



LB  
1840  
G7  
1927-28  
c.2

Bulletin

74575

LB  
1840  
G7  
1927-28  
c.2

Bulletin

74575





COLORED COPY  
REPRODUCED FROM  
ORIGINAL COPY

*This Volume*  
*was bound in the Bindery*  
*of*  
Colorado State Teachers  
College  
Greeley, Colorado

By *Grace Alma Taylor*  
*Winter* Quarter, 19*30*



COLORADO STATE TEACHERS COLLEGE

# BULLETIN



## CATALOG AND YEAR BOOK 1927-1928

GREELEY

SERIES XXVII

APRIL

NUMBER 1



**COLORADO STATE TEACHERS COLLEGE**  
**BULLETIN**

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

**Current numbers of any of the College Publications may be had on application to the President of the College, Greeley, Colorado.**

LB1840  
G7  
1927-28  
c.2

Colorado State Teachers College  
Bulletins  
1927 - 28  
Series 27  
Table of Contents

Colorado State Teachers College Bulletin.  
Catalog and Year Book 1927-28. April.  
Series 27, No.1.

Colorado State Teachers College Bulletin.  
Freshman Enrollment. September 21-26,  
1927. Series 27, No.2.

Colorado State Teachers College Bulletin.  
The Graduate School. Rules and  
Regulations, June 1927. Series 27,  
No.3.

Colorado State Teachers College Bulletin.  
Course of Study in Health Education.  
July, 1927. Series 27, No.4.

Colorado State Teachers College Bulletin.  
High School Opportunities in Colorado.  
August, 1927. Series 27, No.5.

Colorado State Teachers College Bulletin.  
Advanced Course in Nursing Education.  
Summer Quarter, Greeley, Colorado, June  
16-July 21 1928. Series 27, No.6.

Conservatory of Music. Colorado State  
Teachers College. October, 1927.  
Series 27, No.7.





1927-28

Industrial Arts. Colorado State Teachers College. November, 1927. Series 27, No.8.

Colorado State Teachers College Bulletin. Hand Book of the Extension Service. January, 1928. Series 27, No.10.

Colorado State Teachers College Bulletin. Teachers College High School. Summer Quarter 1928. Series 27, No.11.

Colorado State Teachers College Bulletin. School for Custodians, Janitors, and Engineers. March, 1928. Series 27, No.?.

Lectures, Entertainments, and Book Reviews. Summer Quarter, 1928, June 18 to August 25. (no number.)

Colorado State Teachers College Bulletin. Summer Quarter June 16-August 25, 1928. Series 27, No.11.



CATALOG  
AND  
YEAR BOOK

COLORADO STATE TEACHERS COLLEGE

1927—1928

GREELEY, COLORADO  
PUBLISHED BY THE COLLEGE  
APRIL, 1927



## 1927—THE COLLEGE CALENDAR—1928

### FALL QUARTER

<i>Sept. 21,</i>	<i>Wednesday</i> .....	Freshman Week begins; 10:30, Little Theater
<i>Sept. 26,</i>	<i>Monday</i> .....	Registration of Freshmen
<i>Sept. 27,</i>	<i>Tuesday</i> .....	Registration of Upper Classmen
<i>Sept. 28</i>	<i>Wednesday</i> .....	Classes begin
<i>Nov. 11,</i>	<i>Friday</i> .....	Armistice Day (Holiday)
<i>Nov. 24-25,</i>	<i>Thursday, Friday</i>	Thanksgiving (Holiday)
<i>Dec. 10,</i>	<i>Saturday</i> .....	Advance Registration for Winter quarter
<i>Dec. 18,</i>	<i>Sunday</i> .....	Christmas Vacation begins

### WINTER QUARTER

<i>Jan. 3,</i>	<i>Tuesday</i> .....	Classes begin
<i>Feb. 22,</i>	<i>Wednesday</i> .....	Washington's Birthday (Holiday)
<i>Mar. 10,</i>	<i>Saturday</i> .....	Advance Registration for Spring quarter
<i>Mar. 17,</i>	<i>Saturday</i> .....	Quarter Ends

### SPRING QUARTER

<i>Mar. 20,</i>	<i>Tuesday</i> .....	Classes begin
<i>May 4,</i>	<i>Friday</i> .....	Insignia Day
<i>May 30,</i>	<i>Wednesday</i> .....	Memorial Day (Holiday)
<i>June 2,</i>	<i>Saturday</i> .....	Commencement

### SUMMER QUARTER

<i>June 16,</i>	<i>Saturday</i> .....	Registration for Summer quarter
<i>June 18,</i>	<i>Monday</i> .....	Classes begin
<i>July 4,</i>	<i>Wednesday</i> .....	(Holiday)
<i>July 21,</i>	<i>Saturday</i> .....	First Half ends (Registration for second half quarter)
<i>July 23,</i>	<i>Monday</i> .....	Second Half begins
<i>Aug. 25,</i>	<i>Saturday</i> .....	Summer Convocation

## IMPORTANT ANNOUNCEMENT

CERTIFICATE OF HIGH SCHOOL GRADUATION.—Students enrolling for the first time in the College and those whose admission to the College has not yet been formally arranged must obtain a "College Matriculation Blank" from the registrar. This blank includes a formal application for admission, a transcript of entrance subjects and a recommendation from the principal or superintendent. Send the application to your principal or superintendent who will forward the same, completed, direct to the registrar. The prospective student should have received a report on the basis of his admission before coming to register. Do not present a diploma unless full and complete data indicated above are not available.

Special summer students may not consider themselves candidates for graduation until properly matriculated. This means that entrance credits must be presented, as indicated above, unless admission is accepted in any other approved manner. All students, even though once graduated, are required to readjust their admission to correspond with entrance standards now effective.

Students not high school graduates may be admitted conditionally upon presenting a transcript showing the completion of fourteen units, in designated groups. This condition must be removed during the first year by taking one unit of work in Teachers College High School.

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

TABLE OF CONTENTS

TABLE OF CONTENTS

- LB  
1840  
G-7  
1927-28
- PART I—Organization of the College
- C. 2 1—The Board of Trustees
- a—Members
  - b—Officers
  - c—Officers of administration
  - d—Graduate Council
- 2—Professional Staff
- a—The faculty
    - (1) Members of the faculty
    - (2) Special faculty for the Summer Quarter, 1927

PART II—General Information

- 1—Historical sketch
- 2—Location
- 3—Plant
- 4—The campus
- 5—School garden
- 6—Departmental museums
- 7—Equipment
- 8—Greeley water
- 9—Maintenance of the College
- 10—Government
- 11—Function of the College
- 12—Standard of the College
- 13—Fees and expenses
- 14—Rooming regulations
- 15—The summer quarter
- 16—Training Schools
  - a—Elementary
  - b—Secondary
  - c—Requirements in student teaching
- 17—Extension Department
- 18—Teachers' Placement Bureau
- 19—Religious associations
- 20—Student loan funds
- 21—Scholarships
- 22—Honorary fraternities
- 23—Gifts to the College

PART III—Admission, Graduation, Credits

- 1—Admission
- 2—Graduation
- 3—Credits
- 4—Enrollment

PART IV—Graduate Work

- 1—The nature of graduate work
- 2—Admission to candidacy for degree
- 3—Requirements for the degree
- 4—Fellowships
- 5—Scholarships

PART V—Court of Study

- 1—Statement of content by departments

PART VI—Program of Courses for 1927-28

Index

74575





PART I  
ORGANIZATION OF THE COLLEGE



OFFICERS OF GOVERNMENT AND ADMINISTRATION

HARRY V. KEPNER, Sc.D.  
 President of the Board of Trustees  
 GEORGE WILLARD FRASIER, Ph.D., LL.D.  
 President of the College

BOARD OF TRUSTEES

(Appointed by the Governor of the State of Colorado)

EARL M. HEDRICK ..... Wray, Colo.  
 CHARLES N. JACKSON ..... Greeley, Colo.  
 HARRY V. KEPNER, Sc.D. .... Denver, Colo.  
 WILLARD E. LETFORD ..... Johnstown, Colo.  
 CLIFFORD P. REX, D.D.S. .... Alamosa, Colo.  
 E. M. RUSSELL, M.D. .... Gunnison, Colo.  
 KATHERINE L. CRAIG ..... Denver, Colo.  
 (State Superintendent of Public Instruction, Ex-Officio)

OFFICERS OF THE BOARD OF TRUSTEES

DR. KEPNER ..... **President**  
 DR. RUSSELL ..... **Vice-President**  
 MR. McMURDO ..... **Secretary**  
 DR. KEPNER, MR. LETFORD, MR. JACKSON .....  
 ..... **Executive Committee for Colorado State Teachers College**

OFFICERS OF ADMINISTRATION

GEORGE WILLARD FRASIER, Ph.D., LL.D. .... **President of the College**  
 ETHAN ALLEN CROSS, Ph.D. .... **Vice-President of the College**  
 WINFIELD DOCKERY ARMENTROUT, Ed.D. .... **Director of Instruction**  
 ..... **Director of Training Schools**  
 A. EVELYN NEWMAN, A.M. .... **Dean of Women**  
 FREDERICK LAMSON WHITNEY, Ph.D. .... **Director of Research**  
 JOHN R. BELL, Litt.D. .... **Director of Extension Service**

THE GRADUATE COUNCIL

FRANK COVERT JEAN, Ph.D. .... **Chairman**  
 J. D. Heilman, Ph.D.; Earle U. Rugg, Ph.D.; O. M. Dickerson, Ph.D.;  
 W. G. Bowers, Ph.D.; F. L. Whitney, Ph.D.; W. D. ArmentROUT, Ed.D.;  
**President and Vice-President of the College ex-officio**

ROY M. CARSON ..... **Registrar**  
 J. P. CULBERTSON ..... **Business Agent**  
 W. F. McMURDO ..... **Treasurer**  
 RUTH L. GUNSAUL ..... **Secretary to the President**

## THE FACULTY

GEORGE WILLARD FRASIER

*President*

A.B., Michigan State Normal College; A.M. Leland Stanford Junior University; Ph.D., Columbia University; LL.D., Colorado College; Instructor in Science, Harbor Beach, Michigan; Superintendent of Schools, Coleman and Mayville, Michigan; Director of Research and Professor of Education, State Teachers College, Cheney, Washington; Associate in Educational Administration, Teachers College, Columbia University; Director Department of Classification and Statistics, Denver Public Schools; Author "The Control of City School Finances;" Joint Author, "An Introduction to Education;" Phi Delta Kappa; Kappa Delta Pi.

WINFIELD DOCKERY ARMENTROUT

*Director of Instruction;*  
*Director of Training Schools;*  
*Professor of Education*

A.B. Missouri Valley College; A.M. Columbia University; Ed. D., Harvard University; Graduate Student, Ohio State University; Instructor, Chanute, Kansas, High School; Instructor, Fort Scott, Kansas, High School; Head of Normal Training Department, Topeka, Kansas, High School; Associate Professor of Education and Psychology and Principal of the Secondary Training School, Kansas State Teachers College, Pittsburg; Principal, Lawrence, Kansas, Junior High School; Curriculum Specialist, Denver Public Schools; Extension Lecturer, Boston University; Joint Author, "An Introduction to Education;" Phi Delta Kappa; Kappa Delta Pi; Pi Kappa Delta.

\*GRACE M. BAKER

*Professor of Art*

B.S., Teachers College, Columbia University; B. Art. Ed., Chicago Art Institute; Student, Illinois State Normal University; Student, University of Chicago; Student, School of Applied Arts, Chicago; Teacher of Art, Chicago Art Institute; Supervisor of Drawing, Shawnee, Oklahoma; Head of Art Department, State Normal School, Edmond, Oklahoma; Head of Art Department, State Normal School, Whitewater, Wisconsin; Kappa Delta Pi.

GEORGE ALEXANDER BARKER

*Professor of Geology, Geography,*  
*and Physiography*

B.S., M.S., University of Chicago; Graduate Scholarship in Geography, University of Chicago; Department of Physiography, Joliet High School; Assistant Professor of Geography, Illinois State Normal University; Head of the Department of Geography, Colorado Springs High School; Instructor in Geology, Colorado College; Author, "Geography of Colorado," Colorado Supplement, Smith's Human Geography; Sigma Xi.

SAMUEL CLAY BEDINGER

*Assistant Professor of Commercial Education*

LL.B., La Salle Extension University, Chicago; Admitted to Oklahoma Bar; Instructor, Normal Business College, Springfield, Missouri; Head of Commercial Department, Oklahoma A. and M. College; Professor of Law, Oklahoma A. and M. College.

JOHN RANDOLPH BELL

*Director of Extension Service;*  
*Professor of Extra-mural Education*

Pd.B., Colorado State Teachers College; Ph.B., A.M., University of Colorado; Litt.D., University of Denver; Principal City Schools, Alma, Colorado; Principal of Byers School, Edison School, Denver, Colorado; Supervisor of Denver Playgrounds; Principal of Teachers College High School, Colorado State Teachers College.

WILFRED GEORGE BINNEWIES

*Associate Professor of Sociology*

A.B., DePauw University; A.M., University of Chicago; Graduate Student University of Minnesota; Professor of Education and Athletic Director, Shurtleff College; Director of Athletics and Instructor in History and German, Illinois State Normal University; Professor of Sociology and Education, Fairmount College; Instructor in Sociology, University of Minnesota; Phi Delta Kappa; Pi Kappa Delta.

\*On leave.

**\*RALPH THOMAS BISHOP***Associate Professor of Industrial Arts*

A.B., Colorado State Teachers College; Graduate in Manual Arts, Western Illinois State Normal School; Graduate, Inland Printer Technical School; Student, University of Chicago; Instructor, Western Illinois State Normal School; Instructor, Edmonton, Canada, Technical School; Member Advisory Editorial board, "The Printing Instructor."

**HAROLD GRANVILLE BLUE***Professor of Education*

A.B., A.M., Colorado State Teachers College; Student, Indiana State Normal School; Student, University of Chicago; Head of Department of Mathematics, Junior High School, Goshen, Ind.; Superintendent of City Schools, Twin Falls, Idaho; Director of Teachers Institutes, South Central District, Idaho; Associate Editor of "Idaho Teacher;" Instructor in Education, Idaho Technical Institute, Summer Session, 1919; Associate Professor of Education, University of Idaho, Summer Session, 1920; Instructor in the History of Education, University of Chicago, Summer quarter, 1927; Principal of Teachers College High School, Colorado State Teachers College, 1923-1926; Kappa Delta Pi; Phi Delta Kappa.

**LESTER WELLS BOARDMAN***Professor of Literature and English*

A.B., A.M., Brown University; A.M. in Education, Teachers College, Columbia University; Student, Colgate University; Graduate Student, University of Chicago; Instructor in English, Cook Academy, Montour Falls, N. Y.; Teacher, University School, Providence, R. I.; Head of English Department, City College, Baltimore, Md.; Head of English Department, Rhode Island State College, Kingston, R. I.; Army Educational Corps Overseas, with Seventh Army Corps; Staff Assistant, Carnegie Foundation, New York; Exchange Professor in University of London, 1925-26; Editor of "Modern American Speeches;" Joint author of "A Supplementary Reading List for High School English," and "Standards for Determining the Collegiate Rank of Subjects;" Phi Kappa Phi; Kappa Delta Pi; Pi Kappa Delta; Phi Delta Kappa.

**WILLIAM GRAY BOWERS***Professor of Chemistry*

B.S., Ohio Wesleyan University; A.M., Indiana University; Ph.D., Ohio State University; Special Work, University of California; Teacher, Public Schools, West Virginia; Instructor, High School Sciences at Leesburg, Ohio; Professor of Chemistry and Physics, State Normal School, Ellendale, North Dakota; Professor of Food Chemistry, Agricultural College, Fargo, North Dakota; Author, "Food Values in the Soy Bean."

**MARGARET ELIZABETH BRYSON***Medical Adviser of Women;  
Associate Professor of Physical Education*

M.D., University of Colorado.

**JEANETTE HELEN CAMPBELL***Assistant to the Dean of Women;  
Assistant Professor of English*

A.B., Colorado State Teachers College; Teacher of Literature and English, Pueblo County High Schools; Principal, Consolidated Schools, Pueblo County; Teacher of Literature and English, City Schools of Pueblo.

**ALBERT FRANK CARTER***College Librarian;  
Professor of Library Administration*

M.E., M.S., Indiana, Pennsylvania, State Normal School; A.B., Colorado State Teachers College; Graduate Student, Chicago University; Member Colorado State Library Commission; Teacher, Public Schools, Tyrone, Pennsylvania; Assistant Professor of Mathematics, Botany and Physiology, Indiana, Pennsylvania, State Normal School.

**JEAN CAVE***Director of Physical Education for Women;  
Professor of Physical Education*

B.S., State Teachers College, Hays, Kansas; A.M., Teachers College, Columbia University; Physical Education Instructor, Hill City, Kansas, High School; Superintendent of Schools, Paradise, Kansas; Supervisor Physical Education, Public Schools, Concordia, Kansas; Assistant Instructor Physical Education, State Teachers College, Hays, Kansas.

**J. ELBERT CHADWICK***Instructor in Piano and Organ*

Graduate, College of Fine Arts, Syracuse, New York; Student of Widor, Fontainebleau, France; awarded Premier Prix; Graduate Student of Dr. Adolf Frey, Syracuse; Head of Piano and Organ Department, Intermountain Union College, Helena, Montana; Head of Organ and Theory Departments, Mt. Allison College, Sackville, N. B., Canada.

\*On leave.

**HARRY WILLIAM CHARLESWORTH***Acting Assistant  
Professor of Mathematics*

A.B., A.M., Colorado State Teachers College; Student, University of Colorado; Principal, Junior High School, Sugar City, Colorado; Principal, High School, Johnstown, Colorado; Superintendent, City Schools, Eads, Colorado; Teaching Fellow, Department of Mathematics, Colorado State Teachers College; Kappa Delta Pi; Phi Delta Kappa.

**MARY MUNCY CHURCH***Instructor in Old Testament Literature*

A.B., A.M., Alfred University, Alfred, New York; Teacher of High School English, Latin, and History, Cincinnatus and Lisle, New York; Professor of History and Greek, Salem College, Salem, West Virginia.

**J. DE FOREST CLINE***Director of the Conservatory of Music;  
Professor of Public School Music*

Graduate in Music, Washington State College; Graduate Student, Columbia University; Voice under Percy Rector Stevens; Composition under Arthur Edward Johnston; Director of Music at Chehalis, Washington, State Training School; Head of Department of Music and Dramatic Art, State Teachers College, Cheney, Washington; Phi Mu Alpha, Sinfonia, Kappa Delta Pi.

**AMBROSE OWEN COLVIN***Professor of Commercial Education*

B.C.S., Denver University; Graduate Student, University of California; Graduate, Tarkio College, Tarkio, Mo.; Professor of Commerce, Stanberry Normal, Stanberry, Missouri; Head of Commercial Department, Berkeley High School, Berkeley, California; Head of Bookkeeping Department, Central Business College, Denver, Colorado; Head Bookkeeping Department, Coffeyville Business College, Coffeyville, Kansas; Teacher, Cass Technical High School, Detroit, Michigan.

**GEORGE EDWIN COOPER***Director of Athletics for Men;  
Professor of Physical Education*

Pd.B., Pd.M., Slippery Rock, Pennsylvania, State Normal; Student, University of Illinois; Student, Harvard University; Assistant Instructor, Basketball, Harvard University; Principal, Junior High School, Fort Morgan, Colorado; Physical Director, Arizona Normal School, Tempe, Arizona.

**CLARE BROWN CORNELL***Professor of Educational Administration*

Ed. B., Nebraska State Teachers College; A.B., A.M., Ph.D., University of Nebraska; Graduate Student, Teachers College, Columbia University; Associate Professor of Mathematics in Nebraska (Peru) State Teachers College; Assistant in Psychology, University of Nebraska; Associate Professor of Psychology, University of Kentucky; Supervisor of Boys' Vocational Work, Public Schools, Lincoln, Nebraska; Division Director Post-War Services, American Red Cross; Superintendent of Schools, Shaker Heights, Ohio; Instructor in Educational Administration, Summer Quarter, University of Virginia; Member Field Staff, Hammonton, New Jersey, Survey; Author "A Graduated Scale for Determining Mental Age"; "A Teachers' Salary Schedule"; Sigma Tau, Acacia, Phi Delta Kappa.

**NELLE CATHERINE CRATES***Assistant Professor of Foreign Languages*

A.B., Ohio Wesleyan University; A.M., Ohio State University; Student, University of Dijon, summer 1921; Student, University of Strasbourg, 1921; Student, Institute of Touraine, 1926; Instructor in French, Ohio Wesleyan University; Teacher in Latin, Central High School, Findlay, Ohio.

**ETHAN ALLEN CROSS***Vice-President of the College;  
Professor of English*

A.B., University of Illinois; A.M., University of Chicago; Ph.D., Columbia University; Student, Southern Illinois State Teachers College and Cornell University; High School Principal and Public School Superintendent, 1900-1904; Author: "The Short Story," "The Little Grammar," "The Cross English Test," "The Little Book of English Composition," "Story Telling for Teachers" (Joint authorship); "Fundamentals in English," Kappa Delta Pi, Phi Delta Kappa, Phi Beta Kappa.

**LILLIAN GRACE CUSHMAN***Assistant Librarian;  
Instructor in Library Administration*

Pd.B., Colorado State Teachers College; Assistant in Children's Department, Greeley Public Library.

HELEN CALDWELL DAVIS

*Principal of Teachers College  
Elementary School;  
Professor of Elementary Education*

A.B., Grinnell College; A.M., University of Iowa; Instructor, History and German, West Liberty, Iowa, High School; Teacher, Sixth Grade, University Elementary School, University of Iowa; Grade Supervision, State Normal School, San Francisco, California; Phi Beta Kappa, Phi Lambda Theta.

LUCY DELBRIDGE

*Instructor in Violin*

Pd.B., Colorado State Teachers College; Pupil of Abramowitz, New York; Pupil of Lemaitre, Paris.

