

Colorado  
State Teachers College  
BULLETIN

---

SERIES XXIV

SEPTEMBER

NUMBER 6

---

HAND BOOK  
OF THE  
EXTENSION DIVISION



GREELEY, COLORADO

Published Monthly by Colorado State Teachers College, Greeley, Colo.  
Entered as Second-Class Matter at the Postoffice at Greeley, Colo.,  
under the Act of August 24, 1912

## EXTENSION DIVISION

### EXECUTIVE STAFF

GEORGE WILLARD FRASIER, A. B., A. M., Ph.D.  
President of the College

JOHN RANDOLPH BELL, Ph.B., A.M., Litt.D.  
Director of Extension Service

ROBERT HUGH MORRISON, A.B.  
Assistant Director of Extension Service  
Executive Secretary of Placement Bureau

NORMA S. GILBERT  
Secretary

### MEMBERS OF THE COLLEGE FACULTY GIVING COURSES IN THE EXTENSION DEPARTMENT

W. D. ARMENTROUT, A.M.	Director of Training Schools and Professor of Education
GEO. A. BARKER, M.S.	Professor of Geology, Geography and Physiography
S. C. BEDINGER, LL.B.	Assistant Professor of Commercial Education
HAL G. BLUE, A.B.	Principal of Teachers College High School; Professor of Secondary Education
LESTER W. BOARDMAN, A.M.	Professor of Literature and English, Head of Division
WILLIAM G. BOWERS, Ph.D.	Professor of Chemistry
M. E. BRYSON, M.D.	Medical Adviser of Women
ELIZABETH CLASBEY, A.M.	Assistant Professor of Household Science
AMBROSE O. COLVIN, B.C.S.	Professor of Commercial Education
HELEN C. DAVIS, A.M.	Associate Professor of Student Teaching
OLIVER M. DICKERSON, Ph.D.	Professor of History and Political Science
HULDA A. DILLING, B.E.	Associate Professor of Student Teaching
EDWIN STANTON DUPOINCE, Ph.D.	Professor of Romance Languages
GEORGE W. FINLEY, M.S.	Professor of Mathematics
FREDRICK LINDER FITZPATRICK	Associate Professor of Biology; Curator of the Museum
SAMUEL MILO HADDEN, A.M.	Dean of Practical Arts; Professor of Industrial Education
GRACE HAMILL, A.M.	Associate Professor of Psychology
WILLIAM H. HARGROVE, B.S.	Professor of Rural and Agricultural Education
JOSEPHINE HAWES, A.M.	Assistant Professor Student Teaching
JACOB DANIEL HEILMAN, Ph.D.	Professor of Educational Psychology Head of Department
FRED LOUIS HERMAN, B.S.	Assistant Professor of Student Teaching
IRA WOODS HOWERTH, Ph.D.	Professor of Sociology and Economics; Head of Division
F. C. JEAN, A.M.	Professor of Biology; Head of Division
WINFIELD L. KNIES, A.B.	Assistant Professor of Commercial Education
GENEVIEVE L. LYFORD, A.M.	Associate Professor of Student Teaching
ARTHUR E. MALLORY, A.M.	Associate Professor of Student Teaching
VIVIEN MERRIMAN, A.M.	Assistant Professor of Commercial Education
LESTER E. OPP, Mus.B.	Instructor in Music
ORA B. PEAKE, A.M.	Associate Professor of Student Teaching
ETHEL B. PICKETT, B.S.	Associate Professor of Household Science
EARLE UNDERWOOD RUGG, Ph.D.	Professor of Education; Head of Division
FRANCES TOBEY, A.B., Litt.B.	Professor of English
EDITH GALE WIEBKING, A.B.	Associate Professor of Household Arts
GRACE WILSON, A.B.	Assistant Professor of Education; Director of Religious Activities

# HAND BOOK

## OF THE

### EXTENSION DIVISION

---

The year 1924-25 is proving to be an unprecedented one in the development of the Extension Division of Colorado State Teachers College. More than two thousand different individuals are taking advantage of the opportunity which the Extension Division affords, and more than three thousand paid enrollments have been entered upon the records of the College.

#### The Meaning of the Term "Extension Course"

At first the term "extension course" signified that a given college prepared and sent out to students not resident in the town where the school was located certain desired courses of study. It was at first conceived to be a service by the college to those without the pale.

Those engaged in the service soon realized that the original conception was both narrow and false. They perceived that the college belongs to all the people of the state. The humblest citizen has a vital share in it and as part owner has a right to its privileges.

This thought brought with it a new sense of responsibility, a feeling that the college was in honor bound to minister to the educational needs of all the citizens of the commonwealth who desire to avail themselves of its advantages. The "extension course" ceased to be a courtesy and became a duty.

Extension service comes in this way to mean, in its wider significance, that the group of students who fill college halls and class rooms are but a part of its clientele. There is a larger body of earnest men and women who, also, "covet learning's prize" and would vain "climb the heights and take it" though they must use a path more rugged. It means, also, by reason of the fact that it takes more courage of heart and power of will to succeed in this way than by the more direct method, that the extension group is worthy of all honor and consideration.

It means in final analysis that a college is something more than walls and tower and building site, and that its influence should reach everywhere and be everywhere for good.

#### Growth of Extension Service

Coincident with this new and more wholesome attitude on the part of college faculties toward their extension service, there has arisen in the minds of thousands of aspiring and energetic individuals the clear realization that extension courses do afford a sane and practical method of professional advancement.

No phase of educational progress has been more marked in recent years than the rapid growth of extension departments, with the possible exception of the development of summer schools.

From a few isolated cases of persons connected with colleges twenty years ago in the capacity of extension students, the situation has changed to such an extent that today many of the most eminent colleges have more non-resident students than resident. There has been a corresponding advance in the quality of those taking extension work and the excellence of the courses offered.

## The Significance of Preparedness

Success is always measured in terms of preparation. There are always ready places for ready men. The individual who would make the most of his native gifts is not under the necessity of creating opportunities, but merely the obligation of being tremendously prepared for opportunities when they come.

Every great life bears conclusive and irrevocable evidence of this truth. Preparation, therefore, becomes the best of all investments and the surest guarantee of a useful and happy career.

The lawyer who knows the law does not lack clients. The physician who has mastered the science of medicine is not without patients, and the teacher who can direct life into sane and healthful channels, develop in her students thought power, and lay the foundations of character, is needed to the ends of the earth.

## Compensation Dependent Upon Preparation

Many of the largest and most progressive school systems in America, now, make compensation depend upon preparation. This, in fact, is the tendency everywhere manifest and indicates that the time is not far distant when all school authorities will refuse to employ those who have not made special and thorough preparation for that calling which has been characterized as the "chief business of a republic."

## The Professionalization of Teaching

Shall teaching become a profession? Some who would answer this question in the affirmative seek to bring about the added increment of dignity and power through the instrumentality of minimum wage laws.

The motive of those who advocate such laws is right, but the method is wrong.

In the presence of a vast number of unemployed men, there is no economic law that will keep wages up, and when laborers are scarce there is no way in which wages can be kept down.

