Some of the problems of retailing that are treated in the course are: securing good salespeople; education for retail salespeople; the wages of salespeople; location and rent in the retail business; the fixing of retail prices; the expenses of retailing.

The following kinds of retail stores and their relation to our system of distribution are studied: the department store; the chain-store systems; the mail order house; general stores and specialty shops.

\*Given also by extension.

**157. METHODS OF TEACHING BOOKKEEPING AND ALLIED SUBJECTS. Four hours.**

This course attempts to present special methods for the teaching of bookkeeping, accounting, commercial law, and other subjects. 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.

**160. BANKING PRACTICE. Four hours.**

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 emphasis of the course will be placed on commercial banking practice and the general processes of carrying on the banking business. The process through which the loans of one bank become the deposits of other banks, and just how and to what extent this process makes possible the multiplication of deposits in the banking system as a whole on the basis of a given reserve, will be discussed.

**162. THE COMMERCIAL CURRICULUM. Four hours.**

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

**165. ADVANCED ACCOUNTING I. (Not offered 1932-33). Four hours.**

Prerequisite, Com. Ed. 151 or the equivalent.

This course is given as an advanced course in accounting for students who are already familiar with methods applicable to single proprietorships, partnerships, and corporations, and to trading and manufacturing businesses. Some of the topics that are treated are: statements at the end of an accounting period and their analysis; the division of partnership profits; accounting problems peculiar to corporations; controlling accounts; partnership problems in case of dissolution; accounting for insolvent concerns; the valuation of balance sheet accounts.

**212. PROBLEMS IN COMMERCIAL EDUCATION. Four hours.**

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

**213. SUPERVISION AND ADMINISTRATION OF COMMERCIAL EDUCATION (Not offered 1932-33). Four hours.**

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

**222. INDIVIDUAL STUDIES IN COMMERCIAL EDUCATION. (Not offered 1932-33). Two or four hours.**

**223. RESEARCH IN COMMERCIAL EDUCATION. Four hours.**

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

**224. RESEARCH IN COMMERCIAL EDUCATION. Four hours.**

Prerequisite, Com. Ed. 223.

This is a seminar and conference course for graduate college students who are working on their masters' theses. Students will have an oppor-

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

225. RESEARCH IN COMMERCIAL EDUCATION. Two hours.  
This course is a continuation of Com. Ed. 224.

## EDUCATION

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

The two-year course (junior college) outlined on page 36 is primarily intended for students who plan to teach on limited certificates in the rural and consolidated schools.

The three-year courses (kindergarten-primary, intermediate, and upper grades) are designed for students who plan to teach on the limited certificate in village and city schools.

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

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

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

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

Students majoring in kindergarten-primary or intermediate teaching for the Bachelor of Arts degree should utilize electives designed in their four-year curriculum to complete at least three subject matter minors of at least sixteen hours each (cores and departmental courses to count) in: (1) Art, (2) music, (3) geography, (4) history, (5) English, (6)

mathematics, and (7) science. Core and departmental required courses may count towards a minor. For example, a minor in art could count Art 2a and the senior college art for eight hours of the sixteen required for this minor. Two more four-hour courses would have to be taken.

Students majoring in the upper grades (three years) and junior high school (four years) should select three minors in subject matter as outlined herewith (p. 39), and take the exact courses listed as possible in the first three years for two minors chosen. For the fourth year the other subject matter minor should be chosen. Thus, the three-year student should have two minors with a minimum of twenty-four hours of work in each and the fourth year student will have three minors with twenty-four hours in each.

SUGGESTED JUNIOR HIGH SCHOOL MINORS

See head of the Education Department for courses to be taken in the first two years.

SOCIAL SCIENCE		SCIENCE	
Hist. 1	Pol. Sci. 101 or 102	Gen. Sci. 51 (Soph. yr.)	Phys. 1
Hist. 2	Geo. 15	Chem. 8	Biol. 1, 2, 11, 12
Hist. 5	Soc. 125		
ENGLISH		MATHEMATICS	
Eng. 42	Eng. 122	Math. 10	Math. 108
Eng. 111	Eng. 12	Math. 107 (Soph. yr.)	
Eng. 130 or 112	Eng. 109	Elec. 14 hrs. in Math.	
ART		HOME ECONOMICS	
Art 17	Art 4	H. E. 20	H. E. 107 H. E. 132
Art 114	Art 2a	H. E. 5	H. E. 125
Art 3 or 3a	Art 5, 16, or 107	H. E. 10	H. E. 100
MUSIC		INDUSTRIAL ARTS	
Music 1c	Music 11	Ind. Ed. 1	Ind. Ed. 5 and 6
Music 1d	Music 45	Ind. Ed. 2	Ind. Ed. 10
Music 10	Music 3	Ind. Ed. 7	Ind. Ed. 12
	Music 4	Ind. Ed. 8a	
COMMERCIAL EDUCATION			
a. Typewriting		c. Junior Business Training	
C. E. 11, 12, 14.		C. E. 37, 41, and 150	
b. Shorthand		d. Bookkeeping	
C. E. 1, 2, 3.		C. E. 150, 151, 157	

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

SPECIAL CURRICULA FOR SENIOR COLLEGE EDUCATION MAJORS

FOR SUPERINTENDENTS		
Ed. 142-242	Ed. 113-213	Biol. 101
Ed. 143-243	Ed. 116 or 269	Ed. 136
Ed. 144-244	Ed. 145-245	

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

## FOR ELEMENTARY PRINCIPALSHIP AND SUPERVISION

Ed. 110-210	Ed. 162	Ed. 134
Ed. 111-211	Ed. 113	Biol. 101
Ed. 112-212	Ed. 145-245	Soc. 160

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

## FOR HIGH SCHOOL PRINCIPALSHIP

Ed. 116	Ed. 113-213	Ed. 134
Ed. 167-267 or 164-264	Ed. 145-245	Biol. 101
Ed. 142-242	Soc. 160	

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

FOR TRAINING SCHOOL WORK AND TEACHERS OF EDUCATION IN  
TEACHERS COLLEGES

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

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

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

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

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

Methods of teaching, including observation and teaching 3-9, 55-59, 105-109, 155-159

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

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

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

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

Rural education—30-31, 80-81, 130, 230

History of education—135-137

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

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

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

## I. COURSES PRIMARILY FOR JUNIOR COLLEGE STUDENTS

**\*1. INTRODUCTION TO EDUCATION. Four hours.**

Required of all freshmen.

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

**3. LANGUAGE ARTS IN PRIMARY-INTERMEDIATE GRADES. Four hours.**

Prerequisite, Ed. 1.

This course combines Ed. 5 and 8 for rural majors.

**4. SOCIAL ARTS IN PRIMARY-INTERMEDIATE GRADES. Four hours.**

Prerequisite, Ed. 1.

This course combines Ed. 6 and 9 for rural majors.

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

Prerequisite, Ed. 1.

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

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

Prerequisite, Ed. 1.

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

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

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

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

Prerequisite, Ed. 1.

Reading deals with the objectives of reading instruction and the relationship of reading to progress in other school subjects. Spelling deals with the objectives of spelling instruction and the methods of teaching spelling. Composition deals with the oral and written phases of language skills. Attention is given to the fundamental purpose in teaching composition and

\*Given also by extension.

to the educational principles which must be employed in realizing this purpose. The methods of improving handwriting, the uses of handwriting charts, and means of correlating handwriting with the other classroom subjects are studied.

**9. SOCIAL ARTS IN THE INTERMEDIATE GRADES (Formerly Ed. 4b). Four hours.**

Prerequisite, Ed. 1.

This course deals with the materials and methods of teaching arithmetic, social science, and health in the intermediate grades.

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

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

**16. CAMP FIRE GIRLS' LEADERSHIP. Two hours.**

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

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

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

**26. PSYCHOLOGY OF LEARNING FOR RURAL TEACHERS. Four hours.**

This is an introductory course dealing with the nature of the child, the laws of learning, and problems of measuring the results of education. It deals with only those facts and principles of the psychology of learning which will be of most service to typical elementary rural school teachers. The laws and principles studied will be treated in the light of the experiences and environmental background of rural children.

**30. THE RURAL TEACHER'S PROBLEMS. Four Hours. Each quarter.**

This course aims to contribute directly to the practice of those who work in the rural schools. It deals with the distinctive problems of rural teaching that are due to the many grades and consequent difficulties of rural school organization.

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

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

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

Prerequisites, Ed. 1 and sophomore standing.

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

\*Given also by extension.



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

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

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

This course consists of four regularly scheduled observation and discussion periods a week. These periods are spent in observing and discussing work of all grades of the elementary school. Further time is spent by each student in individual observation and participation in one grade of the elementary school. A weekly conference on Tuesday at 4 P. M. is held with the teacher in charge of the grade to which the student is assigned for individual observation.

**56. PRE-TEACHING OBSERVATION IN THE SECONDARY SCHOOL (Formerly Ed. 2c). Four hours.**

This is the observation course for those preparing for teaching at the secondary level. It is preparatory to and should next precede the student teaching. Of the four regularly scheduled weekly meetings two are under the direction of the director of the secondary school and two under the direction of supervising teacher in charge of the work which the student expects to teach. The general phase of the course is designed to give the student an opportunity to become acquainted with problems of teaching at the secondary school level. The specific phase of the work under the direction of supervising teacher is intended to prepare the student to do a specific piece of work in a certain grade and subject.

**58. STUDENT TEACHING IN THE ELEMENTARY AND JUNIOR HIGH SCHOOLS (Formerly Ed. 2b). Four to eight hours.**

As prerequisites to Ed. 58, each student must complete satisfactorily the course in pre-teaching observation and the methods courses in his major department.

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

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

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

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

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

The topics of this second junior college course in psychology are: a classification of the kinds of learning such as motor, perceptual, and informational; the laws of learning illustrated by reference to such elementary school subjects as handwriting, reading, arithmetic, spelling, history,

\*Given also by extension.

geography, poetry, etc.; the physiological, psychological, and educational conditions of learning; general characteristics of learning such as the rate, amount, and limits of improvement, as found in different functions; learning and forgetting curves, plateaus, and physiological limits in different functions; factors and principles entering into economical learning and studying; and the problem of transfer.

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

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

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

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

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

**82. RURAL EDUCATION AND COUNTRY LIFE. (See Soc. 90).**

**II. COURSES PRIMARILY FOR SENIOR COLLEGE STUDENTS**

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

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

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

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

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

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

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

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

The purpose of this course is to show some of the more important phases of visual aids in education. Some of the questions discussed are (1) what is the meaning of visual education; (2) how can I best inform myself on the subject of visual aids; (3) what are the different types of visual

\*Given also by extension.

aids and what is their comparative effectiveness; (4) how have the administration problems been solved; (5) what has been accomplished in the field and by whom. In addition, the use of the different types of visual aids will be illustrated and discussed. The course should be valuable to teachers and administrators alike.

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

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

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

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

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

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

Prerequisite, junior standing.

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

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

Prerequisite, junior standing.

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

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

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

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

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

Prerequisites, Ed. 5 and 6 or equivalents.

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

\*Given also by extension.

**116. SECONDARY EDUCATION. Four hours.**

This is an orientation course in secondary education. The topics considered include: The recent rapid growth of American secondary education; physical and mental growth of high school pupils; variation and selection of pupils; aims and functions of secondary education; relationships to elementary and higher education; size and distribution of high schools; the rural high school problem; the program of studies; methods and psychology of secondary education; guidance, school activities, community relationships, the high school staff, the school plant, and costs.

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

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

**117a. CITIZENSHIP EDUCATION IN THE PRIMARY GRADES (Formerly Ed. 110d). Two or four hours.****117b. CITIZENSHIP EDUCATION IN THE INTERMEDIATE GRADES (Formerly Ed. 110b). Two or four hours.****117c. CITIZENSHIP EDUCATION IN THE SECONDARY SCHOOLS (Formerly Ed. 110c). Two or four hours.**

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

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

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

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

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

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

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

\*Given also by extension.

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

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

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

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

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

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

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

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

**130-230. RECENT DEVELOPMENTS IN RURAL LIFE. Four hours.**

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

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

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

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

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

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

\*Given also by extension.

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

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

This course develops the general principles of school administration. Since it is intended for those relatively inexperienced in the field, most of the practical examples will be drawn from the small school systems and applied to the administration of village and consolidated systems. Brief consideration will be given to the relation of the federal government to schools, state and county organization, and school support. More detailed consideration will be given to the following topics: selection, organization, and functions of boards of education; the election, qualifications, and duties of principals and superintendents; qualifications, selection, salaries, in-service training, and tenure of teachers; building management; supplies, transportation; budgeting and control of local finances; administrative control of the curriculum; and community relationships. Graduate students and those with administrative experience take Ed. 142-242, 143-243, or 144-244.

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

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

Prerequisite, junior standing.

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

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

Prerequisite, junior standing.

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

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

Prerequisite, junior standing.

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

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

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

Prerequisite, junior standing.

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

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

Prerequisite, junior standing.

This course will deal in detail with curriculum making in the major fields of activity—health, economic life, home and family relationships,

\*Given also by extension.

citizenship, recreation, and moral education. It will permit the student to deal in detail with the reconstruction of materials in these fields in a similar way to that developed in Ed. 110-210, 111-211, and 112-212.

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

Prerequisite, junior standing.

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

**\*148. WORKBOOKS AS AIDS IN TEACHING AND LEARNING. (Given by extension only). Two hours.**

**155. ADVANCED OBSERVATION. Two hours.**

(Limited to experienced teachers; registration only by approval of the director of student teaching.)

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

An elective course open to students who desire further experience in classroom teaching. This course may not be taken for graduate credit.

**157. STUDENT TEACHING IN THE SECONDARY SCHOOLS (Formerly Ed. 103). Four or eight hours.**

This course is open to students who wish to elect student teaching in the high schools after completing Ed. 58 or who are majoring in a specialized field and wish to prepare for public school positions at the secondary school level. It includes conferences, observation, supervision, and teaching under the direction of a supervising teacher. Pre-Teaching Observation (Ed. 56) is a prerequisite for this course for students who have had no previous work in student teaching. This course may not be taken for graduate credit. An additional quarter may be taken as Ed. 157a.

**158. STUDENT SUPERVISION IN THE ELEMENTARY SCHOOL (Formerly Ed. 102a). Four hours.**

**159. STUDENT SUPERVISION IN THE SECONDARY SCHOOL (Formerly Ed. 103a). Four hours.**

**160. THE PRE-SCHOOL (Formerly Ed. 151). Four hours.**

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

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

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

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

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

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

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

\*Given also by extension.

**165-265. JUNIOR HIGH SCHOOL ADMINISTRATION AND SUPERVISION** (Formerly Ed. 213). Two or four hours.

Prerequisite, junior standing.

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

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

Prerequisite, junior standing.

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

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

Prerequisite, junior standing.

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

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

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

**ED. 176. PSYCHOLOGY OF LEARNING FOR SECONDARY TEACHERS.** Four hours.

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

**177a. CHILD DEVELOPMENT** (Formerly Psych. 3). Two or four hours.  
See description of Ed. 77.

**177b. THE PSYCHOLOGY AND PATHOLOGY OF SPEECH** (Formerly Psych. 111. Summer quarter only). Four hours.

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



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

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

**179. CRITICISMS OF CURRENT PSYCHOLOGIES. Four hours.**

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

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

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

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

**192. STUDENT TEACHING AND THE PROFESSIONAL EDUCATION OF TEACHERS. Two hours.**

The following topics are treated: the relation of theory and practice in the education 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 supervising teachers; the results of student teaching on the pupils taught.

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

Open only to seniors and graduate students.

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

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

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

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

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

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

\*Given also by extension.

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

209. IMPROVEMENT OF READING AND STUDY HABITS. Four hours.  
(Given by extension only.)

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

See description of Ed. 110.

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

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

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

See description of Ed. 111.

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

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

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

See description of Ed. 112.

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

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

213. EDUCATIONAL SUPERVISION. Four hours.

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

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

See description of Ed. 120.

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

223. GRADUATE THESIS RESEARCH IN EDUCATION. Four hours.

To be taken in first quarter of graduate work.

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

224. GRADUATE THESIS RESEARCH IN EDUCATION. Four hours.

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

225. GRADUATE THESIS RESEARCH IN EDUCATION. Two hours.

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

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

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

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

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

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

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

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

The topics of this course embrace the history of the testing movement; classification of mental tests and measurements, including tests of intelligence and personality traits; the meaning of intelligence; the principles of intelligence testing; the possibility of improving intelligence; the influence of intelligence upon achievement; the construction of intelligence tests; criteria for selecting tests for practical purposes; preparation for giving intelligence tests; tabulating and interpreting the results of tests; the value of tests for educational and vocational guidance; the uses of intelligence tests in the practical work of schools and colleges; differences in intelligence among individuals, races, occupational groups, and between sexes and city and rural school children; the relation between intelligence on the one hand and crime and physical traits on the other.

**230. RECENT DEVELOPMENTS IN RURAL LIFE. Four hours.**

For description of course see Ed. 130.

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

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

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

Teachers in public school systems who may be assigned some special administrative duties in their own school and who will work on assigned administrative problems in the school system may enroll for this course.

\*Given also by extension.

The work will be carried on under the joint direction of the superintendent and the College. Registration permitted only after conference with the professor of school administration.

242. **SCHOOL ADMINISTRATION (First Course). Four hours.**  
For description of course see Ed. 142.
243. **SCHOOL ADMINISTRATION (Second Course). Four hours.**  
For description of course see Ed. 143.
244. **SCHOOL ADMINISTRATION (Third Course). Four hours.**  
For description of course see Ed. 144.
245. **TECHNIC OF MAKING THE SCHOOL CURRICULUM (Formerly Ed. 208). Four hours.**  
For description of course see Ed. 145.
246. **SEMINAR IN ADVANCED CURRICULUM CONSTRUCTION (Formerly Ed. 209). Four hours.**  
For description of course see Ed. 146.
247. **EDUCATIONAL VALUES (Formerly Ed. 210). Four hours.**  
For description of course see Ed. 147.
265. **JUNIOR HIGH SCHOOL ADMINISTRATION AND SUPERVISION (Formerly Ed. 213). Two or four hours.**  
For description of the course see Ed. 165.
266. **HIGH SCHOOL ADMINISTRATION (Formerly Ed. 216). Four hours.**  
For description of course see Ed. 166.
267. **HIGH SCHOOL SUPERVISION (Formerly Ed. 217). Four hours.**  
For description of course see Ed. 167.
275. **ADVANCED STATISTICAL METHODS (Formerly Psych. 217). Four hours.**

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

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

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

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

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

\*Given also by extension.

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

This course includes a study of some of the psychological methods and experimental technic involved in the learning 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 improvement; the factors and conditions of improvement; forgetting; the spread of improvement of the transfer of training; fatigue; curves of work; heredity; differences in individuals, families, sexes, and races.

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

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

**280. GRAPHIC METHODS OF PRESENTING FACTS (Formerly Psych. 118. Summer quarter only). Four hours.**

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

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

For description of this course see Ed. 195.

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

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

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

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

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

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

See description for Ed. 198.

**FIELD STUDIES FOR THE PH.D. DEGREE****322. RESEARCH PRELIMINARY TO FIELD STUDY.**

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

323a	} GRADUATE RESEARCH CREDIT FOR FIELD STUDY No. 1
323b	
323c	

Each course four hours—maximum twelve hours for Field Study No. 1.

\*Given also by extension.

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|------|---|---|
| 324a | } | GRADUATE RESEARCH CREDIT FOR FIELD STUDY No. 2        |
| 324b |   | Each course four hours—maximum twelve hours for Field |
| 324c |   | Study No. 2.  |
| 325a | } | GRADUATE RESEARCH CREDIT FOR FIELD STUDY No. 3        |
| 325b |   | Each course four hours—maximum twelve hours for Field |
| 325c |   | Study No. 3.  |

## EDUCATIONAL RESEARCH

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

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

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

To be taken by candidates for the master's degree in the first quarter of their graduate work. This is a required seminar and conference course for graduate students in all departments granting the degree of Master of Arts. The director of educational research will meet the graduate seminar four times each week and will confer with individual students by appointment. In seminar, proper procedures and technics to be used in educational investigations as well as allied topics are considered, and opportunity is given each student to report upon and discuss the details of his study so far as time will permit. Among the topics dealt with are: The scientific method; education as a science; educational research; types of research problems; the selection of a problem; the bibliography; methods of investigation; the master's study as a process of ordered thinking; the agendum of procedures with necessary technics; the collection, classification, presentation, and interpretation of educational data; practicums in the organization, interpretation, and reporting of educational material; etc.

## ENGLISH AND LITERATURE

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

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

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

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

#### A FOUR-YEAR CURRICULUM IN ENGLISH AND LITERATURE

In addition to the core subjects listed on page 36, the following courses are required of majors in this dept:

Those expecting to become teachers of English and literature: Eng. 36, 38, 39, 40, 110, 111 and Eng. 121, or 122, or 126. Hist. 105, Ed. 116. Sixteen hours chosen from the following: Eng. 100, 130, 131, 132, 133, 134, 140, 141, 142, 147, 148, 149.

Those expecting to become oral English teachers: Eng. 36, 38, 39, 40, 109, 110, 111, and Eng. 121, or 122, or 125. Hist. 105, Ed. 116. Sixteen hours chosen from the following: Eng. 12, 13, 14, 16, 18, 19, 112, and 114.

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

Students majoring in English are advised to select their minors from the following subjects: Latin, Spanish, Library Science, History, Art, Music, Home Economics, or Mathematics. See the sections of the catalog devoted to these departments for lists of courses prescribed as minors in each. Two minors of twenty-four hours each are required of all English majors. The minors may be selected in other fields than those mentioned, but the experience of the Placement Bureau shows that students having these minors are in demand for teaching positions; especially is there a demand for English teachers who can teach some elementary Latin.