OLIVER MORTON DICKERSON

*Professor of History and Political Science*

A.B., A.M., Ph.D., University of Illinois; Graduate, Illinois State Normal University; Thayer Scholarship, Graduate School, Harvard University; Principal of Schools, Macomb, Illinois; Teaching Fellow, University of Illinois; Instructor in History, Summers, Illinois State Normal University and University of Illinois; Head of Department of History, State Teachers College, Macomb, Illinois; Head Department of History and Social Science, State Teachers College, Winona, Minnesota; President State Teachers College, Moorhead, Minnesota; U. S. Army, 1917-1919; Commission, Captain Infantry, N.A., Major Infantry, U. S. A.; Author, "American Colonial Government," "History of the Illinois Constitutional Convention of 1862," "An Illinois Supplement to Woodburn and Moron's School History of the U. S.;" Phi Beta Kappa.

J. S. DOUBENMIER

*Assistant Professor of Physical Education;  
Training Teacher, Teachers College Elementary and  
Secondary Schools*

A.B., Colorado State Teachers College; Student, Coe College; Student Iowa University; Physical Director, Polk and Madison Junior High Schools, Cedar Rapids, Iowa; Assistant Director of Athletics and Director of Physical Education, Pueblo, Colorado, Public Schools.

ETHEL TURNER DULIN

*Associate Professor of Primary Education*

B.S., George Peabody College for Teachers; Student, Randolph Macon Woman's College, Lynchburg, Virginia; Student, University of Tennessee; Teacher, Public Schools of Kentucky and Tennessee; Instructor in Institutes of Perry, Overton, Williamson, and Stewart Counties, Tennessee; Peabody Extension Instructor, Hot Springs, Arkansas; Supervisor Primary Grades, State Normal School, Conway, Arkansas; Teacher, Demonstration School, George Peabody College; Instructor, Summer Session, State Normal School, Harrisonburg, Virginia.

GEORGE WILLIAM FINLEY

*Professor of Mathematics*

B.S., M.S., Kansas State Agricultural College; Student, Teachers College, Columbia University; Student, Kansas State Normal School; Student, University of Chicago; Teacher, County Schools of Kansas; U. S. Army, Spanish-American War; Teacher in City Schools, Wauneta, Kansas; Principal of School, Peru, Kansas; Head of the Department of Mathematics, Oklahoma University Preparatory School.

CHESTER KIMES FLETCHER

*Assistant Professor Extra-Mural Education*

A.B., Pacific University; A.M., Colorado State Teachers College; Instructor, Modern Languages, Principal, Pueblo, Colorado, High School; Principal, Natrona County High School, Casper, Wyo.; Chairman Board of Directors, Colorado Education Association, 1922; U. S. Army 1918-19; commission, Captain Field Artillery; Kappa Delta Pi; Phi Delta Kappa.

CHARLES MEADE FOULK

*Professor of Industrial Arts*

Pd.B., Pd.M., Colorado State Teachers College; Student, Edinboro State Normal School; Graduate, Architectural Course, International Correspondence School; Building Foreman and Superintendent in Pennsylvania, Idaho, Colorado, and Washington; Conducted Classes in Trade Problems in Pennsylvania, Idaho, and Colorado.

ELLEN LOUISE GOEBEL

*Associate Professor of Secondary  
Foreign Languages;  
Training Teacher, Teachers College High School*

Pd.B., State Teachers College, Warrensburg, Missouri; A.B., B.S., in Ed., University of Missouri; A.M., University of Chicago; Student in Middlebury College, Vermont; University of California, University of Washington, Porto Rico, Madrid, Paris, University of Mexico; Head of Department of Modern Languages, Twin Falls, Idaho, High School; Head of Department of Foreign Languages, Tulsa, Oklahoma, Central High School.

**J. ALLEN GRUBB***Instructor in Voice*

Graduate of The Western Conservatory of Music, Chicago, Illinois. Has studied with a number of leading vocal teachers throughout the United States, among whom are John F. Jones, University of California; Wm. Claire Hall, Chicago; John C. Wilcox, Denver. Over fifteen years' experience in teaching, singing, Oratorio and Opera and in recital-concert tours.

**ELLA FRANCES HACKMAN** *Associate Professor of Secondary Social Science,  
Training Teacher, Teachers College High School*

B.S., Diploma in Normal School Supervision, Teachers College, Columbia University; Student, University of Tennessee, University of Virginia; Teacher, Hood River, Oregon; Teacher of History, Kimberly, Idaho; Twin Falls, Idaho; Instructor, Summer Session, West Tennessee State Normal School, Memphis, Tennessee.

**SAMUEL MILO HADDEN***Professor of Industrial Education*

Pd.B., Colorado State Teachers College; A.B., A.M., University of Denver; Student, Cooper Memorial College, Sterling, Kansas; Student, Teachers College, Columbia University; Student, Chicago University; Teacher, Sterling, Kansas; Teacher, Tawner, Colorado; Honorary State Diploma; Graduate Student, State University of California; Lecturer, State Teachers College, San Jose, California.

**JOHN W. HANCOCK, JR.***Assistant Coach Men's Athletics  
Assistant Professor of Physical Education*

A.B., State University of Iowa; Sigma Nu, A. F. I., Iota Delta Chi.

**WILLIAM HENRY HARGROVE***Professor of Rural and  
Agricultural Education*

Pd.B., State Normal School, Cape Girardeau, Missouri; B.S., in Education and B.S. in Agriculture, University of Missouri; Teacher, Missouri Rural Schools; Principal, Sikeston, Missouri, High School; Superintendent of City Schools, Bloomfield, Missouri; Superintendent of Extension Schools and Farmers' Meetings, College of Agriculture, Missouri University.

**EZRA CLARENCE HARRAH***Associate Professor of Zoology*

A.B., Southwestern College, Winfield, Kansas; A.M., Ph.D., University of Illinois; Head Department of Biological Sciences, Sumner County High School, Fellow and Instructor at University of Illinois; Student, Marine Biological Laboratory, Woods Hole, Mass.; Associate Professor of Zoology, University of Wyoming; Author, North American Monostomes primarily from fresh water hosts; Two New Monostomes from Asia. Sigma Xi and Kappa Delta Pi.

**MARTHA LUCILLE HARRISON***Assistant Professor  
of Elementary Education*

Ph.B., University of Chicago; Music Supervisor's Diploma, Northern Illinois State Teachers College; Teacher, Public Schools of Illinois; Teacher, Northern Illinois State Teachers College; Pi Lambda Theta; Sigma Pi Lambda.

**JOSEPHINE MARY HAWES***Associate Professor of English*

A.B., A.M., Colorado State Teachers College; Graduate, Kansas State Teachers College; Student, University of Colorado; Graduate Student, Columbia University, and Cambridge University, England; Head of Department of English, Las Vegas, New Mexico; Principal, Grade School, Emporia, Kansas; Head of Department of English, Newton, Kansas; Instructor, English Department, Kansas State Teachers College; Kappa Delta Pi.

**JACOB DANIEL HEILMAN***Professor of Educational Psychology*

Graduate Keystone State Normal School; A.B., Muhlenberg College, Allentown, Pennsylvania; Ph.D., University of Pennsylvania; Harrison Fellow in Pedagogy; Assistant in Psychological Clinic and Lecturer in Child Study, University of Pennsylvania; Author of "A Clinical Study of Retarded Children," "Cooperative Testing Program," "A Study in Addition," "A Study in Reading," "A Study in Spelling," "Methods of Reporting the College Teachers' Load and Administrative Efficiency"; Phi Delta Kappa; Kappa Delta Pi.



**FRED LOUIS HERMAN***Associate Professor of Secondary Science;  
Training Teacher, Teachers College High School*

B.S., University of Nebraska; Student, Leland Stanford University; Head of Department of Science, Nebraska City High School; Instructor in General Chemistry, University of Nebraska; served in the U. S. Army 1917 to 1919; Commissioned Officer 1919 in Field Artillery, O. R. C.; Sigma Xi; Alpha Chi Sigma.

**OSCAR EDWARD HERTZBERG***Professor of Educational Psychology*

A.B., University of Wisconsin; A.M., Ph.D., Teachers College, Columbia University; Graduate Student, University of Wisconsin; Principal of Schools, Scandinavia, Manawa, and Wrightstown, Wisconsin; Professor of Education and Psychology, Iowa State Teachers College; Assistant in Educational Psychology, University of Wisconsin; Professor of Education, Pennsylvania State College, Summer Session, 1926; Director, School of Education Exposition, University of Wisconsin; Fellow in Education, University of Wisconsin; Scholar in Education, Teachers College, Columbia University; Author "A Comparative Study of Different Methods Used in Teaching Beginners to Write"; Chairman, Committee Surveying Attendance Bureau, Atlanta Survey; Phi Delta Kappa.

**RAYMOND LEROY HILL***Associate Professor of Art*

Graduate Rhode Island School of Design, Providence, R. I.; Student, New York University of Teacher Training; Student, Smith-Hughes, University of Tennessee; Student, California School of Fine Arts, San Francisco; Student in Italy, Spain, France; Student Dante Ricci, Rome; Head of Art Department, Technical High School, Memphis, Tennessee.

**\*IRA WOODS HOWERTH***Professor of Sociology and Economics*

A.B., Northern Indiana Normal School; A.B., Harvard University; A.M., University of Chicago; Ph.D., University of Chicago; Member of Illinois Bar; Special Lecturer Over Seas in the Educational Corps of the United States Army; Assistant Professor of Sociology, University of Chicago; Secretary, Illinois Educational Commission; Professor of Education and Director of University Extension, University of California; Fellow of the American Association for the Advancement of Science.

**BLANCHE BENNETT HUGHES***Instructor in Piano*

Student, College of Music, Cincinnati; Student, with Alexander Andre, Cincinnati; Student with Everett H. Steele, Wolcott Conservatory of Music, Denver; Instructor in Piano, ten years.

**EDITH ISE***Library Assistant;**Instructor Library Administration*

A.B., Colorado State Teachers College.

**FRANK COVERT JEAN***Chairman of Graduate Council;**Professor of Biology*

A.B., A.M., Ph.D., University of Nebraska; Student, York College; Superintendent of Schools, Doniphan and Milford, Nebraska; Head of Department of Biology, State Teachers College, Peru, Nebraska; President, Nebraska Academy of Sciences; Joint Author, Carnegie Institution Bulletin 316, "Development and Activities of Crop Plant Roots;" Senior Author, Carnegie Institution Bulletin 357, "Root Behavior and Crop Yield Under Irrigation"; Botanical Society of America; Ecological Society of America; American Association for the Advancement of Science; Sigma Xi, Kappa Delta Pi, Phi Delta Kappa.

**ALICE JOHNSON***Associate Professor of Secondary English;**Training Teacher and Dean of Girls, Teachers College High School*

Ph.B., University of Chicago; Graduate Student, University of Chicago; Head of English Department and Preceptress of High School, Twin Falls, Idaho; Instructor in English, Idaho State Normal School, Albion, Idaho; Head of English Department and Assistant Principal of High School, Coeur d'Alene, Idaho; Acting Principal of Coeur d'Alene High School, Coeur d'Alene, Idaho.

**ELIZABETH HAYS KENDEL***Associate Professor of Secondary Mathematics;**Training Teacher, Teachers College High School*

A.B., Colorado State Teachers College; Student, Chicago Normal School; Student, Columbia University.

\*On Leave.

- MARGARET JOY KEYES** *Associate Professor of Physical Education*  
 A.B., Colorado State Teachers College; Graduate, Columbia College of Expression, Chicago; Student, Chicago University; Student, Chalf Normal School of Dancing, New York; Student, Columbia University; Instructor in Physical Education and Dramatic Art, Prescott School of Music, Minot, North Dakota; Instructor in Physical Education and Dramatic Art, Grafton Hall, Fond du Lac, Wisconsin.
- WINFIELD LEROY KNIES** *Assistant Professor of Commercial Education*  
 A.B., Colorado State Teachers College; Kappa Delta Pi.
- ELLEN GERTRUDE LEE** *Instructor in Camp Fire Training*  
 Student, Teachers College, Columbia University, New York City; Private teaching in high school subjects, New York City and Colorado; Graduate of National Camp Fire Training Courses; Executive of North Central Colorado, Camp Fire Girls, by National Appointment; Highest National honors conferred by Camp Fire Headquarters, New York City, for work along literary lines, decoration and design, community organization, leadership and service.
- ELIZABETH LEHR** *Assistant Professor of Elementary Education; Training Teacher, Teachers College Elementary School*  
 B.S., Teachers College, Columbia University; Kindergarten Directors Diploma, National Kindergarten-Elementary College, Chicago; Student, Hastings College, Hastings, Nebraska; Teacher, Public Schools, Hall County, Nebraska; Aurora, St. Paul, Minnesota; Hastings, Nebraska.
- \*ROYCE REED LONG** *Professor of Health Education*  
 A.B., Leland Stanford Junior University; Student, University of Chicago; Graduate Student, Johns Hopkins University; Director of Athletics, Vanderbilt University; Assistant Professor of Hygiene, Leland Stanford Junior University; Captain, U. S. Army.
- FLORENCE LOWE** *Assistant Professor of Art*  
 A.B., Colorado State Teachers College; Student, Chicago Art Institute; Student, California School of Fine Arts; Student, Teachers College, Columbia University; Teacher, Laramie, Wyoming, Public Schools.
- ELIZABETH LUZMOOR** *Assistant Professor of Elementary Education; Training Teacher, Teachers College Elementary School*  
 B.S., University of Iowa; Student, Colorado State Teachers College; Teacher, Colorado Public Schools; Teacher, University Elementary School, Iowa City, Iowa; Pi Lambda Theta.
- GENEVIEVE L. LYFORD** *Professor of Kindergarten Education; Training Teacher, Teachers College Elementary School*  
 B.S., Teachers College, Columbia University; A.M., Colorado State Teachers College; Graduate, Oregon Agricultural College; Graduate, Kindergarten Normal, Galesburg, Illinois; Graduate Student, University of Chicago; Teacher in Summer Schools, University of Tennessee, Iowa State Teachers College; Kindergarten Training Teacher, State Teachers College, Warrensburg, Missouri; State Teachers College, Valley City, North Dakota; State Teachers College, Moorhead, Minnesota; Research in Pre-School and Kindergarten Education, Boston, New York City, Detroit, Washington, and the University of Iowa; author of "Textbook for Training Kindergartners."
- \*THOMAS JEFFERSON MAHAN** *Assistant Professor of Education*  
 A.B., A.M., Colorado State Teachers College; Student, Central Missouri State Teachers College, Warrensburg, Missouri; Teacher, Public Schools, Russelville, Missouri; Instructor in English and History, Tayabas Provincial High School, Lucena, Tayabas, Philippine Islands; Principal, Elementary Training School, Vigan, Ilocos Sur, Philippine Islands; Principal, Ward School, Leadville, Colorado; Instructor in Social Science, Denver City Schools; Lambda Gamma Kappa, Kappa Delta Pi.
- \*ARTHUR ERNEST MALLORY** *Professor of Mathematics*  
 A.B., A.M., University of Kansas; Instructor Mathematics and Science, Great Bend, Kansas; Superintendent of Schools, Burton, Kansas; Scientific Assistant, U. S. Bureau of Entomology.

- ANNIE MARGARET McCOWEN** *Professor of Elementary Education;  
Training Teacher, Teachers College Elementary School*  
A.B., Bessie Tift College; B.S., A.M., Teachers College, Columbia University; Diploma in Elementary Supervision, Teachers College, Columbia University; Instructor Rural School, Excelsior, Georgia; Critic Teacher, Teachers College, Greenville, N. C.
- PAUL MCKEE** *Professor of Elementary Education*  
A.B., Monmouth College; A.M., Ph. D., State University of Iowa; Fellow in Education, State University of Iowa; Superintendent of Schools, Hanover, Illinois; Supervisor Elementary Education, Hibbing, Minnesota; Author "Spelling Difficulty in Context Form," "Teaching and Testing Spelling by Column and Context Form"; Phi Delta Kappa, Tau Kappa Alpha.
- LUCY NEELY McLANE** *Associate Professor of Secondary English;  
Training Teacher, Teachers College High School*  
A.B., Colorado State Teachers College; B.L.I., Emerson College of Oratory, Boston; Student, Columbia University; Student, College of Speech Arts, Boston; Graduate Student, Boston University; Assistant Director, Story Telling and Dramatic Arts, North End Settlement, Boston; Pi Kappa Delta, Alpha Psi Omega.
- ESTELL ELGAR MOHR** *Assistant Professor of Public School Music*  
B.S., Music Education, Teachers College, Columbia University; Public School Music Diploma, Bowling Green Normal College, Bowling Green, Ohio; Graduate Student, Teachers College, Columbia University; Student of Percy Rector Stephens, King's Crown.
- GEORGIA ETHEL MOORE** *Assistant Professor of Art*  
B.S., Diploma in Fine Arts, Teachers College, Columbia University; Student, University of Washington; Instructor, City Schools, Lind, Chewelah, Spokane, Washington.
- ROBERT HUGH MORRISON** *Assistant Director of Extension Service;  
Associate Professor of Extra-Mural Education*  
A.B., Michigan State Normal College; A.M., Colorado State Teachers College; Superintendent of Schools, Centerville, Michigan; Principal Durant School, Flint, Michigan; Director Physical Education, Flint, Michigan; Principal Junior High School, Saginaw, Michigan; Pi Kappa Delta, Kappa Delta Pi.
- VERA NEWBURN** *Acting Assistant Professor of Household Arts*  
B.S., Hastings College, Hastings, Nebraska; M.S., Teachers College, Columbia University; Student, University of Nebraska; Teacher, High School, Aurora, Nebraska.
- A. EVELYN NEWMAN** *Dean of Women;  
Professor of English Literature*  
A.B., Kentucky State Normal School; Ph.B., A.M., University of Chicago; Assistant Head of Beecher Hall, University of Chicago; Graduate Fellowship, University of Chicago; Assistant Dean of Women and Teacher of English and Sociology, State Normal School, Moorhead, Minnesota; Graduate Student, Columbia University; Executive and Field Secretary of Art Student Work for The Young Women's Christian Association, New York City; Member of Women's International Congress at The Hague, 1915; Army Welfare and Educational Worker in France and Germany, for the Young Men's Christian Association, 1917-1919; Member of Summer School Oxford, England, 1923; Member of Sherwood Eddy's Travel Seminar, Europe, Summer of 1925.
- LESTER EDWIN OPP** *Assistant Professor of Music*  
Piano and Cello, Dana's Musical Institute, Warren, Ohio; Mus.B., Dana's Musical Institute; Cellist, First Stand, D.M.I. Symphony Orchestra and D.M.I. String Orchestra; Instructor, Cello, Newcastle, Pennsylvania, High School.
- IVAREA BEIL OPP** *Instructor in Reed Instruments*  
Student Dana's Musical Institute, Warren, Ohio; member D.M.I. Symphony Orchestra and Concert Band; Chautauqua and Lyceum Entertainer.
- WILLIAM BIDWELL PAGE** *Library Assistant;  
Instructor Library Administration*  
M.D., University of Michigan.

ORA BROOKS PEAKE

*Associate Professor of History*

Ph.D., Michigan State Teachers College, Ypsilanti, Michigan; A.B., A.M., University of Michigan; Graduate Student, University of Chicago; Teacher in the Rural Schools of Ionia County, Michigan; Junior High School, Portland, Michigan; History and Civics in Senior High Schools at Homer, Portland, Battle Creek and Bay City, Michigan; Teacher of History and Civics, North Denver High School, Denver, Colorado.

ETHEL BLANCHE PICKETT

*Associate Professor of Household Science*

B.S., A.M., Professional Diploma in Education, Teachers College, Columbia University; Student, Missouri State University; Student, State Normal School, Pittsburg, Kansas; Student, Pratt Institute; Teacher, Rural and City Schools, Carthage, Missouri; Head of Department of Home Economics, State Normal School, Silver City, New Mexico.

ROBERT CECIL POOLEY

*Assistant Professor of Secondary English*

A.B., A.M., Colorado State Teachers College; Student, Cornell University; Student, General Theological Seminary, New York City. Fellow in English, Colorado State Teachers College. Phi Delta Kappa, Kappa Delta Pi, Pi Kappa Delta.

JAMES H. RISLEY

*Professor of Extra-Mural Education*

A.B., Indiana University; A.M., University of Chicago; Certificate School Administration, Teachers College, Columbia University; Principal, High School, Petersburg, Indiana; Owensboro, Kentucky; Superintendent City Schools, Mt. Vernon, Indiana; Owensboro, Kentucky; Superintendent City Schools, Pueblo, District No. 1, since 1921; charter member Kappa Delta Pi, Mount Vernon, Indiana.

LUCY LYNDE ROSENQUIST

*Associate Professor of Primary Education; Training Teacher, Teachers College Elementary School*

B.S., Fremont Normal College, Fremont, Nebraska; Ph.B., University of Chicago; Kindergarten Director, Schuyler, Nebraska, Public Schools; Principal, McCormick's Orthogenic School, Chicago, Illinois; Kindergarten-Primary Supervisor, Public Schools, Mobile, Alabama; Head of Kindergarten Department, Nebraska State Teachers College, Peru, Nebraska.

\*MARGARET MOORE ROUDEBUSH

*Professor of Household Arts*

Ph.B., University of Chicago; A.B., State Woman's College of Mississippi; Graduate Student of Bryn Mawr College; Teacher in the Public Schools of Mississippi; Instructor in English and History, Smith Academy, St. Louis, Missouri; Supervisor of Home Economics, Oshkosh, Wisconsin; Dean of Women and Head of the Home Economics Department, University of Mississippi; Instructor in Household Art, Western Reserve University; Instructor in Household Art, University of Washington, Seattle, Washington.

EARLE UNDERWOOD RUGG

*Professor of Education*

A.B., A.M., University of Illinois; Ph.D., Teachers College, Columbia University; Teacher of History and Civics in Monmouth, Illinois, High School and in Oak Park, Illinois, High School; Instructor in Political Science, Illinois Normal University; Assistant in Social Sciences at Teachers College, Columbia University, and Assistant in Educational Research in Lincoln and Horace Mann Schools; Author of "Street Railway Franchises in Illinois," "Character and Value of Standardized Tests in History," "Supervised Study in History," and "How the Current Courses in History, Geography and Civics Came to Be;" Managing Editor "The Teachers Journal and Abstract;" Phi Delta Kappa, Kappa Delta Pi.