As long as eighth grade graduates or individuals with only a year or two of high school training can, by means of brief periods of intensive study, become teachers, teaching can never become a profession. Under these conditions wages will inevitably be low, educational standards inadequate, and the living conditions of those who teach not such as to encourage self-respect and professional efficiency, or to inspire confidence in the leadership of those upon whom society places the responsibility for the physical, mental, and ethical training of its youth.

Professional training is the indispensable requirement, without which no type of work can ever attain to the dignity and honor of a true profession. With it, every form of labor becomes permeated with the spirit and potency of scientific effort. Without it, all form of work, devoid of the light and inspiration of applied principle and basic law, become drudgery and are characterized by mediocrity.

With proper emphasis upon professional training, the educational situation changes from one in which many poorly prepared individuals are competing for each school vacancy and by their very eagerness to secure a position and to work for whatever they can get, bearing down the average rate of compensation, to one in which boards of education must make their selections from a

limited number of thoroughly trained and highly efficient teachers, and because they are not so numerous and because they cannot be had without just compensation are compelled to offer a salary that makes it possible for teachers to be happy and efficient as leaders in community life.

### **The New Certification Law**

The new Certification Law has been looked upon by some educators as an act unfriendly to teachers, but its sequence will prove to be their greatest boon and blessing.

When the faulty examination method of selecting teachers has been forever abandoned in the good state of Colorado, then, a large number of folk who are only eighth grade graduates, or possess at most a year or two of high school training, will be eliminated from the field and individuals who have devoted a number of years in preparation for the all-important work of teaching will come into a vocation of vastly augmented dignity and honor.

When men who have tried all sorts of occupations without success can not, after a few weeks of cramming, drift into the business of teaching, then, the company of those who teach will be composed of men and women who definitely and with conscientious purpose have prepared themselves for the finest of all arts—the art of moulding human life into forms of beauty and truth and righteousness.

When teaching is no longer a lowly stepping stone to all of the other professions and men cease to teach in order to earn money to become lawyers, physicians, and engineers, then, it will come into its own as a calling so important and a business so exalted that the safety of democracy, the well-being of humanity, and the progress of civilization itself will depend upon the way in which it is done and the character of the men and women engaged in it.

The new law means that training, thorough and specific, is to be the criterion for selecting teachers. It means that teaching is to attain to the dignity, power, and honor of a noble profession. It means that teachers are to receive compensation commensurate with the importance of the work which they do and that teachers are to live in comfort and to be happy and well and efficient because of their improved social status. And it means, above all, that the child, the neglected country child, the foreign-born child, yes, every child, is to have a trained teacher, that is, a man or woman with reach of intellect, breadth of sympathy, and power of will, characteristics that come only through training.

### **A Two-fold Responsibility**

Teachers College is not only responsible under the new order of things for making it possible for every teacher to meet the new conditions without undue hardship and loss, but to organize a Placement Bureau by means of which those teachers who have fulfilled the professional requirements shall be assisted to find the type of position which will enable them to be most helpful in the organization and development of community life.

### **Teachers College Rises to the Occasion**

Both responsibilities are being met in a spirit of utmost devotion and consecration. By means of the widespread organization of group extension courses and the development of individual extension courses that meet the needs of every

teacher, no matter how far he may be removed from the centers of learning, it is possible for every teacher in the state (who held at the time the new Certification Law was enacted a first or second grade certificate) to meet the requirements of the Law without giving up his work as a teacher for a single year and without going to Summer School more than one year in three.

To meet the second responsibility, the College has organized a Placement Bureau which is to serve the graduates of the College and the members of the Alumni Association in securing the kind of teaching position for which they have made special preparation.

## TEACHERS PLACEMENT BUREAU

Operated as a Part of Extension Division

with

MR. ROBERT HUGH MORRISON

Assistant Director of Extension Service and Executive Secretary of the Placement Bureau in Charge

### The Need for a Placement Bureau

For a long time Teachers College has felt that a strongly organized effort should be made to assist school officials in their endeavors to place the best available teacher in every position in the state. This work has been attempted by various faculty members who have already been carrying a full load. Superintendents coming to our college have not always been able to interview candidates for positions, nor always secure adequate data concerning graduates. This condition existed because the personnel of the Placement Bureau was already overloaded. The year 1924 marks a new era for Teachers College in the reorganization of the Placement Bureau. This highly important work has been placed in the Department of College Extension Service. An additional man has been added to the staff to give this bureau full and adequate attention.

Superintendents coming to Greeley in search of teachers will be given every consideration in helping them to get in touch with teachers fitting their exact needs. The personnel of our Placement Bureau will never be too busy to give all school officials every assistance in filling their vacancies.

### A Logical Part of Extension Service

No one at Teachers College is as well acquainted with the school conditions in Colorado as the personnel of the Extension Department. In organizing and promoting College Extension Service, Dr. Bell has traveled the entire state again and again. He has visited a large majority of the schools. School officials in the entire Rocky Mountain region know of the Extension Service of Colorado Teachers College. Because of this wide acquaintance and thorough knowledge of the state, the Teachers Placement Bureau logically becomes an integral part of the Extension Service.

### Relation of the Bureau to Alumni

Teachers College is vitally interested in the promotion and adjustment of her Alumni. To this end the Placement Bureau will endeavor to keep in close relationship with the entire alumni. The work of each graduate will be followed. An honest endeavor will be made to keep our graduates in positions where both service to the community and growth of the teacher are possible. To this end the Bureau invites communication from alumni. The service we can render them will depend to a large degree upon the co-operation of all concerned.

### Guiding Principles in Making Nominations

1. The rights of the child are paramount.
2. Testimonials are to be truthful and discriminating.
3. As far as is humanly possible, the Bureau will endeavor to place the right individual in the right position.

4. Only one candidate will be nominated for any particular vacancy. This does not mean, however, that we are not pushing the nominee for other positions at the same time.

5. When, however, superintendents and boards of education come to Colorado State Teachers College in quest of teachers, they will be permitted to examine the records of any or all available individuals and interview any person in whom they may be interested to the intent that questions of scholarship, teaching power, and character may be decided first hand by those who are responsible to the public for the hiring of teachers.

6. In order to be of maximum service, the Bureau will evaluate in advance, the graduates of the College, members of the Alumni Association and such other educators as the spirit of justice and fair-play make it necessary to consider in the placement of teachers.

7. The Bureau will not confine itself to graduates of Teachers College, but in cases where two candidates seem equally strong, as measured in terms of scholarship, experience and character, preference will be given to graduates of Colorado State Teachers College.

8. When a nomination has been made to a particular superintendent or board of education and the said school authorities become interested in some other candidate through their own initiative or the initiative of the said candidate, the Bureau will then make, upon request of said school officials, a statement relative to the individual in whom the school authorities have become interested.

9. The Placement Bureau will set itself the task of studying dilligently the needs of the schools of Colorado and the Rocky Mountain West to the intent that nominations may the more perfectly meet local school needs.

10. The Bureau pledges itself to act with no selfish, mercenary, or personal motives, and to do in each case as best it can the thing which will prove most helpful to the schools and most just to the teachers.

### Confidential Information Accompanying Nominations

1. A digest of Qualifications.

This is the Bureau's estimate based upon scholarship, personality, experience, and general college activities.