Courses for students from other departments who choose a minor in English.

I. **ENGLISH AND LITERATURE**—Eng. 36, 39, 40, 110, 111, and one of the following: Eng. 121, 122, or 126.

II. **ORAL ENGLISH**—Eng. 12 (2 hrs.), 13, 14, 16 (2 hrs.), 110, 112, and one or two of the following: Eng. 121, 122, or 125.

#### 4. SPEAKING AND WRITING ENGLISH. Four hours.

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

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

#### 12. ORAL EXPRESSION. Two hours.

This basic course in the art of oral expression teaches the fundamental laws of interpretation and the manifestation of these principles through natural expression. This course also embodies the subject of public speaking. This course is prerequisite to English 14.

#### 13. STORY TELLING. Four hours.

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

#### 14. DRAMATIC ART. Four hours.

Prerequisite, English 12.

This course embraces all the basic principles of dramatic art. The course is designed to meet the needs of students producing plays in the

junior and senior high schools. Direction of short plays by the student is carried on under the supervision of the instructor. This course is prerequisite to English 105.

**16. PHONETICS. Two hours.**

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

**17. VOICE TRAINING. Two hours.**

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

**18. DEBATING. Two hours.**

A practice course in debating open to any student interested in 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. Two hours**

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

**\*36. AMERICAN LITERATURE. Four hours.**

A course in American literature following the plan of courses 38, 39, and 40 in English literature. The work is professionalized by the consideration of the selection of material for the schools.

**\*38. A SURVEY OF ENGLISH LITERATURE 700-1625. 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. reader.

**\*39. A SURVEY OF ENGLISH LITERATURE 1625-1798. 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 38.

**\*40. A SURVEY OF ENGLISH LITERATURE 1798-1900. Four hours.**

This course follows the plan of 38 and 39 and deals with English literature from 1798 through the Victorian Age to 1900.

**41. AN OUTLINE OF LITERATURE. Four hours.**

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

**42. AN OUTLINE OF LITERATURE (Continued). Four hours.**

A continuation of Course 41. The story of literature of the nineteenth century illustrated with extensive readings in translation of as many of the great modern pieces of literary art as time will permit. The literature of France, Italy, Germany, Russia, the Scandinavian countries, England, Ireland, and the Americas will be included.

**43. AN OUTLINE OF LITERATURE (Continued). Four hours.**

**100. JOURNALISM. Four hours.**

A beginning course in journalism; designed primarily for those who desire to teach journalism in the high school or who may be called on to act as advisers to high school students in the publication of the school paper. English 100 must be taken before one may register for either 101 or 102.

\*Given also by extension.



**101. JOURNALISM. Four hours.**

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

**102. JOURNALISM. Four hours.**

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

**109. ADVANCED COMPOSITION. Four hours.**

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

**110. ADVANCED COMPOSITION. Continuation of Eng. 109. Four hours.****\*111. THE ENGLISH LANGUAGE FOR TEACHERS. Four hours.**

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

**112. CHILDREN'S THEATER. Four hours.**

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

**114. PLAY PRODUCTION. Four hours.**

Frerequisite, 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. Choice of materials for amateur theatricals is considered. Special emphasis is laid on the actual production of plays, including casting and directing.

**\*121. LITERATURE FOR THE ELEMENTARY SCHOOL—Intermediate Grades. Four hours.**

Required of intermediate and English majors.

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

**\*122. LITERATURE FOR THE JUNIOR HIGH SCHOOL. Four hours.**

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

A survey of children's literature appropriate for use in the seventh, eighth, and ninth grades. A flexible course, affording opportunities for intensive work within the scope of any of these three grades, according to the individual need or preference.

**125. ORAL ENGLISH IN THE HIGH SCHOOL. Two hours.**

Prerequisites, English 12 and 14.

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

**\*126. THE TEACHING OF ENGLISH IN THE HIGH SCHOOL. Four hours.**

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

\*Given also by extension.

**130. CONTEMPORARY LITERATURE. Four hours.**

An appreciation course dealing with the literature of the twentieth century.

**\*131. THE SHORT STORY. Four hours.**

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

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

The development, technic, and significance of the novel.

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

The reading of ten typical novels of the past five years for the purpose of observing the trend of serious fiction and of studying the social, educational, and life problems with which the novelists are dealing.

**\*134. MODERN DRAMA. Four hours.**

Reading and class discussion of plays that best represent the characteristics, thought-current, and the dramatic structure of our time.

**140. LYRIC POETRY. Four hours.**

A comparative study of types, theme, spirit, and technic of standard English lyrics with an attempt to estimate the significance of contemporary tendencies in poetry.

**141. EARLY NINETEENTH CENTURY POETRY. Four hours.**

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

**142. VICTORIAN POETRY. Four hours.**

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

**\*146. NINETEENTH CENTURY PROSE. Four hours.**

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

**\*147. SHAKESPEARE'S COMEDIES. Four hours.**

The life of Shakespeare and a literary study of his comedies, with a proper amount of attention to the method of teaching Shakespeare in high schools.

**148. SHAKESPEARE'S HISTORICAL PLAYS. Four hours.**

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

**149. SHAKESPEARE'S TRAGEDIES. Four hours.**

The completion of the year's work in Shakespeare.

**150. ELIZABETHAN DRAMA EXCLUSIVE OF SHAKESPEARE. 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.

**160. LITERATURE OF THE NEW TESTAMENT. Including the Life and Teachings of Jesus. Four hours.**

This course is a literary study of the four gospels, from an historical point of view. It also includes an intensive study of the teachings of Jesus, in the light of the background out of which He came.

**161. THE HISTORY, LITERATURE, AND RELIGION OF THE OLD TESTAMENT Four hours.**

This course is a study of the Old Testament from the viewpoint of its historical development. A study is also made of the religion of the Hebrews as it is reflected in their literature. The course includes the early poetical, legal, biographical writings, and the prophets before the Exile period.

\*Given also by extension.

**162. THE HISTORY, LITERATURE, AND RELIGION OF THE OLD TESTAMENT**  
Four hours.

This course, continuous with English 161, consists of the consideration of important productions, from the Exile period, through the second century B. C.

**207. COMPARATIVE LITERATURE—Greek and Latin.** 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.

**208. COMPARATIVE LITERATURE—Italian, Spanish, and French.** Four hours.

A study of literary elements and influences deriving from Medieval and Renaissance cultures; a review of the trends of modern romance literature; a careful reading in translation of outstanding classics, notably Dante's "Divine Comedy."

**209. COMPARATIVE LITERATURE—German, Scandinavian, and Russian**  
Four hours.

A comparison of Teutonic epic material with Greek and Romance epic; a survey of the significant contributions in the literature of Germanic and Russian peoples; the careful study of Goethe's "Faust."

**210. OLD ENGLISH.** Four hours.

A beginning course in the grammar and reading of Old English (Anglo-Saxon).

**211. CHAUCER AND MIDDLE ENGLISH.** Four hours.

A study of the English language of the fourteenth century to show its development after the Norman Conquest and preceding the Elizabethan period. The observations upon the development of the language are made mostly through a careful study of Chaucer. The course is the natural follower to English 210, but may be taken independently.

**222. INDIVIDUAL STUDIES IN ENGLISH.** Two or four hours.**223. RESEARCH IN EDUCATION.** Four hours.

Taken in the first quarter of graduate work.

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

**224. RESEARCH IN ENGLISH.** Four hours.

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

**225. RESEARCH IN ENGLISH.** Two hours.

This is a continuation of English 224.

## FOREIGN LANGUAGES

This department offers courses in French, German, Latin, Spanish, and in the teaching of foreign languages. One course is offered each year in German and two in Latin. German 1, 2, and 3 alternate with German 5, 6, and 7. French 105 and French 205 are both called advanced French and will be offered in alternate years. Either course may be taken first. Foreign Language 131 and 132 will be given in alternate years.

All majors in French or Spanish will be required to have two years of high school or one year of college Latin.

Spanish 1, 2, 3 is offered in the summer quarter, five days each week, classes meeting twice daily, for those who wish to receive a year's credit in beginning foreign language. College credit for beginning foreign language

will be given toward graduation only upon the completion of a year's work in the language; however, music majors may receive permission to take the first quarter of French and German for credit.

Courses are offered leading to the Bachelor of Arts degree and Master of Arts degree in French, Spanish, and Romance Languages.

#### A FOUR-YEAR CURRICULUM IN FOREIGN LANGUAGES

In addition to the core subjects listed on page 36, the following courses are required of majors in this department: French or Spanish 1, 2, 3, 5, 6, 7, 105, 106, 107, 131, Latin 1, 2, 3 (if not taken in high school), Ed. 116, and Ed. 141 (for men).

The department requires for the bachelor's degree forty-eight hours in the language of the major, and a minor of twelve to twenty-four hours outside the department. A student may select an additional minor of twenty-four hours within the department. Foreign Language 131 is required as part of the forty-eight hours for the major. In addition to the foreign language requirements, the department requires that the candidate for the Bachelor of Arts degree be proficient also in the English language. The following courses are required of majors in the foreign languages: English 111, Education 116 and 125.

131. THE TEACHING OF ROMANCE LANGUAGES. (Not given 1932-33). Four hours.

Methods of teaching, preparing examinations, selecting tests, etc.

132. PROBLEMS IN THE TEACHING OF ROMANCE LANGUAGES. Four hours. Not given in 1932-33.

Discussion of difficult phases of grammar and syntax, and review of elements of French and Spanish as to presentation in classroom.

222. INDIVIDUAL STUDIES IN FOREIGN LANGUAGES. Two or four hours.

223. RESEARCH IN FOREIGN LANGUAGES. Four hours.

Taken in the first quarter of graduate work.

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

224. RESEARCH IN FOREIGN LANGUAGES. Four hours.

A graduate seminar for the students working on the master's thesis.

225. RESEARCH IN FOREIGN LANGUAGES. Two hours.

A continuation of Foreign Language 224.

#### FRENCH

1. ELEMENTARY FRENCH. Four hours.

Principles of grammar and easy reading.

2. ELEMENTARY FRENCH. Four hours.

Grammar, reading, conversation.

3. ELEMENTARY FRENCH. Four hours.

Reading and conversation.

\*5. INTERMEDIATE FRENCH. Four hours.

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

\*Given also by extension.

**\*6. INTERMEDIATE FRENCH. Four hours.**

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

**\*7. INTERMEDIATE FRENCH. Four hours.**

The short story. Buffum's *Contes Français*.

**105. ADVANCED FRENCH (Not given 1932-33). Four hours.**

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

**106. ADVANCED FRENCH (Not given 1932-33). Four hours.**

Seventeenth Century prose writers.

**107. ADVANCED FRENCH. Four hours.**

A survey of French lyric poetry from Charles d' Orleans and Villon to contemporary poets, including the Belgian.

**205. ADVANCED FRENCH. (Not given 1932-33). Four hours.**

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

**206. ADVANCED FRENCH. (Not given 1932-33). Four hours.**

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

**207. ADVANCED FRENCH. (Not given 1932-33). Four hours.**

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

209. } Those who have had Advanced French with a different course  
210. } content may take additional French as 209, 210, 211.  
211. }

## SPANISH

**1. ELEMENTARY SPANISH. (Not given 1932-33). Four hours.**

Hills and Cano's *Cuentos y Leyendas* and an elementary grammar.

**2. ELEMENTARY SPANISH. (Not given 1932-33). Four hours.**

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

**\*3. ELEMENTARY SPANISH. (Not given in 1932-33). Four hours.**

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

**1, 2, 3. ELEMENTARY SPANISH. Twelve hours.**

The same course content as during the year. The class meets twice daily during the summer quarter, covering the first year's work in college Spanish.

**\*5. INTERMEDIATE SPANISH. Four hours.**

A review in the elements of Spanish. Seymour and Carnahan's *Short Review Grammar. Cuentos Humorísticos Españoles*.

**\*6. INTERMEDIATE SPANISH. Four hours.**

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

**\*7. INTERMEDIATE SPANISH. Four hours.**

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

**\*105. THIRD YEAR SPANISH. Four hours.**

Romantic drama. Echegaray's *El Gran Galeoto*, Hartzzenbusch's *Los Amantes de Teruel*, and Tamayo y Baus's *Un Drama Nuevo*.

\*Given also by extension.

**\*106. THIRD YEAR SPANISH. Four hours.**

Modern drama. Benavente's *Tes Comedies*, Martinez Sierra's *Sueno de una Noche de Agosto*, and a play of the Quintero brothers.

**\*107. THIRD YEAR SPANISH. Four hours.**

Modern prose and poetry. A study of the works of Ruben Dario, Azorin, and Valle Inclan.

**150. SPANISH POETRY (Offered on request). Two hours.**

A study of the most important poetical works of the nineteenth and twentieth centuries. Recommended to students taking Spanish 105 or 205.

**205. FOURTH YEAR SPANISH. Four hours.**

Cervantes' *Novelas Ejemplares* and *Don Quijote*.

**206. FOURTH YEAR SPANISH. Four hours.**

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

**207. FOURTH YEAR SPANISH. Four hours.**

Golden Age prose and non-dramatic poetry.

209. } Graduate Spanish, the same as 205, 206, 207. Because the  
210. } course content will be varied in successive years, Seniors may  
211. } take additional Graduate Spanish as 209, 210, 211.

## GERMAN

**1. ELEMENTARY GERMAN. Four hours.**

Vos's *Essentials of German*.

**\*2. ELEMENTARY GERMAN. Four hours.**

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

**\*3. ELEMENTARY GERMAN. Four hours.**

Purin and Rose's *Deutsche Kulturkunde*.

**5. INTERMEDIATE GERMAN. (Not given 1932-33). Four hours.**

Pope's *Writing and Speaking German*.

**6. INTERMEDIATE GERMAN. (Not given 1932-33). Four hours.**

*Nineteenth century novelle*.

**7. INTERMEDIATE GERMAN. (Not given 1932-33). Four hours.**

*German lyric poetry*.

## LATIN

**1. ELEMENTARY LATIN. Four hours.****2. ELEMENTARY LATIN. Four hours.****3. ELEMENTARY LATIN. Four hours.****\*5. INTERMEDIATE LATIN. Four hours.**

Prerequisite, two years of high school or one year of college Latin. *Nepos' Lives* and prose composition.

**\*6. INTERMEDIATE LATIN. Four hours.**

A continuation of Latin 5. Prerequisite, two years of high school or one year of college Latin.

**\*7. INTERMEDIATE LATIN. Four hours.**

Prerequisite, two years of high school or one year of college Latin. *Ovid's Metamorphoses*.

\*Given also by extension.

## GEOGRAPHY

In addition to providing subject matter for the teacher in the elementary, junior or senior high school, geography is to be thought of as a cultural subject as well. It furnishes a needed background for history, sociology, and English, and even for music and art. A variety of courses in the department offers not only this cultural side, but also the method side of the subject as well.

The people in the United States, far distant from any powerful country or country of large population, are inclined to be provincial unless the school offers some subject whose primary object is to bring them into contact with other countries and peoples and their ways. Geography is primarily designed to accomplish this aim.

### A FOUR-YEAR CURRICULUM IN GEOGRAPHY

In addition to the core subjects listed on page 36, the following courses are required of majors in this department: Geog. 7, 8, 102, 103, 130, 132, 162, 170, 196, 199, Hist. 3, 10, choice of Geog. 10, 11, 12, or 15, and Ed. 116, 141 (for men).

Courses for students from other departments who choose a minor in Geography: Geog. 7, 8, 151, 152, 154, 155.

#### 7. ECONOMIC GEOGRAPHY. Four hours.

This course is primarily designed for commercial education majors but will be of value as an elective for those engaged in elementary or secondary school work. The distribution of crops, timber and animals in their environmental relationships, the sources of important minerals, the methods of transportation, the great transportation systems, and the geography of manufacturing will be viewed with their effects on man's business and economic activities.

#### 8. HUMAN GEOGRAPHY. Four hours.

The great divisions of mankind from the racial standpoint will be taken up. After a short discussion of primitive man with special reference to prehistoric relics of the same in America, the great major divisions of mankind are taken up.

The first of these to be considered is the negro race, divided into five groups. The second main group will be that of the Mongol, divided into five groups. The white race is divided into seven groups.

A study will be made of the various blends of the above races that make up the various European nationalities. The problems of pro-Nordic propaganda; American immigration, and the racial geography of United States will be discussed. This course is of value to those directly interested in the social sciences and to others as a general cultural course.

#### 10. METHODS AND MATERIALS IN GEOGRAPHY FOR THE INTERMEDIATE GRADES. Four hours.

The purpose of this course is three fold: first, to give the student a knowledge of the geography of North America; second, to familiarize the student with the best methods of teaching North America; third, to analyze books, globes, maps, etc., which are essential or needed in the teaching of North American geography in the intermediate grades.

This course covers in a professionalized manner much of the subject matter that is ordinarily taught in the intermediate grades but in a much more intensive form. Principles and laws of geography are stressed and unimportant details omitted.

#### 11. METHODS AND MATERIALS IN GEOGRAPHY FOR THE INTERMEDIATE GRADES. Four hours.

This is a continuation of Geography 10. The course proposes to cover Europe, Asia, Australasia and Africa in much the same way that Geog. 10 covers North America. South America is touched upon.

#### 12. RURAL SCHOOL GEOGRAPHY. Four hours.

The purpose of this course is to give the most important geographic principles and understandings essential to the teacher of rural schools. Man's adjustment to his physical environment will be briefly discussed in

the various countries of the world. Special type regions will be studied in detail. This detail will include such things as the reasons for the climate, soil, natural vegetation and physical geography of the regions under discussion.

#### 15. METHODS AND MATERIALS FOR TEACHING JUNIOR HIGH SCHOOL GEOGRAPHY. Four hours.

This course stresses namely the social science aspects of the subject. Some of the main topics treated are: Europe before the Industrial Revolution; industrial Great Britain and its origin; the Industrial Revolution in the United States; France, a balanced manufacturing and agricultural country; Germany, an industrial and technical leader; Europe 1914 to today; relation of the geography of Europe to its industries; China in change; Japan, a nation with an ancient culture and a modern industrial civilization; the ancient Indian and the modern Latin America; changing civilization in the modern world, and the interdependence of nations.

#### 50. HOME GEOGRAPHY. Two hours.

The following items are presented in this course: 1. Physical Geography of Local Region (Colorado)—(a) important natural and artificial land and water forms emphasizing irrigation, (b) weather of locality; 2. Industrial geography of local region—(a) leading products, (b) occupations and industries, (c) methods of communication, (d) public service activities such as water, lights, roads, etc.; 3. Comparison of child life in this region with child life in other lands, emphasizing effect of environment on life—(a) in a typical cold country, Norway and Sweden; (b) in a typical hot, wet country, aspects of India or Africa; (c) in a typical hot, dry country as Arabia, Northern Africa, Indians of S. W. United States; (d) in a typical temperate, highland country as Switzerland; (e) in a typical lowland country, Holland; (f) in a typical island country, Japan.

#### 102. THE CHANGING WEATHER. Two hours.

This course is designed to familiarize the student with the causes of changing weather. Direct observations will be made and if possible, the class will make one trip to the Denver weather bureau to familiarize themselves with the technic of the weather bureau and the instruments used. Each member of the class will keep, during the course, an observation sheet recording temperatures, precipitation, wind direction, relative humidity and state of sky.

#### 103. CLIMATE AND MAN. Two hours.

This course aims to give the student a broad survey of the world as viewed especially from a climatic standpoint. The climates of the world are classified, characteristics studied, and causes for their existence explained in terms of latitude, winds and topography. The existence of similar climates in widely separated areas is explained and special vegetative, animal and human adjustments are dwelt upon. Characteristic products and crops are studied. The possibilities and limitations of the various climatic provinces are featured. Maps are studied intensively.

#### 130. ELEMENTARY GEOLOGY. Four hours.

This course has as its purpose the study of those forces and processes that are and have been continually modifying the surface of the earth. Rocks reveal something of their past history, land forms tell their age and probable future. The work of the wind, rivers and the oceans are some of the topics considered. Volcanoes, glaciers and earthquakes are made to give up some of their secrets. This is a good foundation course for historical geology, science, and other courses in the field of geography. It is also valuable for those who expect to teach physical geography in secondary schools.

#### 132. HISTORICAL GEOLOGY. Four hours.

A course designed to give the third dimension of geography, time, and through it, an understanding of present topographic forms, and such outstanding phases as the coal period and the ice age as affect us so much culturally in the present.

#### 151. REGIONAL GEOGRAPHY OF ENGLISH SPEAKING AMERICA. Four hours.

This course divides the United States, Canada and Alaska into human use regions and attempts to explain why such adjustments have been made. The geographic personality of each region is stressed and reasons found for the development of such personalities. Students can not secure credit for both Geog. 10 and Geog. 151.



**152. REGIONAL GEOGRAPHY OF LATIN AMERICA. Four hours.**

In this course the geographic background of Latin cultures from the Rio Grande to Cape Horn is taken up. Students can not secure credit for both Geog. 10 and Geog. 152.

**154. EUROPE AND HER AFRICAN COLONIES. Four hours.**

This is one of sequence of courses designed to give the student a detailed knowledge of the regional geography of the world. This particular course deals with man's adjustment to his physical environment in the various geographic regions of Europe and Africa. The peculiar geographic relationships existing between Africa and the dominant European countries are also considered. Students can not secure credit for both Geography 11 and Geography 154.

**155. GEOGRAPHY OF ASIA AND AUSTRALASIA. Four hours.**

A study of the regions bordering the Indian Ocean on the North and east and the Pacific Ocean on the west. Students can not secure credit for both Geog. 11 and Geog. 155.