CHARLES RICHARD SATTGAST

*Assistant Professor of Extra-Mural Education*

B.S., University of Illinois; A.M., Leland Stanford Junior University; Graduate, Southern Illinois State Normal University; Student, Kansas State Agricultural College; Dairy Extension Service, University of Illinois; Assistant Instructor in Chemistry, Southern Illinois State Normal University; Principal of Consolidated School, Richfield, Kansas; Smith-Hughes Instructor, High School, Holcomb, Kansas; Graduate Student, Leland Stanford Junior University; Phi Delta Kappa.

\*On leave.

- OTTO WILLIAM SCHAEFER** *Associate Professor of Industrial Arts*  
 Student of William Walker, Art Binder of Edinburgh, Scotland; Head of Bookbinding Department, B. F. Wade Printing Company, Toledo; Head of Stamping and Finishing Department, Kistler Stationery Company, Denver; Head of Binding Departments in Cleveland, Detroit, Asheville, Riverside, and Los Angeles.
- EDITH MARIE SELBERG** *Assistant Professor of Biology*  
 A.B., A.M., Colorado State Teachers College; Fellow, Biology Department, Colorado State Teachers College; Graduate Student, Chicago University; Kappa Delta Pi.
- JOHN HENRY SHAW** *Editor of Official Publications;  
 Instructor in Journalism*  
 Reporter, Copy Reader, Assistant Financial Editor, Railroad Editor, Philadelphia, Pa., Press; Reporter, Philadelphia Inquirer, Philadelphia Record; Railroad Editor, Philadelphia Public Ledger; Staff Correspondent, Philadelphia Press; Correspondent, New York World, Chicago Tribune; Correspondent, Associated Press, International News Service; Reporter, Copy Reader, Denver, Colo., Post, Rocky Mountain News, Denver, Colo.; Managing Editor and Editorial Writer, Pueblo, Colo., Chieftain; Editor, Fort Collins, Colo., Morning Express; Editor, Sterling, Colo., Evening Advocate; Owner and Publisher, Sterling, Colo., Enterprise.
- ANGIE S. K. SOUTHARD** *Instructor in Music Appreciation*  
 A.B., Wellesley College; studied piano in New York and Berlin; taught in New York and Curitiba, Brazil; accompanist at the Metropolitan Opera House, New York.
- CORA MAY THOMAS** *Library Assistant;  
 Classifier and Cataloger*  
 Pd.B., Colorado State Teachers College; eleven years Assistant Librarian, Greeley Public Library.
- J. J. THOMAS** *Assistant Professor of Music*  
 A.C.M., Dana Musical Institute; Violin Pupil of Charles H. Lowry, who was a student of Theodore Spearing; Pupil of John Hundertmark; The ory pupil of Rei Christopher and Prof. J. D. Cook; Band and Orchestral Conducting under Professor Lynn B. Dana; Assistant Director of American Air Service Band, England; Musician with the Chautauqua Lake Symphony Orchestra and Concert Band, Chautauqua Lake, New York.
- A. L. THRELKELD** *Professor of Extra-Mural Education*  
 I.S., University of Missouri; A.M., Teachers College, Columbia University; Graduate State Teachers College, Kirksville, Missouri; special study in summer sessions, University of Wisconsin and Chicago University; teacher and coach of athletics, high school, Kirksville, Missouri; Superintendent of Schools, Bunceton, Unionville and Chillicothe, Missouri; Assistant Superintendent and Deputy Superintendent of Schools, Denver, Colorado; President Missouri State Teachers Association, 1921; Phi Delta Kappa, Kappa Delta Pi.
- FRANCES TOBEY** *Professor of English*  
 B.S., Western Normal College, Iowa; A.B., Colorado State Teachers College; Graduate, Emerson College of Oratory, Boston; Student, Oxford University; Member Faculty, Emerson College of Oratory, Boston; Chair of English and Reading, Denver Normal School; Editor, Emerson College Magazine; Kappa Delta Pi, Pi Kappa Delta.
- FLOSS ANN TURNER** *Associate Professor of Primary Education;  
 Training Teacher. Teachers College Elementary School*  
 Pd.B., State Teachers College, Warrensburg, Missouri; Ph.B., University of Chicago; Student, Teachers College, Columbia University; Student, University of Utah; Primary Teacher, Roswell, New Mexico; Primary Teacher and Supervisor, Jordan Consolidated District, Salt Lake County, Utah; Teacher, Demonstration School, City Normal School, Cleveland, Ohio, Summer 1918; Teacher of History and Dean of High School Dormitories, Carbon County, Utah; Supervisor, State Teachers College, Mankato, Minnesota.
- CHARLES FRANKLIN VALENTINE** *Associate Professor of Physics*  
 Science Department, Dowagiac High School, Dowagiac, Michigan; Principal High School, Hartford, Michigan; Head of Physics Department, A.B., Kalamazoo College; A.M., Teachers College, New York; Head of Flint High School and Junior College, Flint, Michigan.

SUSAN HART VAN METER *Associate Professor of Elementary Education;  
Training Teacher, Teachers College Elementary School*

Pd.B., Colorado State Teachers College; B.S., in Education, University of Missouri; Graduate Student, Colorado State Teachers College; Graduate Student, Ohio State University; Teacher, Rural and Grade Schools, Maysville, Missouri; Principal, Upper Grades, Como, Colorado; Instructor in Mathematics, Hamilton, Missouri; Superintendent of School, Union Star, Missouri; Instructor in Teacher Training, High School, La Plata, Missouri; Critic Teacher, State Teachers College, Cape Girardeau, Missouri.

WALLACE THEODORE WAIT

*Assistant Professor of  
Educational Psychology*

B.S., Whitworth College; A.M., Ph.D., University of Washington; Arthur A. Denny Fellow in Education, University of Washington; Principal of High School, Elma, Washington; Principal of High School, Hoquiam, Washington; Superintendent of Schools, South Bend, Washington; Librarian of School of Education Library, University of Washington; Associate in Education, University of Washington; Phi Delta Kappa.

IVA CATHERINE WATSON

*Reference Librarian*

Pd.M., Colorado State Teachers College; B.S., Colorado Agricultural College; Student New York State Library School, New York University; Library Assistant, Colorado Agricultural College; Librarian, East Side Branch Library, Evansville, Indiana.

FREDERICK LAMSON WHITNEY

*Director of Educational Research;  
Professor of Education*

Ed.B., Ph.B., A.M., University of Chicago; Ph.D., University of Minnesota; Superintendent of Schools, Grafton, North Dakota, and Huron, South Dakota; Principal of the Monroe Elementary School, Minneapolis; Superintendent of Training Department, Duluth State Teachers College; Assistant, Department of Educational Administration, College of Education, University of Minnesota; Director of Training School, State Teachers College, Moorhead, Minnesota; Curriculum Specialist, Department of Curriculum Revision, Denver Public Schools; Author "The Prediction of Teaching Success," Journal of Education Research Monograph, No. 6, 1924; Phi Delta Kappa, Kappa Delta Pi.

EDITH GALE WIEBKING

*Associate Professor of Household Arts*

A.B., Colorado State Teachers College; Student, Laird's Seminary for Young Ladies, Philadelphia, Pennsylvania; Student, Philadelphia School of Design; Teacher six years, Greeley City Schools.

GRACE HANNAH WILSON

*Associate Professor of Education;  
Director of Religious Activities*

Pd.B., Colorado State Teachers College; A.B., Colorado College; A.M., Teachers College, Columbia University; Graduate Student, Harvard University; Secretary Young Women's Christian Association, Iowa State Teachers College.

WILLIAM LAWRENCE WRINKLE *Principal of Teachers College High School;  
Associate Professor of Secondary Social Science*

A.B., A.M., Colorado State Teachers College; Superintendent Buckingham, Colorado, Centralized Schools; Phi Delta Kappa, Kappa Delta Pi, Lambda Gamma Kappa.

## SPECIAL FACULTY AND GENERAL LECTURERS

SUMMER QUARTER, 1927

Herewith is a partial list of eminent educators and lecturers who will serve on the special faculty for the summer quarter, 1927. The list is complete up to the time this bulletin went to press. There will be others added, and the entire list makes up one of the outstanding features of the summer quarter. It furnishes an opportunity to come into personal contact with national leaders in their separate fields.

DR. LEONARD V. KOOS, Professor of Secondary Education, University of Minnesota; Authority on Junior Colleges. Courses in Education.

DR. LIGHTNER WITMER, Director Department of Psychology, University of Pennsylvania; Courses in Educational Psychology.

DR. EDWARD A. ROSS, Sociologist, University of Wisconsin; Lecturer, and Courses in Sociology.

DR. RICHARD BURTON, Litterateur. Lecturer, and Courses in Literature.

DR. GEORGE E. RAIGUEL, Physician, and Lecturer on History and Politics; Staff Lecturer on International Politics for the American Society for University Teaching. Lecturer.

DR. CARLETON W. WASHBURNE, Superintendent of Schools, Winnetka, Illinois; Expert in the field of Individual Instruction. Courses in Education.

MR. S. H. CLARK, Head of Department of Public Speaking, University of Chicago; Lectures on Drama.

CAROLYN ELIZABETH GRAY, Lecturer in Nursing Education, Teachers College, Columbia University; Author and Hospital Nurse Superintendent; Courses in Nursing Education.

DR. EDWARD HOWARD GRIGGS, Author and Lecturer on Literature and Philosophy. Lecturer.

DR. H. GRAHAM DU BOIS, Professor of English, Newark, New Jersey; Poet and Short Story Writer. Courses in English.

MISS JESSIE HAMILTON, Principal Morey Junior High School, Denver, Colo., Courses in Education.

DR. EDGAR N. MENDENHALL, Kansas State Teachers College, Pittsburg, Kansas. Courses in Education.

MR. SPENCER MILLER, Workers Educational Bureau, New York. Lecturer.





PART II  
GENERAL INFORMATION



## HISTORICAL SKETCH

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

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

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

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

## LOCATION

Colorado State Teachers College is located in Greeley, Weld County, Colorado, on the Union Pacific and the Colorado & Southern Railways, fifty-two miles north of Denver. This city is in the valley of the Cache la Poudre river, one of the richest agricultural sections of the state. The altitude is 4,567 feet above sea level. The streets are lined with trees, forming beautiful avenues. The elevation and distance from the mountains render the climate mild and healthful. The city is one of Christian homes and contains churches of all the leading denominations. There are 14,000 inhabitants.

## PLANT

The plant consists of twelve attractive and substantial buildings, beautiful in their architectural lines, with interiors designed with a view to maximum service. Work on a large and model gymnasium is almost finished, and other buildings are to be added as soon as possible. Among the structures next to be erected is a science building and a model heating plant. The latter will be erected on the new plot of ground east of the campus. It will be located close to the Union Pacific tracks and steam will be piped to a distributing plant on the campus. It also is proposed to build an addition to the library as soon as funds are available. The buildings which at present comprise the physical plant are:

**THE ADMINISTRATION BUILDING**—The main or Administration Building is 240 feet long and 80 feet wide. It has in it executive offices, classrooms, and class museums. Its halls are wide and commodious and are occupied by statuary and other works of art, which makes them very pleasing. A Natural History Museum, which is regarded as one of the most complete and interesting in the state, occupies a large part of the upper floor of this building. The broadcasting room of Station KFKA, operated by and under the name of Colorado State Teachers College, is also located on the top floor of this building.

**THE LIBRARY**—This imposing structure of gray stone forms the central unit of a group of three buildings, forming a link between the Administration Building on the west and the Training Schools on the east. It contains 60,500 volumes, a large picture collection, and several thousand pamphlets. The two floors are used for library purposes. The main floor is a reading and general reference room, where are shelved many of the periodical and reference books. On this floor also are kept reserved books, which are for special use within the building. The

basement floor contains the general book collection stacks, government publications, and unbound volumes of magazines. An automatic electric book lift operates between the floors. The volumes in the library have been selected with special reference to needs of students in education, for teachers, and for educational research work.

**THE TRAINING SCHOOLS**—The Training School building is the home of the Training Schools of the College, namely, the Teachers College High School, the Junior High School, the Elementary School, and the Kindergarten. It is a commodious building of red pressed brick and similar in style to the Administration Building. In its construction no pains or expense have been spared to make it sanitary, fireproof, and in every possible way an ideal building for a completely graded training school from the kindergarten to the senior year of the high school, inclusive. An expenditure approaching \$300,000.00 has been made to provide a training school center comparable in every way with any building in the country devoted to similar use.

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

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

**THE MODEL COTTAGE**—In order that students pursuing studies in home economics shall have practical training, the College maintains this building. It is a model cottage of five rooms and is used for demonstrations in home furnishings and housekeeping.

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

**THE HOUSEHOLD ARTS BUILDING**—This is a structure similar in construction, color, material and architectural design to the Industrial Arts building. It is three stories high and contains ample room for all the classrooms, laboratories, kitchens, dining rooms, and work-rooms for a well-organized department of household arts in a teachers college, including both household arts and household science. A well-arranged cafeteria is maintained to provide meals for students.

**GYMNASIUM**—There has been erected during the past year a gymnasium which is regarded as one of the most attractive, commodious and complete structures in every detail given over to the work of building healthful bodies to be found anywhere in the entire west. A part of this new building has been in use for a few months but formal dedication is scheduled for the opening of the fall quarter 1927. At this time the completed structure will be ready for use in all its departments and affording

full opportunity for use by all students enrolling for the new year. The building is located just south of the administration building and covers a part of the old athletic field. It measures 152x244 feet. The main playing floor is 45x88.6 feet. Provision is made here for seating capacity for 2800 during basketball games and when used as an auditorium, as it will be, there will be a seating capacity of 3800. There will be another playing floor, measuring 50x100 feet, for the exclusive use of girls and in addition to auxiliary gymnasiums for class work. Accommodations are provided for five classrooms for use of the physical education department. The physical education and athletic departments, as well as the medical advisers for both men and women, will have their offices located in the gymnasium. A swimming pool 30x75 feet is an attractive feature of this new structure on Teachers College campus. The building is constructed of a specially made gray brick with gray terracotta trimmings. Its architectural lines are a combination of cathedral and gothic and make it one of the most imposing structures on the campus.

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

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

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

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

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

Only freshman girls now occupy the dormitories. This ruling was made in order that young girls away from home for the first time might be better cared for. After a girl has been in college a year, it is easier for her to find a suitable room in a private home.

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

- Two pairs of sheets for a single bed
- Three pillow cases of 42-inch tubing
- Three bath towels
- Three face towels
- Three wash cloths
- Two blankets and one comforter.

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

Rooms rent at \$25.00, \$27.00 and \$28.00 per quarter for each student, with two students in each room.

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

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

### THE CAMPUS

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

### SCHOOL GARDEN

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

### DEPARTMENTAL MUSEUMS

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

### EQUIPMENT

The institution is well equipped in the way of laboratories, libraries, gymnasiums, playgrounds, an athletic field, art collection, museums, and a school garden. The library has 58,500 volumes. There is ample opportunity to work out subjects requiring library research. There is a handicraft department connected with the library wherein a student may learn how to conduct a library.

### THE GREELEY WATER

The water supply of Greeley is obtained from the canon of the Cache la Poudre, forty miles from Greeley, in the mountains. The water is passed through settling basins and filters until all foreign matter is removed. The supply is clear, pure, and ample for all needs of the city. The system was constructed at an expense of \$400,000.00 and is owned by the city.

### MAINTENANCE OF THE COLLEGE

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

## GOVERNMENT

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

The control of student affairs, including matters of conduct and discipline, social life, and the larger phases of student policy, is in the hands of the Associated Students, an organization of the entire student body. Every regularly enrolled student at the time of registration is required to become a member of the association and pay a quarterly fee of \$2.50, which admits the student to all Associated Student activities with the exception of athletics and benefits.

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

A unit of the national organization of Associated Women Students has been formed with the purpose of bringing the entire body of women more closely together for the solving of women's problems on the campus and for helping to maintain the standards of student self-government. It in no way interferes with the activities of the Associated Students but rather co-operates in the fullest possible way. Every woman student on the campus becomes a member of this organization when she pays her regular student association fee.

## FUNCTION OF THE COLLEGE

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

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

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

## STANDARD OF THE COLLEGE

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

As a member of the North Central Association of Colleges and Secondary Schools, Colorado State Teachers College is recognized by virtually all of the institutions of higher learning, and credits earned in this College are acceptable at their face value in practically all of the colleges and universities in the United States. Especial recognition was recently given Colorado State Teachers College by the State Board of Education of California in the announcement that work completed in this College would be accepted toward fulfillment of requirements for California teachers' credentials in special subjects.

### 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.

### NEW ROOMING REGULATIONS

Beginning with the fall quarter, 1925, the College required all women students to live in approved rooming houses. For this reason, it is necessary that students apply at the office of the dean of women for a list of such rooms from which they may make a selection. No student should rent her room by mail. Prospective students are urged to come a few days before the opening of the quarter and personally select their rooms. The office of the dean of women is open during the month of September for this purpose.

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

Students who wish to find roommates after they arrive in Greeley should come to the dean of women's office for a list of those desiring roommates. In selecting a room first, the student runs a great risk of finding no roommate.

**BOARD AND ROOM**—The dormitory triangle provides housing for 114 women students. Each room is provided with two beds and with complete accommodations for two students. Rooms in dormitories cost from \$25.00 to \$28.00 per student for a quarter. Rooms outside of the dormitories rent from \$12.00 to \$16.00 for one in a room and \$18.00 to \$24.00 for two in a room per month. Rooms equipped for light house-keeping cost from \$16.00 to \$25.00 a month for two students.

Table board costs an average of \$5.50 per week in the College cafeteria. In private boarding houses, the cost is usually \$6.00 or \$6.50 per week.

Board .....	\$70.00
Room .....	42.00
Incidental fee .....	8.00
Library fee .....	2.00
Student Association fee .....	2.50

Total for a quarter (12 weeks) ..... \$124.50

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

**TUITION**—1. Tuition is free to Colorado students.

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

**FEES**—The incidental fee (except in the summer quarter) is \$8.00 per quarter. This includes matriculation, enrollment, graduation, diploma. In addition there is a library fee of \$2.00, paid by all students. These fees are paid by all, and are never refunded.



Fees for individual lessons in piano, organ, violin, and other musical instruments, and voice are extra in the College Conservatory of Music.

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

TEXTBOOKS—Students may obtain the regular textbooks at the College bookroom at a reduction from the publishers' list prices.

## THE SUMMER QUARTER

The summer quarter of 1928 will in general follow the plans that have prevailed during the past few years. Each instructor will include all the material in his courses that he regularly uses and will give full time to each topic. A student will carry sixteen hours of work as in other quarters.

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

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

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

Any student twenty years of age or over may be enrolled in Colorado State Teachers College for the summer quarter without reference to meeting the College requirements for admission. The College believes it can render a valuable service to the teachers of Colorado and surrounding states by allowing any mature man or woman who is teaching or expecting to teach, but who has not graduated from a high school, to enroll in the College for the summer quarter and take such work as he or she may be able to carry.

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

## THE TRAINING SCHOOLS

The training schools have a two-fold function. First, they train college students in the art of teaching. Second, they maintain as nearly as possible an ideal elementary and secondary organization.

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

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

### ELEMENTARY

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

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

The course in pre-teaching observation (Ed. 2a) enables the student to learn how the training teacher applies principles of teaching to actual classroom situations, to observe the work of the pupils in a given grade, and to become familiar with the subject matter of the grade observed.

It also enables the student to learn the names of the pupils and to distinguish outstanding characteristics of the pupils whom she will teach the following quarter.

During the period of student teaching (Ed. 2b) the work of the classroom is put more nearly into the hands of the student teacher. She continues to learn the best practices through observation of the training teacher and applies the knowledge thus gained to her own teaching. Through close supervision and conferences with the training teacher, she learns how to improve her instruction. No student is allowed to continue teaching for any considerable period of time when the class is not making progress under that individual's instruction.

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

## SECONDARY

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

The primary function of the Secondary School is to train that group of teachers who expect to enter the field of secondary education. A minimum of five hours of student teaching is required of all students in the senior college who expect to take their Bachelor of Arts degree. Three years of college training are prerequisite to student teaching in grades ten, eleven, and twelve. In the high school, the student teacher spends about two-fifths of his time in teaching and the remainder in observation. When not teaching, the student teacher is held responsible for preparation and participation in the discussion of the recitation just as any other member of the class.

Students will select the subjects they teach upon the recommendation of the head of the department in which they are majoring and of the principal of the Secondary School. Ed. 101, "Principles of Teaching in the High School," precede the student teaching. This course consists of a series of systematic observations together with a study of the technic and principles of teaching in high schools.

## NEW REQUIREMENTS IN STUDENT TEACHING

1. The required amount of student teaching for the Life Certificate shall be one quarter.
2. As a prerequisite to one quarter of student teaching (Ed. 2b) each student shall be required to spend one quarter in a systematic scheduled class in observation (Ed. 2a) with the training teacher with whom he is to teach the following quarter.
3. The course in observation (Ed. 2a) shall consist of two regular observation hours each week and one conference hour every two weeks with the training teacher. This course shall also include assigned readings, which will supplement the observations and prepare the student for the subsequent course in student teaching. This course in observation (Ed. 2a) shall be given one hour credit.
4. Each student shall be required to pass satisfactorily an achievement test and make a grade not less than "C" in Ed. 2a, as prerequisites to student teaching (Ed. 2b).
5. Each student making a grade of less than "C" in student teaching (Ed. 2b), shall be required to repeat the course. A student receiving a grade of "F" in two quarters work in student teaching (Ed. 2b) is not permitted further enrollment in the Training Schools.
6. The required amount of student teaching in the senior college for the degree shall be one quarter taken in either the elementary school (Ed. 102) or the high school (Ed. 103).

7. A second quarter of student teaching may be elected in the junior college for the Life Certificate and in the senior college for the degree.

8. Additional prerequisites for student teaching in the junior college are: Ed. 1, Ed. 2a, and the method courses required for the majors listed on pages 72 and 73. The prerequisite for student teaching in the high school is Ed. 101 and at least one method and one content course in the student's major.

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

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

1. A score above average on the standard college entrance test
2. A score above average on the English Exemption test
3. A grade of less than "C" (the average) in two college courses within one quarter disqualifies.

## THE EXTENSION DEPARTMENT

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

1. **EXTRA-MURAL CLASSES**—Classes are conducted by members of the College faculty in centers that can be reached conveniently. These classes meet once a week for seventeen weeks for a period of ninety minutes. These classes are regarded as residence work up to a maximum of sixteen hours of each year's work in the College. Three hours credit. Fee \$10.00.