2. Nominee's Personal Record.

A brief summary of all the educational institutions attended, previous teaching experience, and an accurate list of references.

3. Professional and Educational Record.

This sheet enables a superintendent to tell at a glance the field for which the nominee is best prepared.

4. Copies of Original Recommendations.

The Placement Bureau assembles confidential reports concerning each graduate. The reports are based upon records made in the class room and training school. If the graduate has had experience, an experience record is obtained. Copies of these confidential reports are sent to school officials whenever the Bureau nominates for a position.



## Field of Operation

Colorado Teachers College intensively serves Colorado. During the past few years, however, students from all parts of the United States have knocked at our gates for admission. They have been admitted and thus became loyal boosters of Teachers College. Upon returning to their home states, they have continued to boost until now we receive calls for teachers from every state in the Union. Our graduates are scattered from coast to coast. Each one is a booster; each one is widening the scope of Colorado Teachers College.

## Positions for Which We Nominate

Rural	Secretaries	Music
Tests and Measurements	Normal Training	Writing
Physical Training	Critic Teachers	Printing
Home Economics	Agriculture	Librarian
Sub-Normal	Grades	High School
Principalships	Drawing	Athletics
Superintendencies	Kindergarten	Colleges
Commercial	Normal Schools	

## Professional Training of Our Graduates

Teachers College recognizes teaching as a fine art. Our students are asked to select a field and work with a definite end in mind. However, there are some things which all teachers and school administrators must know to effectively take their place in the profession. Our graduates are well grounded in Modern Psychology and Current Educational Thought. The spirit of co-operation and scientific investigation is instilled from the beginning courses until graduation. School officials seeking teachers need have no fear concerning the educational training of our graduates.

## State Service—No Commission

Teachers College believes the work of the Placement Bureau is the culmination of the state's effort to train teachers. The Bureau is planned to secure the best possible teacher for every boy and girl. To this end the service should be and is free. No commission is charged to either the community or the teacher.

**COLORADO STATE  
TEACHERS COLLEGE**  
Greeley, Colo.

## DETAILED INSTRUCTIONS

### RELATIVE TO GROUP AND INDIVIDUAL EXTENSION COURSES Two Distinct Types

There are two distinct ways in which extension work can be carried on. One is known as the *group plan*, and the other as the *individual plan*.

The former is intended to meet the needs of teachers who can gather in sufficient numbers to justify (twenty is the minimum number in all cases where a college faculty member does the teaching) the organization of a class and the selection of an instructor.

The latter is planned for persons who are too far removed from the larger centers of population to make a co-operative scheme feasible.

### Details Relative to the Group Plan

The University of Colorado, the University of Denver and Teachers College have agreed upon the following conditions for granting credit:

1. Standards—The standard of the work done shall be of such type as to be acceptable for regular undergraduate credit at each of the above-mentioned institutions.
2. Instructors—No work shall be accepted for credit except that given by instructors duly approved by the institution in which credit is desired.
3. Class Period—The period of each class shall be ninety (90) minutes, requiring seventeen (17) sessions for three (3) quarter hours' credit. The minimum time requirements for a whole course shall be 1,500 minutes spent in class recitation.
4. Fees—The fees shall be \$8.00 per student per class yielding 3 quarter hours' credit.

### The Nature of Individual Extension Courses

Each Extension Course consists of (1) a set of "study units" containing questions such as might be asked in class, *assignments* such as might be made in residence study, and *explanatory sections* corresponding to the explanations which instructors often make in class. (2) a "materials sheet" which informs the student fully in regard to all the books and other materials needed for the course.

### How Individual Extension Courses Are Conducted

The Extension Department sends the student the first four study units of the course he has chosen and the material sheet and book list. He studies the books as directed and works out his first *recitation paper*—covering the work outlined in the first study unit. HE MAILES THIS TO THE EXTENSION DEPARTMENT AS SOON AS IT IS FINISHED—AND WAITS FOR ITS RETURN BEFORE SENDING IN HIS SECOND RECITATION PAPER, SO THAT HE MAY HAVE THE ADVANTAGE OF THE TEACHER'S SUGGESTIONS. The date on which the paper is received in the Extension Department is recorded on the student's enrollment card and stamped on the back of the study unit, which is then passed without delay to the instructor in charge. When the instructor has read, commented on, and graded the paper he returns it to the Extension Department, where the date of its return and the grade given it are recorded on the enrollment card. The first recitation paper is then returned to the student with the *fifth study unit*, after which the student may mail to the Extension Department his second recitation paper *together with any additions*

required by the instructor to his first recitation paper. The second paper passes through the same process and is mailed back to the student with the sixth study unit, and so on till the course is completed.

### How Manuscripts are to be Prepared

1. Each recitation paper must show clearly on the first page the following information.
  - a. The Student's Name and Address.
  - b. The name and Number of the Course.
  - c. The Number of the Study Unit.
2. Use clean letter-size paper. Remember that the character of the teacher is often judged by the care with which she prepares manuscripts. *It pays to be neat.*
3. Leave a margin one inch wide on left hand side of each sheet for the criticisms and suggestions of the instructor.
4. Always copy the number of the item or question or assignment with your answer; i. e., let your answer bear the same number as the question you are answering.
5. The student is expected to answer every question asked, or else when it is not possible to work out a fairly satisfactory answer independently, to ask questions of the instructor. The instructor expects to do as much teaching as the course requires.
6. Similarly the student is expected to work out all assignments (such as "list the factors—," or "Illustrate—," etc.) with deliberate care, or else to ask questions of the instructor.

### How Mail Is Forwarded

*Please send all study units to the Extension Department in large envelopes. Do not send your manuscripts or any other kind of mail to the Director of Extension Service, or his Assistant, but directly to the EXTENSION DEPARTMENT, COLORADO STATE TEACHERS COLLEGE, GREELEY, COLORADO.*

The reason for this request is that both the Director and his Assistant are frequently out of Greeley for a week or ten days at a time, and mail addressed to them must wait for their return; while mail addressed directly to the department is acted upon promptly, and in case it is necessary for the Director to pass upon the point in question, this can be done later.

### Limitations on Extension Study

**ALL EXTENSION STUDENTS ARE HELD RESPONSIBLE FOR ALL FACTS STATED IN THE FOLLOWING RESTRICTIVE PARAGRAPHS**

1. No diploma or degree can be earned wholly by extension study. Three full quarters of residence work must be done by all who graduate from the Junior College; graduation from the Senior College requires at least two additional quarters of residence work; and graduation from the Graduate School requires three additional quarters of residence study.

Students entering Teachers College with sufficient advanced credit may receive the A. B. degree with the completion of three quarters of residence work.

Group study done with members of the college faculty may be counted to the extent of one quarter's residence work in the Junior College, and one in the Senior College.

2. Students in residence are not permitted to do correspondence work except as a means of completing a course which has been begun at least three months before the residence enrollment was made. In such cases the residence work must be correspondingly restricted and *written permission* of the Dean of the College must be presented to the Director of the Extension Department.

3. Not more than one-third as much work can be taken in any given school year by extension as in residence. The standard amount of residence work in any year at Colorado Teachers College is 48 quarter hours. Sixteen quarter hours is therefore the maximum amount of extension work allowed in any given school year. An additional four quarter hours may be taken in the summer quarter, provided the individual is not a resident student. Any group work must be included in the 16-hour limitation.