**162. GEOGRAPHY OF THE TROPICS. Two hours.**

The following are some of the topics treated in this course: (1) isolation and the tropics; (2) tropical temperatures—daily, seasonal and aperiodic; (3) rainfall zones in the tropics; (4) soils of the tropics; (5) tropical plant life with reference to variety of species and provinces; (6) tropical animal life; (7) native races of the tropics; (8) selective influences upon native races; (9) tropical diseases and progress toward their elimination; (10) tropical products used in the temperate zones; (11) problems of white exploitation of the tropics; (12) acclimatization of the white man in the tropics; (13) Australia's experiment with white men in the tropics; (14) the tropics as a future frontier for the temperate zone; (15) laboratory products as substitute for tropical products; (16) governmental problems in the tropics; (17) religious questions of the tropics; (18) the tropics and missionaries.

**170. GEOGRAPHY OF POLAR REGIONS AND ALASKA. Two hours.**

Some of the topics considered in this course are: the mathematical geography of the polar region circles; length of day and night; seasons; Arctic Ocean basin; factors governing the climate of polar regions; plant life of land in polar regions; plant life of sea in polar regions; animal life of land and sea; human life as a response to land conditions (Lapland); human life as a response to sea conditions (Greenland); mineral resources of polar lands; food resources of polar lands; polar lands as a future resource—coal power; polar lands and aviation routes; regional discussion of polar regions.

**191. GEOGRAPHY AND WORLD POWER. Four hours.**

A course designed to bring out the role geography has played in the struggle for world dominion in the past. Some topics considered are: Geographic backgrounds of (1) Egypt, (2) Babylonia, (3) Greece, (4) Rome, (5) Carthage, (6) Spain at the apex of its glory, (7) Portugal, the first Atlantic power, (8) the Aztec and Maya realms in Mexico, (9) the Inca Empire in Peru, (10) the past development of China through the ages as controlled by her geography.

**194. GEOGRAPHIC INFLUENCES IN AMERICAN HISTORY. Four hours.**

This course takes up the geographic factors that have controlled, to a certain degree, the trend of American history. The drowned river valleys of the eastern coast, the fall line, the Appalachians and their water gaps, the Mississippi and Ohio, the Great Plains, the Rockies, the Great Basin, and Puget Sound will be some of the units treated from this viewpoint.

**195. BASIS OF GEOGRAPHY. Four hours.**

This course, after sketching the climatic and geologic backgrounds of man's stage, the earth, builds upon these his slow adaptation to his complex geographic environment, as that adaptation takes place from primitive groups to more complex civilized groups.

**196. GEOGRAPHY OF THE ROCKY MOUNTAIN INDIAN. Two hours.**

The following topics are discussed in this course: A—The general characteristics, home, food, dress, customs, superstitions, religions, amusements, industries, both past and present, of the following: (1) The wandering tribes, Cheyenne, Arapahoe, Sioux, Commanche, Kiowa, Utes, etc.; (2) a pastoral tribe, the Navajo; (3) village, or Pueblo tribes, the Hopi. B—present status of Indians of this region: (1) location of reservations; (2) government supervision and aid; (3) contributions to our civilization.

**197. INFLUENCE OF SOIL ON AMERICAN HISTORY. Two hours.**

The course is designed to explain the effect of the various soils in the United States upon the settlement of the country. Certain stocks preferred certain soils and topographic sites that were similar to those with which they were familiar in Europe. This phase of geographic control has not been stressed until recently.

**198. GEOGRAPHY OF FOODS. Two hours.**

A course on the outstanding groups of food products of the world as for example: (1) meats; (2) fish; (3) breads; (4) dairy products; (5) fruits, etc. This course is a study of these products from the consumer's point of view.

**199. CONSERVATION OF NATIONAL RESOURCES. Four hours.**

Among the topics considered under this head are water power, soil, metallic mineral deposits, non-metallic mineral deposits, coal and its by-products, giant power and coal, conservation of fresh-water life, conservation of shore life in salt water, conservation of wild life, conservation of forests, conservation of valuable national traits of character, conservation of natural beauty.

There are extensive library readings and the class work is of lecture-discussion type.

**210. SPECIAL PROBLEMS IN GEOGRAPHY.**

This course is designed especially for graduate students who are interested in working out individual problems in the field of geography. Two hours credit a quarter. No student should register in this course without permission of the geography department. The department will make an assignment as to time and place of meeting.

This course may be taken for two additional quarters as 211 and 212.

**222. INDIVIDUAL STUDIES IN GEOGRAPHY. Two or four hours.****223. RESEARCH IN GEOGRAPHY. Four hours.**

To be taken in first quarter of graduate work.

A course designed for those working on their master's theses.

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

**224. RESEARCH IN GEOGRAPHY. Four hours.**

This is the thesis course for masters candidates in their second quarter of graduate work. Open for field studies for other qualified graduate students with the consent of the head of the department.

**225. RESEARCH IN GEOGRAPHY. Two hours.**

This is the thesis course for masters candidates in their third quarter of graduate work. Open for field studies for other qualified graduate students with the consent of the head of the department.

## HISTORY AND POLITICAL SCIENCE

This department offers courses in the two fields, history and political science, of such nature that they meet the needs of teachers in elementary and high schools. The courses are arranged to cover the materials and methods which are most helpful in presenting the subjects of history and civics,

The increasing interest in civics and citizenship training is reflected in the school programs. The courses offered are all chosen from fields that are of most value to teachers. The new and growing subjects are represented as well as the more traditional selections of subject matter.

## A FOUR-YEAR CURRICULUM IN HISTORY AND POLITICAL SCIENCE

Students should plan their work definitely to prepare them for teaching on the junior or the senior high school level. This should be done in consultation with some member of the departmental teaching staff. History 25 and 26 listed in the core may be omitted and other more detailed courses substituted.

With the exception just noted, in addition to the core subjects listed on page 36 each student should have a minimum of thirty-two hours in history, thirty-two hours in the social subjects including political science, economics, geography, and sociology; and a twenty-four hour minor in some subject other than those included in the social subjects listed above. Two such minors will be of advantage in securing appointments. Minor combinations of English and mathematics, English and a foreign language, mathematics and a science or similar combinations can be worked out and still leave from four to twenty hours for electives. Detailed sample programs will be supplied at time of registration.

Those planning to teach in the junior high school should complete two minors of sixteen hours each instead of one of twenty-four hours outside of the social subjects field; should include one year of geography, and should arrange for practice teaching on two levels. Mathematics, science, and English are suitable subjects for minors.

In addition to the core subjects listed on page 36 the following courses are required of majors in this department: Hist. 1, 2, 3, 5, 6, 7, 102, 117; Pol. Sci. 101, 102, 151, 152.

For the guidance of students in planning programs the following schedule is suggested and must be adhered to for the first two years.

**FIRST YEAR.** Hist. 1, 2, 3.

**SECOND YEAR.** Hist. 5, 6, 7; Pol. Sci. 101, 102; a selected minor.

**THIRD YEAR.** Hist. 102, 117; Pol. Sci. 151, 152; Soc. 105; Ed. 56, 58; continuation of selected minors; a selected course in psychology; and electives.

**FOURTH YEAR.** Electives in the major field; continuation of selected minors; sociology; Ed. 157, 195-295; and selected electives. Those planning to teach in high schools should elect Ed. 116, and men are advised to elect Ed. 141.

All programs should be planned for a year or longer instead of for a single term. Minors must be selected in such a way as to give a unified body of knowledge. Core required subjects may be included in the totals for a minor.

Courses for students from other departments who choose a minor in History and Political Science:

- I. Hist. 10, 25, 26, 105, 203, or 117; Pol. Sci. 101 or 102.
- II. Hist. 25, 26, 101, 117, 216; Pol. Sci. 101 or 102.
- III. Hist. 10, 13b, 25, 26, 57, 102 or 203; Pol. Sci. 101, 102, or 103.

### HISTORY

#### \*1. FOUNDATIONS OF AMERICAN NATIONALITY, 1600-1800—Four hours.

Social and economic conditions at the close of the first century of colonization; types of colonial government; relations with the mother country; the development of self-government; conquest of French North America; new schemes of imperial control; causes of the revolution; finances; the loyalists; formation of a permanent government; establishing the new government.

\*Given also by extension.

**\*2. DEVELOPMENT OF AMERICAN NATIONALITY, 1800-1865. Four hours.**

Consolidation of the new west; the tariff controversy; financial readjustment; removal of the Indians beyond the Mississippi; westward expansion; Jacksonian democracy; the slavery controversy; secession and civil war; saving the Union; foreign relations; economics of the Civil War.

**\*3. RECENT AMERICAN HISTORY, 1865 to the present time. Four hours.**

Problems of reconstruction; radical ideas in congress; the negro problem in the south; carpet bag rule; rebuilding of political parties; railroad and commercial expansion; the United States as a world power; the new era of industrial consolidation; regulating industry; Roosevelt and Wilson Americanism; the World War; financial, economic and social reconstruction.

**\*5. EARLY MODERN EUROPE. Four hours.**

Phases of the later medieval period that vitally affected the development of the nations of western Europe. The development of important nations and the commercial revolution. The Reformation with its results upon both catholic and protestant churches. National and religious rivalry in the seventeenth and eighteenth centuries. Growth of democratic ideas of government. Causes leading to the French revolution. The revolutionary and Napoleonic eras in Europe with their resultant political, social, and economic changes.

**\*6. MODERN EUROPEAN HISTORY. Four hours.**

This is a continuation of Hist. 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. 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.

**\*7. RECENT EUROPEAN HISTORY. Four hours.**

This is a continuation of Hist. 5 and 6. Some of the main topics considered are: Colonial imperialism with its expansion into Asia and Africa; rivalry for markets; growth of international labor organizations; realignment of powers; the break-up of Turkey; the world war; the series of conventions, and treaties following the war; the new nations of Europe; the League of Nations and World Court; economic, industrial, social, and political readjustments; Europe's present relations with the United States.

**\*10. SOCIAL AND INDUSTRIAL HISTORY OF THE UNITED STATES. Four hours.**

This course traces first of all the economic and industrial development of the United States from colonial times to the present. In addition, it includes a description of the changes in home life, in industry, in modes of transportation, and in general social conditions that have accompanied the economic changes.

**13a-13b. TEACHING OF HISTORY AND CIVICS IN THE ELEMENTARY SCHOOL. Two hours.**

These courses are similar in general plan; 13a is planned for the primary and 13b for the intermediate grades. Each course deals with the historical development of history instruction: the aims and values of history in the schools; materials and methods of handling them in the various grades; various types of presentation; testing of results; the relation of history and civics to other subjects.

In 13a special attention is given to a detailed study of the materials for history instruction in grades 1 to 4; in 13b the material commonly found in grades 4 to 6.

**25. CONTRIBUTIONS OF THE ANCIENT AND MEDIEVAL WORLD TO MODERN CIVILIZATION. Four hours.**

This is an orienting course of junior college grade. It seeks to explain to students how the ancient and medieval worlds existed, their ideals, their customs, their outstanding personalities, and their permanent influence upon later civilization. Lectures, discussions, reports, and extensive reading.

\*Given also by extension.

**26. THE EXPANSION OF EUROPEAN CIVILIZATION IN MODERN TIMES.**  
Four hours.

This is a continuation of 25. It seeks to explain how the modern nations have come to develop in the particular form that they have, their national aspirations and ambitions for the future. The development overseas in America, Asia, and Africa of European civilization and the problems that have arisen as a result of such expansion. Emphasis will be laid upon leading personalities and upon those elements of European civilization that have left permanent contributions for the modern world or permanent ulcers for the world to attempt to cure.

**27. HISTORY OF EDUCATION AND ITS RELATION TO WESTERN CIVILIZATION.** Four hours.

This course is a continuation of 25 and 26. Its aim is to present the history of education as a phase of the rise, development and spread of our western civilization. It attempts to trace the development of the many efforts to perpetuate human progress made through the organization of educational institutions. The course presents the story of the practice, progress, and organization of education itself rather than a history of educational theory.

**57. CONTEMPORARY HISTORY.** Two hours.

This course deals with the world problems that have developed since the World War. Topics are selected that are of current interest and studied in the light of their historical development. These topics vary from year to year. Each year brings in some new problems that are pressing for solution and sees others eliminated that have temporarily been adjusted. Topics are selected from events in the United States, in South America, in Asia, and in Europe that touch the Americans in some important way. Much use will be made of current periodicals.

**HISTORY 100a-200a. Unit Course. Manchuria and the Territorial Integrity of China.** One hour.

This course deals with the problems of Manchuria, China and Japan so far as they relate to international and American policies. (Summer Quarter only.)

**HISTORY 100b-200b. Unit Course. The Contributions of History to Recent Curriculum Construction.** One hour. Summer, 1932.

**HISTORY 100c-200c. Unit Course. Correlation of Social Studies and English.** One hour. Summer, 1932.

**\*101. COMMERCIAL AND FINANCIAL HISTORY OF THE UNITED STATES.** Four hours.

English commerce, its ideals, its regulation, and its effect upon colonial development on the continent of America. 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 and who desire a background course in the history that has accompanied important commercial changes.

**102. ANCIENT SOCIAL HISTORY.** Four hours.

This is a survey of the development of society among ancient peoples. Examples will be chosen from the social and legal codes of the Hebrews, the Assyrians, and the Egyptians. Special attention will be given to houses, temples, religious ideas, clothing, furniture, social customs, slavery, and the position of women in the above nations and in Greece and Rome. 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. General social life of the early Roman Empire. Some of the causes of national decay. This course deals especially with concrete material that high school instructors find most difficult to teach in the courses in ancient and world history. It also includes material most largely drawn upon for courses in the grades.

\*Given also by extension.

**103. THE LITERATURE OF AMERICAN HISTORY. Two hours.**

A survey of the materials available for the study of American history: the chief collections of source materials, the more important general accounts; biography; bibliographical aids; special and local histories; textbooks and their authors; the selection of a good working library.

**104. WESTERN AMERICAN HISTORY. Four hours.**

The westward movement as an historical process. Causes which led to migration from the eastern states. The occupation of the region between the Alleghenies and the Mississippi. The land policy of the United States. Reaction of the west upon national policies. Expansion into Florida, Louisiana, and the Oregon country. Acquisition of Texas and California. Discovery of gold in California and Colorado and the resultant gold rush. Settlement of Utah, and special features of the history of Colorado. Coming of the new west and passing of the old frontier conditions. This course may be substituted for History 2 by students of senior college standing.

**105. ENGLISH HISTORY. Four hours.**

This course is designed especially to meet the needs of majors in English. It will supply an interesting background for those who desire a course of this kind for general cultural purposes. The personal element will be emphasized. Enough political history will be included to give an adequate setting to those great reforms in government and custom and the crises in empire that have been the direct or indirect inspiration of the great permanent blocks of English literature.

**117. THE TEACHING OF HISTORY AND CIVICS IN JUNIOR AND SENIOR HIGH SCHOOLS. Four hours.**

The development of instruction in these subjects in high school; their place in the high school program; aims and values of instruction; problems connected with the teaching of these subjects; the relation between history and civics teaching. Modern courses of study; modern tests, their use and absence; written work; illustrative work; the working library. Special attention will be given to the organization of material for teaching purposes. Prerequisite, one course in history.

**170. LEADING RELIGIONS OF THE WORLD. Two hours.**

A study of the world's principal living religions, such as, Buddhism, Christianity, Confucianism, Hinduism and Mohammedanism. Each religion will be studied in the historic environment in which it appeared, the peoples to whom it made its chief appeal, and its present body of followers. Attention will be given to the rites, ceremonies and beliefs peculiar to each religion.

**203. THE REFORMATION. Four hours.**

This is one of the most illuminating periods in modern history. No other course explains so many things and controversial questions that are still acute among modern churches. Some of the topics covered are: actual conditions in the medieval catholic church at the close of the fifteenth century; the religious effect of the Renaissance in Germany; the growth of a sense of nationalism; the rise of national churches; theological contributions of Luther, Calvin and Zwingli; the reformation in England, France, and Scandinavia; 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. Frequent reference will be made to the phases of the Reformation that are still in progress.

**205. MEDIEVAL LIFE AND INSTITUTIONS. Four hours.**

This course deals with those phases of medieval life that have been most permanent, are of most interest to teachers in the public schools, and are most difficult for teachers to master unaided. Some of the topics included will be social and industrial life; relations of lords to each other, to their serfs, and to their overlords; rise of cities; beginning of commerce; the medieval church; medieval learning, schools, and colleges; administration of justice; art and architecture.

**206. THE FRENCH REVOLUTION. Four hours.**

This is a detailed study of the great revolutionary epoch in European history. Some of the important topics considered are: the monarchy under Louis XVI; the various classes of nobles and clergy with their special privileges; the bourgeoisie or middle class of the towns; the peasants and their burdens; the methods of taxation and feudal exactions; the growth of criticism and revolutionary literature; the assumption of power by the Third Estate; 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.

**207. THE GREAT COLONIAL EMPIRES OF THE TWENTIETH CENTURY. Four hours.**

This course deals especially with the colonial empires of England, France, Italy, Holland, Belgium, and Germany. It seeks to explain how these empires have arisen, the relations of the colonies to the mother countries, the importance of their commerce and industry to world relations, the efforts to weld these various imperial organizations into coherent wholes, and the relations of such colonial empires to international rivalry.

**208. THE AMERICAN REVOLUTION. Four hours.**

This course will include a careful study of the relationship—governmental, social, economic, and political—existing between the American colonies and the British government; the development of self-government; the beginning of a permanent Indian policy; judicial procedure and the judicial disallowance of colonial legislation; the commercial legislation affecting the colonies; colonial and British ideas of representation; the causes of the revolution. Much use will be made of source materials.

**209. SLAVERY, SECESSION, CIVIL WAR, AND RECONSTRUCTION, 1850-1870. Four hours.**

This is a detailed library course. The general conditions of slave life and the slavery system. The great compromises made in 1850. Operation of the Fugitive Slave Law. Effect of the slavery agitation upon political parties. Repeal of the Missouri Compromise. The Dred Scott Decision and its effect upon political ideas. Lecomptonism and the fight of Douglas to retain his leadership in the democratic party. The election of 1860. Secession. Problems of the war. Process of emancipation. Conditions in the south after the war. Problems of reconstruction. Conflict between the executive and congress. Carpet bag rule and what it meant. Actual processes of reconstruction. Resumption of white supremacy in the governments of the southern states.

**\*216. LATIN-AMERICAN HISTORY. Four hours.**

A course designed to furnish a background for understanding the growing relations between the United States and the republics to the south. In tracing the experiences of the Latin-American people, attention is given to the work of Spain, to the securing of independence, to the social, political, and economic growth, to international relations and the Monroe Doctrine, to the interests of the United States in the Caribbean and to the new Pan-Americanism.

**217. TEACHING OF SOCIAL SUBJECTS OTHER THAN HISTORY. Four hours.**

This is a course in civic education. It includes a consideration of the historical development of civic instruction in the United States, how the present courses in the social studies came to be, and the main trends and materials in community civics, economics, sociology, advanced civics, and problems of democracy. Attention is given to typical courses in operation in various parts of the country, to library and laboratory equipment, to special methods of procedure, to extra-curricular activities, and to the selection and organization of units of instruction in the fields named above. Selected units of instruction are treated in detail. The utilization of social-science materials for instruction in oral and written English is discussed and illustrated. Special effort is made to present materials so as to enable teachers and supervisors to adapt the work to classroom needs.

**221. HISTORY OF THE FAR EAST. Four hours.**

This course is designed to enable teachers to understand the problems of the Far East. It includes a survey of the modern history of Japan and China; the growth of western ideas; the development of Japan as a first-class power; the conflict of interest in China; Japan's ambitions and their relation to our own interests. The development of self-government in China and its difficulties. It also includes a survey of British occupation in India; the relation of the British to the native races; economic, industrial and educational reforms in India and their results; the growth of self-government; and the national aspirations of the people of India. Throughout this course, the relation of these various problems to the United States is emphasized.

\*Given also by extension.

**222. INDIVIDUAL STUDIES IN HISTORY. Two or four hours.****223. RESEARCH IN HISTORY. Four hours.**

Taken in the first quarter of graduate work.

This is a required seminar and conference course for graduate students who are working on their 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 and is directly responsible to him for the detailed agenda for his master's thesis.

**224. RESEARCH IN HISTORY. Four hours.**

Students doing graduate work in the fields of history or political science may arrange for time and topics as may be desired. Research problems of interest to such students both in the field of subject matter and methods of instruction will be taken up for consideration. Students working on masters' theses in the department will enroll for this course.

**225. RESEARCH IN HISTORY. Two hours.**

A continuation of 224.

**300. SEMINAR IN THE TEACHING OF HISTORY. Offered on application. Two or four hours.**

This course will offer opportunity for the special study and investigation of selected topics in the teaching of history in elementary schools, high schools, and teacher-training institutions. Open only to graduate students.

**301. SEMINAR IN HISTORICAL TECHNIQS. Two hours.**

This course deals with the technics of historical investigation as used by scientific historians. An analysis will be made of the sources used by and the conclusions reached by outstanding historians. Practical exercises will be given in attacking historical problems, locating sources of information, and organizing historical evidence. Open only to graduate students. Given from time to time on demand. Materials will be selected from American history. The course will include individual work and group discussions as they are needed and students are ready for them.

**POLITICAL SCIENCE****100a-200a. UNIT COURSE. MODERN INTERNATIONAL POLICIES. One hour.**

This course deals with the League of Nations, the World Court, the Kellogg Pact and other recently created agencies for international cooperation, their organization and their services. (Summer Quarter only.)

**\*101. GOVERNMENT OF THE UNITED STATES. Four hours.**

A detailed study of the origin of the federal government; the selection and powers of the president; congress, and its relations to the other departments; the federal judiciary; conduct of elections; the actual work of the national government; foreign relations; the preservation of peace and the enforcement of law; the police power and social legislation; relations to the state and local governments. The emphasis is placed upon government as reflected in current politics.