2. **EXTENSION CLASSES**—These classes are organized in more distant centers, and are taught by superintendents, principals, and teachers appointed by the director of the extension service. The outline of the course is made by the College instructor who gives the residence course. Seventeen meetings of ninety minutes each. Three hours credit. Fee, \$10.00.

3. **CORRESPONDENCE COURSES**—For the convenience of those who can not meet in extra-mural classes or in extension classes the College provides individual correspondence courses. Each course consists of a set of study units, which are worked through by the student. The student's response is made in writing to the instructor, who reads and grades the papers. Fee, \$2.50 per credit hour, plus a 25-cent postage fee per credit hour. A four-hour course thus costs \$11.00, a three-hour course \$8.25.

**LIMITS OF EXTENSION CREDIT**—Students enrolling in the College through either the residence or extension departments after September 1, 1926, are not allowed to apply more than twenty-four credit hours of extension class or correspondence credit toward the two-year Life Certificate course or forty-eight hours toward the four-year degree course.

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

## TEACHER PLACEMENT BUREAU

The College maintains a bureau to serve graduates seeking positions and school boards and superintendents seeking teachers. There is no charge for this service beyond a small charge to cover in part the cost of assembling data concerning nominees. Superintendents and school boards are invited to visit the College, to make use of the placement bureau in looking for teachers, and to meet applicants in whom they are interested. During the calendar year of 1925 the bureau placed 396 teachers in positions that paid a total of \$524,000 in salaries. Reports from the employers of these teachers indicate that 94 per cent were successful in the positions to which they were recommended by the bureau.

## THE RELIGIOUS ASSOCIATIONS

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

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

## STUDENT LOAN FUNDS

There are numerous loan funds, aggregating more than \$18,000, designed to help worthy students to complete courses in Colorado State Teachers College. It not infrequently happens that a promising student meets with an unexpected loss, through sickness or other causes, which compels him either to leave school or to continue his work at the risk of low scholarship and overtaxed body and mind, unless he is able to borrow some money. It is for the purpose of meeting just such emergencies that these loan funds have been established.

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

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

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

Y. W. C. A. STUDENT AID FUND—The Young Women's Christian Association has a fund of several hundred dollars which is kept to aid

students who need small sums to enable them to finish a quarter or a course. The fund is in charge of a committee consisting of the treasurer of the society, two members of its advisory board, and a member of the faculty. Loans are made without reference to membership in the society.

**THE WILLIAM PORTER HERRICK MEMORIAL FUND**—This fund, the gift of Mrs. Ursula D. Herrick, in memory of her husband, the late William Porter Herrick, consists of the principal sum of \$5,000. The proceeds or income of said fund are to be paid over and expended by the Board of Trustees of Colorado State Teachers College of Colorado, in aid of such worthy and promising undergraduate students of the College, of either sex, as the president of said College may from time to time designate; provided, however, that no student who uses tobacco in any form or who uses intoxicating liquors of any kind as a beverage shall participate in the benefits of this fund. The sum or sums, income or proceeds so expended by the said trustees shall be considered in the nature of a loan or loans to such students as may receive the same, and each of said recipients shall execute a note or notes promising to repay to said trustees the amount or amounts so received.

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

**HOSPITAL LOAN FUND**—The class of 1922 turned over to the Student Loan Committee of the College the sum of \$225.00 to be used as a loan fund for those who need financial assistance in meeting hospital or medical expenses.

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

**THE SARAH PLATT DECKER MEMORIAL FUND**—This fund, established on April 7, 1926, by the Sarah Platt Decker Memorial Association in memory of the late Sarah Platt Decker, consists of the sum of \$3,658.00 which is to be lent to female students of Colorado State Teachers College under such terms as shall from time to time be determined by the Loan Fund Committee of the College.

**GRADUATE LOAN FUNDS**—For information about graduate loan funds, see pages 47 and 48.

## SCHOLARSHIPS

The following regulations governing the issuance of scholarships to resident graduates of Colorado high schools have been passed by the Scholarships Committee and became effective beginning with the school year, 1924-25. In every instance awards shall be made only to members within the first fifth of the class and upon recommendation of the principal.

### I. ACCREDITED HIGH SCHOOLS

To graduating classes of twenty-four or less, one scholarship; to classes of twenty-five to forty-nine, two scholarships; to classes of fifty to ninety-nine, three scholarships; to classes of one hundred or over, four scholarships. A major fraction of five may be regarded as the next higher multiple of five.

### II. NON-ACCREDITED HIGH SCHOOLS

A maximum of two scholarships will be issued to each non-accredited high school provisionally. If the holder passes the entrance test

with a satisfactory score and does satisfactory work during the first two quarters in residence, it becomes permanent.

A scholarship covers the incidental fee of \$24.00 a year for four academic years. It is not valid during summer quarters. A student holding a scholarship must not receive more than one grade of "D" in a four-hour subject in any quarter. The scholarship, otherwise, becomes invalid until the student has again met the standard set.

A scholarship to become valid must be used the fall quarter next following its issuance and will thereafter remain in force for four academic years, subject to limitations herein noted. The holder of a scholarship is not required to attend in successive quarters; however, any "break" in attendance is counted as a part of the life of the scholarship. Any high school must have a minimum of three graduates to be entitled to one. A scholarship is forfeited when any of the above provisions are violated, or where the student withdraws from the College to attend another school unless satisfactory arrangements are made in advance.

## HONORARY FRATERNITIES

### PHI DELTA KAPPA

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

### KAPPA DELTA PI

Kappa Delta Pi is a national honorary fraternity in education open to both men and women students of upper class rank. It was founded at the University of Illinois in June, 1911. The chapter at Colorado State Teachers College was established on February 23, 1920, as the eighth chapter of the fraternity and the first chapter in a teachers college. Membership in Kappa Delta Pi is open to upper class students who have ten quarter hours in education who have been in residence for three quarters, and who meet certain scholastic and character qualifications.

### PI KAPPA DELTA

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

## GIFTS TO THE COLLEGE

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





**ADMISSION, GRADUATION, CREDITS**  
**PART III**



ADMISSION

Prior to the school year 1923-24, students were admitted to this College upon presentation of a minimum of fifteen standard high school units, regardless of groups. Beginning with the school year 1923-24, certain designated groups were required. Unconditional admission was limited to graduates of high schools accredited by the North Central Association of Colleges and Secondary Schools or by state universities. These requirements were revised by a joint committee of Colorado High School Principals and the Admission and Credits Committee of the College, with the result that the following regulations were adopted beginning September 1, 1924, and are now effective:

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

GROUP II (Required) Minimum of five units must be presented

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

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

Group III (Elective) A maximum of six units may be presented

- 6. Music and Fine Arts } 6
- 7. Commercial Arts }
- 8. Home Economics }
- 9. Manual Arts }
- 10. Normal Training (Maximum of two units) }

All candidates for admission must satisfactorily pass a physical examination and also make an acceptable score in a standard classification test and in an English test. Students from non-accredited high schools may gain admission to the College by presenting the same kind of credentials for admission as are required of students from accredited schools. The College will, however, give more attention to the classification test for these students than is given for graduates of accredited schools. The fee for this examination is \$1.00.

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

CONDITIONAL ADMISSION—Any applicant who is not a high school graduate, but who is credited with 14 high school units, may be admitted to the College upon presenting a transcript from a reputable high school, showing the completion of 14 units in designated groups. Such students are limited to a maximum program of 12 hours per quarter in the College, and must make up the deficient high school unit in Teachers College High School during their first year in the College. The student can not be enrolled for the second year until the entrance condition has been removed.

Adult students (twenty years of age or over) may be admitted to the College upon passing an English test and the standard classification test, provided the score is sufficiently high to assure the College that the student has the ability to carry on college work, even though he may have had no high school training, or only a partial high school course.

FRESHMAN ENROLLMENT—All freshmen enrolling in this College for the first time are required to report at 9 o'clock Wednesday, September 21, 1927, to make complete arrangements for matriculation in

the College. Each student must at that time present an official transcript of his or her high school record, must present himself or herself for a health examination and for the usual classification test and the English test. During the afternoons and evenings of these days the freshmen will be given instructions about the various phases of college life, and will find an opportunity to engage suitable rooming and boarding places. Reports on the acceptability of the student's credentials and upon the various tests will be ready by 9 o'clock Monday, September 26. Those who are accepted for entrance into the College will then complete their registration in classes during Monday. Upper class registration will take place on Tuesday, and classes will begin on Wednesday, September 28.

## GRADUATION

Since September 1, 1921,<sup>c</sup> credit has been given only for regular College work in institutions uniformly recognized as standard colleges or colleges maintained primarily for the training of teachers. On that date Colorado State Teachers College discontinued giving college credit for teaching experience, handwriting certificates, music certificates, drawing certificates, private study, private lessons of any kind or work in business colleges, conservatories of music, dramatic schools, county institutes, reading circles, or for any other kind of work done in an institution other than one ranking as a standard normal school, college, teachers college, or university.

Students coming up for graduation since September 1, 1924, are required to meet standard requirements for the certificate or degree no matter what the requirements might have been at the time the student first enrolled in the College. This means that the student must meet the entrance requirements outlined above. It also means the cutting off of credit for life experience, teaching experience, handwriting, art, and music certificates; private lessons in art, music, and the like; and cutting down excessive credit for a quarter's work, and especially the excessive credit formerly given for the summer term of six weeks.

The College will continue to grant the two-year certificate, the Bachelor of Arts and the Master of Arts degrees, but under the conditions of entrance and graduation which became effective September 1, 1924. Students whose entrance was approved under the requirements announced for the school year 1923-24 are not required to make any adjustment because of the revision made as shown above which became effective September 1, 1924.

Ninety-six quarter-hours are required in the courses wherein the Life Certificate is granted upon the completion of two years of work. One hundred and ninety-two quarter hours are required for the Bachelor of Arts degree.

**ADVANCED STANDING**—Students who come to the College after having done work in another college, normal school, or university, will be granted advanced standing for all such work that is of college grade, provided that the institution in question has required high school graduation as a condition for admission. Those who receive advanced standing are required to take here all of the prescribed subjects in the course they select, unless these prescribed subjects, or their substantial equivalents, have been taken already in the institutions from which the students come. Only the heads of the departments involved have the power to excuse students from taking these prescribed subjects. No advanced standing is granted for additional units above the usual sixteen earned in the four-year high school course.

**MINIMUM RESIDENCE REQUIREMENT**—The College does not grant any certificate or degree for less than three full quarters of resident study, during which time the student must have earned at least forty-eight quarter-hours of credit. If the student's first graduation is with the

Bachelor of Arts degree, only three quarters are required. Students who have already taken the Life Certificate (two-year course) must spend in residence at least two additional quarters for the Bachelor of Arts degree. Correspondence students when enrolling in residence should apply to the extension department for an extension of time which will permit the completion of correspondence courses at a time when the student is not enrolled in residence courses. Students in residence are not permitted to enroll in correspondence courses during vacations except during the vacation between the end of the summer quarter and the beginning of the fall quarter. Extra-mural classes and part-time enrollment classes conducted by members of the College faculty are considered as resident work and may be counted as such to the extent of one quarter for the Life Certificate (two-year course) and one of the two resident quarters required beyond that for the Bachelor of Arts degree. The residence requirement in the graduate school is shown on page 46.

### CREDITS

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

### ENROLLMENT

The College enrolls students under the following classifications:

1. **RESIDENCE**—In this type of enrollment, students must successfully complete a minimum of twelve quarter hours each quarter, in order that it be counted as one of the required residence quarters.

2. **PART TIME**—Students may, with the consent of the College, enroll for any number of hours less than twelve.

3. **EXTRA-MURAL**—In this type of enrollment, students are enrolled in classes not taught upon the campus, but taught by faculty members.

4. **EXTENSION**—These students are enrolled in classes taught by extension instructors duly approved by the College.

5. **CORRESPONDENCE**—These students are enrolled in correspondence courses.

**MAXIMUM AND MINIMUM HOURS OF CREDIT**—A student registers usually for fifteen, sixteen, or seventeen hours, each quarter. The average shall be not more than sixteen hours for any three consecutive quarters, or forty-eight for the year of nine months. If a student attends during the summer quarter, this average shall be understood to apply. If the work is to count as a resident quarter, the student must carry at least twelve quarter-hours. A student who wishes to take a larger program than sixteen hours regularly must take one of the standard mental tests. Following the test, the student may carry seventeen or eighteen hours regularly, if the score is high enough to warrant it. In no case shall more than eighteen hours be allowed.

**THE TEN-HOUR RULE**—A student failing to pass in ten hours of college work out of a full quarter's program of from twelve to eighteen hours will be dropped at the end of the quarter and may not enroll again except by special permission of the vice-president, and then only on probation for one quarter. The second failure to pass in ten hours of work permanently excludes the student from the College.

**THE GRADING SYSTEM**—The system of weighted credits which has been in effect for some years past has been abandoned by faculty action. However, extra credit earned under that system while in effect is not to be discounted because of the change. The following grading system has been adopted by faculty action and has been in effect since October 1, 1924:

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

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

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

A course marked "Incomplete" must be made up within three months, or during the succeeding quarter, if credit is to be recorded for it. By special arrangement in advance with the vice-president or registrar and the teacher a longer time may be given.

A course marked "Withdrawn" may not be made up unless arrangement was made at the time of withdrawal with the vice-president or registrar.

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

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

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

**THE HOUSING OF WOMEN STUDENTS**—All rooming accommodations for women must be approved by the dean of women before permanent registration. The office of the dean of women is open during the month of September for the sole purpose of consulting with women students and placing them in approved houses. It is advised that students attending College for the first time come several days or even a week before the beginning of the fall quarter that they may be satisfactorily located. No rooming houses will be allowed on the approved list if they do not have single beds and comfortable bathing and heating facilities.

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

PART IV  
GRADUATE WORK





## GRADUATE WORK

Colorado State Teachers College offers to advanced students courses above the four-year bachelor level. The fifth year of work leads to the degree of Master of Arts, and courses beyond this may be transferred to teacher training institutions granting the doctor's degree.

## THE NATURE OF GRADUATE WORK

The principal aim of work beyond the bachelor level is to develop still further a professional attitude, to increase the ability to carry on investigations in the educational field independently, and to promote the spirit of research. In keeping with this function of a teachers college, graduate work is confined largely to the professional field. It represents specialization and intensive work. As soon after enrollment as possible, the graduate student shall focus attention upon some specific problem which shall serve as the center for the organization of his work, including courses to be taken and special investigations to be conducted. No graduate credit will be given for scattered and unrelated courses.

## ADMISSION TO GRADUATE WORK

1. Application for admission must be made in writing to the registrar of the College.
2. The requirements for admission are:
  - a. The degree of Bachelor of Arts, Philosophy, Science, or other four-year degree from a reputable institution authorized by law to confer these degrees and approved by this institution.
  - b. Official credentials to be filed with the registrar giving (1) a record of the high school work, (2) a transcript of the undergraduate, college or university grades.
  - c. Satisfactory classification test scores to be filed with the registrar as a matter of record.

Excess bachelor's work taken in Colorado State Teachers College may be applied toward the Master of Arts degree provided the student files with the registrar prior to the time the work is done a statement from the head of his major department granting him the privilege to do this. Such credit will be granted to students in their fourth year only who do not need all of their time for the completion of their undergraduate work.

The prospective student should obtain the blank "Application for Advanced Standing" and send it to the Committee on Admission and Credits for its approval before the opening of the quarter. Such blanks may be secured by addressing The Registrar, Colorado State Teachers College, Greeley, Colorado. Original credentials, including the high school record, should be submitted with the application for advanced standing.

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

## ADMISSION TO CANDIDACY FOR THE MASTER OF ARTS DEGREE

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

1. Not later than the tenth week of the student's first quarter, application for admission must be made in writing to the registrar of the College.

2. Before a student can be admitted to candidacy, he must meet the following requirements:
  - a. He must have demonstrated his ability to do a high grade of work in his field of specialization and must have shown promise of ability to do research.
  - b. The average of his first quarter's grades must be above the mean grade of "C".
  - c. He must have given evidence to the director of the Training Schools of his ability to teach. This may have been done by either of the following ways: (1) Successful teaching experience; (2) Successful student teaching.
  - d. He must have established satisfactory classification test scores.
  - e. Should his test requirement in Education 223 reveal an inability to organize research data effectively and to express his thought in a clear, lucid form he will be required to take English 20 without credit.
  - f. He must have shown his personal fitness to become a candidate.
  - g. The head of the student's major department must have filed with the registrar a statement endorsing the student for admission to candidacy, giving the subject of his thesis, and stating the progress made on the thesis at that date.

A candidate may be required by the head of his major department to pass either a written or an oral preliminary examination before he is recommended to the Graduate Council for admission to candidacy.

#### REQUIREMENTS FOR THE DEGREE

1. Beyond the four-year undergraduate course, the student working for the degree, Master of Arts, must earn graduate credits amounting to 48 quarter-hours. Three quarters of work in residence are required, but one quarter of approved graduate work may be transferred from another institution; or 16 hours of approved graduate work may be done in extra-mural group classes conducted by members of Teachers College faculty.
2. Research culminating in the writing of a thesis upon some selected problem shall be an integral part of the work required for the degree. A maximum of 9 hours credit may be granted for this research, 3 hours of which shall be taken in Education 223, the other 6 hours in graduate research courses in his major department.
3. Every student must register for Education 223 during his first quarter of work.
4. The student must have at least 64 quarter hours of undergraduate and graduate work in his major or closely related subjects.
5. He must have not less than 32 hours of undergraduate and graduate professional work in education and related fields, as educational psychology, educational sociology, and educational biology. If the candidate majors in Education, 64

quarter-hours will be required, but only work in education or educational psychology will be accepted for such undergraduate and graduate work.

6. At least four weeks before the date upon which the degree is to be conferred; three copies of his thesis must be filed with the head of his major department for review by the Thesis Committee before going to the Graduate Council for final approval.
7. At least three weeks before the date upon which the degree is to be conferred, the complete thesis in final form must be approved and two copies must be filed with the Graduate Council, one of which must be an original copy.
8. The thesis must conform to definite standards. It must be typewritten on paper of good quality, size 8½ inches by 11 inches, and be properly bound. The arrangement of the title page is as follows:

COLORADO STATE TEACHERS COLLEGE

(Title of Thesis)

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

by

(Student's Name)

(Title of Major Department)

(Date)

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

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

No graduate student may enroll for more than 16 hours of work in any one quarter. In determining the maximum amount of work, research upon thesis must be included within the limit stated.

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

GRADUATE FELLOWSHIPS, SCHOLARSHIPS, AND LOAN FUNDS  
FOR 1927-28

TEACHING FELLOWSHIPS

Ten graduate teaching fellowships will be available for the school year 1927-28. Each fellowship carries a stipend of \$450, paid in nine equal installments. These fellowships are open to any man or woman who has a Bachelor of Arts degree and who is an exceptionally capable student. Fellows are required to teach at least six hours per week and may not register for more than twelve hours of courses per quarter. Application for these fellowships should be made to the dean of the College.

THE PRESBYTERIAN CHURCH GRADUATE SCHOLARSHIP

The First Presbyterian Church of Greeley, aided by the Board of Christian Education, offers to a member of the graduate group a scholarship with a stipend of \$600 for the school year 1927-28. This is open to any graduate student qualified by natural ability and Christian experience as well as by scholarship to assist the local church, particularly

as it endeavors to keep in touch with the Presbyterian students in the College, and to maintain classes in training for Christian leadership. The position in the church is to be that of student secretary, and half of the student's time is to be given to it.

#### THE WELD COUNTY SAVINGS BANK GRADUATE SCHOLARSHIP

The Weld County Savings Bank offers to a member of the graduate group a scholarship with a stipend of \$100 for the school year 1927-28. This is open to any young man or young woman who wishes to pursue advanced study in preparation for teaching. The scholarship is designed primarily to assist a student who is not financially able to continue college work, but scholarship and ability will be taken into consideration in the selection of the candidate.

#### DELTA PHI OMEGA GRADUATE SCHOLARSHIP

The Delta Phi Omega sorority offers a graduate scholarship with a stipend of \$150 for the school year of 1927-28. This is open to any student who wishes to pursue advanced study in preparation for teaching. First preference will be given to a member of the sorority. The scholarship is designed primarily to assist a student who is not financially able to continue college work, but scholarship and ability will be taken into consideration in the selection of the candidate.

#### SIGMA Upsilon GRADUATE LOAN FUND

The Sigma Upsilon sorority has established a graduate loan fund to be used in helping advanced students 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.

#### P. E. O. SISTERHOOD GRADUATE LOAN FUND

Greeley Chapters I. and B. E. of the P. E. O. Sisterhood have established a graduate loan fund to be used in helping advanced students remain in college for the degree of Master of Arts. This fund is available to any young man or young woman in need of financial assistance. All applications for loans should be made to the vice-president of the College.

PART V  
THE COURSE OF STUDY



## THE COURSE OF STUDY

*Throughout this catalog courses numbered 1-99 are primarily first and second-year subjects; 100-199 are third and fourth-year. Those numbered 200 and above are graduate work.*

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

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

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

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

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

Art	Music
Kindergarten-Primary	Manual Training
Intermediate Grades	Commercial Education
Junior High Schools	Home Economics
Rural Schools	

This regulation is made because it is impossible to place teachers with less than four years of college training in positions in accredited high schools, except in certain of the types of work noted above. Teachers with less than four years of college training usually go into the elementary or rural schools.

A student who expects to go straight through a four-year curriculum may major in any of the departments, but, except as noted above, can not get the Life Certificate until the full degree course is completed. One who finally expects to complete a degree course in some other department than the nine listed for the two-year life certificate may, however, begin his course as a major in one of the nine listed curricula and at the same time elect the departmental requirements of the first two years of the curriculum he finally expects to use as his major. At the end of two years he may take his Life Certificate with a major; for example, in junior high school teaching. He would at that time have completed all the core requirements and departmental requirements of the junior high school curriculum, and also, the departmental requirements of the first two years of his four-year major; for example, history

or geography. Then he may go out and teach for a time. When he returns to the College he may register as a history major, or a geography major, and go on and complete his four-year curriculum and receive the degree of Bachelor of Arts in the field finally chosen. During the first two years this student would register as a major in one of the nine designated departments. His adviser would be the head of that department. In the third and fourth years his adviser is the head of the department finally chosen for the Bachelor of Arts degree curriculum.