4. All extension courses must be completed within six months from the date of enrollment. For sufficient reasons an extension of three months may be granted by the Director of the Extension Department, upon the request of the student.

5. No enrollment can be made until the necessary fees have been paid. Note that the fees are \$2.00 per quarter hour, plus 20 cents per quarter hour for postage.

6. No enrollment can be made in any given course until the Instructor shall have prepared and presented to the Extension Department the study units required for the given course.

7. In all cases the detailed instructions relative to method of study and preparation of manuscripts as outlined in the Hand Book of the Extension Department must be strictly adhered to.

8. Courses begun in residence cannot be completed in non-residence and courses begun in non-residence cannot be completed in residence. The two types of work are entirely distinct.

9. It is the prerogative of any instructor to ask any student to drop a course for which the student is clearly not prepared. In this case the fee is returned.

10. Students finishing graduation requirements by extension work must give one month's notice to the Dean of the College of their expectation of graduation.

### The Question of Cost

A course for which four quarters hours' credit is granted costs eight (8) dollars; i. e., two dollars per quarter hour. Since a course of this type consists of twelve study units, it follows that the College receives fifty cents for the preparation (original) and grading of each study unit. This is, in the judgment of the Department, fair both to the instructor and the individual taking the work.

An additional 20 cents per quarter hour is charged for postage. This makes a three-quarter hour course cost \$6.60 and a four-quarter hour course \$8.80. The entire cost of a four-hour course, is, therefore, \$8.80.

## Refunds and Transfers

*Beginning June 1, 1924, money will not be refunded after thirty days from the date of enrollment. In no case will money be refunded after the completion of three study units.*

Before the completion of three study units the individual may transfer the money paid upon a particular course to some other course. The transfer privilege ceases, however, at the end of six months from the date of enrollment.

## NECESSARY PROCEDURE

### Before Extension Credits can be Counted Toward Graduation at Colorado State Teachers College

#### I. High school graduates.

All high school graduates are permitted to enroll for College extension courses on a *provisional basis*. Extension units will be forwarded immediately upon application, with the proviso that the student proceed to take up at once with the Registrar of the College the problem of matriculation, unless this has been previously determined under recent regulations.

*It is to be clearly understood*, however, that credit will not be recorded until college entrance requirements have been fully satisfied.

Teachers College has prepared a matriculation blank, which explains the proper procedure that the student must follow in furnishing complete data upon which his entrance to college is to be determined. The Year Book for the current year will indicate clearly the qualifications which the student must possess in order to complete matriculation at Colorado State Teachers College.

*It is highly important* that the student who enrolls in the Extension Department take up at once the question of college entrance requirements, to the intent that he may not be embarrassed at the completion of the course by the fact that credits are withheld.

#### II. Mature students, not high school graduates.

In order that experienced teachers who are not high school graduates may get in touch with the new ideas and movements in education which the college faculty are presenting to teachers of the country through the medium of extension courses, special provision is made for teachers and mature individuals with broken educational careers.

Any student twenty years of age, or over, may be enrolled in the Extension Department at Colorado State Teachers College under the following conditions:

1. Credit is not to be counted toward graduation until college entrance requirements are fulfilled.

2. A careful record will be kept, however, of the work done and the grade earned so that both may be transmitted upon request to the State Department of Education in fulfillment of the professional requirements under the new Certification Law.

III. There are three ways in which high school conditions may be removed.

1. By passing an intelligence test with a minimum score of 70.
2. By adjustment through the Ungraded School for Adults.
3. Teachers College High School has prepared a group of most excellent high school courses in Literature, History, Science, and Mathematics that may be taken by adult students for high school credit.

It is not difficult for an experienced teacher to work off these subjects, one at a time, while teaching. The study units are so arranged that they can be followed up continuously until a complete unit has been finished.

### Biological Sciences

#### 1. EDUCATIONAL BIOLOGY—Three hours.

A study of protoplasm and its responses, the cell, specialization with strong emphasis upon adaptation. The whole question of nutrition from the making of foods by plants to their use in the animal body, especially man, is surveyed. Evolution, its scope, evidences and implications are considered. Heredity, Mendel's laws and their relation to innate capacities and abilities are treated.

#### 4. PRACTICAL ZOOLOGY—Four hours.

A general survey of the animal kingdom from the economic standpoint. Special emphasis will be placed upon the relation of each group to man. Not a technical course, but one that should prove valuable to teachers of biology or nature study. If students can elect but one course in zoology, it is suggested that this course be taken.

### Chemistry

The following courses in Chemistry are intended to give the teacher and prospective teacher a better appreciation of this subject. The great world war has demonstrated in a very forceful manner the woeful lack of development of industrial chemistry in our own country. The realization of our utter dependence on European countries for many of the chemical necessities has given a great impetus to the manufacturing end of chemistry and to individual research and study. With our wonderful natural resources as a basis, and the lessons of the world's war as a strong stimulus, we are looking into the future of a great chemical awakening in this country.

#### 3. GENERAL CHEMISTRY—Three hours.

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

#### 3b. HOUSEHOLD CHEMISTRY—Three hours. Prerequisite, Chemistry 1 and 2.

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

#### 108. ORGANIC CHEMISTRY—Three hours.

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

#### 109. ORGANIC CHEMISTRY—Three hours.

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

#### 112. FOOD CHEMISTRY—Three hours.

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

#### 115 and 115b. INDUSTRIAL CHEMISTRY—Four or eight hours.

**221. ADVANCED INORGANIC CHEMISTRY—Three or four hours.**

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

Note—Teachers of Chemistry are invited to make suggestions in regard to courses which should be offered in Extension, and information in regard to the peculiar difficulties met in the teaching of Chemistry will be gratefully received.

**Commercial Education**

It is our aim in the following outline to offer only such courses as seem to be practical by correspondence. We do not encourage the study of shorthand or advanced typewriting by correspondence courses.

We offer Courses 1 and 2 in shorthand, and Courses 11 and 12 in typewriting. We believe that Courses 1 and 2 in shorthand can be successfully taken by mail, but not with the same degree of success that would result from residence courses; therefore, we recommend that students elect other courses from this outline than the ones in shorthand. No college credit will be granted for Courses 1 and 11. All of the material necessary for each of these courses is outlined in the first lesson that is sent to the student, and we have omitted further references to the required materials. All of the material and supplies should be bought from the publishers or the local book store of the town.

**1. PRINCIPLES OF SHORTHAND I—No credit. Fee \$8.80.**

The purpose of this course is to give the student who has not had shorthand in high school the necessary foundation for the secretarial course in the use of Gregg Shorthand. The first ten lessons of the Gregg Shorthand Manual will be covered in this course.

**2. PRINCIPLES OF SHORTHAND II—Four hours.**

Prerequisite, Commercial Arts 1 or its equivalent. This course is a continuation of Commercial Arts 1. The Gregg Manual will be completed.

**11. PRINCIPLES OF TYPEWRITING I—No credit. Fee \$8.80.**

A prerequisite for typewriting 12 for those students not having high school typewriting. Beginning work in touch typewriting and care of machine.