**\*102. STATE GOVERNMENT. Four hours.**

The relation of state government to the national government. Common features of state constitutions. The field of state legislation. Operation of the state government and its importance to the individual. The enforcement of laws. Local government and its significance to the individual. State and local finances. Popular participation in governmental activities. Plans for making state and local government more efficient. Colorado government will be used constantly for illustrative purposes, although the work will be equally valuable to students from other states.

**103. MUNICIPAL GOVERNMENT. Four hours.**

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

\*Given also by extension.



**151. HISTORY OF THE FOREIGN POLICY OF THE UNITED STATES. Four hours.**

This course aims to give the student a continuous conception of the evolution of our foreign policies and the problems out of which they have arisen. Some of the chief topics are: Origins of our foreign policies; why we had to adopt a policy of isolation; the diplomacy of territorial expansion; development of the Monroe Doctrine; leadership in the practice of peaceful settlement of international questions; diplomatic problems of the Caribbean and the Pacific; attitude toward and policies followed in the later problems of international conferences, organizations, and interference in world affairs.

**152. INTERNATIONAL RELATIONS. Four hours.**

This course deals first with the principles of international laws as they have been embodied in the common practices of nations in the past, included in treaties and applied by courts. Then there is taken up for careful study the modern attempts to establish cooperation among nations, common public opinion, and formal machinery for handling common international problems. Such efforts as the Hague Tribunal, the World Court, the League of Nations, the Pan American Union, the Kellogg Pact and other proposals will be considered.

**203. POLITICAL SCIENCE THEORY. Four hours.**

This is an introduction to the principles governing the various political organizations. The theories and forms of government, constitutions, and ideals of citizenship are included. The course should be of special interest and value as explanatory of the current political thought relative to democracy and to the radicalism that is expressed in bolshevism and communism and the various phases of internationalism.

**HOME ECONOMICS**

Courses offered in this department are planned to provide valuable training for individuals, whether they plan to teach the subject, become homemakers, or to regulate their own lives according to modern ideals of health, comfort, and beauty. Both men and women are welcomed in this department. Many courses offered are as important to men as to women.

In addition to the core subjects listed on page 36 the following courses are required of majors in this department: H. E. 2, 3, 5, 20, 21, 22, and 23 as junior college subjects; and H. E. 102, 103, 107, 110, 125, 140, Ed. 116, and a course in psychology as senior college subjects.

Majors in this department are required to select two minors of twenty-four hours each outside the department.

Courses for students from other departments who choose a minor in Home Economics:

- I. H. E. 5, 10, 20, 104, 106, 109, and 125.
- II. H. E. 3, 8, 20, 25, 102, 103, and 107.
- III. H. E. 3, 5, 8, 20, 25, 106, 109, and 125.

**THE FAMILY****8. SOCIAL CUSTOMS AND MANNERS. Two hours.**

This course lays stress on good form as recognized by civilized people everywhere. The class will participate in demonstrations of correct manners under varying circumstances.

**106. HOME CARE OF THE SICK. Four hours.**

The purpose of the course is to teach students the use of means at hand to meet emergencies of sickness or accident in the home. Standards of heat, light, ventilation, care of the room and of the patient are stressed.

**108. THE EDUCATION OF THE CONSUMER. Four hours.**

A course presenting the problem of the consumer's effort to make his income buy the satisfactions he already appreciates and desires. Aids to such efforts are pointed out and discussed. Standards of consumption are studied.

**109. FAMILY RELATIONSHIPS. Two hours.**

The purpose of this course is to discuss the fundamental problems of family life as influenced by the organization and administration of the modern home as contrasted with earlier homes.

**125. CHILD CARE AND CHILD WELFARE. Four hours.**

Aims: (1) to give an appreciation of the significance and responsibilities of parenthood; (2) to give a subject matter foundation for the physical care of infants and children; (3) to point out the larger social aspects of the child welfare movement; (4) to discuss methods for conducting child welfare work in home, school and community.

**THE HOME****10. HOUSEHOLD MANAGEMENT (THEORY). Two hours.**

The study of convenient house plans as they affect the work of the housewife. Routinizing of work; schedules, menus, and market lists are made.

**104. HOUSING AND HOUSE SANITATION. Two or four hours.**

The purpose of this course is (1) to give an appreciation of the importance of good housing in relation to citizenship; (2) to develop ideals of what constitutes a safe and livable house; (3) to recognize the individual's responsibility in demanding houses whose standard will measure up to other American ideals. Emphasizing problems of heating, lighting, ventilating, and disposing of waste in the house is the latter half of this course.

**107. HOME DECORATION. Four hours.**

This course includes the problems met with in homes of moderate or small means. Suggestions are given of how one may develop good taste and judgment in the selection and arrangement of furnishings, even though they are simple. This work is further emphasized by a trip to Denver, where leading decorators of the stores demonstrate for the class the latest ideas in arrangement of furniture, draperies and other essentials.

**110. HOUSEHOLD MANAGEMENT. (Practice). Two hours.**

Class limited to twelve. Any student who has completed 10, 21 and 22 may live in the cottage and secure this valuable experience. A resident instructor is present to advise, but the entire planning and running of the cottage is in the hands of the students. Girls from other departments expecting to marry soon should take this course and its prerequisites.

**132. THE HOME. Two or four hours.**

Not every house is a home, but every home must have a house or shelter.

The purpose: (1) to distinguish a home from a house; (2) to set up some minimum essentials for the successful homemaker; (3) to analyze the complex problems that every family faces and see if there is not some help available in studies of these problems; (4) the American home in the near future; (5) values to be retained; (6) how can we retain them. A study of sources of help available to every family. Case studies of family relationships and analysis of their problems. Remedies suggested by philosophers, educators, and economists. The American's god (\$) compared to simple living with a purpose. Setting up ideals of home worthy of our age and our country.

**FOOD AND NUTRITION****20. ELEMENTARY NUTRITION. Four hours.**

Purposes: (1) to give the student a background of the subject matter of nutrition; (2) to train students so that they will be more able to recognize and deal with nutritional problems that might arise in their future teaching; (3) to develop an appreciation of the contribution of food to the diet; (4) to give the student the fundamentals of the school lunch problem; (5) to acquaint the student with the treatment of certain diseases through diet; (6) to train in methods of teaching nutrition to children.

**21. FOODS AND COOKERY. Four hours.**

Special emphasis is placed on the selection and principles involved in the preparation of many types of foods; food preservation; familiarization with the use and care of laboratory equipment and with all available fuels and cooking equipment as gas, electric and kerosene ranges, the fireless and pressure cookers.

**22. FOODS AND COOKERY. Four hours.**

More complicated cooking processes are undertaken; emphasis is placed on the economic phases of food problems. Food legislation is studied.

**23. COOKERY AND SERVING. Four hours.**

The types of food prepared in this course include more difficult combinations and require a greater degree of manipulative skill. Practice is given in the planning and serving of well-balanced meals at given costs per capita. The social and aesthetic phases of food service are stressed.

**25. COOKERY AND TABLE SERVICE FOR HOMEMAKERS. Four hours.**

A course for non-majors. No prerequisites.

Aims of course: (1) to give some knowledge of the fundamental processes of cookery through the preparation of typical dishes, chosen on the meal basis plan; (2) to give instruction in table service.

Content: dishes suitable for the various meals are prepared with emphasis upon the nutritive needs of the family group. Practice is given in the preparation and service of meals.

**26. RURAL EDUCATION PROBLEMS IN HOME ECONOMICS. Two hours.**

This course is planned to include such problems as the personal appearance and manners of the teacher, the school lunch and attendant values, proper care of clothing and food as it relates to family welfare.

**121. EXPERIMENTAL COOKERY—Open to graduate students in Home Economics. Two hours.**

Prerequisites: H. E. 21, 22, and 23.

Aims: (1) to give the student an appreciation of the field of food research work; (2) to give some training in the technic of food research problems; (3) to make comparative studies of fuels in a quantitative way; (4) to study the efficiency of various types of kitchen equipment; (5) to study and compare the value of cookery processes and methods; (6) to make comparative studies of some standard food products.

**123. DEMONSTRATION COOKERY. Two hours.**

Prerequisites: H. E. 21, 22, and 23.

Aims: (1) to broaden the student's experience by affording an extensive range of applications; (2) to increase skill in technic; (3) to increase self-confidence; (4) to fit students to do community work as demonstrators.

**124. DIETETICS. Four hours.**

The completion of chemistry is prerequisite. Aims, to consider (1) the nutritive values of carbohydrates, fats, proteins, ash constituents, and vitamins; (2) the digestive process; (3) metabolism; (4) physiological requirements of individuals throughout all age periods; (5) principles which govern the choice of food under varying conditions such as age, occupation, health, and disease; (6) to give practice in planning and preparing dietaries for individuals and for family groups.

**TEXTILES AND CLOTHING****2. TEXTILES. Four hours.**

Required as a prerequisite to all of the clothing work for majors. Other students are welcomed into the course, which is worthwhile to all who must select household fabrics of any kind. The hygienic qualities of various fabrics are stressed.

**3. DESIGNING, AND CLOTHING CONSTRUCTION. Four hours.**

This course includes the adaptation of patterns and fabrics to individual needs in the construction of garments suited to the times and to the purse of the student.

**5. DRESS APPRECIATION. Four hours.**

The purpose is to enable each student to choose the suitable and attractive clothes for herself or others.

**102. CHILDREN'S CLOTHES. Two hours.**

Appropriate clothing for babies and small children will be studied and made.

**103. COSTUME DESIGN. Four hours.**

The study and application of the art principles to clothing design both structural and decorative.

**105. ADVANCED DRESSMAKING. Four hours.**

The purpose of this course is to increase the student's confidence in her ability to make one of her best dresses at a cost that is less than half she would have to pay for a similar garment that does not compare in quality. Into this work she brings the training of all her previous courses of design and sewing. Care is taken that the costume as a whole is planned with accessories to match so as to insure unity throughout.

**OBSERVATION AND METHODS**

One of the core subjects, 56, affords the student observation and methods both in this department and in elementary and junior high school work.

**140. METHODS OF TEACHING HIGH SCHOOL HOME ECONOMICS. Four hours.**

The purpose of the course is to familiarize the student with sources of information and guidance, to determine objectives of the work and to suggest probable means of attainment. Short units of study adapted to local classes are organized. The arrangement, equipment and costs of operating a department are studied.

**INDUSTRIAL EDUCATION**

The curriculum is varied, giving the student an understanding of practical and technical phases in the field of his major interest and the broader historical and philosophical background for the better understanding and interpretation of the teaching processes.

Emphasis is placed on the major industrial interests that have found a place in the curricula of the public schools of the nation. The college has a superior complete public school unit, in which college students may observe and teach industrial work, under supervision. The department has a complete shop equipment and teachers for technical courses listed on the following pages.

In addition to the core subjects listed on page 36, the following courses are required of majors in this department: Ind. Ed. 5, 6, 7, 104, 108, 126, Ed. 116, 176, and 141 (for Men).

**A FOUR-YEAR CURRICULUM IN INDUSTRIAL EDUCATION**

A major of thirty-two hours must be selected from two fields of work offered in the department. A minor of twenty-four hours must be selected from the three remaining fields in the department—eight hours to be taken in each field.

An outside minor totaling twenty-four hours in any field not included under the head Industrial Education is required. Electives of twelve hours to be selected by the student. Below are the field courses from which Industrial Education majors and minors must be selected.

**DRAFTING**—Ind. Ed. 10, 11, 12, 13, 105, 117, 118.

**METAL WORKING**—Ind. Ed. 8a, 8b, 109a, 109b, 110, 111.

**WOODWORKING**—Ind. Ed. 1, 2, 14, 19, 103, 107, 121.

**BOOKBINDING**—Ind. Ed. 41, 42, 43, 44, 143, 144, 145.

**PRINTING**—Ind. Ed. 31, 33, 34, 36, 132, 133, 136.

**1. CONSTRUCTIVE WOODWORKING I. Four hours.**

This course is so arranged as to fill the needs of both majors in industrial education and those taking the work as an elective. The course embraces both theoretical and practical phases of the subject.

**2. CONSTRUCTIVE WOODWORKING II. Four hours.**

This course is a continuation of Constructive Woodworking I and leads the student into more advanced problems, both practical and technical.

**5. HISTORY OF INDUSTRIAL EDUCATION. Two hours.**

Early outstanding examples of attempts to organize industrial courses in principal European countries. Reasons why such courses were planned, types of people for whom organized, and the courses of study and objectives. Particular emphasis on the influence of particular European countries on industrial schools and courses in the United States.

**6. TEACHING IN JUNIOR HIGH SCHOOL. Two hours.**

This course is planned to cover four rather definite, but not hard and fast, items in teaching. What are we going to teach, what are we going to teach with, how are we going to teach, and how are we going to measure the student's progress in the field.

All four of the items listed involve an investigation of what has been taught in particular fields and what work seems to lend itself best as a teaching unit in industrial education work, the selection of illustrative materials and equipment, how problems have been and are being attacked and devices and plans for measuring abilities and progress of individual pupils.

**7. TEACHING PROBLEMS IN INDUSTRIAL EDUCATION. Two hours.**

The treatment and possible solution of problems which the student will meet in his practice teaching in the training school shop.

**8a. ART METAL I. Two or four hours.**

This course is planned as an introductory course in copper and brass work as it may be introduced into the public school. The work is planned so as to suggest minimum and more extensive equipment and point out some of the possibilities of such a course in public schools. The purpose of the technical phases of the course is to make clear methods and processes that may be applied in the working out of simple artistic problems. In general, the problems of equipment, materials, and their use in design, etching, piercing, bending, shaping, planishing, and raising are considered.

**8b. ART METAL II. Two or four hours.**

The general topics discussed and technically worked out are similar to those worked out in the first course. Emphasis is placed on the correlation of metal work and design showing the possibilities and limitations of design as applied to soft metals. A discussion of the commercial forms of copper and alloys of copper such as brass, aluminum, bronze, german silver and their possibilities in craft work. The technical work involves simple problems in etching, soft soldering, lapping, bending, saw-piercing, annealing, seaming, raising, planishing, outline chasing, recessing, hard-soldering, and coloring.

**10. PRINCIPLES OF DRAFTING. Two or four hours.**

The course is planned to show that drawing is a language to express and record ideas and information necessary for the building of machines and structures by outline alone, giving exact and positive information regarding the work to be executed. The course is planned to present the technic of expression through the use of drawing instruments in the accurate laying out and executing of problems in lettering, geometric construction, orthographic projection, pictorial representation, developed surfaces, dimensioning, and working drawing.

**11. PROJECTION, SHADE, AND SHADOW. Two or four hours.**

The purpose of this course is to give a working knowledge of the fundamentals of orthographic projection, that is, the planes of projection, the projection of points, lines, surfaces and solids on the coordinate and auxiliary planes; the subject of shade and shadow as an application of orthographic projection, in the use of conventional pictorial methods, showing its advantages, disadvantages, and limitations in drawing.

**12. PRINCIPLES OF ARCHITECTURAL DRAWING I. Two or four hours.**

The characteristics of architectural drawing, kinds of drawings, preliminary sketches, and display drawings, as embodied in a working drawing of a simple frame structure, which includes the general considerations,

plan of site, floor plans, framing plans, laying out of plans, methods of sectioning, detailed drawings, details of building construction, different forms of foundation, floor, and wall construction for buildings with and without basement; special features, the use of symbols, the correct dimensioning of drawings as used in building construction, notes and specifications, and the types of lettering commonly used in architectural drawings are some of the problems commonly discussed and technically worked on in this course.

### 13. PRINCIPLES OF ARCHITECTURAL DRAWING II. Two or four hours.

This course is a continuation of Principles of Architectural Drawing I, but deals with the designing of buildings for public purposes and includes framing for larger building, detail of plans for large opening, slow burning and fireproofing structures, ventilation, heat, light, general arrangement of the building for the purpose intended; city ordinance demands regarding walls, door openings, fire escapes; specification and a pictorial representation in pencil of the structure proposed.

### 14. CARE AND MANAGEMENT. Two or four hours.

This course is designed to train students to care for, repair, and adjust hand and power tools used in woodworking.

### 19. WOODTURNING. Four hours.

The aim of this course is to give the students a knowledge of the woodworking lathe, its care, use, and possibilities. Different types of problems will be solved, that is, cylindrical work, working to scale, turning duplicate parts, and assembling, the making of handles and attaching them to the proper tools. Special attention will be given to the making of drawings of a kind used in woodturning.

### 31. ELEMENTS OF PRINTING I. Two or four hours.

Courses 31 and 32 are consecutive courses and are planned to give the student the technical background upon which all type composition rests. This course covers the use of the various tools, equipment, materials, and the fundamentals of plain type composition. The student sets simple jobs and carries them through the different stages from composition to making ready and printing on the press. Methods of teaching these elements are also stressed.

### 32. ELEMENTS OF PRINTING II. Two or four hours.

A continuation of Course 31. The student is given further work in the fundamental technic involved in producing printed matter. More complicated jobs involving the use of rule and tabular work, borders, and ornamental materials are set.

### 33. PRINCIPLES OF PRINTING DESIGN. Two or four hours.

This course is a continuation of Course 32 in that it builds upon the student's knowledge of and ability in the use of type, tools, and materials, in teaching him the elements of good design in printing. Proportion, balance, simplicity, harmony of shape and tone, ornamentation, etc., are specifically dealt with as the student designs, sets, and prints complete pieces of work.

### 34. INTERMEDIATE PRINTING I. Two or four hours.

Courses 34, 35, and 36 aim to give intensive work in job composition. This course offers advanced technical work in the fundamental mechanical processes in printing. It stresses the principles of good design and workmanship. Practical work with tickets, cards, letterheads, labels, etc., form the basis for the student's work.

### 35. INTERMEDIATE PRINTING II. Two or four hours.

A continuation of Course 34, to cover the design and printing of title pages, cover pages, posters, menus, programs, etc. The student is introduced to the use of color and the make-up of color forms more fully than in any of the preceding courses.

### 36. INTERMEDIATE PRINTING III. Two or four hours.

While this course gives further training in the designing and producing of the various types of work dealt with in courses 34 and 35, it lays particular stress upon the composition of difficult and extensive pieces of job composition and the efficient laying out and planning of such work. More press work is done than in previous courses.

**41. ELEMENTARY BOOKBINDING AND LEATHERCRAFT. Four hours.**

This course aims to introduce all the tools and equipment necessary in elementary bookbinding and leathercraft, also the terminology of materials used, the making of some articles in leathercraft and binding of small volumes.

**42. ELEMENTARY BOOKBINDING AND LEATHERCRAFT. Four hours.**

Full buckram magazine bindings and care and repair of books. Beginning hot and cold tooling—a continuation of leathercraft. Pattern making for leathercraft and tooling. Use of air brush.

**43. INTERMEDIATE BOOKBINDING AND LEATHERCRAFT. Four hours.**

Half and full leather bindings in morocco, calf, and cow hides. Leather tooling and design. Elementary gold stamping on lettering machine. This course deals with the preparation and organization of problems, planning of technical work, carrying out designs, and selection of all types of materials and methods of construction. Simple book edgings.

**44. INTERMEDIATE BOOKBINDING AND LEATHERCRAFT. Four hours. On request.**

This course takes up the binding of extra large volumes requiring special sewing and make-ready necessary in the building of large volumes. Deals with advanced steps in half and full leather bindings, tooling, stamping, and titling.

**100. WOOD SHOP PROBLEMS. Four hours.**

Fee.

This course is designed to furnish an opportunity for students to become acquainted with the more advanced phases of technical shop practice as they are worked out in the school or factory.

**103. METHODS IN WOODWORKING. Four hours**

This course deals with methods in the handling of school woodworking from the construction and equipping of the shop to the actual work done through the grades, junior high, and high school classes.

**104. DEVELOPMENT OF VOCATIONAL EDUCATION. Two hours.**

A course dealing with the vocational problems that have come to the front because of the reorganization of the old plans for the education of the young people of the country. It deals in a somewhat general way with new phases of education fostered by federal, state, and private funds.

**105. PRINCIPLES OF ARCHITECTURAL DRAWING III. Four hours.**

This course is designed to give some understanding of outstanding historic building units handed down through the ages and applications in modern building. The technical work in sketches and measured drawings of columns, capitals, arches, vaults, buttresses, windows, etc., and their application in modern building. The work is extensive rather than intensive in its fundamental aspects.

**106. SCHOOL AND SHOP EQUIPMENT CONSTRUCTION. Four hours.**

This course has for its base the construction of various types of equipment both for the woodworking laboratory and other departments of the school. In this course, machine work prevails wherever possible.

**107. WOODWORKING CLASS PROJECTS. Two or four hours.**

The purpose of this course is to train the student in planning, designing, and carefully working out suitable projects to construct in elementary, junior high, and high school classes.

**108. TEACHING VOCATIONAL SUBJECTS. Two hours.**

The problems in this course deal with new types of teachers, new types of education, new kinds of schools. For example, the adolescent school, the vocational school, and the training of teachers for positions in schools of less than college grade that prepare for particular vocations.

**109a. ART METAL AND JEWELRY I. Four hours.**

Planned for the further study of problems of the type developed in Art Metal II, and the making of jewelry in more precious materials. Many attractive designs of the old crafts may be adapted or applied in the making of products in the schools. No other craft calls for such fine practice in design and handling of materials used. Some of the topics presented in the course are precious metals, semi-precious stones, stone setting, and the processes of designing, sawing, filing, embossing, and soldering.

**109b. ART METAL AND JEWELRY II. Four hours.**

A continuation of 109a, Art Metal and Jewelry I, and involves advanced processes in stone setting, including shaping, doming, measuring for a bezel, soldering of bezel and assembly soldering. Further problems in wire work, settings, enameling, and casting with sand and other materials.