**LENGTH OF COURSE**—Each course is planned to occupy twelve quarters. A quarter is approximately twelve weeks in length. Upon the completion of the course the degree of Bachelor of Arts will be granted. The diploma is a Colorado Life Certificate. Each course is so arranged that it may be divided in the middle. The first part of the course may be completed in six quarters. The student who chooses to be graduated at the end of the two-year course receives the Colorado Life Certificate, but no degree.

## THE COURSE OF STUDY IN DETAIL

### THE PROFESSIONAL CORE

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

**FIRST YEAR:** Biology 1, English 0 or 4 (unless excused for proficiency), Hygiene 1, Education 1, Education 5, Civilization 1 and 2, and a Physical Exercise course each quarter.

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

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

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

**THE DEPARTMENTAL REQUIREMENTS**—In addition to these "core" subjects required of all students, each student is required to take a number of prescribed subjects in the department which he chooses as his major. The lists of subjects required by the several departments may be found on the pages indicated below:

Art .....	53	History and Political Science .....	96
Athletics and Men's Physical		Home Economics .....	101
Education .....	56	Industrial Arts .....	104
Biology .....	57	Library Science .....	109
Chemistry .....	61	Literature and English .....	110
Commercial Education .....	64	Mathematics .....	115
Education (all divisions) .....	72	Music .....	117
Educational Psychology .....	81	Physical Education and Athletics	
Foreign Languages .....	87	for Women .....	122
Geology, Physiography, and		Physics .....	126
Geography .....	91	Sociology, Anthropology and Eco-	
Health Education .....	94	nomics .....	128

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



## ART

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

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

## COURSE OF STUDY

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Reference text, "Composition," Dow.

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

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

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

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

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

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

6. ART APPRECIATION—Each quarter. One hour.

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

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

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

9. HISTORY OF ART—Winter quarter. Three hours.

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

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

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

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

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

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

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

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

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

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

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

100. SUPERVISION OF ART EDUCATION—Spring quarter. Two hours.

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

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

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

## 103. ART STRUCTURE III—Fall and winter quarters. Four hours.

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

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

For description of course see Art 3a.

## 104. COLOR THEORY AND COMPOSITION—Fall quarter. Four hours.

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

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

For description of this course see Art 4a.

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

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

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

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

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

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

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

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

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

For description of course see Art 12.

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

A course which stresses the decoration and glazing of pottery.

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

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

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

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

## 120. OIL PAINTING I—Winter and spring quarters. Four hours.

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

## 200. SUPERVISION OF ART EDUCATION—Spring quarter. Two hours.

For description of course see Art 100.

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

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

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

A continuation of Art 224.

## ATHLETICS AND PHYSICAL EDUCATION FOR MEN

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

The courses for men in Athletic Coaching, Physical Education, and Administration have been arranged especially for instructors already engaged in teaching and coaching, during the regular school year; and for any others who wish to supplement the preparation they may have received in other colleges and professional schools. The courses take up all the more important problems of coaching and are designed for the purpose of fitting men more competently to take charge of athletics and gymnastics in schools and colleges throughout the country.

Students should have had experience, however limited, either in coaching, or in actual participation in the various competitive sports. It is necessary that they should be fitted for this work, and experience is a requisite. The coaching courses are not for those without experience. The school does not guarantee to convert any applicant into a successful coach, but it does promise instruction which cannot fail to be of much value to the man who is fitted to take it.

### COURSE OF STUDY

All men doing major work in this department must also do major work in some other department.

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

FIRST YEAR: H. Ed. 8, Ath. 13, Ath. 52, Ath. 66, and H. Ed. 1.

SECOND YEAR: H. Ed. 2, H. Ed. 5, Ath. 55, Ath. 66, Ath. 66a, and Ath. 67.

THIRD YEAR: Ath. 165, Ath. 167, Ath. 170, Ed. Psych. 105 and 106, and Soc. 105 and 130.

FOURTH YEAR: P. E. 101, H. Ed. 101, H. Ed. 103, H. Ed. 108, Ath. 166, and Ath. 168, Biotics 101, Ed. 111, and Eng. 100.

13. ATHLETIC TRAINING—Summer quarter. Two periods. One hour.

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

52. GYMNASTICS—Fall, winter, and spring quarters. Three periods. One hour.

An assortment of activities are included in this course, such as handball, tennis, heavy apparatus, tumbling, volleyball, touchball, depending on the season.

55. PERSONAL COMBAT GAMES—Winter quarter. Two periods. One hour.

Boxing, fencing, wrestling, and other activities.

66. COLLEGE SPORTS—Fall, winter, and spring quarters. Daily. One hour.

This course is intended for those desiring to make a place on the college or freshmen teams in the various sports in season, football, basketball, wrestling, boxing, baseball, track, and tennis.

66a. FOOTBALL FUNDAMENTALS—Fall and spring quarters. Three periods. Two hours.

A course designed for those who find it impossible to participate in the regular college practice, and yet wish to learn the more important fundamentals of the sport. This course is also open to beginners in football.

67. INTRA-MURAL SPORTS—Fall, winter, and summer quarters. Three periods. One hour.

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

68. CROSS-COUNTRY RUNNING—Fall quarter. Three periods.

70. SWIMMING—Winter and summer quarters. One hour.

165. FOOTBALL COACHING—Fall and summer quarters. Three periods. Two hours. Prerequisite, football experience.

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

166. BASKETBALL COACHING—Winter and summer quarters. Three periods. Two hours. Prerequisite, basketball experience.

Theory of coaching different styles of both offense and defense used by the leading coaches, goal throwing, foul throwing, signals from tip-off and out-of-bounds plays, value and use of the pivot, will be among the chief topics discussed.

168. TRACK AND FIELD COACHING—Spring and summer quarters. Three periods. Two hours.

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

169. BASEBALL COACHING—Spring and summer quarters. Three periods. Two hours. Prerequisite, baseball experience.

Discussion of best methods in batting, fielding, base running, pitching. Attention is given to the fundamentals, teamwork, rules, and like topics.

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

The general organization and administration of a department of physical education and athletics. Aims, types of activities, courses, personnel, relation of medical advisory work and health service, athletics and like topics.

## BIOLOGY

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

No one can be a safe leader in educational theory and practice who does not have some conception of the place the study of nature should have in the normal development of the child; who does not realize the large application of the principle of organic evolution to education 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 laborable. For it is only through this procedure that students gain both a scientific knowledge and a large appreciation of life forms. tory and field work with classroom study wherever this is possible and

## COURSE OF STUDY

Courses marked \* are given also by extension.

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

## BOTANY THE MAJOR INTEREST

FIRST YEAR: Botany 1, 2, and 3.

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

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

FOURTH YEAR: Biotics 101, Biology 102, Botany 102, Geology 100, General Science 1, Physics 103.

## †ZOOLOGY THE MAJOR INTEREST

FIRST YEAR—Zoology 1, 2, and 3.

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

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

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

## BIOLOGY

\*1. EDUCATIONAL BIOLOGY—Every quarter. Three hours. Fee, \$1.00. Required of all Junior College students.

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

102. TEACHING OF BIOLOGY—Spring quarter. Four hours. Fee, \$1.00. Prerequisites, Biology 1, Botany 1, 2, and 3, Zoology 1, 2, and 4.

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

## BOTANY

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

This is an elementary study of the structure and function of flowering plants and their relation to man. Students who can elect but one botany course for its cultural value are advised to take this one. The course includes a study of the structure, character, and functions of roots; the structure and functions of stems and their industrial applications, such as the color of woods and grain in lumber; the nature and functions of leaves; the structure of flowers and fruits and their relation to mankind. The whole aim of this course is to give students not only a scientific knowledge of the structure and function of our common plants, but also an appreciation of the large place which they hold in serving man and beautifying the earth.

2. GENERAL BOTANY—Winter quarter. Four hours. Fee, \$1.00. Prerequisite, Biology 1.

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

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

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

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

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

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

102. **BOTANICAL TECHNIC AND HISTOLOGY**—Fall and summer quarters. Four hours. Fee, \$1.50.

Prerequisite, Botany 1.

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

103. **PLANT PHYSIOLOGY**—Winter and summer quarters. Four hours. Fee, \$1.50.

Prerequisite, Botany 1.

The purpose of this course is to give the student a working knowledge of such physiological activities as absorption, translocation, photosynthesis, digestion, respiration, and transpiration. The experimental method is largely used. The student is encouraged to plan and accurately carry on these experiments. Constant stress is laid upon sources of error and modifying conditions.

201. **TAXONOMY**—Spring and summer quarters. Four hours. Fee, \$1.00. Prerequisites, Botany 2 and 3.

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

224. **BOTANICAL RESEARCH**—Fee, \$3.00.

An individual research course in connection with the graduate thesis. This is a conference course designed to guide students in the selection of problems, method of procedure in the solution of them, and the interpretation of results. It should be registered for only after consultation with the head of the department.

225. **BOTANICAL RESEARCH**—Fee, \$1.00.

A continuation of Botanical Research 224.

## ZOOLOGY

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

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

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

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

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

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

\*4. **ECONOMIC ZOOLOGY**—Spring and summer quarters. Four hours. Prerequisite, Biology 1.

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

101. **INVERTEBRATE ZOOLOGY**—Summer quarter. Four hours. Fee, \$1.00.  
Prerequisites, Zoology 1 and 2 or equivalent.  
Morphology of a series of invertebrates. Invertebrate structure and development.

102. **VERTEBRATE ZOOLOGY**—Spring quarter. Four hours. Fee, \$1.00.  
Prerequisites, Zoology 1 and 2 or equivalent.  
A study of the vertebrate series designed to acquaint the student with the group, their structure, relationship, and development. Lectures, assigned readings, laboratory and demonstrations.

103. **ZOOLOGICAL TECHNIC AND ANIMAL HISTOLOGY**—Winter quarter. Four hours. Fee, \$1.50.

Prerequisites, Zoology 1 and 2 or equivalent.  
A course in which the methods of fixing, staining, and preparing material for class use is combined with the study of the origin, differentiation and organization of animal tissues.

107. **ELEMENTARY ENTOMOLOGY**—Fall quarter. Four hours. Fee, \$1.00.

Prerequisites, Zoology 1 and 2 or equivalent.  
A study of the structure and classification of insects, together with identification of the common species of the vicinity. Methods of collecting, mounting, and preparing insect material for study will be given emphasis. Those preparing to teach will be given opportunity to prepare a reference collection of the common species. Field observations will constitute a part of the work.

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

Prerequisites, Zoology, 1, 2, and 102.  
Detailed studies of systems of organs from the comparative standpoint. Designed for students who desire to continue the study of the vertebrates. Lectures, assigned readings, and laboratory.

224. **ZOOLOGICAL RESEARCH**—Fee, \$3.00.

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

225. **ZOOLOGICAL RESEARCH**—Fee, \$1.00.

Continuation of course 224.

#### BIOTICS

101. **HEREDITY AND EUGENICS**—Winter and summer quarters. Four hours.

Prerequisite, Biology 1.

The first half of this course deals with the physical basis of heredity, Mendel's laws, their modifications and extensions, and other principles governing the transmission of inherited characters. The second half considers the inheritance of natural abilities and capacities, the present eugenic trend of the American people, how to eliminate the defective strains of germplasm, and what measures may be taken to preserve the superior strains.

201. **HEREDITY AND EUGENICS**—Winter and summer quarters. Four hours.

Prerequisite, Biology 1.

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

#### BACTERIOLOGY

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

Prerequisite, Biology 1.

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



## ELEMENTARY SCIENCE

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

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

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

This course is a continuation of Elementary Science 1 and may be elected by students who wish advance work in this field. It deals primarily with physical phenomena, such as simple problems in electricity, magnetism, geology, meteorology, and astronomy. Laboratory demonstrations and field observations constitute a major part of the work.

## GENERAL SCIENCE

1. GENERAL SCIENCE—Winter and summer quarters. Four hours. Fee, \$1.50.

This is primarily a professionalized course emphasizing the aims and the methods used in selecting and organizing the subject matter for a general science course. In addition, numerous investigations will be made in recent texts and courses of study to determine the type of subject matter emphasized. Governed by these results, the student will formulate a course of study. Some time will be devoted to the examination of appropriate texts and individual investigations in the field of general science teaching. Especially for junior high school majors.

## CHEMISTRY

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

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

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

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

## COURSE OF STUDY

Courses marked \* are given also by extension.

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

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

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

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

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

## †CHEMISTRY

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

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

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

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

---

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

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

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

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

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

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

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

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

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

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

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

**7. QUALITATIVE ANALYSIS—Any quarter. Four hours.**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### COURSES FOR GRADUATE STUDENTS

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

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

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

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

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

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

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

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

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

217. TEACHING OF CHEMISTRY—Any quarter. Three hours. Fee, \$3.00.

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

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

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

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

Recitations and lectures on most recent findings concerning the metals.

223. ADVANCED FOOD CHEMISTRY—Four to twelve hours. Fee, \$4.00.

A laboratory and consultation course. Prerequisites, Chemistry 112, 114, 114b.

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

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

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

A continuation of Chem. 224.

## COMMERCIAL EDUCATION

The direct and controlling aim of the Department of Commercial Education is to prepare supervisors, department heads, and teachers of commercial education for the public schools and teacher training institutions. The courses of study offered below are planned and arranged with this objective in mind.

Specialization has been emphasized to the extent that a student who desires to become a specialist in the teaching of secretarial training, bookkeeping and accounting or economics, marketing and administration, may select a two-year or a four-year course that will give the highest degree of specialization in that particular field that it is possible to acquire in the given length of time.

The student should select one of the programs offered below and follow it very carefully in planning quarterly programs. Your faculty adviser should be consulted concerning the choice of electives.

The Life Certificate will be issued to those who complete the requirements of one of the courses outlined below for the first two years and the core subjects outlined on page 52 and who have earned 96 hours of college credit. The Bachelor of Arts Degree will be granted to those who have completed one of the following four-year courses and the core subjects on page 52 and who have earned 192 hours of college credit. The Master of Arts Degree will be granted to those who have met the requirements set forth below together with those set forth on pages 45, 46, 47.

Students who have had training in commercial education will not be required to take courses that are similar to those they have had elsewhere. They will be admitted to advanced classes by satisfying the professors that they are able to carry advanced work.

### COURSE OF STUDY

Courses marked \* are offered also by extension.

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

#### FOR TEACHERS OF ECONOMICS, MARKETING, AND ADMINISTRATION

FIRST YEAR: C. E. 36, 37, 38, Geog. 7, Hist. 10, and Soc. 10.

SECOND YEAR: C. E. 39, 40, 42, 50, 53, and Eng. 4.

THIRD YEAR: C. E. 144, Hist. 101, Soc. 110, and 130.

FOURTH YEAR: C. E. 155, 157, 158, Soc. 112, and Geog. 199.

#### FOR TEACHERS OF BOOKKEEPING AND ACCOUNTING

FIRST YEAR: C. E. 36, 37, 38, Geog. 7, Hist. 10, and Soc. 10.

SECOND YEAR: C. E. 39, 40, 50, 51, 52, and Eng. 4.

THIRD YEAR: C. E. 144, 150, 151, 159, and Soc. 110.

FOURTH YEAR: C. E. 155, 157, 158, Soc. 112, and Geog. 199.

#### FOR TEACHERS OF SECRETARIAL TRAINING COURSES

FIRST YEAR: C. E. 11, 12, 13, 14, 15, 37, and Soc. 10.

SECOND YEAR: C. E. 1, 2, 3, 4, 16, and Eng. 4.

THIRD YEAR: C. E. 105, 106, 110, Hist. 10, and Eng. 20.

FOURTH YEAR: C. E. 103, 104, 107, 108, 111, 158.

## CANDIDATES FOR THE MASTER OF ARTS DEGREE

One of the four-year curricula outlined above or the equivalent.

FIFTH YEAR: C. E. 212, 213, and 224-5.

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

## MAJORS:

1. Beginning typewriting shall receive credit only on completion of the typewriting work of the third quarter and the shorthand work of the third quarter. The amount of credit shall be one-third of the number of weekly periods of work, including practice.
2. Beginning shorthand shall receive credit only on completion of the shorthand work of the third quarter.
3. Only methods work in handwriting shall receive college credit, and this to the extent of a maximum of two hours altogether.

## NON-MAJORS:

1. College credit for beginning shorthand or beginning typewriting shall be given only at the completion of the second quarter's work in either subject.
2. The amount of credit shall be one-half of that given to commercial majors.
3. Only methods work in handwriting shall receive college credit, and this to the extent of a maximum of two hours altogether.

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

This course is based on the Gregg Shorthand Manual and covers the first ten lessons. It is offered for the benefit of students who have had no training in shorthand but who desire to major in the teaching of secretarial training courses.

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

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

3. SECRETARIAL PRACTICE I—Fall, spring, and summer quarters. Four hours.

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

4. METHODS OF TEACHING SHORTHAND—Spring and summer quarters. One hour.

Prerequisite, C. E. 2 or the equivalent. The chief aim of this course is to suggest special methods of teaching Gregg Shorthand. Some attention is given to the materials used in teaching shorthand.

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

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

**\*11. PRINCIPLES OF TYPEWRITING I—Fall and summer quarters. Two hours. Fee \$1.00.**

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

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

Special attention is given to correct habit formation relative to operating the machine, memorizing the keyboard, position of the hands over the keyboard and general posture of the body at the machine.

**\*12. PRINCIPLES OF TYPEWRITING II—Winter and summer quarters. Four hours. Fee, \$1.00.**

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

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

**\*13. PRINCIPLES OF TYPEWRITING III—Fall, spring, and summer quarters. Three hours. Fee, \$1.00.**

Prerequisite, C. E. 12 or the equivalent. This course includes a review of the names and uses of operative parts of the typewriter, a review of the International Rules for correcting papers, with an introduction to the preparation of manuscripts, tabulation and billing, and to law and business papers. Accuracy in typing is stressed throughout the course. Speed tests are given at regular intervals with an opportunity given to win the awards as given by the different typewriter manufacturing companies. This course is required of all candidates for the life certificate or A. B. Degree who are majoring in the secretarial group of studies of the Commercial Education curricula.

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

Prerequisite, C. E. 12 or the equivalent. This class meets once a week. The purpose of the course is to give the prospective teachers of typewriting a knowledge of the equipment that is necessary to teach typing successfully. It also deals with the different texts on the market and the special and different methods of procedure. Students are required to know the names and uses of all the operative parts of at least all the different makes of typewriters in the department; they must be able to write on the typewriter accurately at a moderate rate of speed.

**\*15. BUSINESS REPORTS AND COMPOSITIONS—Fall quarter. Four hours.**

This course attempts to give the teacher of business English in high school a better background. The principles of literary composition will be applied to commercial correspondence, reports, and compositions. Business situations will be analyzed, letters classified into type forms, and the requisites of each class will be exemplified by models. The psychology of the good sales letter will be analyzed, and principles derived from this analysis will be applied to practice compositions. Special consideration will be given to letters of application, letters of complaint, sales letters, follow-up letters, letters of collection, and other special correspondence.

**16. MATERIAL AND METHODS FOR TEACHING FILING—Spring quarter. Four hours. Fee, \$1.00.**

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

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

**\*36. HANDWRITING METHODS—Every quarter. Two hours.**

This course combines practice and special methods of teaching penmanship for teachers and supervisors of handwriting. The class meets four times a week and no outside preparation is required. All who take this course are required to reach a standard of skill equal to 80 as measured by the Zaner Handwriting Scale No. 5 before credit will be given.

**\*37. BUSINESS MATHEMATICS—Fall quarter. Four hours.**

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

**\*38. COMMERCIAL LAW I—Winter and summer quarters. Four hours.**

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

**\*39. AN INTRODUCTION TO BUSINESS—Fall quarter. Two hours.**

A broad picture of the entire business field is presented in this course, without going far into detail at any point, with a review of such historical material as is necessary for an understanding of present business phenomena. Special attention is given to the most important industries and business concerns of the country. The first part of the course deals with the business aspects of the industries furnishing the raw materials of commerce. This is followed by a discussion of production and distribution which traces the raw product from the producer to the workshop and to the consumer. The next part of the course deals with business organizations and business functions. Such topics as Risk Bearing Institutions, Business Men's Associations, and relations of Government to Business are touched upon near the end of the course. Special attention throughout the course is given to the problems of the small business. This course should be of special interest to teachers interested in vocational guidance and it will be very helpful to the student contemplating the selection of a field of specialization in business.

**\*40. INVESTMENTS—Winter quarter. Two hours.**

This course attempts to cover the entire field of investments in a clear, concise, non-technical manner. The tests by which a sound investment are analyzed are treated together with the methods of applying these tests to securities. A study of the information available on the financial page of the daily papers in order that it may be utilized in buying or selling securities. The mechanics of the purchase and sale of securities and the principles back of judicious investments are considered. Technical terms are avoided as much as possible. A careful distinction is made and maintained throughout the course between investment and speculation. The following aims are set forth for the course: to discourage a tendency toward speculation; to create a tendency toward thrift and saving; to help the average person find suitable investment possibilities; and, to prepare teachers to teach the same subject in secondary schools.

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

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

**\*42. ADVERTISING—Spring quarter. Four hours.**

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

**\*50. PRINCIPLES OF ACCOUNTING I—Fall quarter. Four hours.**

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

**\*51. PRINCIPLES OF ACCOUNTING II—Winter quarter. Four hours.**

Prerequisite, C. E. 50 or the equivalent. This course is a continuation of C. E. 50. Various types of business papers are considered in their relation to the records and to the routine of the business. Summary statements of different kinds are discussed and illustrated. Types of accounting records and their development, especially as regards the partnership business, are taken up in detail. The principles considered are developed by means of class discussion, lectures, and illustrative laboratory material. A complete set of partnership books with a minimum of bookkeeping detail are written up by the student as homework in connection with this course.

**\*52. PRINCIPLES OF ACCOUNTING III—Spring and summer quarters. Four hours.**

Prerequisites, C. E. 50 and 51 or the equivalent. This course is designed to cover the more advanced principles of accounting, emphasizing especially some of the problems of corporation accounting. The proper evaluation of balance sheet items, as regards depreciation and the maintenance of fixed assets, receives special attention. A complete set of corporation books with a minimum of bookkeeping detail are written up by the student as homework with this course. Principles considered are developed by lectures, discussion and illustrative laboratory problems.