**12. PRINCIPLES OF TYPEWRITING II—Four hours.**

A study of letter forms and tabulating.

**51. PRINCIPLES OF ACCOUNTING II—Four hours.**

Various types of business papers arising out of transactions are considered in their relation to the records and to the routine of the business. Summary statements of various kinds are discussed and illustrated. Types of accounting records and their development, especially as regards a partnership business, are taken up in detail. A complete set of partnership books with a minimum of bookkeeping detail are written up in this course.

**53. BUSINESS MATHEMATICS—Four hours.**

A treatment of advanced phases of commercial calculation. A brief review of percentage and its application. The theory of investments, stocks and bonds, sinking funds, annuities, insurance, and income taxes will be treated.

**56. PENMANSHIP METHODS—Two hours.**

This course has a two-fold purpose. It offers to the student an opportunity to improve his handwriting and at the same time some valuable suggestions in the way of methods of teaching writing. The Palmer Method Manuals are used, but the instruction is not restricted to any one author's ideas.

**102. PRINCIPLES OF ACCOUNTING III—Four hours.**

This course is designed to cover the more advanced principles of accounting, emphasizing, especially, the problems of corporation accounting. The proper evaluation of balance sheet items, as regards depreciation and the maintenance of fixed assets, is especially stressed. A complete set of corporation books with a minimum of bookkeeping detail are written up in this course.

## 113. PRINCIPLES OF TYPEWRITING III—Three hours.

Prerequisite, either typewriting 11 or typewriting 12 in residence. This course includes a study of legal documents, more complicated tabulation, and methods of obtaining speed.

## 140. BUSINESS REPORTS AND COMPOSITIONS—Four hours.

This course gives practice in comparison and arrangement of correspondence and reports peculiar to business. It is an advanced course in the English of business.

## 143. COMMERCIAL LAW I—Four hours.

A treatment of the general principles of common law as applied to business, together with a study of the Colorado Statutes and decisions bearing on commercial interests.

## 144. COMMERCIAL LAW II—Four hours.

A continuation of Course 143. The study of Partnership Law, Corporations, Personal Property, and Bankruptcy being taken up.

## 151. COST ACCOUNTING—Four hours.

A study of material cost, labor cost, overhead expense, distribution of expense, and managing expense. A set of books on manufacturing costs will be written.

## 153. SALESMANSHIP AND BUSINESS EFFICIENCY—Three hours.

A substitute for Commercial Arts 151. The purpose of this course is to bring to the attention of students preparing to teach in secondary schools as much literature as can be reviewed that deals with problems of retail selling and store management. The chief aim of the course is to develop methods that will be helpful to the student in presenting the subject in secondary schools. The course will include some investigation and research along the line of special methods and devices used by teachers of salesmanship in other schools and business concerns.

## 211. BUSINESS ADMINISTRATION—Credit to be arranged.

The principles of industrial management and the organization of the modern office. Various types of organization, the labor force, payment of the worker, records of raw material and unfinished goods, etc.

## Education

The aim of the Department of Education is to help make better teachers, principals, supervisors, and superintendents. The work, although having to do primarily with fundamental theory underlying the educative process, shows how such theory is of practical value to the teacher and administrator. Courses numbered 1-99 are primarily first and second year subjects; 100-199 are third and fourth year subjects. Those numbered 200 and above are open to graduate students and to qualified seniors. See Catalog and Year Book for Core and Departmental required subjects.

### 1. AN INTRODUCTION TO EDUCATION—Required of all first year students. Three hours.

This course aims to introduce the student to the study of education. It does for education what general science does for the later study of specialized subjects in science. The course deals with teaching as a profession, educators of the past and present, and many of the major problems that are met in the field of education. The purpose of the course is to orient the student in the great field of education and prepare him for the specialized study to come later.

### 3. PRIMARY METHODS—Four hours.

This course is based on the needs of the child between the ages of seven and eight years. This course leads up to the selection of subject matter which functions in the child's life. To this end a brief comparison of courses of study in some of our larger city schools is made. The latest and most scientific articles on primary methods are read and discussed. Many devices for teaching beginning reading, phonics, rhythm, spelling, songs, as well as methods for dramatization of stories, multiplication table, and practice in blackboard illustrating are given.



10. THE ELEMENTARY SCHOOL CURRICULUM—Three hours. Prerequisite, Education 1.

This course will deal largely with the objectives of elementary education. The main subjects of the elementary curriculum will be studied from the standpoint of objectives to be attained in each in terms of existing aims, hypotheses, investigations, and measurements. Each subject will also be studied to determine what additions and eliminations of subject matter are desirable.

20. GENERAL AGRICULTURE—Four hours.

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

21. RURAL SCHOOL PROBLEMS—Four hours.

This course will consider problems peculiar to the rural school teacher. The organization and administration of the rural school course of study, school class room management, the school laws that apply particularly to rural schools, the relations of teacher to school board and to the community, and the methods of relating the activities of the school to the activities of the community will be dealt with.

28. SCHOOL AND HOME GARDENS—Four hours.

Topics: Planning, planting, cultivating, controlling insect enemies and plant diseases; methods of propagation of vegetables and flowers; best varieties of vegetables and flowers for certain seasons; soil requirements for successful gardening; planting about home and school; use of hot beds and cold frames.

38. VOCATIONS FOR WOMEN—Two hours.

A course designed for the study of vocations open to women, with the idea of preparing the teacher to guide her students in the choice of their life work. The course consists of a study of women in industry, agriculture, commercial work, the professions, such as nursing, library work, and medicine.

51. LITERATURE, SONGS AND GAMES FOR KINDERGARTEN AND PRIMARY CHILDREN—Four hours.

This course is a study and classification of the different types of stories, songs and games according to their fitness for various ages and purposes.

52. THE KINDERGARTEN CURRICULUM AND USE OF MATERIALS—Four hours.

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

106. ELEMENTARY TYPES OF TEACHING AND LEARNING—Four hours.

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

108. EDUCATIONAL SUPERVISION—Four hours.

This course will deal with problems of supervision in school systems. It will be of especial value to those who expect to become superintendents or supervisors.

111. PHILOSOPHY OF EDUCATION—Four hours. Required of fourth year students.

This course is designed to study the underlying philosophy of education.

113. ORGANIZATION AND ADMINISTRATION OF THE JUNIOR HIGH SCHOOL—Four hours.

In this course the following points will be considered: organization; standards for judging junior high schools; historical development; the program of studies; the daily schedule of classes; courses of study for the various subjects; the qualification of teachers, etc. After many representative junior high schools of the United States have been considered from the above-mentioned standpoints, each student will arrange a program of studies, and a course in one subject for a junior high school in some designated community.

116. THE ORGANIZATION AND ADMINISTRATION OF A SENIOR HIGH SCHOOL—Four hours.

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

133. HISTORY OF EDUCATION WITH SPECIAL REFERENCE TO MODERN TIMES—Three hours.

This course will be a general survey of the history of education. After a brief study of the contributions of the Greeks, Romans, and the Medieval Church to educational progress, 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 and a comparative study of the educational systems of the chief countries of the world.

134. HISTORY OF EDUCATION IN THE UNITED STATES—Three hours.

Beginning with the old world background this 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 interest 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.