**110. SHEET METAL. Four hours.**

This course is planned to give practice in the fundamental technical experiences common to sheet metal shops.

Good design and the application of sheet metal drafting in the fields of mathematics and mechanical drafting are emphasized. Prerequisites are Industrial Education 8a, 10, and 11. This course may be continued for four additional hours as Industrial Education 111.

**117. MACHINE DRAWING I. Four hours.**

Involves, in the practical application of the language of drawing, the need for the representation of fastenings and the methods of fastening parts together with permanent and removable fastening and a knowledge of the fundamental forms of these fastening parts and familiarity with the conventional methods of their representation in drawings. Technical exercises include sketches, tracings, and drawings of parts and assembled drawings.

**118. MACHINE DESIGN II. Four hours.**

A study of the transmission of motion by belts, pulleys, gears, and cams. The technical work involves the solution of problems in the fields enumerated above.

**119. APPLIED ORNAMENT. Two hours.**

Attempts to bring before the students a few of the most prominent styles of ornament which are closely related to each other in which certain general laws seem to reign independent of the individual characteristics of each. Examples are to be taken from materials found in the great arts that have contributed to the comfort and wellbeing of peoples. Such illustrative materials will be taken from furniture, rugs, china, metal work, and jewelry. Lecture recitation, projectoscope, and slides. Open to all students of the College.

**120. ADVANCED WOODTURNING. Four hours.**

The topics emphasized in this course will include woods best suited for various work; glue, varnish, shellac, dowels, draft, shrinkage, and finish. The practical work will consist of patterns for hollow castings, building up and segment work.

**121. ADVANCED CABINET MAKING. Four hours.**

The course is planned to cover advanced phases of cabinet work, including paneling, dovetailing, secret nailing, and key joining. These technical processes will be worked out on individual projects.

**124. MACHINE WORK. Four hours.**

This course is designed to give the student a general knowledge of the care and operation of woodworking machinery. The setting of cutters and their manipulation embraces the general basis of this course.

**125. CLASS MANAGEMENT IN WOODWORKING. Four hours.**

The purpose of this course is to give the student a thorough knowledge of the handling of an advanced class in woodworking and also give him an opportunity to gain a better understanding of the handling of high grade material than could be gained by working in elementary or secondary classes. Hours to be arranged with individual students.

**126. HISTORY OF ARCHITECTURE. Two hours.**

A nontechnical course preparatory to further technical study for those so desiring.

Civilization and human progress have, in the main, followed the course of the sun. In the East arose those nations and cities from which other nations have derived a part of their civil institutions, their religion, and culture. This course is planned to study architecture largely from the standpoint of world history, reading into their great monuments the feelings and aspirations of the people who erected them.

Technically, we will trace various forms and structural phases of architecture as they have appeared from the early past down to the present, noting the fundamental considerations that have played a superior part in the building of great monuments. Illustrated with lantern slides. Open to all students of the College.



**132. ADVANCED PRINTING I. Four hours.**

This course assumes that the student through previous courses has acquired technical skill with type and a thorough understanding of the principles of good design in printing. He now proceeds to put these into practice in large printing projects. The aim is to produce work of considerable artistic merit. Discussion and criticism of jobs are features of the course. An intensive study of papers and inks is made.

**133. ADVANCED PRINTING II. Four hours.**

An intensive study of cuts and the cutting and printing of linoleum blocks are stressed in this course. Advanced press work in the printing of blocks and cuts has a prominent place. Hand lettering and its application to the printed page are also dealt with.

**135. COST ACCOUNTING IN PRINTING. Two hours.**

This course is intended to familiarize the student with the costs involved in printing. Practical work in estimating and figuring jobs is featured.

**136. SHOP MANAGEMENT IN PRINTING. Two hours.**

This course stresses the business side of equipping and managing the school shop. Practical experience is given in the keeping of records and accounts, the purchase of materials, and the planning and laying out of equipment. Students are encouraged to work out original ideas, intended to increase the shop's efficiency from both a commercial and teaching viewpoint.

**137. PRINT SHOP PROBLEMS. Four hours.**

A course designed for the student who wants to get a deeper practical insight into actual problems of care, management, and instruction confronted by the teacher of printing. Practical experience in assisting the instructor in dealing with such problems is given the student.

**138. SUPERVISORY PRINTING. Four hours.**

An over-view course designed for those who desire to get not only a speaking acquaintance with type, tools, processes, equipment, and materials of a print shop, but who want to know something of the function, place, and proper conduct of the school shop in a school system. A general, rather than a detailed technical knowledge of the shop is stressed.

**143. TEACHING OF BOOKBINDING. Four hours.**

A practical course in classroom management and fundamentals of teaching binding and leathercraft, care of equipment, and materials. Laboratory and lecture.

**144. ADVANCED OVER-VIEW IN BINDING AND LEATHER WORK. Four hours.**

Takes up all types of folder, novelty, and specialty problems in leather, fabricoid, or buckram. An over-view of all work showing the possibilities of the equipment from numerous angles, fitting the student for both high school and college teaching.

**145. SHOP ACCOUNTING AND MATERIALS IN BOOKBINDING. Four hours. On request.**

Science of shop accounting, purchasing of materials and equipment for the classroom. Production estimating, cost and upkeep expense. Department floor plans. Laboratory and lecture.

**146. HISTORY OF BOOKBINDING. Two hours. On request.**

This course deals with the methods applied and materials used in ancient, medieval, and modern bindings. Takes up hand lettering, tooling, and designs in gold, the making of gold edges, and also the art of marble and wax edge making. Laboratory and lecture.

**150. AUTOMOTIVE MACHINERY I. Two or four hours.**

An actual shop experience course including overhauling and repairing cars. This is a cooperative course, work being carried on in commercial repair shops of the first class. Opportunity for practice work in general repair and the overhauling of automobiles.

**201. SEMINAR IN INDUSTRIAL EDUCATION. Four hours.**

This course has for its purpose individual research in the field of industrial education. Problems to be selected upon consultation with instructor in charge. Conference hours to be arranged. This course may be continued for four additional hours as Industrial Education 203.

**204. DEVELOPMENT OF VOCATIONAL EDUCATION. Two hours.**

A continuation of Industrial Education 104.

**208. TEACHING VOCATIONAL SUBJECTS. Two hours.**

A continuation of Industrial Education 108. The problems in this course deal with new types of teachers, new types of education, new kinds of schools. For example, the adolescent school, the vocational school, and the training of teachers for positions in schools of less than college grade that prepare for particular vocations.

**222. INDIVIDUAL STUDIES IN INDUSTRIAL EDUCATION. Two or four hours.****223. RESEARCH IN INDUSTRIAL EDUCATION. Four hours.**

Taken in the first quarter of graduate work.

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

**224. RESEARCH IN INDUSTRIAL EDUCATION. Four hours.**

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

**225. RESEARCH IN INDUSTRIAL EDUCATION. Two hours.**

A continuation of Industrial Education 224.

## LIBRARY SCIENCE

The main library of the College contains about 71,500 volumes with a large picture collection and all equipment for a very complete library. There is also a children's branch containing about 5,000 volumes for the use of the elementary and secondary schools. Good facilities are offered for classes in library training.

Library Science is not offered as a major course, but as a minor for students working for the Bachelor of Arts degree. The work is given in the junior and senior years. It is suggested that it be taken with literature, foreign languages, or history as the major, although it is not limited to any one major. Any course in library science may also be chosen as an elective by a student not taking it as a minor. It is required of all taking library science as a minor that they shall take at least four hours in library bookbinding. The following courses in library science are offered:

**101. BOOKMAKING AND BOOK SELECTION. Four hours.**

Paleography, manuscripts, history of printing, paper and papermaking. The physical make-up of the book. Study of modern processes of printing and illustrating. Reviews and aids in book selection. Trade bibliography. Checking in and preparing for shelves.

**103. CLASSIFICATION AND CATALOGING. Four hours.**

A study of the principles of classification, the decimal system particularly. Classification of books, pamphlets, pictures, and the varied items that may be obtained for the school library. The dictionary catalog, alphabetizing, adaptation, and use of Library of Congress cards, use of subject headings and shelf lists.

**104. REFERENCE WORK. Four hours.**

The subject covers a study of the standard works of reference, such as the principal encyclopedias, dictionaries, atlases, and reference manuals of various kinds. Periodicals as reference material. Periodical indexes and aids. Bibliographies and reading lists. Selection of public documents and their use for reference.

**106. CHILDREN'S LITERATURE AND JUVENILE LIBRARY SERVICE. Four hours.**

A survey of the field of literature for children, and its selection for juvenile libraries. History of children's literature. Modern illustrators. School libraries and equipment.

**107. ADMINISTRATION AND HISTORY OF LIBRARIES. Four hours.**

Historical libraries, American Library Association, library extension, county libraries, traveling libraries, library commissions, library legislation, finances and budget allotments. Periodicals, checking and accounting, book circulation and charging systems.

**108. PRACTICAL WORK IN LIBRARY (By arrangement). Four hours.**

Time required, two hours per day, plus optional work by student. This is allowed only to those who have taken 102, 103, 104, and calls for a certain responsibility on the part of the student.

**MATHEMATICS**

All courses are given strictly from the professional point of view. In those which emphasize subject matter the material is presented in such a way as both to illustrate the best methods of teaching and to give a real mastery of the most important parts of the subject under consideration. In the courses that emphasize methods subject matter still plays a part, for no instruction in method can be effective unless it is based upon a genuine knowledge of the subject matter to be taught.

Freshmen preparing to major in mathematics should arrange their work as follows: those with one year or less of high school algebra should take Math. 1, 2, and 3; those with more than one year of high school algebra should take Math. 5, 6, 7.

**A FOUR-YEAR CURRICULUM IN MATHEMATICS**

In addition to the core subjects listed on page 36, the following courses are required of majors in this department: Math. 1, 2, 3, or 5, 6, 7, and Math. 9, 101, 102, 103, 200, or 201, Ed. 116, 176, 141 (for men), and eight hours selected from Math. 10, 11, 104, 105, 107, 108, 109, 110.

Courses for students from other departments who choose a minor in mathematics:

- I. Math 1, 2, 3, 9 and two other courses.
- II. Math. 5, 6, 7, 9, and two other courses.

**\*1. COLLEGE ALGEBRA. Four hours.**

Designed to give the student a real understanding of elementary algebra and to extend his knowledge to new topics in the field. This course is planned especially for students with not more than one year of high school algebra.

**\*2. TRIGONOMETRY. Four hours.**

Covers the ordinary topics of plane trigonometry.

**\*3. COLLEGE ALGEBRA. Four hours.**

An extension of course 1.

**4. SLIDE RULE. Two hours.**

The theory and use of the slide rule.

**\*5. GENERAL MATHEMATICS. Four hours.**

The courses in general mathematics deal with the subject as a unit rather than as a collection of different subjects. They cover the field of algebra, trigonometry, analytics, and the introduction to calculus. Math. 5 includes functions and graphs, trigonometric functions and their uses, exponents, logarithms, straight line formulas, and quadratic functions.

**\*6. GENERAL MATHEMATICS. Four hours.**

Theory of equations, determinants, differentiation of algebraic functions, integration, trigonometric formulas, polar coordinates.

\*Given also by extension.

**\*7. GENERAL MATHEMATICS. Four hours.**

Progressions, interest formulas, binomial theorem, laws of growth, exponential functions, conic sections, space of three dimensions, permutation and combination, theory of measurements, complex number.

**8. SURVEYING. Four hours.**

A practical course in the use of surveyor's instruments and the solution of problems obtained from measurements made in field work.

**\*9. ANALYTIC GEOMETRY. Four hours.**

This course deals with geometrical problems from the analytic viewpoint. It is especially valuable to prospective teachers of algebra.

**10. MATERIALS AND METHODS OF ARITHMETIC. Two hours.**

This course and Math. 11 present the subject matter of arithmetic in such a way as to meet the needs of the arithmetic teacher in the grades.

**11. MATERIALS AND METHODS OF ARITHMETIC. Two hours.**

A continuation of Math. 10.

**12. SOLID GEOMETRY. Four hours.**

Covers the ordinary materials of the subject from the viewpoint of the one who is to teach it.

**50. INFORMATIONAL MATHEMATICS. Four hours.**

This course treats mathematics from the informational rather than the computational side. It sets forth the part mathematics has played in the development of civilization and the place it occupies in modern life.

It deals with such topics as the following: number as a fundamental concept, its origin and development, the number system, other number systems, early notations, the Hindu-Arabic notation, its development, use and importance, number as an organizing agent, measuring and counting, finding an average, a median, a mode, translating scores into grades, how we measure, directly, indirectly, degree in accuracy in measurement, in computation from measurements, measuring time, the story of the clock, the mathematics of the home, budgets, accounts, writing bank checks, balancing the check book, property insurance, life insurance, investing ones money, savings accounts, annuities, stocks, bonds, speculation, the nature of algebra, the formula, the equation, the graph, the nature of geometry, intuitive geometry, demonstrational geometry, Descartes and his new geometry, Euclid and Pythagoras, Newton and Leibnitz and The Calculus, a glimpse into modern mathematics, point-land, flat-land, three dimensional space, four dimensional space, mathematical recreations—puzzles, magic squares, number games, famous problems—trisection of the angle, duplicating the cube, squaring the circle.

**\*101. DIFFERENTIAL CALCULUS. Four hours.**

A study of differentiation and its applications.

**\*102. INTEGRAL CALCULUS. Four hours.**

The meaning, use and applications of integration.

**\*103. THEORY OF EQUATIONS. Four hours.**

The function and its graph, complex number and its graphical representation, cubic and quartic equations, symmetric functions, and determinants.

**\*104. THE TEACHING OF ARITHMETIC IN THE LOWER GRADES. Two hours.**

A thorough study of the best in modern methods of teaching arithmetic in the first four grades.

**\*105. THE TEACHING OF ARITHMETIC IN THE UPPER GRADES. Two hours.**

A study of the best methods of teaching arithmetic in the grades above the fourth.

**106. DESCRIPTIVE ASTRONOMY. Four hours.**

A non-mathematical study of the interesting facts about the universe in which we live.

\*Given also by extension.

**\*107. TEACHING JUNIOR HIGH SCHOOL MATHEMATICS. Four hours.**

This course deals especially with the problems that arise concerning the teaching of the arithmetical part of the junior high school course in mathematics.

**108. TEACHING MATHEMATICS IN THE JUNIOR HIGH SCHOOL. Four hours.**

This course deals especially with the problems that arise in connection with the intuitive geometry, algebra, and numerical trigonometry of the junior high school course in mathematics.

**\*109. THE TEACHING OF ALGEBRA. Four hours.**

This course tries to give the student an understanding of algebra from a common sense viewpoint and a knowledge of the best way to help pupils to understand the subject.

**\*110. GEOMETRY FOR TEACHERS. Four hours.**

This course attempts to give the student an understanding of geometry and of what it may be expected to do for those who study it, together with the best ways of teaching it.

**\*111. THE HISTORY OF MATHEMATICS. Two hours.**

This course gives the student an opportunity to become familiar with many of the interesting facts connected with the development of mathematics so that he may use them in helping to make his teaching more effective.

**158. SURVEYING. Four hours.**

This course covers the materials of Math. 8 with additional work suited to the needs of senior college students.

**\*200. ADVANCED CALCULUS. Four hours.**

An extension of the work begun in Math. 101 and 102.

**\*201. DIFFERENTIAL EQUATIONS. Four hours.**

A study of the differential equation and its applications in the solution of problems.

**222. INDIVIDUAL STUDIES IN MATHEMATICS. Two or four hours.****223. RESEARCH IN MATHEMATICS. Four hours.**

Taken in the first quarter of graduate work.

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

**224. RESEARCH IN MATHEMATICS. Four hours.**

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

**225. RESEARCH IN MATHEMATICS. Two hours.**

A continuation of Math. 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.

\*Given also by extension.

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 College orchestra and band offer excellent training for those interested.

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.

College credit will be given for proper work in all instruments except the following: Ukelele, banjo, guitar, mandolin, fife, and single percussion instruments.

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.

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.

Pianos are rented at \$4.00 per quarter.

Band and orchestral instruments are rented at \$5.00 per quarter.

#### A FOUR-YEAR CURRICULUM IN MUSIC

In addition to the core subjects listed on page 36, the following courses are required of those majoring in this department (Students may select one of two fields in music with which to major):

Those planning to become classroom supervisors of music shall take their subjects as follows:

**FIRST YEAR.** Music 1b, 1c, 1d, and six hours of applied music.

**SECOND YEAR.** Music 3, 4, 9, 10, 11, 45, two hours 101, and four hours of applied music.

**THIRD YEAR.** Music 45, 107, 114, three hours 101, three hours applied music.

**FOURTH YEAR.** Music 20, 21, 45, 103, 101, and three hours of applied music.

Those planning to become instrumental supervisors of music shall take their subjects as follows:

**FIRST YEAR.** Music 1b, 1c, 45, and six hours of applied music.

**SECOND YEAR.** Music 3, 4, 5, 10, two hours of 43 or 44, four hours 45, two hours of 101, and three hours of applied music.

**THIRD YEAR.** Music 43 or 44, 107, 108, 114, and five hours applied music.

**FOURTH YEAR.** Music 20, 21, 103, 104, 105, 106, and two hours of applied music.

Students minoring in instrumental supervision must take: Music 1b, 1c, 3, 45 (three quarters), 105, 114, and seven hours applied music.

Music majors must select two four hour minors outside the department.

Courses for students from other departments who choose a minor in Music:

I. CLASSROOM SUPERVISION—Mus. 1b, 1c, 1d, 10, 11, and ten hours of applied music.

II. INSTRUMENTAL SUPERVISION—Mus. 1b, 1c, 3, 45 (three quarters), 105, 114, and seven hours of applied music.

1a. RUDIMENTS AND METHOD. Four hours.

Required of kindergarten-primary, intermediate and rural majors. This course is designed for the purpose of equipping the grade teacher with the necessary musical skills, and methods for teaching the daily music lesson in the classroom. The materials and methods covered are those for: Sight-singing, notation, musical terms, appreciation, rote-singing, games, etc. This course is sectioned according to majors.

1b. SIGHT-SINGING (Four hours a week). Two hours.

Rudiments of music and beginning sight-singing.

1c. SIGHT-SINGING (Four hours a week). Two hours.

Prerequisite Music 1b. Continuation of Music 1b. The student will acquire speed and accuracy in hearing and sounding difficult intervals.

1d. SIGHT-SINGING (Four hours a week). Two hours.

A continuation of Music 1c.

3. HARMONY. 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.

4. HARMONY. Three hours.

Continuation of Music 3.

5. HARMONY. Three hours.

A continuation of Music 4, taking up discords and modulations.

9. PRINCIPLES OF MUSICAL EDUCATION. Two hours.

A survey of the field of public school music, including history and public school music, principles of musical education, evaluation of musical projects etc. Prerequisite for Music 10.

10. METHODS FOR TEACHING MUSIC (Lower Grades). Four hours.

This course is devoted to the study and demonstration of material and methods for the kindergarten and first four years in music. Fundamental principles and devices for training in such musical skills as pitch, rhythm, reading, writing and theory. Special attention is given to the presentation of the different problems as they are taken up in successive years.

Music majors only.

11. METHODS FOR TEACHING MUSIC (Upper Grades). Four hours.

This course is devoted to the study and demonstration of material and methods for the upper grades in music. The work of each year is taken up in detail and the problems which confront the grade teacher are carefully considered.

\*20. HISTORY OF ANCIENT AND MEDIEVAL MUSIC. Four hours.

A cultural course which deals with the development of ancient and medieval music and musicians up to and including Beethoven, through the presentation of music by these composers.

\*21. MODERN HISTORY. Four hours.

A continuation of Music 20. The lives and music of the great masters since Beethoven will be studied. Through the aid of the phonograph the student will become acquainted with the different styles of these composers' compositions. Prerequisite, Music 20.

\*Given also by extension.

**25. AN OUTLINE OF MUSIC. Two hours.**

Not required of music majors.

The story of the development of music amply illustrated through the use of, and by the rendition of music through the use of orchestral instruments, the piano, the organ and phonograph records of music recorded by the world-famous musical artists; talks about the characteristics of the great musical compositions and hearing the pieces played and sung; the form used in constructing a piece of music, such as the minuet, gavotte, fugue, waltz, polonaise, symphony, etc.

The chief aim of the course is to present a common stock of knowledge to the student who does not expect to become a music major, and who aspires to be classed with those teachers who want to be regarded as cultured persons.

**30. INDIVIDUAL VOCAL LESSONS. One hour.**

Correct tone production, refined diction and intelligent interpretation of songs from classical and modern composers.

**31. INDIVIDUAL PIANO LESSONS. One hour.**

High class instruction is offered to both beginners and advanced students using the standard technical works of Czerny, Clementi and others as well as the compositions of Beethoven, Bach, Schumann, Chopin and other classical and modern composers.

**32. INDIVIDUAL VIOLIN LESSONS. One hour.**

The work will be outlined according to the ability of the student. Only the best of teaching material is used and the bowing and finger technic are carefully advised.

**33. INDIVIDUAL PIPE ORGAN LESSONS. One hour.**

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, Gullmant, Rheinberger, Widor and other organ composers of like standing in the musical world.

**34. CLASS PIANO METHODS. One hour.**

Fee, \$6.00.

A course designed for the prospective teacher in piano classes.

**35. INDIVIDUAL LESSONS FOR BRASS AND REED INSTRUMENTS. One hour.**

Each instrument is carefully taught by a competent instructor. Special attention is given to beginners.

**36. INDIVIDUAL 'CELLO LESSONS. One hour.**

Modern methods are used and a thorough course is given presenting the best music literature for the 'cello.