**\*53. SALESMANSHIP—Fall quarter. Four hours.**

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

The first part of the course is based on a more detailed analysis of personal selling processes as applied to buyers in general, and is adapted to practically all classes of buyers. The second part of the course deals with the problems and relationships of the salesman and his employer in the direction of personal selling as a business activity.

**\*55. THE ECONOMICS OF RETAILING—Winter and summer quarters. Four hours.**

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



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

**103. THE ORGANIZATION OF SHORTHAND MATERIAL—Fall quarter.  
Two hours.**

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

**104. METHODS OF TRAINING FOR SECRETARIAL PERSONNEL SERVICE—  
Winter quarter. Two hours.**

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

**105. SECRETARIAL PRACTICE II—Spring and summer quarters. Four  
hours.**

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

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

**106. SECRETARIAL SCIENCE I—Winter quarter. Three hours.**

Prerequisites, C. E. 105 and 13 or the equivalent.

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

**107. SECRETARIAL SCIENCE II—Spring quarter. Three hours.**

Prerequisite, C. E. 106 or the equivalent.

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

**108. SECRETARIAL STANDARDS AND MEASUREMENTS—Fall quarter.  
Three hours.**

Prerequisite, C. E. 105 or the equivalent.

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

**109. ANALYTICAL STUDIES IN GREGG SHORTHAND—Winter quarter.  
Three hours.**

Prerequisite, C. E. 105 or the equivalent.

The aim of the course is to work out for the prospective teacher lesson plans applicable exclusively to the presentation of shorthand. This is a

specialized subject to which general plans cannot be successfully applied. Studies of recent books in the field along this line are to be supplemented by the surveys in teaching problems through a series of projects. The basic texts are to be Principles of Gregg Shorthand and Analytical Lessons in Gregg Shorthand by M. D. Frink.

**110. OFFICE APPLIANCES AND SPECIAL EQUIPMENT—Every quarter. Four hours.**

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

**111. SECRETARIAL BOOKKEEPING—Winter quarter. Four hours.**

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

**\*144. COMMERCIAL LAW II—Spring quarter. Four hours.**

Prerequisite, C. E. 38 or the equivalent.

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

**150. BANKING PRACTICE—Fall quarter. 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 course provides for some practice work in handling the books and records of a bank. Popular accounting machines are demonstrated in connection with the course. This course aims to prepare the prospective teacher to teach bank bookkeeping, the principles of banking, or to organize a school bank.

**\*151. COST ACCOUNTING—Winter and summer quarters. Four hours.**

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

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

**155. BUSINESS ADMINISTRATION—Fall and summer quarters. Four hours.**

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

**\*157. METHODS OF TEACHING COMMERCIAL SUBJECTS—Winter quarter. Four hours.**

This course attempts to present special methods for the teaching of the following commercial subjects: bookkeeping; accounting; commercial arithmetic; commercial law; salesmanship; advertising; and economic geography. The materials necessary for the teaching of each of the above subjects are also considered. Some attention is given to the organization of the commercial curriculum and to the subject of tests and measurements. The aim of the course is to furnish concrete, practical suggestions on the methods employed by successful teachers in presenting the commercial subjects listed above.

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

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

**159. AUDITING—Spring quarter. Four hours.**

Prerequisite, C. E. 52 or the equivalent.

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

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

A study of the commercial curriculum for the junior and senior high school. The content of courses, the year in which they should be offered, and the objectives of each will be treated. The educational qualifications and training of commercial teachers required by different states for certification will be studied. Some of the other topics that will be treated are: the necessity for academic training along with commercial education; the present status of commercial education in secondary schools and the noticeable trends; the expansion of the commercial curriculum for the purpose of offering more opportunities for specialization; the inclusion of a definite program of subjects for the student who does not care to specialize but who wants some business training; placement and follow-up of graduates; the status of commercial subjects as offerings for college entrance requirements, and many other topics that cannot be mentioned for want of space.

**213. COMMERCIAL EDUCATION CURRICULA—Winter quarter. Two hours.**

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

**224. RESEARCH IN COMMERCIAL EDUCATION—Every quarter. Three hours.**

Prerequisite, Ed. 223.

This is a seminar and conference course for graduate college students who are working on their master's theses. Students will have an opportunity to report on the progress being made with their studies at each

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

225. RESEARCH IN COMMERCIAL EDUCATION—Every quarter. Three hours.

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

## CONTEMPORARY CIVILIZATION

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

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

### COURSE OF STUDY

1. CIVILIZATION—Introduction to Contemporary Civilization. Winter quarter. Three hours.

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

2. CIVILIZATION—Introduction to Contemporary Culture. Spring quarter. Three hours.

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

## EDUCATION

The aim of the Department of Education is to help make better teachers, principals, supervisors, and superintendents. Many courses are given that are basic to all. Many other courses are highly specialized. An attempt is made to give enough general work so that every student will get a thorough foundation in the field, and enough specialized work so that he may become a specialist in some one branch. The student will find courses in the theory, the history and the philosophy of education in which clear analysis and straight thinking are of chief concern. He will also find courses that teach definite skills. These skills vary from the planning of a single lesson to the making of a curriculum or the planning of a school building.

### COURSE OF STUDY

Courses marked \* are given also by extension.

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

### FOR KINDERGARTEN AND PRIMARY TEACHERS

#### TWO YEARS

FIRST YEAR: Ed. 3a, 3b, and 3c, Ed. 52, Art 2.

SECOND YEAR: Elem. Science 1, Art 13, Eng. 15, Music 1a.

## FOR INTERMEDIATE MAJORS

## TWO YEARS

FIRST YEAR: Ed. 4a and 4b, Elem. Science 1, Art 14.

SECOND YEAR: Geog. 12, Hist. 1 or 4 or 10 (one of these courses), Math. 8, Eng. 1, Eng. 15, Eng. 13, Music 1a.

## FOR JUNIOR HIGH SCHOOL TEACHERS

## TWO YEARS

FIRST YEAR: Eng. 15, Hist. 1 or 2 or 10 (one of these courses), Elem. Science 1, Ed. 15.

SECOND YEAR: Ed. 113, Ed. 110, Eng. 2, Geog. 14, Math. 108.

## FOR TEACHERS AND SUPERVISORS IN RURAL SCHOOLS

## TWO YEARS

FIRST YEAR: Ed. 21, Ed. 3a, 3b, and 3c, Geog. 12, Ed. 23, Math. 8, Eng. 1.

SECOND YEAR: Ed. 4a and 4b, Ed. 20, either one of the following History courses :1, 2, 3, or 10, Music 12.

## FOR THIRD AND FOURTH YEAR STUDENTS IN EDUCATION

FOR MAJORS IN ELEMENTARY EDUCATION: Ed. 106, Ed. 129, Ed. 134, Ed. 150, Ed. 152 or 158, Ed. 210, Psych. 107, Biotics 101.

FOR SUPERINTENDENTS, SUPERVISORS AND PRINCIPALS: Ed. 104, Ed. 113 or 115, Ed. 108, Ed. 129, Ed. 134, Ed. 142, Ed. 143, Ed. 144, Ed. 210, Psych. 107, Biotics 101.

## I. COURSES PRIMARILY FOR JUNIOR COLLEGE STUDENTS

\*1. INTRODUCTION TO EDUCATION—Required of all first-year students. Every quarter. Four hours. (This course combines former Ed. 1 and Ed. 5 courses.)

This course aims to introduce the student to the study of education and to the principles of teaching or to orient the student in the field of teaching and to prepare him for more specialized study to come later. Among the topics to be discussed are the following: professional opportunities in education; function of education in a democracy; development of free schools; organization of American schools; professional ethics; professional training; the teacher's job in the community; how children learn; methods of teaching; classroom management; individual differences; measurement and testing; health of the child; in-service preparation and growth; etc.

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

This course consists of two regularly scheduled observation hours each week and one conference hour the first and fourth Tuesday of each month. The student observes the class he is to teach for a quarter preceding his actual teaching. This quarter of pre-teaching observation gives the student an opportunity to gain an insight into the technic of teaching and the mechanics of classroom management; a knowledge of the complete sequence of the subject matter of which he will teach only a part. Related readings and references in both content and method are required in this course. A student making a grade of less than "C" shall repeat the course.

2b. STUDENT TEACHING IN THE ELEMENTARY AND JUNIOR HIGH SCHOOL—Every quarter. Hours according to schedule.

Required of all junior college students. A full quarter of teaching carries five hours' credit, meeting five days a week with two monthly group conferences on the first and fourth Tuesdays. Each student making

a grade of less than "C" shall be required to repeat this course. As a prerequisite to student teaching (Ed. 2b) each student must make at least a grade of "C" in observation (Ed. 2a), pass satisfactorily an achievement test, Ed. 1, and a method course.

\*3a. PRIMARY GRADE METHODS (Dealing with methods of teaching reading, language, and spelling.)—Every quarter. Three hours. Prerequisite, Ed. 1.

3b. PRIMARY GRADE METHODS (Dealing with methods of teaching arithmetic, elementary social science and health.)—Every quarter. Three hours. Prerequisite, Ed. 1.

3c. PRIMARY GRADE METHODS (Literature, songs and games for the kindergarten-primary grades)—Every quarter. Three hours. Prerequisite, Ed. 1.

4a. INTERMEDIATE GRADE METHODS (Dealing with methods of the teaching of reading, language and spelling.)—Every quarter. Four hours. Prerequisite, Ed. 1.

4b. INTERMEDIATE GRADE METHODS (Dealing with methods of the teaching of arithmetic, social science and health)—Every quarter. Four hours. Prerequisite, Ed. 1.

5. PRINCIPLES OF TEACHING—Now a part of Ed. 1, Introduction to Education.

10. AN INTRODUCTION TO CURRICULUM MAKING (formerly the Elementary School Curriculum.)—Every quarter. Three hours. Prerequisite, Ed. 1 and Sophomore standing.

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

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

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

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

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

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

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

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

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

\*20. AGRICULTURAL EDUCATION—Fall and summer quarters. Four hours.

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

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

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

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

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

**24. THE RURAL COMMUNITY—Winter quarter. Three hours.**

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

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

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

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

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

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

**65. BIBLE STUDY, RELIGION OF ISRAEL—Fall and summer quarters.**  
Two hours.

This course will trace the religion of Israel from earliest beginnings through the exile period, showing the growth, through experience, of the Hebrew religion and the progress of the Hebrew conception of God. Emphasis will be laid upon the teachings of the Prophets.

**66. BIBLE STUDY, THE PERSONALITY AND TEACHINGS OF JESUS—Winter and summer quarters. Two hours.**

This is a study of Jesus and his world, and of Jesus and our world today, with an historical study of the records of the life of Jesus.

**67. BIBLE STUDY, PAUL AND THE GROWTH OF THE CHURCH—Spring quarter. Two hours.**

A study of the letters of Paul, of the situation which called them forth, and of the beginning of Christianity.

**100a. PROBLEMS OF EDUCATION—Winter and summer quarters.**  
Three hours.

This course attempts to bring to interested students the results of research concerning current educational problems.

## II. COURSES PRIMARILY FOR SENIOR COLLEGE STUDENTS

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

This course is designed to develop those principles of teaching and features of methodology which are particularly applicable to high school teaching. A textbook is used as a basis, but this is supplemented by individual reports, class discussions, and special papers. There will also be directed observation of high school teaching. Some of the topics to be considered are: characteristics of adolescence; types of disciplinary control; economical classroom management; types of instruction; lesson planning and supervised study.

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

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

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

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

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

104. THE PROJECT METHOD OF TEACHING—Fall and summer quarters. Four hours.

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

105. PRACTICAL PROJECTS IN THE PRIMARY GRADES—Summer quarter. Four hours.

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

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

107. METHODS OF IMPROVING READING AND STUDY HABITS OF ELEMENTARY SCHOOL CHILDREN—Winter and summer quarters. Four hours.

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

\*108. EDUCATIONAL SUPERVISION—Spring and summer quarters. Four hours.

This course will be of special value to those who expect to become superintendents, principals, or supervisors. There will be a theoretical consideration of all the major problems of supervision and, so far as possible, the student will be given an opportunity to do in a practical way the various tasks which the supervisor of instruction is called upon to do while in the field.

\*109. SUPERVISED STUDY—Spring quarter. Four hours.

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

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

This course will discuss school councils and government, athletics, debating, literary and social clubs, the school newspaper and magazine, musical and dramatic activities, and civic clubs and projects that relate to pupil participation. It will consider the purposes and values of such activities in forming proper habits, attitudes, and ideals, and will attempt to show wherein such activities are necessary and a valuable part of the school curriculum.

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



110b. CITIZENSHIP EDUCATION IN THE GRADES—Winter and summer quarters. Two hours.

\*111. PHILOSOPHY OF EDUCATION—Winter and summer quarters. Four hours. Open only to senior and graduate students.

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

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

\*113. ORGANIZATION AND ADMINISTRATION OF A JUNIOR HIGH SCHOOL—Fall, winter, and summer quarters. Four hours. Primarily for junior high school majors. Senior college and graduate students take Ed. 213. Prerequisite, Ed. 1.

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

114. PRIMARY SUPERVISION—Summer quarter. Two hours.

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

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

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

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

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

120. EDUCATIONAL FINANCE—(Now a part of major administration courses, Ed. 142-143).

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

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

125. (Formerly Ed. 25) RURAL EDUCATION—Winter and summer quarters. Three hours.

A study of the general purpose and problems of rural elementary education. It considers the problem as being first elementary and then rural, or the problem of the elementary school in a rural setting. The influences of environment upon rural education, the proposed purposes—retaining the rural child upon the farm, vocation efficiency, broad rural citizenship, education through "ruralized curriculum," etc.—and a criticism of these proposals will be considered. The advantages of the rural school for project study, the needs for larger units in rural education than the local district, the advantages and disadvantages of "open-country" consolidation, and the preparation of the rural teacher to meet the demands of the rural situation will be studied.

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

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

\*129. (formerly Ed. 229). CURRENT EDUCATIONAL THOUGHT—Spring and summer quarters. Four hours.

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

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

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

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

Beginning with a brief treatment of the Old World background, 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 interests and capacities, and the influence of recent educational tendencies, such as the widened concept of citizenship training, the scientific study of education, and the economy of time movement. Contemporary educational problems will be used as the basis of explaining the educational and cultural history of the United States.

136. COMPARATIVE EDUCATION—Summer quarter. Not given 1927. Two hours.

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

141. RECENT EDUCATIONAL DEVELOPMENTS—Winter quarter. Four hours.

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

142. SCHOOL ADMINISTRATION, ELEMENTARY—Fall and summer quarters. Four hours. (First course in administration.)

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

143. SCHOOL ADMINISTRATION, ADVANCED—Winter and summer quarters. Four hours. (Second course in administration.)

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

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

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

147. EDUCATIONAL SURVEYS—(Now a part of major courses in Administration, Ed. 142-143).

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

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

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

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

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

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

154. RECENT INVESTIGATIONS IN ELEMENTARY EDUCATION—Fall and summer quarters. Four hours.

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

155. RECENT INVESTIGATIONS IN KINDERGARTEN EDUCATION—Spring quarter. Three hours.

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

168. PROBLEMS OF RELIGIOUS EDUCATION—Winter and summer quarters. Four hours.

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

190. THE ADMINISTRATION OF NORMAL SCHOOLS AND TEACHERS COLLEGES—Summer quarter. Four 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, etc.; curriculum; the work of the training department; educational research and relation to other educational institutions.

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

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

208. SEMINAR IN EDUCATIONAL VALUES—Fall quarter. Four hours.

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

\*210. PROBLEMS OF THE SCHOOL CURRICULUM—Fall and summer quarters. Three hours. Substituted for Ed. 10 for senior college students.

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

211. CONCEPTION OF THE MIND IN EDUCATIONAL THEORY—Spring quarter. Four hours.

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

213. PROBLEMS OF THE JUNIOR HIGH SCHOOL WITH SPECIAL REFERENCE TO THE CURRICULUM—Spring and summer quarters. Three hours.

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

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

This course is intended for graduate and advanced undergraduate students who are interested in intensive study of significant and fundamental problems in the field of secondary education. These problems will include organizing programs of study, administering student activities, financing student activities, organizing curriculum materials, planning teachers' meetings, and others related to secondary education. Intensive study and investigation will be organized along the lines of individual interest.

223. RESEARCH IN EDUCATION (Graduate)—Every quarter. Three or four hours. (Taken in first quarter of graduate work.)

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

224. RESEARCH FOR GRADUATE STUDENTS—Three hours.

This is the thesis course for masters' candidates in education in their second quarter of graduate work. Open for field studies for other qualified graduate students with the consent of the head of the department.

225. RESEARCH FOR GRADUATE STUDENTS—Three hours.

This is the thesis course for masters' candidates in education in their third quarter of graduate work. Open for field studies for other qualified graduate students with the consent of the head of the department.

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

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

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

This course is primarily intended for superintendents and principals of schools. The problems selected for work in any quarter will vary with the interests of the group electing the course and the relative importance of the problems in present-day educational administration. The following are types of problems, some of which will be studied: types of publicity for a school system; modern school house construction; selection, purchase, and distribution of textbooks, equipment, and supplies; the development

and utilization of a budget; needed changes in financial accounting; needed changes in taxation; needed changes in education laws for a particular state; a plan for a self-survey of a school system; the superintendent or principal as a supervisor—what he can do to improve instruction; an adequate set of educational and financial records and reports for cities of various sizes; how to make and utilize the results of age-grade-progress studies; analysis of the janitor's job; the selection, preparation, tenure, and promotion of teachers; and the legal rights of boards of education. For students desiring it, the course will afford guidance in the discovery and statement of problems suitable for work toward the advanced degrees.

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

This course will emphasize the principal phases of elementary education of particular interest to experienced elementary school teachers.

## EDUCATIONAL PSYCHOLOGY

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

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

Courses marked \* are given also by extension.

#### FOUR YEARS FOR MAJORS IN PSYCHOLOGY

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

FIRST YEAR: Psychology 1 and 110.

SECOND YEAR: Psychology 3.

THIRD YEAR: Psychology 104, 105, 106, 107, and 109, Biotics 101 or 201.

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

Students who wish to major in the curriculum for teachers of special schools and classes will take 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**—Required of students who specialize in physical education. Winter and summer quarters. Four hours.

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

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

**\*2a. EDUCATIONAL PSYCHOLOGY**—Second year. Every quarter. Three hours' credit, four hours' recitation. Required of all students.

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

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

**\*2b. EDUCATIONAL PSYCHOLOGY**—Second year. Every quarter. Three hours' credit, four hours' recitation. Required of all students. Students may take 2b prior to 2a if they so desire.

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

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

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

Purposes of the course: (a) to point out the child's requirements during the different stages of his physical development; (b) to describe the nature of the child's mental development and discuss what kind of behavior and activities may be expected of him in any stage of development; (c) to

encourage the student to form the habit of observing the behavior of the child and to interpret the significance of such behavior; (d) to give the student a sympathetic and understanding attitude toward child life.

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

104. **PSYCHOLOGY OF ELEMENTARY SCHOOL SUBJECTS**—Third year. Spring and summer quarters. Four hours. Required of students who teach and supervise elementary and junior high school subjects.

Purposes: (a) to give the student a basis for the evaluation of methods of instruction and the requirements of learning in the different school subjects; (b) to give him the ability to modify the methods of instruction and the conditions of learning so as to preserve an effective balance of emphasis among the mental activities involved in learning them and to adapt them to differences in the instructional needs of individual children; (c) to place before the student such procedures and conditions of learning in the different school subjects as have been discovered through experimental studies and deduced from the laws of learning and known facts about the child's capacities and tendencies. The course also is a partial preparation for the course in Clinical Psychology.

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

105a. **PSYCHOLOGY OF SENIOR HIGH SCHOOL SUBJECTS**—Third year. Winter and summer quarters. Four hours. Required of senior high school teachers and principals who are majoring in English, Foreign Languages, History and the other Social Sciences.

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

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

105b. **PSYCHOLOGY OF SENIOR HIGH SCHOOL SUBJECTS**—Third year. Winter and summer quarters. Four hours. Required of senior high school teachers and principals who are majoring in Mathematics and the Physical Sciences.

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

106. **CLINICAL PSYCHOLOGY**—Spring quarter. Four hours.

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

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

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

Purposes: (a) to familiarize the student with the various kinds of mental measurements and with the means and methods employed in making them; (b) to give the student training in the administration of the various kinds of mental tests; (c) to develop the right attitudes toward the use of mental tests; (d) to point out the social, educational, psychological, and vocational significance of mental tests; (e) to give the student some conception of the nature of the mental processes measured and of the principles of mental testing and test constructions; (f) to give partial preparation for the course in Clinical Psychology.

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

**\*108a. EDUCATIONAL TESTS AND MEASUREMENTS—Fourth year. Fall and summer quarters. Four hours. Required of students who are preparing to teach and supervise elementary school work, including the Junior High School.**

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

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

**\*108b. EDUCATIONAL TESTS AND MEASUREMENTS—Fourth year. Spring and summer quarters. Four hours. Required of students who are preparing to teach and supervise in the senior high school.**

Purposes: see Psychology 108a.

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



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

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

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

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

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

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

111. SPEECH DEFECTS—Fall quarter, 1928. Two hours.

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

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

112. PSYCHOLOGY OF MUSIC—Winter quarter. Four hours. Required of third or fourth-year music majors in lieu of Psychology 104, 105, 108a, and 108b.

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

113. VOCATIONAL PSYCHOLOGY—Winter and summer quarters. Four hours. Required of senior high school students in Industrial Arts, Fine Arts, Home Economics, and Commercial Arts.

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

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

114. THE PSYCHOLOGY OF JUVENILE DELINQUENCY—Fall quarter, 1927. Two hours.

The purpose of the course is to give the teacher and school officials some notion of how the delinquent child may best be studied and handled. A study will be made of the causes of delinquent behavior and of the

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

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

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

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

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

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

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

**214. ADVANCED EDUCATIONAL PSYCHOLOGY—Spring quarter. Four hours.**

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

Topics: a study of some of the psychological methods and experimental technic involved in the development of educational psychology; the nature and varieties of learning; animal learning; associative learning in man; analytical learning; selective thinking and reasoning; the nature of mental functions; learning curves; the improvement of mental functions; the amount, rate, and limits of 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.