142. CITY SCHOOL ADMINISTRATION—Four hours.

This course is designed primarily for students preparing themselves to be principals, supervisors or superintendents. All phases of city school administration will be dealt with. Particular emphasis will be placed on such subjects as employment, pay and promotion of teachers, and making of the school budget, the planning of the building program, and the development of a course of study.

143. NATIONAL, STATE AND COUNTY EDUCATIONAL ADMINISTRATION—Four hours.

This course deals with the fundamental principles of educational administration as they apply to the nation, state and county. Federal aid to education will be studied. The correct organization of a state department of education and the state's relation to certification, finance, attendance, etc., will be a part of the course. The county as a unit of administration will also be dealt with.

210. PROBLEMS OF THE SCHOOL CURRICULUM—Four hours.

This course may be substituted for Education 10 for Senior College and Graduate Students. This 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 technique of curriculum construction.

223. RESEARCH IN EDUCATION—Hours dependent upon amount of work done. Open only to graduate students.

This course is intended for advanced students capable of doing research in educational problems. Each student may choose the problem of greatest interest to him, provided sufficient opportunity is at hand for original investigation. The results of such research are to be embodied in a thesis. Conference course at hours convenient to instructor and student.

229. CURRENT EDUCATIONAL THOUGHT—Four hours.

This course will consist of reviews and discussions of recent books and magazines in the various fields of education.

## EDUCATIONAL PSYCHOLOGY

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

The department offers two curricula, the one in Psychology and the other in special School and Classes. The first prepares the student to teach psychology in normal schools and high schools and to fill such position in clinical psychology have made to such phases of education as school organization and public school systems. The second prepares the student to take charge of special schools and classes, especially such as are designed for backward and feeble-minded children. Students who elect either of these curricula are advised to take at least six courses of the curriculum of some other department.

### COURSE OF STUDY

#### Four Years for Majors in Psychology

In addition to free electives, and the core subjects listed in the year book, this department requires:

FIRST YEAR: Library Science 1, and Psychology 1 and 110.

SECOND YEAR: Psychology 3.

THIRD YEAR: Psychology 104, 105, 106, 107, and 109, Biotics 102.

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

Students who wish to major in the curriculum for teachers of special schools and classes will take Psychology 112, a course in eugenics and a course in construction work in place of Psychology 105, 108b and 212. They will also be held for some practice teaching in special classes.

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

1. CHILD HYGIENE—First Year. Four hours. Required of students who specialize in Physical Education.

The main purposes of this course are: (a) to point out how the child's school progress and mental and physical development are arrested, and how his health and behavior are impaired by the physical defects which are very prevalent among school children; (b) to discuss the causes of defects, the methods of preventing and detecting them, and the measures which are required for an effective amelioration or cure.

The following topics will be treated: educational and economic values of health; the need of health conservation; deformities and faulty postures; air requirements; malnutrition and school feeding; hygiene of the mouth; enlarged adenoids and diseased tonsils; defective hearing; defective vision.

#### 2a. EDUCATIONAL PSYCHOLOGY—Three hours.

The purposes of this course are; (a) to make the student familiar with the child's capacities, tendencies and native responses and to show him how they, and the nature and order of their development, are involved in the process of educating the child; (b) to discuss such conditions of the school-room and school activities as will avoid fatigue and promote work.

The following topics will be treated: The child's native equipment, mental work, and fatigue.

#### 108a. EDUCATIONAL TESTS AND MEASUREMENTS—Four hours. Fourth year. Required.

Chief purpose of the course: (a) to give the student a working knowledge of the best instruments for measuring the child's school progress and his performance level in the school subjects; (b) to discuss the methods of using the educational tests and tabulating the results; (c) to point out their educational significance in all of its phases.

Topics treated: Tests and standards of reading, writing, spelling, arithmetic, geography, and all the other elementary school subjects.

#### 110. GENERAL PSYCHOLOGY—Four hours.

Purposes of the course: (a) to make the student acquainted with psychological theories and concepts; (b) to discuss the nature of the mental processes; (c) to show what relations they bear to each other, due to the nervous system, to the stimuli of the external world, and to the various forms of mental and physical behavior.

Topics: Those which are listed in the textbooks on general psychology, such as the nervous system and its functions, sensations and images, attention, perception, memory, reasoning, instinct, feeling, emotion, and volition.

## Geology, Physiography, and Geography

The courses listed in this department are not review courses covering the material taught in the elementary schools. Such review courses are listed in the High School department and no credit is given for them toward graduation from the College.

Geography is a definite science in which the superstructure of commercial and human factors is built upon the foundation of climatology and geology.

The courses offered in non-resident work are in phases of the subject where laboratory and field work are not stressed. It is very difficult to do satisfactory work in a subject like mineralogy by non-resident work.

#### 2. PHYSIOGRAPHY—Four hours.

The work in this course is divided between topographic work, which embraces a study of topographic and geologic maps, and, as far as possible, field trips to type regions. Four weeks of the twelve are devoted to the study of meteorology and the observation and prediction of weather phenomena.

#### 7. BUSINESS GEOGRAPHY—Four hours.

A course primarily designed for business majors. A study of the great product areas, the human factors in production, trade routes, reasons for location of cities, and the displacement of river by railway traffic are some of the chief topics studied.

#### 103. CLIMATOLOGY—Four hours.

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

**113. MATHEMATICAL GEOGRAPHY—Three hours.**

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

**122. BIOGEOGRAPHY—Four hours.**

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

## History and Political Science

The work offered in this department includes some of the resident courses and some special courses that may be taken to advantage. The effort is made to arrange these courses on a practical basis so that they will aid the teacher who is working in the lines indicated. In nearly every phase of school work the teacher utilizes the subject matter of history, either directly or as supplementary material. The new interest that attaches to political relationships calls especially for new effort in the schools in teaching history and civics.

The department is anxious to meet the needs of teachers. If the desired work is not listed, correspond with the department concerning it.

### HISTORY

**1. AMERICAN HISTORY, 1750-1800—Four hours.**

Social and economic conditions at the close of the first century of colonization; types of colonial government; relation with the mother country; the development of self-government; conquest of French North America; new schemes of imperial control; causes of the Revolution; foreign relations; finances; the loyalists; formation of a permanent government; establishing the new government.

**2. AMERICAN HISTORY, NATIONAL DEVELOPMENT, 1820-1865—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. RECONSTRUCTION AND THE NEW UNITED STATES—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.

**5. EARLY MODERN EUROPE—Four hours.**

The development of the medieval period particularly affecting the people of modern Europe will be considered. The course will include the French Revolution and Napoleon. Interest will center around the social and industrial phases of the experiences of the people. Not open to Freshmen.

**6. MODERN EUROPEAN HISTORY—Four hours.**

This is a continuation of Course 5. The period since Napoleon will be traced through the political, social, and industrial developments. The experience of the people since 1870 will furnish the basis for understanding the more recent events. The relation of the people of the United States to European conditions will receive attention. Not open to Freshmen.

## 10. SOCIAL AND INDUSTRIAL HISTORY OF THE UNITED STATES—Four hours.

The current social and industrial conditions in the United States will be traced from their beginnings; European conditions which furnish traceable influences will be considered. Some of the subjects are the natural resources; the influence of cheap land; the effect of invention, machinery, and science; the development of agriculture and manufacture; the rise of the great industries; capitalism, business combination, and labor organization; the efforts of labor to better conditions.