**41. MEN'S GLEE CLUB. One hour. May substitute for 101.**

Entrance upon examination.

**42. SCHUMANN'S GLEE CLUB. One hour. May substitute for 101.**

Entrance upon invitation after examination. This club is composed of forty female voices and takes a prominent part in the presentation of the annual oratorio and opera. A concert is given each spring quarter.

**43. ADVANCED ORCHESTRA. One hour.**

Only those are admitted to this orchestra who have experience. Entrance upon examination only. All members must be present when called upon to play at College activities.

**44. ADVANCED BAND. One hour.**

The College Band is maintained in order that experienced band men may have an opportunity to continue rehearsing under able direction. The College band plays for all College activities and all members are expected to be present when the band is called upon to perform.

**45. ORCHESTRAL INSTRUMENTS (Four times a week). Two hours.**

A course in instrument study for the supervisors.

This course is taken for additional credit as Music 45a and 45b.



**101. COLLEGE CHORUS. One hour.**

Worth while music and standard choruses are studied. This chorus' assists in giving the annual oratorio. Open to all students.

**103. BEGINNING COUNTERPOINT. Two hours.**

The rules of harmony are here applied to polyphonic writing. Prerequisite, Music 4.

**104. ADVANCED COUNTERPOINT. Two hours.**

Continuation of Music 103.

**105. BEGINNING INSTRUMENTATION. Two hours.**

A study is made of the several instruments of a symphony orchestra. Their pitch and quality of tone are studied singly and in combination. Beginning arranging for orchestra is begun. Prerequisite, Music 104.

**106. ADVANCED INSTRUMENTATION. Two hours.**

Continuation of Music 105.

**107. FORM ANALYSIS. Two hours.**

Analysis will be made of the smaller forms in music, also of symphonies from Haydn down to the present. Prerequisites, 104 and 106.

**108. ADVANCED FORM ANALYSIS. Two hours.**

Continuation of Music 107.

**111. CONDUCTING BY ASSIGNMENT. Two hours.****114. METHODS IN CONDUCTING (Four hours a week). Two hours.**

The technic of the baton is obtained through use of the same. Music in all forms is studied with special reference to the directors' problems.

**130. INDIVIDUAL VOCAL LESSONS AND METHODS. One hour.**

A method of approach in tone building will be discussed with special reference to the teachers' problems.

**131. INDIVIDUAL PIANO LESSONS AND METHODS. One hour.**

An advanced course in piano playing with suggestions and helps for teaching the instrument.

**132. INDIVIDUAL VIOLIN LESSONS AND METHODS. One hour.**

Teaching problems will be discussed and classified, teaching material will be suggested, making this a valuable course to the student preparing himself for teaching the violin.

**133. INDIVIDUAL PIPE ORGAN LESSONS AND METHODS. One hour.**

An advanced course in organ playing combined with instruction in teaching the instrument.

**134. INDIVIDUAL 'CELLO LESSONS AND METHODS. One hour.**

Discussion will be held with special regard to the methods pursued in teaching the 'cello.

## NURSING EDUCATION

The courses in Nursing Education are for registered nurses planning to become teachers, supervisors, and administrators of nursing.

The courses are arranged on a three-year basis leading to a Bachelor of Science degree. Those who can not arrange to take the entire program in the time designated may, with counsel, elect those subjects which will be of immediate value and use. Students who have had courses similar in content to any of those required in this department will be exempt

from taking the same work again upon satisfying the departmental representatives and the registrar of the College that they have had equivalent work.

The student may elect her electives in the particular field for which she wishes to prepare herself. The field experience for all courses is given in connection with the Schools of Nursing of the Colorado University Hospital, Children's Hospital, and the Denver General Hospital, also the Public Health agencies in Denver.

Requests are constantly received from all parts of the country for school nurses who have had some fundamental educational preparation for their work. The subjects fundamental to public health nursing offered by the College and Department of Nursing are as follows, but the department is not ready to develop a program for public health nurses: One year of class work would include Biol. 101, H.E. 121 or 123, English, Foreign Language, Nurs. Ed. 100, 101, 102 or 103, and 106, Ed. 128, Soc. 1 or 90 or 165, Ed. 75 or 77.

A diagram of the three-year program appears on page 110. The core subjects for the degree have been considered in the organization of the program. A suggested list of electives has also been appended to the program.

#### 100. HISTORY OF NURSING AND CONTEMPORARY PROBLEMS. Four hours.

This course traces the historical development of nursing under the religious, military and secular forms of organization from its early beginnings to modern times. Special emphasis is placed upon the modern development of nursing in the direction of educational and public health activities.

#### 102a. THE CURRICULUM AND PRINCIPLES OF TEACHING IN SCHOOLS OF NURSING. Four hours.

Planned for head nurses, supervisors, teachers and principals of nursing. A study of the construction of curricula for schools of nursing, the selection and arrangement of subject matter, the principles involved in teaching, the sequence of classes, the planning of lessons and demonstrations.

#### 102b. OBSERVATION AND PRACTICE TEACHING. One hour.

Choice of schools in Denver; Children's Hospital, University of Colorado School of Nursing and Denver General Hospital.

#### 103a. WARD MANAGEMENT AND WARD TEACHING. Four hours.

Class and group discussions of the underlying principles and methods of ward administration, with special emphasis on the principles and methods underlying effective clinical instruction.

#### 103b. OBSERVATION AND FIELD WORK IN HOSPITALS. One hour.

#### 104. METHODS OF SUPERVISION AND CASE STUDY IN SCHOOLS OF NURSING. Four hours.

This course is designed for those who need a knowledge of the principles of supervision and their application to the problems in the hospital, schools of nursing and public health organization. It includes (a) a study of the principles on which successful supervision is based, (b) the professional problems involved, and (c) methods of case study.

#### 104a. OBSERVATION AND FIELD WORK. One hour.

Opportunity will be given for observation and participation in ward supervision.

#### 105. ADMINISTRATION IN SCHOOLS OF NURSING. Four hours.

Principles of administration and organization as applied to the schools of nursing, factors governing the relationship between schools of nursing and hospitals, means of support, budget, personnel, etc.

**105a. OBSERVATION AND FIELD WORK. Hours to be arranged.**

Under the supervision of the director of the schools of nursing arranged for Field Work.

**106. HOME HYGIENE AND CARE OF THE SICK. Four hours.**

Based on the Red Cross textbook, "Home Hygiene and Care of the Sick." Deals with health subjects in secondary schools and teachers colleges, including the application of principles of education and methods of presentation. Certificate awarded on satisfactory completion of course. Prerequisite: Educational Psychology.

## PROGRAM FOR GRADUATE NURSES

## TEACHING, SUPERVISION, AND ADMINISTRATION IN SCHOOLS OF NURSING

A total of 198 credits on a quarter hour basis is required for graduation. This includes approximately forty-five credits allowed for the undergraduate professional program. Deficiencies in the undergraduate clinical program must be removed before credit for the professional work is honored.

	Hours		Hours		Hours
English 41.....	4	English 42.....	4	English 43.....	4
Biology 11.....	4	Chemistry 2.....	4	Biology 112.....	4
Chemistry 1.....	4	French, German, Latin or Spanish.....	4	Chemistry 9.....	4
French, German, Latin or Spanish.....	4	Physical Education.....	1	French, German, Latin or Spanish.....	4
Physical Education.....	1	Elective.....	4	Physical Education.....	1
Science 51.....	4	Biology 120.....	4	Biology 101.....	4
History 25.....	4	Commercial Ed. 60 or 101.....	4	Education 195.....	4
Nursing Education 100.....	4	Nursing Education 102a and b.....	4	History 26.....	4
Nursing Education 101.....	4	(Curriculum and Teaching)		Education 136.....	4
Physical Education.....	1	Observation of Practice Teaching.....	1	Physical Education.....	1
Applied Hygiene.....	4	Physical Education.....	1		
Hospital Economics.....	4	Biology 120.....	4		
Nursing Education 103.....	4	Commercial Ed. 60 or 101.....	4		
Elective.....	4	Nursing Education 102a and b.....	4		
		(Curriculum and Teaching)			
		Observation of Practice Teaching.....	1		
		Physical Education.....	1		
		Home Economics.....	4		
		Sociology 105.....	4	Sociology 90 or 165.....	4
		Education 118 or 128.....	4	Nursing Education 105.....	4
		Nursing Education 104.....	4	Field Work in Administration.....	4
		Field Work in Supervision.....	4	Electives.....	8

The following electives are suggested: Com. Ed. 60, 101; Ed. 107, 118, 142, 178; choice of English, Geography, History and Sociology. Adjustments will be made according to the past experience of the students and the particular work for which each is preparing. Thirty-six quarter hours is the total extension credit which may be applied toward meeting the requirements for the completion of the degree.

## PHYSICAL EDUCATION FOR WOMEN

All first and second year students are required to take one active course in physical education each quarter in residence. Phys. Ed. 30 will be substituted for an active course upon presentation of a request from the medical adviser of the school. Excuses from any other doctor must be referred to her.

No physical education course may be taken more than once for credit. This will enable the college to accommodate more students in any one sport and will prevent the monopoly of a popular sport by a few.

A physical examination by the College medical adviser is required of every woman in college once each year. Each woman is given an appointment for this at the time of registration. Anyone failing to keep such appointment without having first canceled same with the approval of the medical adviser will be charged the sum of \$1.00 to pay for the examination when given. If taken at the scheduled time no fee will be charged.

Regulation costumes are required for the physical education work and should be purchased in Greeley in order to conform to the requirements.

A deposit of \$1.00 will be charged for the locker padlock. This padlock will be bought back by the school if returned in good condition.

General students who are especially skilled in physical education work may take major classes with special permission of the instructor.

All freshmen girls are required to take P.E. 31 during one quarter of their freshman year for one of their three quarters of active physical education.

## A FOUR-YEAR CURRICULUM IN PHYSICAL EDUCATION FOR WOMEN

A four-year course is required of all physical education majors. Physical education students desiring certificates at the end of two years should make primary, intermediate, or junior high school education their minor.

Any student majoring in the department who after admission is found to be deficient in any of the major practice courses may be required to take any of the general activity courses without credit.

Majors in the department are required to take P.E. 2, 12, 13a, 16, 27, and 28 to meet the core requirements of six hours of physical education during freshman and sophomore years. Majors must have had sufficient training in P.E. 13, 14, 15, 17, and 26 during high school work to prepare them for the more advanced work given in major courses or else take them in college for no credit. Where such preparation has not been had P.E. 13 and 26 should be taken during the freshman year in order to be prepared for the more advanced work when offered.

An examination consisting of both written and practical work must be taken in P.E. 13, 14, 15, 17, and 26 in order for a major to be exempt from taking the course. Any major is free to take a like examination in any of the above numbered courses required for majors to meet the six hours of physical education required if she feels that she has had their equivalent in high school.

In addition to the core subjects listed on page 36, the following physical education courses are required of majors in the department: P.E. 36, 37, 38, 39, 50, 100, 101, 103, 104, 120, 121, 122, 129, 130, 132, 133, 135, and 137. Courses offered in other departments required for majors in physical education are: Chem. 1 (4 hrs.), Zool. 11 and 12, Ath. 50, Ed. 116 and 125, and Biot. 101, Ath. 125.

Physical education majors are required to take one quarter of student teaching in the campus school for four hours credit and one quarter in the rural training schools.

Physical education majors will have completed a minor in biological science when they have completed a four-year major course in physical education. Besides this, every major must have another minor consisting of twenty-four hours. Suggested minors are English and mathematics.

Courses for students from other departments who choose a minor in Physical Education for Women: P.E. 2, 12, 13, 14, 15, 17, 26 and 31, six of which may be used to meet the general physical education requirements for all junior college students. In addition, the following courses must be taken in this department: P.E. 37, 38, 50; P.E. 102, 103, 129, 130, 135, 137.

**1. CLOG AND ATHLETIC DANCING. One hour.**

This course will contain jigs, clogs, and athletic dances which are especially good for boys and girls in junior high school. Technic will consist of threes, fives, and athletic steps.

**1a. ADVANCED CLOG AND ATHLETIC DANCING. One hour.**

This course is a continuation of the work offered in P. E. 1. which is a prerequisite course for this one. This course offers more work in the fives and introduces the sevens. Some work in tap dancing will also be offered.

**2. NATURAL DANCING. One hour.**

The purposes of this course are to develop control of the body, to stimulate imagination, to learn to portray emotional self-expression by various movements.

**3. NATURAL DANCING. One hour.**

A continuation of P. E. 2 giving more advanced steps, more individual work, beginning scarf work and more advanced exercises which require better coordination.

**5. FOLK DANCING. One hour.**

Simple dances for beginners in folk dancing. Material depends upon the skill of the class.

**6. FOLK DANCING. One hour.**

Prerequisite P. E. 5 or its equivalent. This course will present folk dances, especially suited to high school students.

**11. PLAYS AND GAMES. One hour.**

This course is primarily for primary and intermediate majors and presents both active and singing games in graded form, together with a brief review of the psychological age of the child.

**12. SOCCER. One hour.**

A course organized to develop a knowledge of the rules of the game and skill in technic.

**13. BEGINNING TENNIS. One hour.**

This course will consist of a study of the rules of tennis and practice in the game. Special attention will be given to the service and forearm and backhand drives.

**13a. INTERMEDIATE TENNIS. One hour.**

The prerequisite for intermediate tennis is P. E. 13 with an average grade. The course will include more advanced tactics on court position, and playing strategy, and the technic of strokes including the lob, volley, half-volley, overhead smash, and chop.

**14. BASKETBALL. One hour.**

This course will consist of a study of the rules of basketball and the development of skill in the technic.

**15. BASEBALL. One hour.**

This course will consist of a study of the rules of baseball and the development of skill in it.

**16. HOCKEY. One hour.**

The rules of the game will be studied and skill in technic developed.

**17. VOLLEY BALL. One hour.**

A game that can be played in the intermediate grades and junior high schools.

**18. FIELD AND TRACK. One hour.**

This course will give practice in the different field and track events that are desirable for girls to participate in, such as dashes, running high jump, discus throw, javelin, and hurdles.

**19. GOLF. One hour.**

A course offered to give a practical knowledge of the fundamental strokes of golf and an understanding of the playing rules. Students are required to furnish their own clubs.

**26. BEGINNING SWIMMING. One hour.**

This course will take up the easier fundamental strokes of swimming, the way of regaining a standing position from either face submerged or floating position, rolling from face to back and vice versa, and beginning diving.

**27. INTERMEDIATE SWIMMING. One hour.**

A course in swimming, taking up the side stroke, with the fine technic of arm and foot action. Continuation and advancement in plain spring diving. P. E. 26 or its equivalent is a prerequisite.

**28. ADVANCED INTERMEDIATE SWIMMING. One hour**

A more advanced course, with technical instruction of the crawl strokes and advanced diving. P. E. 26 and 27, or their equivalent are prerequisites.

**30. INDIVIDUAL GYMNASTICS. One hour.**

Open only to those students bearing an admittance slip from the medical adviser. Individual work for individual needs will be given.

**31. FUNDAMENTAL GYMNASTICS. One hour**

This course will present the different types of postural gymnastics. Special emphasis will be laid on flexibility, strength and agility exercises, stall bars, couple exercises, and rhythmic activities. The main emphasis of the course will be on correct posture and how to maintain it.

**ACTIVITY COURSES FOR MAJORS OF JUNIOR COLLEGE RANK**

The following classes are so arranged that juniors may take their work with the seniors without having taken the courses in junior practice. This has been done because at present the enrollment in the department is too small to warrant giving both courses each year. Juniors will take senior practice courses when offered. This arrangement may be changed to separate classes for each by the departmental staff at any time the need arises.

**36. FRESHMAN PRACTICE. Two hours.**

The work in P. E. 36 will be training in fundamental gymnastics. The course aims to (a) develop flexibility, strength and agility in the student; (b) give the student a classification of exercises according to difficulty, progression, and parts of the body exercised.

**37. FRESHMAN PRACTICE. Two hours.**

This practice course is one in beginning folk dancing. The material in the course will depend largely on the previous training of the majors enrolled. The main purpose of the course is to familiarize the student with dances typical of each country, the chief characteristics of each, and to develop skill, rhythm and coordination in the student.

**38. SOPHOMORE PRACTICE. Two hours.**

This practice course presents material in beginning athletic and clog dancing. It will take up in its technic the threes, fives, and sevens. The exact material used depends on the ability of the students enrolled, but the dances chosen are especially adapted for use in the upper grades of the elementary school and the junior high school.

**39. SOPHOMORE PRACTICE. Two hours.**

The work of this course consists of tumbling, apparatus work, and pyramid building. The material will cover individual and group work on the mats, parallel bars and horse. The main purpose of the course will be to give such material as can be used in grades and high schools with the least possible equipment.

**50. THEORY OF PLAYGROUND ORGANIZATION. Two hours.**

This is a course outlined to (a) give knowledge of necessary playground material; (b) study cost, amount and description of playground equipment; (c) give outstanding age group characteristics; (d) present methods for conducting small and large groups; (e) promote leadership; (f) present games for children of different ages.

### THEORY COURSES IN HEALTH EDUCATION FOR JUNIOR COLLEGE AND MAJOR STUDENTS

**HYG. 1. PERSONAL HYGIENE (for women). Four hours.**

A first year course covering the essentials of personal hygiene. The aims are: to secure better personal health habits among teachers and to give methods of teaching better health habits in the public schools.

**HYG. 2. MATERIALS AND METHODS IN HEALTH EDUCATION. Two hours.**

The philosophy underlying various methods of teaching will be briefly considered. Texts and reference books will be examined. Opportunity will be given for each student to construct a teaching program to meet the needs of his situation.

### ACTIVITY COURSES FOR MAJORS OF SENIOR COLLEGE RANK

**100. JUNIOR PRACTICE. Two hours.**

Natural Dancing. A continuation of beginning natural dancing with more advanced steps being given, more individual work, beginning scarf work, and more advanced exercises which require better coordination.

**101. JUNIOR PRACTICE. Two hours.**

Advanced natural dancing, continuation of natural dancing in regard to steps, fundamental exercises, and scarf work. A study of the dance will be made, such problems as the public performance will be stressed, how to teach beginning dancing and the study of progression, a presentation of dancing material, music, themes, etc.

**102. JUNIOR PRACTICE. Two hours.**

This course is designed to meet the teaching needs of major and minor students of physical education. Methods of presentation of dancing technic will be discussed and demonstrated. In addition each student will be required to do original work in dances, present such dances to the group and figure out dance directions written by others.

**103. SENIOR PRACTICE. (Not given 1932-33). Two hours.**

This course will discuss the characteristic figures and steps of different countries, give different types of character dances and present national dances of all countries.

**104. SENIOR PRACTICE. (Not given 1932-33). Two hours.**

This course is made up of the following two divisions:

(a) Advanced swimming for majors. Three days. The course consists of the different strokes of swimming, diving, life-saving, and gives practice in the teaching of swimming. Time will be given to the thorough study of the different methods of instruction in swimming and diving. Students who have done exceptionally good work in P. E. 26 to P. E. 28 inclusive may enroll for this work with special permission from the instructor.

(b) Two days. This course deals with the theory of fundamental gymnastics. Programs will be made for different groups. Types of exercises will be discussed and opportunity will be given for practice teaching.

**110. ADVANCED NATURAL DANCING. Two hours.**

This course is offered for those people who are interested in advanced interpretation of dancing themes. Opportunity for original themes put to music will be stressed. If possible P. E. 100, 101, and 102, should be prerequisites.



## THEORY COURSES FOR PHYSICAL EDUCATION MAJORS OF SENIOR COLLEGE RANK

## 129. COACHING METHODS. Two hours.

This course is designed to meet the teaching needs of major and minor students of physical education for their activity groups. This course will consist of: (a) the theory and practice of advanced technics; (b) methods of organizing and presenting sport material; (c) participation in refereeing and officiating in actual games; (d) references from which students may find adequate material. The sports which will be presented for study are hockey, soccer, speedball, and basketball.

## 130. COACHING METHODS. Two hours.

This course is a continuation of 129. The material will be presented with the same aims in mind, but from the standpoint of baseball, track, tennis, and archery.

## 131. PAGEANTRY. Two hours.

This work is an elective course for majors and is designed to give an appreciation of the art as developed through motor activities. Pantomimes, pageants and festivals, stage lighting, costuming, and make-up will be discussed and opportunity given for practice in the above. Original work will be required.

## 132. THEORY OF INDIVIDUAL GYMNASTICS. Four hours.

The purposes of this course are: (a) to give the student a thorough knowledge of the values of posture and the faults of posture most commonly found in growing children; (b) to know deformities which appear in later life, their characteristics and treatment; (c) thorough study of the technic of massage, what it is used for and its results; (d) study the organization of corrective work in elementary, high school, and college; (e) how to organize a posture drive; (f) complete study of how to give thorough posture examination.

## 133. INDIVIDUAL GYMNASTICS APPLIED. Two hours.

P. E. 132 prerequisite. A laboratory period which gives the student an opportunity to actually see and work with the different cases which comprise a corrective class.

## 135. HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION. Four hours.

This course deals with (1) the play activities of man and physical education among civilized races in the light of their general progress; (2) the comparison of the formal and natural physical education program in the light of their aims, objectives, results, and their value in accordance with the modern philosophy of education; (3) the types of work to be included in the program; (4) the administration of such a program from the standpoint of building, grounds, equipment, and staff.

## 136. PLAYGROUND SUPERVISION. Two hours.

This course deals with the organization of play for all ages of children who stay on the school ground during the noon hour. An elective course.