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

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

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

**222. EXPERIMENTAL TECHNIC AND ITS APPLICATION—Fall and summer quarters. Two or four hours.**

This course will involve: names, reasoning, and induction in experimentation; four historical methods of experimental inquiry; recent methods of experimentation in education; planning an educational experiment;

selection of technic; finding the subjects; relevant and irrelevant variables; experimental measurements; the statistics of experimentation; interpretation of experimental data; the reliability of conclusions reached; report and publication of the results of an experiment; thoughtful reading of experimental literature; selection, making, and scoring of tests and examinations; principles of graphic and tabular representation; classification of pupils; educational diagnosis; educational and vocational guidance.

224. GUIDANCE IN THESIS WORK—Every quarter. Three hours. Work will depend upon nature of thesis.

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

## FOREIGN LANGUAGES

Instruction in foreign languages is offered as follows: three years in French, four years in Spanish, two years in German, and three years in Latin. Third and fourth year Latin is given in alternate years, and fifth year Latin will be offered on request of ten or more students. Italian and Portuguese may be offered when ten or more students request such classes. All courses are taught according to the direct method, and in advanced classes very little English is used.

### CREDIT FOR FOREIGN LANGUAGE STUDIES

College credit for foreign language subjects shall be given under the following conditions:

1. College credit for beginning foreign language work, covering three quarters, shall be given only on the completion of a second year's work in the same language.

2. Full credit shall be given for beginning foreign language, subject to the conditions of 1, when such work is completed within the first six quarters of the student's residence; one-half credit when completed within the next three quarters; and no credit when completed after the ninth quarter of residence.

In order that credit may be properly recorded in the registrar's office, Language majors should have their programs for each quarter's work specially approved by the registrar.

### A FOUR YEAR COURSE OF STUDY FOR MAJORS IN FOREIGN LANGUAGES AND LATIN

The department is prepared to give instruction leading to the Bachelor of Arts degree to students majoring in (1) Spanish, (2) French, or (3) Romance Languages (a combination of Spanish and French).

In addition to the core subjects required of all students and listed on page 52, this department requires:

For the Bachelor of Arts degree with a major in French: French 1, 2, 3, 5, 7, 9, 105, 107, 109, and Romance Language 131, a total of forty quarter hours.

For the Bachelor of Arts degree with a major in Spanish: Spanish 1, 2, 3, 5, 7, 9, 105, 107, 109, and Romance Language 131, a total of forty quarter hours.

For the Bachelor of Arts degree with a major in Foreign Languages (Spanish and French): French 1, 2, 3, 5, 7, 9, 105, 107, 109, and 131; Spanish 1, 2, 3, 5, 7, 9, 105, 107, 109, and 131; a total of eighty quarter hours.

In addition to the foreign language requirements, the department requires that the candidates for the Bachelor of Arts degree be proficient also in the English language. The following English courses are required in each of the three groups of studies for majors in the Foreign Languages: English 11 and 20, eight quarter hours.

Since preparatory work in the languages is varied, no attempt is made here to arrange the courses by years. Each student begins where his previous preparation fits him to begin and takes the courses in the order indicated by the numbering.

The requirements set forth here are the smallest number of hours in each curriculum. The student, in order to perfect his preparation to teach language or languages of his choice, may elect additional courses in the languages as opportunity and time permit.

## FRENCH

### 1. ELEMENTARY FRENCH—Fall and summer quarters. Four hours.

*The New Chardenal.* Special attention will be given to the formation of correct habits of pronunciation and articulation, and to training the ear to French sounds and intonation.

### 2. ELEMENTARY FRENCH—Winter quarter. Four hours.

*The New Chardenal* will be completed. Drill on inflections and simple idioms. Systematic building up of a large organized vocabulary of commonly used words.

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

The class will read Spink's *Le Beau Pays de France* to acquire a knowledge of French life and traditions and of the physical and human geography of the country. The text will be used as a basis for conversation and simple imitative composition. Short stories from 19th century and contemporary authors will be assigned for outside reading and reports.

### 5. INTERMEDIATE FRENCH—Fall and summer quarters. Four hours.

The quarter will be devoted to a more thorough study of French grammar and idioms than is possible in the first year. Carnahan's *Alternate Review Grammar and Composition* will be used. The class will have one lesson every two weeks based on the contents of *Le Petit Journal*.

### 7. INTERMEDIATE FRENCH—Winter quarter. Four hours.

Lavis's *Histoire de France, Cours Morgen*, will be studied with a view to the mastery of the contents, as well as to practice in reading. One historical novel will be read outside of class, and reported on, by each member. Work with the *Petit Journal* will be continued.

### 8. INTERMEDIATE FRENCH—Spring quarter. Four hours.

Augier's *Maitre Guerin* will be studied in class; other examples of nineteenth century comedy will be assigned for outside reading. Simple free composition.

### 105. ADVANCED COMPOSITION AND PHONETICS—Fall quarter. Four hours.

A systematic study of French sounds by means of phonetic notation, and a study of idioms, gallicisms, derivation and relation of words, shades of difference in meaning of French and English cognates, etc.

### 107. HISTORY OF FRENCH LITERATURE—Winter quarter. Four hours.

A general survey of French literature from medieval to contemporary times, using Roz's *Vue Generale de la Literature Francaise*. Readings illustrating the various periods studied will be assigned.

### 109. THE ROMANTIC DRAMA—Spring quarter. Four hours.

Hugo's *Ruy Blas* will be read in class, with lectures and reports on the Romantic movement as a whole, and its significance in French civilization. Outside reading of other dramas of Hugo and De Vigny.

## GERMAN

## 1. ELEMENTARY GERMAN—Fall and summer quarters. Four hours.

The class will complete the first half of Prokosch and Morgan's *Introduction to German*. Emphasis will be laid on forming good habits of pronunciation. The relation of German to English will be constantly stressed.

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

The class will complete the *Introduction to German*. Constant drill will be given on inflections and syntax, and the building up of a practical vocabulary, with attention to the synthetic tendency of the language and the interrelations of words.

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

Muller and Wenckebach's *Gluck Auf!* will be used as a basis for the study of German life, culture and tradition. Conversation and simple imitative composition.

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

Pope's *Writing and Speaking German* will be used. Grammar review, composition and conversation.

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

Wildenbruch's *Das Edle Blut* will be read in class, and one other nineteenth century *Novelle* will be assigned for outside reading to each member of the class.

## 7. INTERMEDIATE GERMAN—Spring quarter. Four hours.

Freytag's *Die Journalisten* or some other nineteenth century comedy will be studied in class. Assigned reading of short stories.

## LATIN

## 1. THIRD YEAR LATIN—Fall and summer quarters. Four hours.

The course will be preceded by a short, intensive grammar review for the benefit of students in whose study of Latin some time has elapsed. Two of the orations of Cicero against Catiline will be read, attention given to figures of speech and other features of oratorical language. Reports on Roman political life and historical background of the orations.

## 2. THIRD YEAR LATIN—Winter quarter. Four hours.

The orations for Archias and for the Mainian Law will be studied. Continued grammar review. Reports on Roman life and customs.

## 3. THIRD YEAR LATIN—Spring quarter. Four hours.

Selections from Ovid's *Metamorphoses* will be read, with attention to the metrical form and poetical features of the language. Reports on Roman mythology.

## 5. FOURTH YEAR LATIN—Fall quarter. Four hours.

This course is to be given alternately with the third year course, both being designed for students who have had only two years in high school. It will be preceded by a brief grammar review, and by a study of the principles of Latin prosody. The first book of Vergil's *Aeneid* will be read; attention will be given to poetical forms, archaisms, figures of speech, and so on. Reports will be made on the major divinities of Roman mythology. (Offered next in 1928.)

## 7. FOURTH YEAR LATIN—Winter quarter. Four hours.

The second, third and fourth books of the *Aeneid* will be read, accompanied by a study of the legends of the Trojan War. (Offered again in 1929.)

## 9. FOURTH YEAR LATIN—Spring quarter. Four hours.

The fifth and sixth books of the *Aeneid* will be read, study will be given to the influence of Book VI on medieval thought and literature. (Offered again in 1929.)

## 105. FIFTH YEAR LATIN—Fall quarter. Four hours.

This course will be offered if requested by at least ten students. Cicero's essays on Friendship and Old Age will be read.

## 107. FIFTH YEAR LATIN—Winter quarter. Four hours.

The class will read *Selected Letters* of Piny the Younger, accompanied by a study of political and social life in Rome of the first century. (Offered on request.)

## 109. FIFTH YEAR LATIN—Spring quarter. Four hours.

Selections from Horace's *Odes and Epodes* will be read, attention given to the characteristic meters of lyric poetry, and reports made on the Augustan Age. (Offered on request.)

## 131. THE TEACHING OF LATIN—Summer quarter. Four hours.

This will be a study of the traditional and contemporary methods of teaching Latin, with examination and criticism of various textbooks, specific devices for use in the classroom and Latin club, and discussion of the objectives and problems of the teaching of Latin in the secondary schools. The essentials of philology, necessary for the equipment of the Latin teacher, will be presented. Use will constantly be made of the report of the classical investigations.

## SPANISH

## 1. ELEMENTARY SPANISH—Fall and summer quarters. Four hours.

Alexis's Spanish Grammar. First 40 lessons.

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

Grammar completed. Reading of *Espana* by Marinoni.

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

Short stories by Palacio Valdes and Elementary Spanish Composition by Cool.

## 5. INTERMEDIATE SPANISH—Fall and summer quarters. Four hours.

*El Prestamo de la Difunta*, by Ibanez; *El Comendador Mendoza*, by Valera.

## 7. INTERMEDIATE SPANISH—Winter quarter. Four hours.

Devoted entirely to Spanish-American Literature. *La Casa De Los Cuervos*, by Hugo Wast; *Valle Negro* and *Los Ojos Vendados*, by the same author.

## 9. INTERMEDIATE SPANISH—Spring quarter. Four hours.

Continuation of South American Literature. *Amalia*, by Jose Marmol; *Maria*, by Jorge Isaacs; *Martin Rivas*, by Alberto Gana; *Don Perfecto*, by Ocampo.

## 105. ADVANCED SPANISH—Fall and summer quarters. Four hours.

Devoted entirely to Mexican Literature. *Ladrona*, by Miguel Arce; *La Majestad Caida*, *Sacerdote y Caudillo*, and *El Sol de Mayo*, by Juan Mateos.

## 107. ADVANCED SPANISH—Winter quarter. Four hours.

Selected dramas from various periods of Spanish Literature. *La Conjuracion de Venecia*, by de la Rosa; *En Flandes se ha Puesto el Sol*, by Marquin; *El Lobo*, by Dicenta.

## 109. ADVANCED SPANISH—Spring quarter. Four hours.

Selected novels from various periods of Spanish Literature. *La Cueva de los Buhos*, by V. Ballesteros; *El Haz de Lena*, by de Arce; *Pepita Jimenez*, by Valera; *La Hermana San Sulpicio*, by Valdes, and for outside reading; *El Zapatero y el Rey*, by Zorrilla; *Clemencia y la Gaviota*, by Caballero.

131. TEACHING OF ROMANCE LANGUAGES—Spring and summer quarters. Four hours.

Discussion of basic principles in Modern Language Teaching,—pronunciation, various types of tests, lesson plans, methods and devices in obtaining best results, comparison of textbooks, courses of study, presentation of a few model lessons, and realia. The course will be based on: Wilkins—Spanish in High Schools, Handschin—Methods of Teaching Modern Languages.

224. RESEARCH IN FOREIGN LANGUAGES—Three hours.

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

225. RESEARCH IN FOREIGN LANGUAGES—Three hours.

This is a continuation of Foreign Language 224.

226. GRADUATE SPANISH—Fall and summer quarters. Four hours.

A comparative estimate of the following texts: *La Hija del Usuero*, by Maerte; *El Gran Galeoto*, by Echegaray; *Lucha Extrana*, by Ballesteros; *La Maja Desnuda* and *La Barraca*, by Ibanez; *Zalacain*, by Pio Baroja; *Un Drama Nuevo*, by Tamayoy Baus. Advanced Spanish Composition, Castillo.

227. GRADUATE SPANISH—Winter quarter. Four hours.

A critical study of the life and works of Cervantes, Valez Guevara, Lope de Vega, Tirso de Molina, Calderon de la Barca, Tamayo y Baus. Original themes based on the various characters studied.

## GEOLOGY, PHYSIOGRAPHY, AND GEOGRAPHY

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

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

### COURSE OF STUDY

Courses marked \* are given also by extension.

#### FOUR YEARS FOR MAJORS IN GEOLOGY, PHYSIOGRAPHY, AND GEOGRAPHY...

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

FIRST YEAR: Geography 7, 8, Elementary Science 1, and History 10.

SECOND YEAR: Geography 4, 5, 12, and 52.

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

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

\*2. PHYSIOGRAPHY—Winter quarter. Four hours.

The work in this course is divided between topographic work, which embraces a study of topographic and geologic maps, and, as far as possible, field trips to type regions. Four weeks of the twelve are devoted to the study of meteorology and the observation and prediction of weather phenomena. This course is a good foundation for much of the work given in elementary science and furnishes an excellent background for history and for other geography courses.

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

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

5. GEOGRAPHY OF THE NEW EUROPE—Winter and summer quarters. Four hours.

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

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

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

8. HUMAN GEOGRAPHY—Fall quarter. Four hours.

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

12. METHODS IN INTERMEDIATE GEOGRAPHY—Fall, winter, and summer quarters. Four hours.

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

14. JUNIOR HIGH SCHOOL METHODS—Spring and summer quarters. Four hours.

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

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

A course on the racial, economic, and political aspects of South American geography. After a brief general survey of the continent, the students are assigned special topics, which they present to the class in the form of an illustrated lecture. An excellent megopticon lantern makes it possible to carry on this without any interference with class routine. Not given in 1927.

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

A course on Asia following the same line as the course on South America, Geog. 52. In the case of Asia the social and racial geographies are stressed, while in South America more emphasis is placed on the commercial aspects.

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

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

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

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



## 100. GEOLOGY—Fall quarter. Four hours.

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

## 102. THE CHANGING WEATHER—Fall and summer quarters. Four hours.

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

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

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

## \*113. MATHEMATICAL GEOGRAPHY—Fall quarter. 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—Spring quarter. Four hours.

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

## 130. THE ISLANDS OF THE SEA—Fall quarter. One hour.

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

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

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

## 162. GEOGRAPHY OF THE TROPICS—Winter quarter. Four hours.

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

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

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

## 199. CONSERVATION—Fall and summer quarters. Four hours.

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

## 224. RESEARCH IN GEOGRAPHY—Three hours.

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

## 225. RESEARCH IN GEOGRAPHY—Three hours.

A continuation of Geog. 224.

## HEALTH EDUCATION

## BASIC COURSES IN PHYSIOLOGY AND ANATOMY

This department offers courses in or basic to health education. The aim is to aid teachers: (1) to meet intelligently their own health problems, (2) to prepare them to make health a fundamental objective of the educational process in the schools where they teach. In addition foundation courses are provided for those majoring in physical education. Students specializing in this latter field will complete their major in this department.

Students specializing in psychology, biology or general education will find courses of value in the department to supplement their preparation for their chosen field. Those who expect to teach physiology should elect those courses which give them the necessary scientific background and methods of presenting this subject.

Courses 1 and 1a for men and women respectively are required of all during the first year and will deal with the problems of personal health. Course 108, Educational Hygiene, is required of all in the senior college and deals with the broader aspects of public, school and occupational hygiene from the social point of view.

## COURSE OF STUDY

Besides the core requirements listed on page 52 this department requires:

FIRST YEAR: H. Ed. 1 or 1a, 2, 5, 8 and 12; Bact. 1, Bot. 1, P. E. 1, 5, 11, 14.

SECOND YEAR: H. Ed. 13, 20; H. E. 4, Ed. Psych. 3, Geog. 8, P. E. 14, 26, 27.

THIRD YEAR: H. Ed. 101, 108, Hist. 102, Soc. 120, 134; P. E. 103, 128.

FOURTH YEAR: H. Ed. 102, 103, 110 or 111; Anthropology 100; Biot. 101; P. E. 132, 134.

Students majoring in physical education, in order to complete requirements for a degree, should take the courses listed below as far as possible in the years indicated.

FIRST YEAR: H. Ed. 1 or 1a, 2, 5, 13.

SECOND YEAR: H. Ed. 5, 12, 20, H. E. 4.

THIRD YEAR: H. Ed. 101, 108; Mus. 22; Psych. 106 or 109; Anthropology 100.

FOURTH YEAR: H. Ed. 101; 103, 110 or 111; Biot. 101.

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

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

1a. INDIVIDUAL AND SOCIAL HYGIENE (for women)—Each quarter. Three periods. Three hours.

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

2. ANATOMY—Fall and summer quarters. Two lectures. Two laboratory periods. Four hours.

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

5. APPLIED ANATOMY AND KINESIOLOGY—Winter and summer quarters. One lecture. Two laboratory periods. Three hours.

A continuation of No. 2 with special emphasis upon the action of muscles in exercises of different kinds. Bowen and McKenzie's Applied Anatomy and Kinesiology is the text, and this is supplemented by references to other standard authorities. Required of Physical Education majors. Open to all.

8. PHYSIOLOGY—Winter and summer quarters. One lecture. Two laboratory periods. Three hours.

Lectures, demonstrations, laboratory exercises with recitations from text and general references on human physiology. A course for Physical Education students, but open to others who expect to teach Physiology.

12. CHILD HEALTH—Winter and summer quarters.  
Required of Physical Education students.

A course dealing with problems of growth and development of the child. Nutrition; physical handicaps; effects of physical defects upon child behavior are considered. Methods of prevention; problems growing out of physical defects in school life, measures to be followed in securing better health in the school child are given attention in the course.

13. FIRST AID—Fall and summer quarters. Two periods. Two hours.

A course covering the usual subject matter on the right thing to do. A study of the causes of accidents and type injuries; what the first aider should do in case of fracture, dislocation of joints, hemorrhage, poisoning, electric shock, asphyxiation, etc. The American Red Cross Text is followed. Required of Physical Education students. Open to all.

20. EXPERIMENTAL PSYCHOLOGY—Spring and alternate summer quarters. One lecture. Two double periods of laboratory work. Three hours.

A laboratory course on the physiology of muscle-nerve, digestion and sense organs supplemented by lectures and references to standard college texts such as Howell, Martin and Luciani. The course is designed to give the student an opportunity to repeat some of the basic experiments in physiology and to become familiar with the recent knowledge relative to the subject of physiology. Given summer 1928.

101. PHYSIOLOGY OF EXERCISE—Fall and alternate summer quarters. One lecture and two laboratory periods. Three hours.

Prerequisites: courses 8 and 20.

The 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. The text followed is McCurdy-Physiology Exercise. Required of Physical Education majors. Not given 1927-28, nor in summer of 1928.

103. PHYSICAL EXAMINATIONS AND ANTHROPOMETRY—Spring and summer quarters. Four periods. Four hours.

Fourth year. Required for Physical Education students.

A lecture, recitation, practice course. Principles and methods of making physical measurements, the determination of norms for different age groups; application of principles to physical education problems; the detection and correction of common physical defects; signs and symptoms of different infections. Required of Physical Education majors; open to others who have had some biology.

108. EDUCATIONAL HYGIENE—Each quarter. Three periods. Three hours.

Required of all in junior or senior years.

A senior college course dealing with health conservation and disease prevention; how scientific research and organization have aided in reducing illness and death rates; the part the schools should take in the general health movement. A general informational course dealing with the fundamental problems of securing better health.

110. OCCUPATIONAL HYGIENE—Winter quarter. Two periods. Two hours.

The course gives chief consideration to the health hazards of different occupations and the means of prevention. Has informational and practical value to the teacher who desires to be informed on health subjects. Given alternate years. Given in 1927-28.

111. PUBLIC HEALTH—Spring quarter. Three periods. Three hours.

This course deals with community, state, national, and international health organizations and problems. An informational course of importance to all teachers. Required of Physical Education majors during third or fourth year. Given alternate years. Not given 1927-28.

112. EPIDEMIOLOGY—Fall quarter, alternate years. Three periods. Three hours. Given 1927-28.

A course dealing with the history and some of the modern problems growing out of epidemics of various diseases. The student becomes familiar with the stages of development in human knowledge regarding the epidemic diseases and their control; the weighing of evidence relative to the causes, dissemination and control of epidemics in the school and communities, and the applications made of this knowledge by different communities and countries.

## HISTORY AND POLITICAL SCIENCE

This department offers courses in the two fields, history and political science, of such nature that they meet the needs of teachers in elementary and high schools. The courses are arranged to cover the materials and methods which are most helpful in presenting the subjects of history, civics, and the social sciences. The new courses in Social Science are based very largely upon history and political science. Opportunities for election are ample to give superior preparation for the teaching of such courses.

The increasing interest in civics and citizenship is marked. All phases of governmental activity are growing in importance. These features of our experience are reflected in the school programs. The courses offered in this field are all chosen from fields that are of most value to teachers in the public schools. The new and growing fields are represented as well as the more traditional selections of subject matter.

### COURSE OF STUDY

Courses marked \* are given also by extension.

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

FIRST YEAR: Political Science 1 and 2, and one course selected from each of the following groups: (1) History 1 or 10; (2) History 2, 3, or 4.

SECOND YEAR: History 5, 6, 7, and 13.

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

FOURTH YEAR: Twelve hours of History and Political Science selected by the student.

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

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

## HISTORY

**\*1. FOUNDATIONS OF AMERICAN NATIONALITY, 1700-1800—Fall, spring, and summer quarters. Four hours.**

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

**\*2. DEVELOPMENT OF AMERICAN NATIONALITY, 1820-1865—Fall and winter quarters. 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—Winter, spring, and summer quarters. Four hours.**

Problems of reconstruction; radical ideas in Congress; the negro problem in the South; carpet bag rule; rebuilding of political parties; railroad and commercial expansion; the United States as a world power; the new era of industrial consolidation; regulating industry; Roosevelt and Wilson Americanism; the World War.

**4. WESTERN AMERICAN HISTORY—Winter and summer quarters. 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 war with Mexico. Discovery of gold in California and Colorado and the resultant gold rush. Settlement of Utah, and special features of the history of Colorado. Coming of the new west and passing of the old frontier conditions.