## 13. THE TEACHING OF HISTORY AND CIVICS IN THE ELEMENTARY SCHOOL—Three hours.

The development of history instruction in the schools; the aims and values of history instruction; the courses of study; methods and materials for the several grades; testing results; school problems related to history, such as, the place of history in the curriculum, and the relation of history to other subjects. Prerequisite, at least one subject-matter course in American History.

## 27. CONTEMPORARY HISTORY—Two hours.

The course is concerned with current interests in this and other countries; their growth and interpretation. It includes the reading of periodicals and recent publications.

## 101. COMMERCIAL HISTORY OF THE UNITED STATES—Four hours.

English commerce in its effect upon colonization; the colonial commerce and its consequences; the several periods of American commerce, domestic and foreign; government aid; the consular service; the relation of commerce to business development; government supervision.

## 102. ANCIENT SOCIAL HISTORY—Four hours.

This is a survey of the development of society among the early peoples, with emphasis on the social and economic phases of Greek and Roman society.

## 107. THE BRITISH EMPIRE—Four hours.

The acquisition of the great colonies; commercial relations prior to 1800; development of self government; missionary movements of the nineteenth century; secret diplomacy and expansion in Asia and Africa; India; the Empire in Africa; the Empire during the World War; efforts to bring about improved imperial organization.

## 116. SPANISH-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 Panama, and the purchase of the Danish West Indies, and to the new Pan-Americanism.

## 117. THE TEACHING OF HISTORY AND CIVICS IN HIGH SCHOOLS—Three hours.

The development of instruction in these subjects in high school; their place in the high school program; aims and values of instruction; problems connected with the teaching of these subjects; the relation between history and civics teaching. Modern courses of study; evaluating results. Prerequisites, two courses in History.

## 124. HISTORY OF THE FAR EAST—Four hours.

This is a study of the modern history of Japan, China, and India with reference to their relations to Europe and the United States.

## POLITICAL SCIENCE

## 1. 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.

## 2. STATE GOVERNMENT—Four hours.

The organization and administration of state government. The government of Colorado will be the main interest of the course.

## 3. MUNICIPAL GOVERNMENT—Three hours.

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

## 101. AMERICAN DIPLOMACY—Four hours.

Foreign relations under the Federalists; establishment of an American foreign policy; Jefferson and the acquisition of Louisiana; arbitration of boundary disputes; the Monroe Doctrine; the open door policy; co-operation with other powers in the settling of international problems in Asia, Africa, and Europe; control of immigration; the Hague Conferences; diplomatic organization and procedure; the recognition of new governments; the World Court; the League of Nations; the Washington Conference.

## 102. INTERNATIONAL RELATIONS—Four hours.

In this course there is a study of the principles governing the relations of civilized nations, which includes the problems of citizenship, the position of aliens and of alien enemies, the rights of nations with respect to war, neutrality, and intervention, and the regard for treaties. American ideals, Pan-Americanism, and the League of Nations.

## 103. POLITICAL SCIENCE—Four hours.

This is an introduction to the principles of the various political organizations. The theories and forms of government, constitutions, and ideals of citizenship are included. The course should be of special interest and value as explanatory of the current political thought relative to democracy and to the radicalism that is expressed in bolshevism.

# Home Economics

The Home Economics Course not only trains teachers of Home Economics, but also trains homemakers in the selection, use and care of materials for the home. It has as an ideal the establishment of sane standards of living, including the economic, social and esthetic sides of life.

## 1. TEXTILES—Four hours.

A study of the characteristics of the chief fibers used in household fabrics. A full study of cotton, linen, silk and wool, together with the different fabrics made from each, and how to know them. The study of weaves in cloth. How to determine the adulteration of wool, linen, and silk. The chemical and physical tests of each. How to buy to the best advantage.

## 5. DRAFTING AND PATTERN MAKING—Four hours.

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

## 7. HOUSEHOLD MANAGEMENT—Two hours. Required of all graduates. Prerequisites—Food and Cookery 1a, 2a and 3.

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

## Industrial Arts

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

### 5. PRINCIPLES OF TEACHING PRACTICAL ART SUBJECTS—Three hours.

The aim of this course is to give a better understanding of the underlying principles essential in teaching, and involves a study of the classroom, laboratory, shop and studio methods and practice. In general, the topics discussed will be what is to be taught in the practical arts field, the illustrative materials essential for good teaching, and the method of attack of a single lesson or series of lessons, type and illustrative lessons and the place of the arts in the curriculum of the public schools.

### 10. MECHANICAL DRAWING—Two or four hours. For art majors.

This course is designed to give a knowledge of the use of drawing equipment and materials. Problems presented include geometrical drawing, elements of projection, development of surface, isometric and oblique projections, simple working drawings and lettering. This course is planned for beginners who have had no technical drawing.

### 12. PRINCIPLES OF ARCHITECTURAL DRAWING I—Four hours.

This course includes the making of complete designs of simple one-story cottages, together with details and specifications of same.

## Literature and English

The department of Literature and English offers the following courses, selected from those given in residence at the College. Graduate credit may be secured in some courses, indicated by a supplementary number over 200.

### 1. MATERIAL AND METHODS IN READING AND LITERATURE—Four hours.

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 the grades; practice in the organization and presentation of type units, including dramatization and other vitalizing exercises. A somewhat flexible course, affording opportunity for intensive work within the scope of any grade or grades, according to the individual need or preference.

### 6. AMERICAN LITERATURE—Four hours.

A course in American literature following the plan of Courses 8, 9, and 10 in English literature.

### 8. THE HISTORY OF ENGLISH LITERATURE—Four hours.

A reading course following the development of our literature from 670 to 1625.

### 9. THE HISTORY OF ENGLISH LITERATURE—Four hours.

A reading course following the development of our literature from 1625 to 1798.

### 10. THE HISTORY OF ENGLISH LITERATURE—Four hours.

### 20. (220). ADVANCED COMPOSITION—Prerequisite, English 4. Four hours.

This course is planned for students who have passed English 4 and wish to get further practice in the usual forms of composition and do not care to go into the newspaper writing provided for in the courses numbered 100, 101, and 102.



## 31. 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. The course is based upon Mr. Cross' book, "The Short Story," supplemented by O'Brien's "The Best Short Stories" and other recent volumes. Current magazine stories are also used.

## 125. NINETEENTH CENTURY PROSE—Four hours.

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

## 127. 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.

## 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 PLAYS—Four hours.

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

## Mathematics

Courses in mathematics are especially well suited to non-resident work by reason of their definiteness. The texts used in this work have been selected with special reference to their clearness of statement and logical arrangement of material. Anyone who has had the preparatory work may take up the courses outlined here with ease and profit.

## 1. SOLID GEOMETRY—Four hours.

The ordinary propositions and exercises of this subject are given. Special attention is given to practical applications.

## 2. PLANE TRIGONOMETRY—Four hours.

The solution of the right triangle with numerous practical applications secured by the use of surveyors' instruments in the field; the development of the formulas leading up to the solution of the oblique triangle.