## 137. MATERIALS AND METHODS IN PHYSICAL EDUCATION. Four hours.

Purposes: (a) to give the student training in methods of presentation of material to the various age groups; (b) characteristics of the different ages; (c) to give them knowledge of material which is suitable for the different grades; (d) to discuss the problem of the supervision of physical education; (e) to know how to prepare a general course of study for the average school system; (f) to give the student an opportunity to judge good teaching and to know how to self-criticise; (g) to give the student actual practice in teaching.

## 223. RESEARCH IN PHYSICAL EDUCATION. Four hours.

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

## 224. RESEARCH IN PHYSICAL EDUCATION. Four hours.

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

## 225. RESEARCH IN PHYSICAL EDUCATION. Two hours.

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

## SENIOR COLLEGE COURSES IN HEALTH EDUCATION FOR MAJORS

## 120. APPLIED ANATOMY. Four hours.

This course deals with the structure of the human body and with the principles and mechanism of bodily movements. Most of the time will be spent on the application they have to physical education.

## 121. KINESIOLOGY. Two hours.

This course deals with the action of muscles in exercises of different kinds. It deals with the bones as levers and the neuro-muscular system as power. The material is presented with special reference to the use of this system in acquiring and maintaining good posture and in its bearing on the correction of postural defects.

## 122. APPLIED PHYSIOLOGY. Four hours.

This course deals with the functional processes of the different systems of the body and the effect of exercise upon these systems in its direct bearing on physical education. The different systems studied in the course are: muscular, circulatory, respiratory, digestive, sensory, and nervous systems. Laboratory work is required.

## SCIENCES

The primary aim of the departments of biology, chemistry, and physics is to prepare science teachers for the public schools of the state. They also endeavor to provide such training in the general principles and content of the sciences as will give students in other fields an adequate background for their professional courses and prepare them for the common activities of life.

Formerly the courses in these respective departments for the most part were organized for the purpose of preparing specialized teachers in these fields. Investigations in the Rocky Mountain region and elsewhere, however, have revealed that, with the exception of the largest schools, what is demanded is teachers of science rather than teachers of any specific branch of it. Even in the north central states where a denser population might be expected to demand specialization it is found that eighty-five percent of the science teachers in secondary schools are required to teach two or more subjects.

In order to meet this need and also because the science departments consider a knowledge of the related sciences necessary for the student who may wish to specialize later in a single field, the departments now require a major in a specific science (biology, chemistry or physics) and one or two minors in the other sciences.

To this end, in addition to the professional core subjects listed on page 36, all students majoring in a science must take the following subjects:

BIOLOGICAL SCIENCE MINOR—Biol. 1, 2, 3, 11, 12, 117, 120, 131a and 131b.

PHYSICAL SCIENCE MINOR—Chem. 1, 2, 3, 7 and 130a; Phys. 1, 2, 3, 103, 130b.

All students majoring in a science are required to carry at least two minors, each with a minimum of twenty-four hours. Majors in biology, chemistry, or physics will not be required to take Sci. 3 and 4 in the "core" listed on page 36.

## FOR MAJORS IN THE FIELD OF BIOLOGY

No one can be a safe leader in educational theory and practice who does not have some conception of the place the study of nature should have in the normal development of the child; who does not realize the large application of the principle of organic evolution to educational procedure, and who fails to appreciate the power of heredity in determining the natural capacities and abilities of the pupil.

The courses in botany and zoology are planned to combine laboratory and field work with classroom study wherever this is possible and desirable, for it is only through this procedure that students gain both a scientific knowledge and a large appreciation of life forms.

In addition to the core subjects listed on page 36 and the science core listed on page 116, majors in the department of biology are required to take one minor in the physical sciences as outlined above and may take the other in some related department such as mathematics or physical education (for men). In addition to these minors the following biology courses are required: 14, 101, 102, 114, Ed. 116. Majors are advised also to elect Biol. 106, 105 or 113 and Ed. 141 (for men).

Courses for students from other departments who choose a minor in Biology:

SENIOR HIGH SCHOOL TEACHERS—Biol. 2, 3, 11, 12, 117, 120.

JUNIOR HIGH SCHOOL TEACHERS—Biol. 1, 14, 101, 107, 117, 120; Sci. 5.

ELEMENTARY SCHOOL TEACHERS—Sci. 1, 2; Biol. 1, 13, 14, 120.

#### 1. GENERAL BOTANY. Four hours.

Three hours laboratory.

This is an elementary study of the structure and function of flowering plants and their relation to man. Students who can elect but one botany course for its cultural value are advised to take this one. The course includes a study of the structure, character, and functions of roots; the structure and functions of stems and their industrial applications, such as the color of woods and grain in lumber; the nature and functions of leaves; and the relation of these plant parts to mankind. The whole aim of this course is to give students not only a scientific knowledge of the structure and function of our common plants, but also an appreciation of the large place which they hold in serving man and beautifying the earth.

#### 2. GENERAL BOTANY. Four hours.

Three hours laboratory.

This course includes a study of the thallophytes and the bryophytes. The blue green algae, the green algae, the brown algae, and the red algae are studied. Local forms are used when available. Field collections of material are made and cultures grown either in the laboratory or greenhouse. In the fungal group bread molds, yeasts, rusts, smuts, mushrooms, puffballs, and other forms, are considered. Type forms of liverworts and mosses are studied. Constant emphasis is placed upon the relation of the thallophytes and the bryophytes to man.

#### 3. GENERAL BOTANY. Four hours.

Three hours laboratory.

A study of pteridophytes and spermatophytes. Ferns, cycads, conifers, and flowering plants are studied. The first part of the course is designed to acquaint the student with these different groups of plants as to their structures, functions, and economic relations. As soon as the weather will permit, a large part of the work is done in the field where the student is taught how to identify plants by the use of a manual. The purpose of this is to prepare the student to become acquainted with the flowers and plants in the region where he may teach.

#### 4. FORESTRY (Given at Camp Olympus). Four hours.

The forests of the mountain slopes furnish a good laboratory. The study periods will be spent in the field making observations and reports on various problems pertaining to trees and forestry. Field trips will be made in conjunction with the course in elementary science, the time being divided between nature study and forestry.

The daily lecture period will be in the morning and will prepare the way for the field work. In these lectures various problems of forestry that

are not available for direct, local observation will also be discussed. The entire course will be planned and presented from the popular rather than the technical standpoint, and the subject matter can be applied to teaching in the public schools.

#### 11. GENERAL ZOOLOGY. Four hours.

Three hours laboratory.

This is a beginning course which treats of principles of structure and function, inter-relations of animals, geographical distribution and the origin and development of animal life. The following subjects will be studied: The history of the development of biological thought; the discovery of protoplasm, its structure and function; classification of animals; the single celled organisms; theories of the origin of many-celled animals; the sponges, tapeworms, hydra, jellyfishes and closely related animals; starfishes, basket-stars, sea-urchins, sand dollars, sea cucumber; earthworms, snails, fresh-water mussels, the chambered nautilus, and related forms, insects, crawfish, and the American lobster. Methods of reproduction will be stressed during the study of these forms.

#### 12. GENERAL ZOOLOGY. Four hours.

Three hours laboratory. A continuation of Zool. 1, and should be preceded by it.

This study will be devoted to the vertebrates and the theories of their origin and development from lower forms. Stress will be laid on comparative structure and function. Time will be given for a discussion of adaptation to environment and of the inter-relations of the vertebrates to a given environment. The course will close with a discussion of geographical distribution, and its effects on animal life.

#### 13. BIRD STUDY. Four hours.

Field trips arranged.

This course is intended to create interest in living things and to add to the appreciation of natural environment. A study will be made of the birds of the vicinity and their relationship to large groups of birds. Means of identification in the field, food relations, seasonal distribution, migrational activities, the importance of protection, and their relation to man, will be emphasized. The course will close with a study of the means of attracting useful birds.

#### 14. ECONOMIC ZOOLOGY. Four hours.

A survey of the animal kingdom with special emphasis on their relation to man and his progress in civilization. Special stress will be given to those forms that are a distinct disadvantage. Consideration will be given to methods of control and to artificial conditions in propagation. Throughout the entire course emphasis will be placed on conservation of wild life.

#### 100. EVOLUTION. Four hours.

The purpose of this course is to furnish the student with the facts and evidences that point toward gradual development of the universe and living things. Both inorganic and organic evolution will be studied. Some time will be devoted to a discussion of the various theories that attempt to explain and to refute the evolutionary idea.

#### 101. GENETICS AND EUGENICS. Four hours.

In the first half of this course the following topics are considered: The physical basis of heredity, the principles of gamete formation, fertilization, and the Mendelian laws; such modifications and extensions of the Mendelian laws as interacting factors, linkage, crossing over and interference, together with a study of sex inheritance, variation, and the question of the transmission of acquired characters.

In the second half, time is spent in the consideration of the inheritance of natural abilities and capacities, the present eugenic trend of the American people, how to eliminate the defective strains of germ plasm and what measures may be taken to preserve the superior strains. The educational implications of all these problems are constantly emphasized.

#### 102. PLANT PHYSIOLOGY. Four hours.

Three hours laboratory. Prerequisite, Botany 1.

The purpose of this course is to give the student a working knowledge of such physiological activities as translocation, photosynthesis, digestion, respiration, and transpiration. The experimental method is used largely,

and constant emphasis is placed upon the economic relations of these plant processes. Constant stress is laid upon sources of error and modifying conditions.

The course is supplemented with approximately thirty laboratory exercises.

**103. PLANT PHYSIOLOGY. Four hours.**

The material of this course consists of a careful review of the research literature concerned with the principal physiological functions of plants. Class discussions and reports under the direction of the instructor will occupy the greater part of the time.

**104. MOUNTAIN FLORA (Given at Camp Olympus). Four hours.**

Study periods will be spent in the field with flowers in their natural environment, determining their family characteristics and classification by means of an analytical key. Morning lectures will give a foundation for the field work and assist in the interpretation of various problems that arise. Great opportunity is given here for comparison of vegetation in the different climatic zones of northern United States and Canada to far polar regions by means of field trips into the alpine regions.

**105. BOTANICAL TECHNIC AND HISTOLOGY. Four hours.**

Three hours laboratory. Prerequisite, Botany 1.

A course in which the science of killing, staining, and making of botanical material into permanent slides is combined with the study of plant tissues. The tissues are studied as to origin, differentiation, and organization. Instruction in freehand methods is followed by a study of the paraffin method of preparation of sections.

**106. SYSTEMATIC BOTANY. Four hours.**

Three hours laboratory.

This course is carried on in the laboratory and field. Its purpose is to give the student a knowledge of the characteristics and relations of the different flowering plants. It enables the student to use the botanical manual with ease and to classify plants with considerable facility. It is especially helpful to teachers of nature study and biology who wish to become better acquainted with types of plants in any community.

**107. PLANT ECOLOGY. Four hours.**

A course concerned with the general aspects of plant ecology. Units of vegetation are defined and their successional movement up to the climatic stage are studied. The edaphic and atmospheric factors affecting plant life are given special attention and the interaction between plants and their environment in succession is stressed. Constant application of the facts and principles learned is made to forestry, range management and crop production. Field work constitutes a major part of the course.

**108. EMBRYOLOGY. Four hours.**

A course planned to furnish the citizen with a fundamental understanding of the development of the human embryo. The work is arranged so that the student will be able to see the various stages of development of some of the vertebrates. The course will open with a study of the early stages of development from the single cell. The study will then follow cell differentiation until the major organs of the body have been developed.

**111. INVERTEBRATE ZOOLOGY. Four hours.**

Four hours laboratory. Prerequisites, Zool. 1 and 2 or equivalent.

A study of the anatomy, physiology, and life history of a selected series of the invertebrates. This course will provide a more complete series than Zool. 1 and a more detailed study will be made.

**112. VERTEBRATE ZOOLOGY. Four hours.**

Prerequisites, Zool. 1 and 2 or equivalent.

A much more detailed study of selected types of the vertebrates than can be given in a general course. In addition to assigned readings, lectures and discussions on embryology, anatomy, and physiology of the entire group, the student is required to make careful dissection of a fish, an amphibian, a bird, and a mammal.

**113. ZOOLOGICAL TECHNIC AND ANIMAL HISTOLOGY. Four hours.**

Three hours laboratory. Prerequisites: Zool. 1 and 2 or equivalent.

A course in which the methods of fixing, staining, and preparing material for class use is combined with the study of the differentiation and

organization of animal tissues. The student will have opportunity here to prepare material which will be of value for demonstration in high school teaching.

**114. ELEMENTARY ENTOMOLOGY. Four hours.**

Prerequisites: Sci. 1 and 2 or equivalent.

A study will be made of the more common insects of the region, their classification and life histories. Methods of collecting, mounting, and preparing insect material for study will be given attention. Students will be given opportunity to prepare a reference collection of the more common species. Field observations will constitute a part of the work. Lectures, discussions, assigned readings, and laboratory.

**117. HUMAN PHYSIOLOGY. Four hours.**

The purpose of this course is to give the student a knowledge of how the body functions. The following subjects will be treated: digestion; circulation and heart activity; respiration; muscular activity, and glandular functions. As much as is possible, the student will be led to analyze his own bodily functions. The student will perform laboratory experiments to verify class discussion whenever possible.

**120. GENERAL BACTERIOLOGY. Four hours.**

Three hours laboratory. Prerequisites: Sci. 1 and 2, or equivalent.

This course treats of the morphology and classification of bacteria, yeasts, and molds, their effects on food and their relation to man. Especial emphasis is placed upon the relation of molds and yeasts to foods and cookery, and upon disease producing effects of micro-organisms. A study is made of the bacterial count of milk and water, and methods by which they are contaminated. This course is organized into units. Each unit includes assigned readings, laboratory, and investigational work.

**131a. PRINCIPLES OF SCIENCE TEACHING. Two hours.**

This is a course designed to acquaint the students with the fundamental principles underlying the teaching of science and to prepare them for their work in Chemistry 130a, Physics 130b and Biology 131b.

**131b. TEACHING OF BIOLOGY. Two hours.**

This course is designed to acquaint the major in science with present trends in the field of high school biology, the generalizations and concepts that should be taught, and the subject matter necessary to develop these generalizations and concepts. Materials, texts, and reference books are considered, and the large units in a suggested course in high school biology are worked out. Methods of instruction are treated, together with laboratory equipment and supplies needed for successful work.

**201. GENETICS AND EUGENICS. Four hours.**

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

**206. TAXONOMY. Four hours.**

Three hours laboratory. Desirable prerequisites, Bot. 2 and 3.

This is a graduate course but is open to all students who have had the prerequisite courses. The purpose of the course is to give the advanced student an understanding of the morphological relations of plants and the principles underlying their classification. The work is carried on largely in the field and results in a rather wide knowledge of local wild plants and flowers. Graduate students are required to work out a special problem in addition to the regular work of the course.

**211. MORPHOLOGY OF THE VERTEBRATES. Four hours.**

Prerequisites, Zool. 1, 2, and 102 or equivalent.

A more detailed study of the systems of organs of the vertebrates from the comparative viewpoint. The student is expected to trace the differentiation of the organs and systems from the simple vertebrates to their complex condition in the mammals. Dissections will be made of amphioxus, the dogfish shark, cryptobranchus, and the cat. Lectures, discussions, library references, and laboratory.

**222. INDIVIDUAL STUDIES IN BIOLOGY. Two or four hours.**

For graduate biology majors.

**223. BIOLOGICAL RESEARCH FOR BIOLOGY, BOTANY AND ZOOLOGY. Four hours.**

Taken in the first quarter of graduate work.

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

**224. BIOLOGICAL RESEARCH FOR BIOLOGY, BOTANY AND ZOOLOGY. Four hours.**

An individual research course in connection with the graduate thesis. This is a conference course designed to guide students in the selection of problems, method of procedure in the solution of them, and the interpretation of results. Students should register for this course only after consultation with the head of the department.

**225. BIOLOGICAL RESEARCH FOR BIOLOGY, BOTANY AND ZOOLOGY. Two hours.**

A continuation of Biological Research 224.

**FOR MAJORS IN THE FIELD OF CHEMISTRY**

In addition to the core subjects listed on page 36, and the science core subjects listed on page 116, the following courses are required of majors in this department: Chem. 7b, 109, 110, 111, 114, Ed. 116, and Ed. 141 (for men).

A major in chemistry will have had sufficient courses in physics and biology to be classed as a physical science major, with a minor in biology, or a chemistry major with a biology-physics minor. If, however, he adds six extra hours of physics, he may be classed as a chemistry major with a minor in each, physics and biology. By adding twenty-four hours of the subject he may take another minor in some related subject.

Courses for students from other departments who choose a minor in chemistry:

- I. PHYSICS MAJORS—Chem. 1, 2, 3, 7, 130a, 114b and 2 hrs. of 114.
- II. BIOLOGY MAJORS—Chem. 1, 2, 3, 7, 130a, 110 and 2 hrs. of 111.
- III. HOME EC. MAJORS—Chem. 1, 2, 3b, 7, 130a, 110 and 2 hrs. of 111.
- IV. PHYSICAL ED. MAJORS—Chem. 1, 2, 7, 109, 110 and 11.
- V. OTHER MAJORS—Chem. 1, 2, 3, 7, 114 and 114b.

**1. GENERAL CHEMISTRY. Four hours.**

The purpose of this course is (a) to give the student some knowledge of the more simple terms used in general chemistry; (b) to make the student acquainted with some of the properties of the more familiar elements and compounds in nature; (c) to arouse an interest in some of the commercial processes applied in the preparation of some of the most important utilities of life.

**2. GENERAL CHEMISTRY. Four hours.**

The purpose of the course is (a) to extend the student's knowledge of the common terms used in general chemistry; (b) to furnish the student a knowledge of the most important of the nonmetallic elements; (c) to get the student started in the practice of putting together symbols in writing formulas and balancing equations according to the theory of ionization.

**3. GENERAL CHEMISTRY. Four hours.**

Prerequisites, Chem. 1 and 2.

The course is aimed to furnish the student a knowledge of the most common metallic elements and their important compounds, to make him acquainted with the relationships existing among these metallic elements, and to make him acquainted with their reactions with each other; to teach the student general principles involved in the separation of metals from their ores, and to make certain characteristic tests for the metals in their salts.

**\*3b. HOUSEHOLD CHEMISTRY. Four hours.**

Prerequisites, six hours of Chem. 1 and 2.

This course is designed especially for home economics students. It offers a practical knowledge of fuels, lighting systems, sanitation, foods, and textiles.

**7. QUALITATIVE ANALYSIS. Two or four hours.**

Prerequisites, Chem. 1 and 2.

This course consists of one lecture each week and in addition a double laboratory period a week put into laboratory work for each hour's credit given. The purpose of the course is to give the student a knowledge of the fundamental principles underlying the classification of the metals and non-metals into classes according to general group tests, and to give him practice in applying individual tests and thus identifying the different metallic and nonmetallic elements and groups.

**7b. QUALITATIVE ANALYSIS. Two or four hours.**

Prerequisites, Chem. 1, 2 and 7.

This course consists of individual conferences and laboratory work. The minimum amount of time put in the laboratory is equal to two double periods a week for each credit hour enrolled for. The purpose of the course is to give the student a knowledge and training in making complete qualitative analysis of dry solid substances.

**8. JUNIOR COLLEGE CHEMISTRY. Four hours.**

This class meets four times a week. The work consists of lectures, discussions, and demonstrations. The theoretical and the practical phases of elementary chemistry will be intermingled in such a manner as to keep the student interested in the fundamental principles by means of the practical phases of the subject.

This course cannot be substituted for any major course in this department.

**9 AND 109. PHYSIOLOGICAL CHEMISTRY. Four hours.**

Prerequisites, Chem. 1 and 2 for 9 and Chem. 1, 2, 110, and 111 for 109.

This course is designed for nurses, physical education majors, and home economics majors. Home economics majors minoring in chemistry will take course 109, which is the same as 9 except that about twelve hours extra work will be put in the laboratory or library.

**\*110. ORGANIC CHEMISTRY. Two or four hours.**

Prerequisites, six hours of Chem. 1 and 2.

The purpose of this course is to get the student acquainted with the manner of grouping of the elements making up the organic compounds; to give the student practice in arranging symbols in a graphic way so as to show the structure of organic groups and organic molecules; to furnish the student with a knowledge of the relations of the simplest hydrocarbons to their important derivatives and of the relations existing among the different derivatives as they are built on one another and as they increase in complexity from the simplest up the series.

\*Given also by extension.



**111. ORGANIC CHEMISTRY. Two or four hours.**

Prerequisite, six hours of Chem. 1 and 2 and Chem. 110.

This course deals with the benzene series of hydrocarbons and their derivatives. The purpose is to teach the student the fundamental principles related to this new and different structure, to make him acquainted with different classes of derivatives which can be built on the benzene ring as a basis of a distinctive type of compounds.

**\*112. FOOD CHEMISTRY. Two or four hours.**

Prerequisites, six hours of Chem. 1 and 2, and six hours of Chem. 110 and 111.

This course consists of lectures and discussions twice a week and double laboratory periods twice a week throughout the quarter. The lectures may be taken for two hours credit and the lectures and laboratory work may be taken for four hours credit. The course is designed to give the student a knowledge of the chemical composition of the chief human food materials, to show him the relation of these materials to the digestive secretions of the body, and show him how these materials function in body processes.

**114 AND 114b. QUANTITATIVE ANALYSIS. Four hours for each course.**

Prerequisites, Chem. 1, 2, 3, and 7.

These are laboratory and consultation courses. The student works in the laboratory a double period per week for each hour's credit. The purpose of the course is to give the student training in the technic of accurate weighing and measuring; to develop a skill in the manipulation of apparatus; to cultivate a deeper knowledge of chemical reactions as far as ion concentrations, solubility products, and end points are concerned, and to teach the student the methods of making the necessary calculations involved in volume and weight relations existing in chemical reactions.

**\*115. INDUSTRIAL CHEMISTRY. Four hours.**

Prerequisites, six hours of Chem. 1 and 2 and four hours of Chem. 7.