## 5. COLLEGE ALGEBRA—Four hours.

This course opens with a thorough review of Elementary Algebra with a view to giving a clear knowledge of the principles of the subject. It continues with permutations and combinations, the progressions, and the function and its graphs.

## 6. COLLEGE ALGEBRA—Four hours.

A continuation of Course 5 dealing with logarithms, variables and limits, theory of equations, and infinite series. Throughout the needs of the prospective teacher are constantly kept in view.

## 7. ANALYTIC GEOMETRY—Four hours. Prerequisite, Math. 2.

This course opens up to the student, in a small way, the great field of higher mathematics. It also connects closely with the subject of graphs in Algebra and forms the basis of the work in the Calculus.

## 9. THE TEACHING OF ARITHMETIC—Four hours.

This course will follow the same lines as Course 8 but in greater detail. It will also give more attention to the development of the principles of the Arithmetic itself.

## 100. THE TEACHING OF SECONDARY MATHEMATICS—Two hours.

This course is designed to place before the prospective teacher the best educational thought of the day relating to High School Algebra, Geometry and Trigonometry. Consideration is given to the educational value of these subjects, to the recent improvement in teaching them, and to all problems arising in the work of the modern teacher of secondary mathematics.

## 101. DIFFERENTIAL CALCULUS—Four hours.

Prerequisites: Math. 2, 5, 6, and 7. An introduction to the powerful subject of the Calculus. While care is taken to see that the formal side of the subject is mastered, many problems of a practical nature are introduced from the realms of Geometry, Physics, and Mechanics.

## 102. INTEGRAL CALCULUS—Four hours.

Prerequisites: Math. 2, 5, 6, 7, and 101. This course takes up the ordinary formulas for integration and the commoner applications of the Integral Calculus.

## 103. THEORY OF EQUATIONS—Four hours.

Prerequisites: Math. 2, 5, 6, and 7. The course deals with the graph, complex number, cubic and quartic equations, symmetric functions and determinants.

## 200. ADVANCED DIFFERENTIAL CALCULUS—Four hours.

Prerequisites: Math. 2, 5, 6, 7, 101, 102. A discussion of problems given over largely to applications of the Calculus.

## 201. DIFFERENTIAL EQUATIONS—Four hours.

Prerequisites: Math. 2, 5, 6, 7, 101, 102. A discussion of problems which lead to differential equations and of the standard methods of their solution.

### Music

The Department of Music is maintained primarily in order that teachers may be thoroughly trained to teach music in the public schools.

## 20. HISTORY OF ANCIENT AND MEDIEVAL MUSIC—Three hours.

A cultural course open to all students. Study of the development of music up to and including Beethoven. The lives of the composers are studied and the student will become acquainted with the style of their composition.

### Romance Languages

Courses are offered in the following languages: French, Spanish, and Latin.

#### FRENCH

## 1. FIRST YEAR FRENCH—Four hours.

Chardenal's First Year French and easy readings.

## 2. FIRST YEAR FRENCH—Four hours.

Grammar and reader continued.

## 3. FIRST YEAR FRENCH—Four hours.

Grammar completed. *Les Aventures du celebre Pierrot*.

## 5. INTERMEDIATE FRENCH—Four hours.

*Les Contes de Maupassant* and *Lavisse's Histoire de France*.

## 7. INTERMEDIATE FRENCH—Four hours.

Daudet's *Le Babab*, *Le Petit Chose*, and *Morceaux Choisis*.

## 9. INTERMEDIATE FRENCH—Four hours.

Sans *La Mare au Diable*, *La Famille de Germander*, and *Les Ailes du Courage*.

## 105. ADVANCED FRENCH—Four hours.

Dumas' *Monte Cristo*, *Vingt Ans Apres*, and *L'Homme Au Masque de Fer*.

## 107. ADVANCED FRENCH—Four hours.

Hugo's *Notre Dame de Paris* and *Les Miserables*.

## 109. ADVANCED FRENCH—Four hours.

Hugo's *Bug Jargal*, *Hernani*, and *Ruy Blas*.

## SPANISH

## 1. FIRST YEAR SPANISH—Four hours.

Wagner's *Spanish Grammar* and elementary reader.

## 2. FIRST YEAR SPANISH—Four hours.

Wagner's *Grammar*, *Espana Pintoresca* by Dorado.

## 3. FIRST YEAR SPANISH—Four hours.

Grammar completed. *El Pajaro Verde* and *Fortuna*. Crawford's *Spanish Composition*.

## 5. INTERMEDIATE SPANISH—Four hours.

Alarcon's *Novelas Cortas* and *El Final de Norma*.

## 7. INTERMEDIATE SPANISH—Four hours.

Escrich's *Amparo* and Benavent's *Ganarse la Vida*.

## 9. INTERMEDIATE SPANISH—Four hours.

Selgas' *La Mariposa Blanca* and de la Vega's *El Indiano*.

## 105. ADVANCED SPANISH—Four hours.

Modern Spanish Drama. Echagaray's *El Gran Galeoto* and *O Locura o Santidad*.

## 107. ADVANCED SPANISH—Four hours.

Modern Spanish Drama. Galdos' *Dona Perfecta* and *Mariucha*. Original compositions.

## 109. ADVANCED SPANISH—Four hours.

Modern Spanish Drama. Tamayo's *Y Baus'* *Un Drama Nuevo* and Du Ponce's *El Ultimo de Su Raza*.

## 225. GRADUATE SPANISH—Three hours.

Ford's *Old Spanish Readings*.

## LATIN

## 10. FRESHMAN COLLEGE LATIN—Four hours.

Nutting's *Latin Reader* and selections from *Eutropius*.

## 12. FRESHMAN COLLEGE LATIN—Four hours.

Gleason's *Gate to Vergil* and other texts.

## 14. FRESHMAN COLLEGE LATIN—Four hours.

Schlichter's *Latin Plays*.

## 110. ADVANCED LATIN—Four hours.

Cicero's *Selected Letters*. (Not offered in 1924-25.)

## 112. ADVANCED LATIN—Four hours.

The *Agricola* and *Germania* of Tacitus.

## Sociology

### 1. AN INTRODUCTION TO THE SOCIAL SCIENCES—Four hours.

A general conspectus of social evolution, with emphasis upon the origin and development of man, races, language, and literature, the sciences, the arts, the state, government, and religion. This course should be taken before Sociology 105. A printed syllabus is used.

### 2. EARLY CIVILIZATION—Four hours.

Types of early civilization are studied, including those of the American Indian, the Cliff Dwellers, African tribes, Esquimaux, etc. Text and readings.

### 3. EDUCATIONAL SOCIOLOGY—Three hours.

This course presents the sociological conception of education with certain sociological principles and their application in education. Text or syllabus and special readings. Prerequisite: Biology 2. Required of first year students.

### 105. PRINCIPLES OF SOCIOLOGY—Four hours.

This course is a study of the scope and history of sociology, sketches of the leading contributors to this science, and an exposition of its main principles as set forth systematically in a selected text. Lectures, readings, and reports.

### 132. THE FAMILY—Three hours.

A study of the evolution of the family with emphasis on the modern situation. Particular attention will be paid to the relationship of the family to education, industry, and ethics.