The course consists of two recitations and two double laboratory periods per week. This course serves especially well to give the student an appreciation of the wide extent to which chemistry in the industries serves to foster the forces of civilization. The student learns how the fundamental principles of chemistry are applied in the various fields of industry. The student preparing to teach chemistry obtains many suggestions as to how the practical side of chemistry may be presented in teaching elementary work.

**116. AGRICULTURAL CHEMISTRY. Four hours.**

Prerequisites, six hours of Chem. 1 and 2 and four hours of Chem. 7.

The course consists of two lectures per week and two double laboratory periods. The purpose of the course is to give the student an appreciation of the wide application of the principles of chemistry to the different phases of agriculture; to give to the chemistry teacher a training which will enable him to be of practical assistance to the agriculturist of any community; to prepare the prospective chemistry teacher to more effectively present the practical side of chemistry in his general teaching.

**130a. THE TEACHING OF CHEMISTRY. Two or four hours.**

This course consists of lectures, discussions, papers written from library references, and practices in setting up apparatus and demonstrating experiments. The course is designed to give the student a knowledge of the problems connected with equipping laboratories, handling apparatus and materials, organizing students into groups for laboratory work, selecting and organizing lists of experiments for courses of study, and the methods of instructing in the laboratories.

**COURSES FOR GRADUATE STUDENTS**

Graduate students may do senior college courses and get graduate credit. In such cases there will be extra requirements.

**212. FOOD ANALYSIS. Two or four hours.**

Prerequisites, Chem. 1, 2, 7, 7b, 110, 111, 112, 114, and 114b.

This is a laboratory and consultation course. The student works in the laboratory one double period per week for each hour's credit. The purpose of this course is to train the student in the methods of making complete analysis of food materials, and to train him in detecting and determining food adulterants in foods.

\*Given also by extension.

**215. INDUSTRIAL CHEMISTRY. Two or four hours.**

Prerequisites, Chem. 1, 2, 7, 7b, 114, 114b, and 115.

This is a laboratory and consultation course. A double laboratory period is required for each hour's credit in the course. This course is designed to give the student a fundamental knowledge of the general technic connected with certain industrial analyses. Its purpose is also to give the student a deeper insight into the theoretical chemistry related to some of the technical processes involved in industrial chemistry.

The student may enter upon any one or more of the following chemical industries: steel, oil, water, gas, fertilizers, cement, dyes, sugar, etc.

**218. ADVANCED INORGANIC CHEMISTRY. Two or four hours.**

Prerequisites, Chem. 1, 2, and 7.

This course is designed for the purpose of taking the student deeper into the fundamental principles of chemistry than he could go in courses 1, 2, and 7; and also for the purpose of giving the student an extended margin of information regarding the application of these principles in the many different fields of chemistry, which will enable him to be a better teacher of chemistry. Incidentally this course takes the student deeper into the problems of estimating proper quantities for complete reactions, and the balancing of equations.

**219. ADVANCED INORGANIC CHEMISTRY. Two or four hours.**

Prerequisites, Chem. 1, 2, and 7.

This course is a continuation of Chem. 218. The topics have to do with the metallic groups. The purpose in this course is not so much to take the student deeper into the fundamental principles as to give him an organized and systematized fund of information regarding the metallic elements as they are related to the groupings in the periodic table. Some fundamental principles such as oxidation and reduction, and the principles underlying displacement are studied more widely than in any previous course.

**222. INDIVIDUAL STUDIES IN CHEMISTRY. Two or four hours.****223. RESEARCH IN CHEMISTRY. Four hours.**

To be taken by candidates for the master's degree in the first quarter of their graduate work. This is a required seminar and conference course for graduate students in all departments granting the degree of Master of Arts. The director of educational research will meet the graduate seminar three times each week and will confer with individual students upon appointment. In seminar the proper technic to be used in educational investigations and allied topics is considered and opportunity is given each student to report upon and discuss the details of his study so far as time will permit. Among the topics dealt with are: The scientific method; education as a science; educational research; types of research problems; the selection of a problem; the bibliography; methods of investigation; the master's study as a process of ordered thinking; the agenda of procedures and technics: the collection, classification, presentation, and interpretation of educational data; practicums in the organization, interpretation, and reporting of educational material; etc.

**224. RESEARCH IN THE TEACHING OF CHEMISTRY. Four hours.**

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

**225. RESEARCH IN THE TEACHING OF CHEMISTRY. Two hours.**

A continuation of Chemistry 224.

**FOR MAJORS IN THE FIELD OF PHYSICS**

The courses in physics have primarily the object of preparing teachers of physics for the secondary schools and colleges. On account of the fact that teachers are usually expected to teach more than one science, preparation for the teaching of biology and chemistry is also required as shown in the science core.

In addition to the core subjects listed on page 36 and the science core subjects on page 116, the following courses are required of majors in this department: Phys. 11, 12, 107; Math. 1 or 5; Ed. 116, Ed. 141 (for men).

A major in the physics department may elect a minor in addition to biology by fulfilling the requirements of the department in which the minor is selected. The following minors for physics majors are recommended: Chemistry, mathematics, physical education.

Courses for students from other departments who choose Physics as a minor:

I. Phys. 1, 2, 3, 103, 107, 118, and 130b.

II. Phys. 11, 12, 13, 103, 107, 118, and 130b.

**\*1. ELEMENTARY COLLEGE PHYSICS. Four hours.**

The quarter is divided roughly into three units of study. The work of the world, man's mastery over machines, and the fundamental nature of things. The topics are treated from a humanistic rather than a technical viewpoint. The technical side is not avoided, but rearranged in such a way as to provide the student with an appreciation of the development of man's mastery over matter and energy. The course will consist of lectures, demonstrations, reading assignments, and laboratory experiments arranged about the units mentioned above.

**\*2. ELEMENTARY COLLEGE PHYSICS. Four hours.**

This quarter is a continuation of the work of the fall quarter. The work is divided roughly into three units of study: The nature and structure of the atom, the transmission of energy through space, and the relation of sound, light, and radio waves. The same methods are followed as in the first quarter.

**3. ELEMENTARY COLLEGE PHYSICS. Four hours.**

The work during the spring quarter is a continuation of the fall and winter quarters and is arranged around three units of study: Radiant energy, the utilization of energy, and electricity, the servant of man.

**10. ELEMENTARY HOUSEHOLD PHYSICS. Four hours.**

A course based upon the questions raised by the problems within the home. Considerable attention is given to the discussion and demonstration of problems in heat, light, and electricity.

**11. GENERAL COLLEGE PHYSICS. (Not given 1932-33). Four hours.**

This course is based upon the problems raised in Millikan's text, "Mechanics, Molecular Physics, and Heat." The laboratory experiments are preceded and supplemented by lectures and demonstrations of the principles involved. The student is required to make an accurate report of the experiments and problems. The student should have a working knowledge of logarithms and understand elementary trigonometry.

**12. GENERAL COLLEGE PHYSICS. (Not given 1932-33). Four hours.**

A continuation of Physics 11. This course is based on a text by Millikan and Mills, "Electricity, Sound, and Light." The same methods and procedure are followed as in the previous course. The discussion and laboratory problems, however, are centered about electricity.

**13. GENERAL COLLEGE PHYSICS. (Not given 1932-33). Four hours.**

A continuation of Physics 12, but devoted to the study of light and sound.

**103. THE PRINCIPLES OF RADIO RECEPTION. Four hours.**

This course consists of lectures, demonstrations, and experiments based upon three units of study: The reproduction and amplification of sound; the vacuum tube, and the modern radio receiver. The purpose of the course is to prepare science teachers to handle the problems raised by pupils in the secondary schools concerning radio. The student electing the course should have had a course in elementary electricity.

**104. THE PRINCIPLES OF RADIO TRANSMISSION. Four hours.**

This course deals with the principles underlying radio transmission. It will consist of lectures, demonstrations, and experience in the operation of a broadcasting station. The purpose of the course is to prepare students for teaching the principles underlying radio transmission, which are basic and fundamental in modern physical science.

\*Given also by extension.

**105. HIGH FREQUENCY PHENOMENA. Two hours.**

A course based upon the experiments and literature in the field of high frequencies or short waves. It is in this field that most of the experiments in radio television and trans-oceanic telegraphy and telephony are being conducted.

**107. MODERN PHYSICS. Two hours.**

This course is a popular review of the development in the field of physics beginning with 1895. It will consist of illustrated lectures and demonstrations and will involve the study of radio activity, the nature and structure of the atom, space, time, and gravitation. It will include a review of the literature in the field of modern physics.

**111. PHYSICS OF THE AUTOMOBILE. Four hours.**

A study will be made of the principles common to all automobiles. The course will be conducted chiefly on the basis of excursions to various salesrooms where the automobile can be studied first hand. The different makes of automobiles will be compared and the physical principles involved and common to all of them discussed.

**114. PHYSICS OF MUSICAL INSTRUMENTS. Four hours.**

A course offered especially for music majors, but valuable to all interested in the nature of sound and sound-producing instruments. It will consist chiefly of illustrated lectures and demonstrations. The principles of sound, musical instruments, amplification and reproduction of sound as well as acoustics will be discussed. There are many phenomena of sound met with in everyday life which are not understood by most people. The course is non-technical in character.

**115. LIGHT AND COLOR. Four hours.**

A non-technical course offered especially for art students involving the principles of light, shade, and color. It will consist of illustrated lectures and demonstrations.

**118. PHOTOGRAPHY. Four hours.**

This course is arranged especially for science teachers and teachers of other subjects interested in making use of photography in their classes. The course will consist largely of laboratory instruction in the art of taking pictures, developing, preparing chemicals, printing, lantern slide making and coloring, and enlargement. Considerable attention will be given to copying so that teachers may take advantage of the wealth of illustrative material found in books and magazines. It is possible for a student to prepare and work out visual materials for a given course. A technical knowledge of physics is not required.

**121. DIRECT AND ALTERNATING CURRENTS. Four hours.**

An advanced course in the theory of direct and alternating currents with the main emphasis upon alternating currents. It will consist of problems, lectures, and demonstrations, as well as a survey of the local problems of generation, distribution, and measurement.

**123. LABORATORY PROBLEM COURSE FOR ADVANCED STUDENTS. Hours dependent upon the amount of work done.**

Purpose: To provide opportunity for advanced students to make a more exhaustive and intensive study of problems of especial interest to them.

Suggested fields of study: Radio transmitters, receivers, short wave transmitters and receivers, radio wave field intensities, vacuum tube characteristics, X-ray, radio activity, atomic structure, piezo electricity, photography, light, heat, sound, acoustics, and others which may be suggested in conference.

**130b. METHODS OF TEACHING HIGH SCHOOL PHYSICS. Two hours.**

A review of the literature in the field and experience in the organization of subject matter, experiments and demonstrations according to accepted principles. The purpose of the course is to prepare the teacher in a professional way to meet the problems of teaching physics. Considerable attention will be given to laboratory and demonstration equipment, costs, sources of materials, tests, bibliography, etc.

**222. INDIVIDUAL STUDIES IN PHYSICS. Two or four hours.**

**223. RESEARCH IN PHYSICS. Four hours.**

Taken in the first quarter of graduate work.

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

**224. RESEARCH IN PHYSICS. Two hours.**

An individual research course in connection with the graduate thesis. This is a conference course designed to guide students in the selection of problems, method of procedure, and interpretation of results. It should be elected only after consultation with the head of the department.

**225. RESEARCH IN PHYSICS. Two hours.**

This is a continuation of Physics 224.

**UNSPECIALIZED SCIENCES****1. BIOLOGICAL ELEMENTARY SCIENCE. Four hours.**

Required of Kindergarten, Primary, and Intermediate majors.

This course involves the study of butterflies, moths, and other insects in relation to man. It includes the study of native and common trees, our most common birds, their habits and their songs. Attention is given to the aims in teaching elementary science, methods of presentation, and ways of collecting, preserving, and using materials. The course is presented in units. Each unit includes assigned readings and field study.

**2. PHYSICAL ELEMENTARY SCIENCE. Four hours.**

This course is a continuation of Sci. 1 and may be elected by students who wish advanced work in this field. It deals primarily with physical phenomena, such as simple problems in electricity, magnetism, geology, meteorology, and astronomy. Laboratory demonstrations and field observations constitute a major part of the work.

**3. INTRODUCTION TO SCIENCE. Four hours.**

The purpose of this course is to provide the student with some important information related to the various sciences; to make life richer to him because he sees deeper into the mysteries of the universe and is able to satisfy some curiosities as to the relation of causes and effects, and to see the reasons for some common phenomena, and to serve the student as an orientation course as well as a cultural course.

The course includes topics dealing with the earth and its relation to other bodies in the universe, forces which hold the earth and other bodies in certain relations to each other, the development of the earth and other planetary bodies, the materials in the earth's crust and their transformation into plant and animal life, and the relation of climatic conditions to such life.

**4. INTRODUCTION TO SCIENCE. Four hours.**

This course is a continuation of Sci. 3. The general purpose is the same, but this course carries through the development from the inorganic material of the earth to the highest type of life.

Foods, vitamins, hormones, the energy relations of life, and the metabolic processes of the human body are stressed; the theories as to how changes and development occur; the laws of heredity as applied to plants and animals; a study of man in his relation to his environments, and how he has modified the development of plants and animals; and man's relation to his physical and chemical environment, and how he has gained increasing control over these.

**5. INTRODUCTION TO SCIENCE. Four hours.**

This course is a continuation of Sci. 3 and 4. These two courses present the scientific facts covering the physical world and its plant and animal life. Sci. 5 does the same thing for man. In this course the student will get a fundamental understanding of man and his behavior. The course deals with such topics as man's efforts to explain his behavior, man's inheritance, the modification of man's behavior, the individual differences, abnormalities of behavior, mental health, and personality.

**51. GENERAL SCIENCE. Four hours.**

This is primarily a professionalized course emphasizing the aims and the methods used in selecting and organizing the subject matter for a general science course. The student will be required to acquaint himself with appropriate textbooks; results of investigations made in the teaching field; and with the details of formulating units for a general science course of study.

**100. UNIT COURSES. Four hours.**

Students who desire may elect any one or more of the units without the others.

A course designed both for science majors and for students specializing outside this field. It will be broken up into four units, the first of which treats of the modern principles in the teaching of science; the second of evolution both organic and inorganic; the third the marvels of modern physics—new conceptions of the structure of matter and radioactivity; and the service of science in prolonging human life.

**101. SCIENCE INSTRUCTION. Four hours.**

This course will acquaint the student with the accepted recent methods of instruction in science and the selection and organization of subject matter. The course has been prepared for supervisors, administrators, and teachers who wish a clearer knowledge of the principles underlying science instruction.

## SOCIOLOGY AND ANTHROPOLOGY

This department offers courses in two related fields, namely, sociology and anthropology. Fundamentally, the school is a social agency and those who direct its activities are social servants, the agents of society. This certainly makes clear the fact that workers in education should have accurate knowledge of the science of society, and should know the relation and application of this science to education. One of the bases upon which safe leadership in educational theory and practice rests is this knowledge.

### A FOUR-YEAR CURRICULUM IN SOCIOLOGY AND ANTHROPOLOGY

In addition to the core subjects listed on page 36, the following courses are required of majors in this department: Soc. 90, 95, 125, 130, 150, 160, 165 and 170; Geog. 8; Biol. 101; Ed. 116, 126, and 141 (for men); Hist. 208 or 209.

Sociology majors are required to elect two minors each of which consists of twenty-four quarter-hours. These minors should be determined as early as possible and in conference with the department head, whose approval is necessary.

The department is anxious to place itself at the service of every department of the College. To this end, a series of sequences in both sociology and anthropology is suggested for the consideration of (1) department heads who want their majors to present one or more sequences in these fields and (2) students who want to minor in these fields or to elect one or more sequences in them. Each of the four sequences consists of twelve quarter-hours of credit, is open to senior-college and graduate students, and runs sequentially through a single college year of three quarters.

**SEQUENCE I**

1. Sociology 105
2. Sociology 125-225
3. Sociology 185-285

**SEQUENCE II**

1. Sociology 105
2. Sociology 160-260
3. Sociology 165-265

**SEQUENCE III**

1. Sociology 105
2. Sociology 145-245
3. Sociology 150-250

**SEQUENCE IV**

1. Sociology 130-230
2. Sociology 135-235
3. Sociology 140-240

**\*1. INTRODUCTION TO SOCIOLOGY. Four hours.**

Required of all first year students.

This course is an elementary study of social principles with the view to setting forth the nature of ongoing human society, to stimulating the student's interest in his own community and those closely related to it, to sharpening his powers of social observation and to introducing him to the tools of social analysis.

**\*90. RURAL SOCIOLOGY. Two hours.**

This course presents rural life as a phase of the general social life. The social situation in rural America is treated from the standpoint of its striking complexities.

**95. URBAN SOCIOLOGY. Two hours.**

Urban sociology is a study of the conditions and trends in modern city life. This course attempts to find the underlying and unifying principles by means of which all that is most significant in urban movements may be correlated.

**\*105. ADVANCED SOCIOLOGY. Four hours.**

Required of all juniors and seniors.

This course treats in detail the major sociological concepts and presents a study of processes and principles of social living. It emphasizes the scientific point of view in dealing with social phenomena.

**\*125-225. MODERN SOCIAL PROBLEMS. Four hours.**

This course embodies the critical consideration of significant social problems arising through all sorts of factors. It attempts to throw a helpful light upon both the causes and the possible amelioration of maladjustments.

**130-230. GENERAL ANTHROPOLOGY. Four hours.**

A general and comparative elementary study of primitive peoples, their physical characteristics, beliefs, customs, arts, industries, forms of government, and religion.

**135-235. THE ORIGIN, DEVELOPMENT, AND ANTIQUITY OF MAN AND HIS SUPERSTITIONS. Four hours.**

A presentation of the knowledge that has been accumulated with respect to early man and the earlier human cultures, with such scientific inferences as seem to be warranted by the facts thus far discovered.

**140-240. EARLY CIVILIZATION IN EUROPE AND AMERICA. Four hours.**

A study of the peopling of Europe and of North and South America, devoting particular attention to the early civilization of the Peruvians, Mexicans, and the Southwest Indians of the United States.

**145-245. SOCIAL EVOLUTION. Four hours.**

How the society of today has developed, the causes or conditions that have produced such development, a description of social life at its various levels, and a study of the means and methods whereby its further development may be hastened and directed.

**150-250. RACES, RACE CONTACT, AND RACE PROBLEMS. Four hours.**

The origin, development, distribution and differentiation of races, their chief characteristics; the effects of race contact and the problems arising from it; the question of race inferiority; the Nordic question, etc.

**155-255. THE SOCIAL THEORY OF EDUCATION. Four hours.**

A philosophy of education based upon the doctrine of organic, psychic, and social evolution. It compares the aim of educational effort, the school as a social instrument, and the relation of education to social progress.

**\*160-260. PERSONALITY AND SOCIAL BEHAVIOR. Four hours.**

This course gives critical attention to the social attitudes and to their development and modification under social pressure. Significant patterns of group behavior and the interactions of individuals and groups are treated. Attention is also given to the implications of social psychology for modifications in education.

\*Given also by extension.

**\*165-265. THE FAMILY. Four hours.**

This course treats of the development of the family as a social institution. Its changed status in present-day social economy is discussed from several points of view. Its significance to society in socializing the individual and fixing those major attitudes which determine his social adjustment is emphasized.

**\*170-270. EDUCATIONAL SOCIOLOGY. Four hours.**

In this course an attempt is made to relate the principles of sociology to the problems of education. A study is made of the bearing of certain sociological concepts on educational theory and practice. School problems are treated from the social and sociological point of view.

**175-275. THE SOCIOLOGICAL ASPECTS OF PATRIOTISM, PEACE, AND WAR. Four hours.**

An attempt is made to conduct the student through a scientific study of the subjects mentioned, stressing the benefits as well as the evils of war, the effects of peace and the proposed methods of securing it, and the kind of patriotism that should be taught in the schools.

**180-280. THE HISTORY OF SCIENCE. Four hours.**

The story of the origin and development of science, its nature, methods, great discoveries, dramatic episodes, leading promoters, contributions to progress, and its relations with philosophy and religion.

**185-285. THEORIES OF SOCIAL PROGRESS. Four hours.**

An analysis, interpretation, and evaluation is made in this course of significant theories of social progress. Attention is given to the principle of social amelioration. Each student works out his own criteria of social progress.

**190-290. CONTEMPORARY SOCIOLOGICAL THEORIES. Four hours.**

This course embodies lectures, reports, and discussions based upon the study of leading sociological sources in the field of general and advanced theory.

**195-295. THE TECHNICS OF SOCIAL RESEARCH. Four hours.**

Hope for the advancement of sociology lies in the testing of sociological principles by a patient accumulation of observed data, scientifically classified and generalized. This course deals with such reliable technics as are available for the collection and treatment of data in social research.

**200. SEMINAR. Four hours.**

The work of the seminar consists in the investigation of a selected sociological problem, or the intensive study of the doctrine of one or more of the leading sociologists.

**222. INDIVIDUAL STUDIES IN SOCIOLOGY. Two or four hours.****223. RESEARCH IN SOCIOLOGY. Four hours.**

This is a required seminar and conference course for graduate students who are working on their masters' theses. The director of educational research meets the group of such students three times each week and confers with individual students in his office. Small group conferences are held occasionally. Each student is expected to meet his thesis adviser regularly. It is expected that this course will be taken in the first quarter of graduate work.

**224. RESEARCH IN SOCIOLOGY. Four hours.**

This is a thesis course for master's candidates in sociology in the second quarter of their graduate work.

**225. RESEARCH IN SOCIOLOGY. Two hours.**

This is a continuation of Sociology 224.

\*Given also by extension.



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