**\*5. EARLY MODERN EUROPE—Fall quarter. Four hours.**

Phases of the later medieval period that vitally affected the development of the nations of western Europe. Development of important nations. The Reformation, with its results upon both Catholic and Protestant churches. The new spirit of education and missionary zeal. Beginning of the expansion of European nations to other continents and the growth of colonial empires. National and religious rivalry in the seventeenth and eighteenth centuries. Growth of democratic ideas of government. Causes leading to the French Revolution. The revolutionary and Napoleonic eras in Europe, with their resultant political, social, and economic changes.

**\*6. MODERN EUROPEAN HISTORY—Winter and summer quarters. Four hours.**

This is a continuation of Course 5. The Congress of Vienna and its attempt to restore Europe to what it was before the French Revolution. The new balance of powers. Continued growth of democracy. Social and political results of the spread of the industrial revolution. New spirit of radical socialism. Conflict between the new and the old ideas of science and religion. Continued growth of political democracy. Rise of Russia, Prussia, and Italy as important national states. Renewed colonial expansion, and the national rivalries that resulted from it. The Balkans and their problems. Break-up of the balance of power.

**7. EUROPE SINCE 1900—Spring quarter. Four hours.**

This is a continuation of courses 5 and 6. Some of the main topics considered are: Colonial imperialism with its expansion into Asia and Africa; rivalry for markets; growth of international labor organizations; realignment of powers; the break-up of Turkey; the World War; the series of conventions, and treaties following the war; the new nations of Europe; the League of Nations and World Court; economic, industrial, social, and political readjustments; Europe's present relations with the United States.

**\*10. SOCIAL AND INDUSTRIAL HISTORY OF THE UNITED STATES—Every quarter. Four hours.**

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. TEACHING OF HISTORY AND CIVICS IN THE ELEMENTARY SCHOOL—Spring and summer quarters. 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—Fall and summer quarters. Two hours.**

This course deals with the world problems that have developed since the World War. Topics are selected that are of current interest and studied in the light of their historical development. These topics vary from year to year. Each year brings in some new problems that are pressing for solution and sees others eliminated that have temporarily been adjusted. Topics are selected from events in the United States, in South America, in Asia, and in Europe that touch the Americans in some important way. Much use will be made of current periodicals.

**\*101. COMMERCIAL AND FINANCIAL HISTORY OF THE UNITED STATES—Spring quarter. Four hours.**

English commerce, its ideals, its regulation, and its effect upon colonial development on the continent of America. Chief characteristics of colonial commerce. Effect of the Revolution upon American trade. Encouragement of commerce by the new national government. Currency and banking reforms and their effect upon the trade of the United States. Effect of foreign relations upon the growth of shipping, foreign trade, and domestic commerce. The Civil War and its effect upon manufacturing, foreign commerce, currency and banking, and our carrying trade. Consolidation and government supervision. New adjustments that came with the World War and the commercial consequences that have followed. This course is especially designed to meet the needs of those who are expecting to teach commercial courses.

**102. ANCIENT SOCIAL HISTORY—Not given 1927-28. Four hours.**

This is a survey of the development of society among ancient peoples. Examples will be chosen from the social and legal codes of the Hebrews, the Assyrians, and the Egyptians. Special attention will be given to houses, temples, religious ideas, clothing, furniture, social customs, slavery, and the position of women in the above nations and in Greece and Rome. The Greek colonies. Reasons for a conflict between Greece and Persia. Athenian and Spartan civilization. Social and educational conditions at Athens at the time of Pericles. The Alexandrian conquests and the spread of Greek civilization and culture. The post-Alexandrian Greek culture. The rise of Rome. Its control over the Mediterranean regions. Occupations, religious ideas, effect of slavery, methods of taxation, roads, commerce, marriage, divorce, and general social life of the early Roman Empire. Some of the causes of national decay. This course deals especially with the concrete material that is frequently used in the grades. It also covers the material that high school instructors find most difficult to teach in the courses in Ancient History and World History.

**104. THE LITERATURE OF AMERICAN HISTORY—Spring quarter. Two hours.**

A survey of the materials available for the study of American History in the public schools; the chief collections of source materials, the more important general accounts; biography; bibliographical aids; special and local histories; textbooks and their authors; the selection of a good working library.

**107. THE BRITISH EMPIRE—Summer 1928. Four hours.**

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

**\*116. SPANISH-AMERICAN HISTORY—Summer quarter, 1928. 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 JUNIOR AND SENIOR HIGH SCHOOLS—Fall quarter. Three hours.**

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

**203. THE REFORMATION—Fall quarter. Four hours.**

This is one of the most illuminating periods in modern history. No other course explains so many things and controversial questions that are still acute among modern churches. Some of the topics covered are: actual conditions in the medieval Catholic church at the close of the Fifteenth Century; the abuses and the need for reform; the earlier critics of the church; the religious effect of the Renaissance in Germany; the growth of a sense of nationalism in Germany; the rise of national churches; Luther and his attack upon indulgences; popularity of the revolt and its appeal to various classes in Germany; attempts to compromise the issue; theological contributions of Calvin and Zwingli; the reformation in England, France, and Scandinavia; efforts of the Papacy and the Empire to remove the worst abuses in the church; the Council of Trent and its definition of doctrine and its reform decrees; the new spirit at Rome; the Jesuits and other reforming and missionary organizations; the Index and the Inquisition; the rise of puritanism; the growth of modern protestant sects and their relation to the Reformation; frequent reference will be made to the phases of the Reformation that are still in progress.

**206. THE FRENCH REVOLUTION—Not given 1927-28. Four hours.**

This is a detailed study of the great revolutionary epoch in European history. Some of the important topics considered are: the monarchy under Louis XVI; the various classes of nobles and clergy with their special privileges; the bourgeoisie or middle class of the towns; the peasants and their burdens; the methods of taxation and feudal exactions; the growth of criticism and revolutionary literature; the bankruptcy of the monarchy and the calling of the Estates General; the assumption of power by the Third Estate; the struggle for control of the monarchy; the Paris mob and its influence; the effect of attempted foreign intervention; the reign of terror; constitutional changes and the democratic revolution; the contest with monarchical Europe; explosive influence of the Revolution in other portions of Europe; French governmental, social, political, and educational reconstruction; the advent of Napoleon; changed direction of the Revolution; the republic becomes an empire.

**208. THE AMERICAN REVOLUTION—Winter quarter. Four hours.**

This course will include a careful study of the relationship—governmental, social, economic, and political—existing between the American colonies and the British government; the development of self-government; the beginning of a permanent Indian policy; judicial procedure and the judicial disallowance of colonial legislation; the commercial legislation affecting the colonies; colonial and British ideas of representation; the causes of the Revolution. Much use will be made of source materials.

**209. SLAVERY, SECESSION, CIVIL WAR, AND RECONSTRUCTION, 1850-1870—Spring and summer quarters. Four hours.**

This is a detailed library course. The general conditions of slave life and the slavery system. The great compromises made in 1850. Operation of the Fugitive Slave Law. Effect of the slavery agitation upon political parties. Repeal of the Missouri Compromise. The Dred Scott Decision and its effect upon political ideas. Lecomptonism and the fight of Douglas to retain his leadership in the Democratic party. The election of 1860. Secession. Problems of the war: getting a fleet, foreign relations, financial troubles, emancipation, developing our man-power, effects of the blockade. Conditions in the south after the war. The ideas of freedom among the negroes. Problems of reconstruction. State labor legislation in the south. Conflict between the executive and congress. Carpet bag rule and what it meant. Actual processes of reconstruction. Resumption of white supremacy in the governments of the southern states.

221. HISTORY OF THE FAR EAST—Summer quarter. Four hours.

This course is designed to enable teachers to understand the problems of the Far East. It includes a survey of the modern history of Japan and China; the growth of western ideas; the development of Japan as a first-class power; the conflict of interest in China; Japan's ambitions and their relation to our own interests. The development of self-government in China and its difficulties. It also includes a survey of British occupation in India; the relation of the British to the native races; economic, industrial, and educational reforms in India and their results; the growth of self-government; and the national aspirations of the people of India. Throughout this course the relation of these various problems to the United States is emphasized.

224. RESEARCH IN HISTORY—Offered on application.

Students doing graduate work in the fields of History or Political Science may arrange for time and topics as may be desired. Research problems of interest to such students both in the field of subject matter and methods of instruction will be taken up for consideration. Students working on master's theses in the department will enroll for this course.

225. RESEARCH IN HISTORY—A continuation of 224.

### POLITICAL SCIENCE

\*1. GOVERNMENT OF THE UNITED STATES—Fall and summer quarters. Four hours.

A detailed study of the origin of the federal government; the selection and powers of the president; congress and its relations to the other departments; the federal judiciary; conduct of elections; the actual work of the national government; foreign relations; the preservation of peace and the enforcement of law; the police power and social legislation; relations to the state and local governments.

\*2. STATE GOVERNMENT—Winter quarter. Four hours.

The relation of state government to the national government. Common features of state constitutions. The field of state legislation. Operation of the state government and its importance to the individual. The enforcement of laws. Local government and its significance to the individual. State and local finances. Popular participation in governmental activities. Sources of information for a study of state and local government. Plans for making state and local government more efficient. Colorado government will be used constantly for illustrative purposes.

3. MUNICIPAL GOVERNMENT—Spring quarter. Three hours.

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

5. PROBLEMS IN CITIZENSHIP—Summer quarter, 1928. Two hours.

The object of this course is to give teachers an opportunity to study the content of the material that is being organized for some of the courses in the Social Sciences. Some of the questions considered for such organization are: how to read a newspaper; Japanese immigration; the relation of the races; the modern woman in industry and social life; strikes and their prevention; conservation; what to do with the radicals; the anti-foreign movement; nationalism versus internationalism; disarmament and the outlawry of war. Other topics will be taken in accordance with the desires of the class.

\*101. AMERICAN DIPLOMACY—Winter quarter. Four hours.

Few good Americans are well informed on the foreign relations of their own country. In the past such relations were not an important part of current political discussion. That day is past. Now there is a growing demand for information upon this subject. Americans are not going to remain longer ignorant of such a vital part of their history. In the near future school courses in American History will be revised so as to give much more space to this phase of our national experience. With the present agitation for good relations with all nations, this course acquires unusual value. Teachers should know the real contributions of the United States to a better international world order. They should also understand the great foreign problems of their country in the immediate future. Some of the important topics treated are:

Foreign relations under the Federalists; establishment of an American foreign policy; Jefferson and the acquisition of Louisiana; arbitration of



boundary disputes; the Monroe Doctrine; the open-door policy; co-operation with other powers in the settling of international problems in Asia, Africa, and Europe; control of immigration; the Hague Conferences; diplomatic organization and procedure; the recognition of new governments; the World Court; the League of Nations; the Washington Conference.

**\*102. INTERNATIONAL RELATIONS—Fall quarter. Four hours.**

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

**203. POLITICAL SCIENCE—Not given 1927-28. Four hours.**

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

## HOME ECONOMICS

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

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

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

### COURSE OF STUDY

Courses marked \* are given also by extension.

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

**FIRST YEAR:** H. A. 1, 3, 5, and 6, Art 4a, Chem. 1, 2, and 3, Bact. 1 and Physics 12.

**SECOND YEAR:** H. Sc. 1, 2, 3, and 7, Ed. 2a and 2b, Eng. 12 or Eng. 15, H. A. 4.

**THIRD YEAR:** Chem. 108, 109 and 112, H. A. 102, 108, and 109, H. Sc. 104, 106, and 108.

**FOURTH YEAR:** H. Sc. 103, 105, H. E. 101, H. E. 111, Ed. 103, and H. A. 112.

### HOUSEHOLD SCIENCE

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

Household Science 1, 2, and 3 are planned as consecutive courses. The relation of foods to health is the underlying keynote. The courses include the study of foods from the standpoints of production, manufacture, composition, nutritive value and cost. Field trips are made to local food factories. In H. Sc. 1 special emphasis is placed on the selection and principles involved in the preparation of many types of food. The course aims to familiarize the student with the use and care of laboratory equipment and with all available fuels and cooking equipment, such as gas, electric, and kerosene ranges, the fireless and pressure cookers.

2. **FOODS AND COOKERY**—Winter quarter. Four hours. Fee, \$3.00.

More complicated cooking processes are undertaken. Emphasis is placed on the economic phases of food problems. Food legislation is studied. Some practice in menu making and table service is given in this course.

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

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

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

4. **ELEMENTARY NUTRITION**—Winter and summer quarters. Four hours.

A course for non-majors, especially students in Physical Education. No Chemistry required. This course is designed to help students, whether in the home or public eating places, choose foods to meet their body needs.

\*7. **HOUSEHOLD MANAGEMENT**—Every quarter. Lecture course. Two hours. Practical course—Residence in cottage one-half term. 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; 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.

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

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

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

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

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

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

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

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

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

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

## 200. SEMINAR.

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

## HOUSEHOLD ARTS

## \*1. TEXTILES—Fall and summer quarters. Three hours.

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

## 3. GARMENT MAKING—Fall, winter, and summer quarters. Three hours.

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

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

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

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

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

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

This course is primarily for majors who have had all their work here. The selection and making of an appropriate dress for afternoon and street wear. This is made of linen or silk. Designing and making a sport outfit, wool skirt, and appropriate blouse. This is for majors only.

## 101. THE HOME—Summer quarter. Two hours.

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

## 102. APPLIED DESIGN—Summer quarter. Four hours.

The study of color and design as applied to household fabrics, such as bed and table linen, curtains, etc. The study of different kinds of thread used in this work. The application of design to crochet, tatting, knitting, cross-stitching, French embroidery, Roman cut work. The designing and working out of monograms and applying to household linen. The application of the fancy stitches to problems suited to each of the grades.

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

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

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

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

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

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

200. SEMINAR.

This work is to be arranged for graduate students who come prepared to take up some specific line of experiment or research. The credit will be determined by the time spent in the work.

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

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

## INDUSTRIAL ARTS

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

The first aim of the department is to prepare teachers for elementary and secondary schools. The courses are varied, and are organized along two lines. The practical or technical phases of the subjects and the educational phases give an opportunity for study along technical, theoretical, and historical lines. An excellent training department housed in the Training School building gives full opportunity to put into practice in teaching the ideas presented in the various courses.

### COURSE OF STUDY

Courses marked \* are given also by extension.

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

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

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

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

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

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

#### MAJORS:

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

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

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

#### NON-MAJORS:

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

1. **TECHNIC AND THEORY OF WOODWORKING I**—Fall, spring, and summer quarters. Four hours. Fee, 62.00.

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

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

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

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

This is a methods course and deals with such topics as equipment, materials used, where and what to buy, kind of work to be undertaken in the different grades, the preparation and presentation of projects, the making of suitable drawings, and the proper mathematics to be used in woodworking.

4. **CONSTRUCTION OF CLASS PROJECTS**—On request. Four hours, Fee, \$2.00.

The purpose of this course is to train the students in designing and carefully working out suitable projects to be used in the elementary and junior high classes.

\*5. **PRINCIPLES OF TEACHING PRACTICAL ART SUBJECTS**—Fall and spring quarters. Three hours.

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

6. **REPAIR AND EQUIPMENT CONSTRUCTION**—Fall quarter. Four hours.

This course has for its base the building of various types of equipment and the use of power machines in working out these problems. This is an especially valuable course for those who wish to emphasize the large phases of vocational education.

8a. **ART METAL**—Fall and winter quarters. Four hours. Fee, \$2.00

This course has in mind the designing and creation of simple, artistic forms in copper, brass, and German silver.

8b. **ART METAL**—Winter and spring quarters. Four hours. Fee, \$2.00.

A continuation of 8a. The course in general includes the designing and executing of simple, artistic jewelry pieces, such as monograms, simple settings of precious stones, and the development of advanced artistic forms in copper.

74575

9. CLASSIC ARCHITECTURE—Fall quarter. One hour.

A general survey of the history of ancient and classic architecture from the standpoint of the history of peoples. Topical studies by members of the class, of selected monuments and of specific problems. Illustrated by lantern slides.

\*10. MECHANICAL DRAWING—Fall and spring quarters. Two or four hours. For art majors. Fee, \$1.00 or \$2.00.

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

\*11. PROJECTIONS, SHADE, AND SHADOW—Fall quarter. Four hours. Fee, \$1.00.

The purpose of this course is to give a student a working knowledge of the fundamentals of orthographic projection as applied to points, lines, planes, solids, shade and shadow, and applications.

\*12. PRINCIPLES OF ARCHITECTURAL DRAWING I—Winter quarter. Four hours. Fee, \$1.00.

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

\*13. PRINCIPLES OF ARCHITECTURAL DRAWING II—Spring quarter. Four hours. Fee, \$1.00.

This course is a continuation of Course 12 and deals with the drawing of plans of cement, brick, and stone structures, culminating in complete plans and specifications for resident and public buildings.

14. CARE AND MANAGEMENT—Fall quarter. Three hours.

This course is designed to train students to care for, repair, and adjust hand and power tools of the woodworking department.

19. WOODTURNING—Winter and summer quarters. Four hours. Fee, \$2.00.

The aim of this course is to give the student a fair knowledge of the woodworking lathe, its care, use and possibilities. Different types of problems will be worked out, such as cylindrical work, working to scale, turning duplicate parts, turning and assembling, the making of handles and attaching them to the proper tools. Special attention will be given to the making of drawings such as are used in ordinary wood turning.

31a. ELEMENTARY PRINTING—Fall quarter. Two or four hours. Fee, \$1.00.

A course intended to acquaint the student with the various tools and materials of a print shop and to teach him the fundamentals of plain type composition, as he carries simple jobs through the various stages from composition to making ready and putting on the press.

31b. ELEMENTARY PRINTING—Winter quarter. Two or four hours. Fee, \$1.00.

Continued work in fundamentals as applied to more complicated pieces of printing, involving rule work, borders, ornaments, etc.

31c. ELEMENTARY PRINTING—Spring quarter. Four hours. Fee, \$1.00.

Balance, proportion, simplicity, harmony, etc., as applied to the designing and producing of good printing.

32a. INTERMEDIATE PRINTING—Fall quarter. Two or four hours. Fee, \$1.00.

Added stress upon principles of good design and workmanship with a view to making the student more proficient in producing artistic work. An intensive study of typographic design in laying out and printing cards, tickets, letterheads, posters, etc.

32b. INTERMEDIATE PRINTING—Winter quarter. Two or four hours. Fee, \$1.00.

Production of title pages, covers, menus, etc.

32c. INTERMEDIATE PRINTING—Spring quarter. Two or four hours. Fee, \$1.00.

Continued practice in producing more pretentious pieces of work of the classes named in 32a and 32b.

41a. ELEMENTARY BOOKBINDING—Every quarter. Four hours. Fee, \$1.00.

This course aims to introduce the following: tools, machines, materials and uses, collating and preparing sheets for sewing, sewing on tape and cord, preparing end sheets, trimming, gluing, rounding and backing, headbanding, banding and preparing backs for covers, selecting cover materials, planning and making covers, and all steps necessary in binding of all kinds including full cloth, buckram, paper, spring or loose back, with plain and fancy edges. Beside the fundamental technic of bookbinding, a variety of individual projects are undertaken, such as memorandum books, writing pads, leather cases, boxes, cloth portfolios, and kodak albums.

41b. ELEMENTARY BOOKBINDING—Every quarter. Four hours. Fee, \$1.00.

A continuation of bookbinding 41a.

41c. ELEMENTARY BOOKBINDING—Fall and spring quarters. Four hours. Fee, \$1.00.

A continuation of bookbinding 41b.

42a. INTERMEDIATE BOOKBINDING—Fall and spring quarters. Four hours. Fee, \$1.00.

This course includes the binding of books in half leather, half morocco, cowhide, calf, sheep, and fancy leathers. Some of the type projects undertaken are the making of travelers' full leather writing cases, music cases and a variety of other art leather pieces.

42b. INTERMEDIATE BOOKBINDING—Winter quarter. Four hours. Fee, \$1.00.

A continuation of bookbinding 42a.

42c. INTERMEDIATE BOOKBINDING—Winter quarter. Four hours. Fee, \$1.00.

A continuation of bookbinding 42b.

100. WOODSHOP PROBLEMS—On request. Four hours. Fee, \$2.00.

The course is designed to furnish an opportunity for students to become acquainted with the more advanced phases of technical shop practice as they may be worked out in school or factory.

\*104. PRE-VOCATIONAL EDUCATION—Winter quarter. Three hours.

The purpose of this course is to discuss the educational needs of pupils in school, based on the community environment, vocational opportunities, and demand; recognizing that vocational needs vary with community conditions, and that vocational work fundamental and helpful in one community might be very unfit and unnecessary in another. We generally make a survey of the vocational activities of a nearby community. The entire course is a discussion of special, government, state, and community school problems in vocational fields that we may learn something of the methods of attack used in planning special pre-vocational work, especially the junior high school problem.

105. ADVANCED ARCHITECTURAL DRAWING—Spring quarter. Four hours. Fee, \$1.00.

The course is designed to give the student a knowledge of great historic materials and their application in modern buildings. A study of columns, capitals, pediments, buttresses, arches, vaults, and their application in building will be stressed through this entire course. The work is intensive rather than extensive in its fundamental aspects.

106. ADVANCED REPAIR AND EQUIPMENT CONSTRUCTION—On request. Four hours.

This course is similar to Ind. Arts 6 but deals with a much more advanced type of work.

109a. ART METAL—Fall quarter. Four hours. Fee, \$2.00.

The base for this course is the designing, making and finishing of artistic jewelry in semi-precious and precious metals; also simple artistic jewelry, with all the steps that are fundamental in stone setting and finishing.

109b. ART METAL—Winter and spring quarters. Four hours. Fee, \$2.00.

A continuation of 109a, with the applications in teaching of jewelry work in the public schools. Advanced problems in design as applied to set metal, wire work, chasing, and repousse.

117. ELEMENTS OF MACHINE DESIGN I—Fall quarter. Four hours. Fee, \$1.00.

This course includes sketches, drawings and tracings of simple parts, such as collars, face plates, screw center, clamps, brackets, couplings, simple bearings, and pulleys. Standardized proportions are used in all drawings.

118. ELEMENTS OF MACHINE DESIGN II—Spring quarter. Four hours. Fee, \$1.00.

A study is made of the transmission of motion by belts, pulleys, gears, and cams. Sketches, details and assembled drawings are made of valves, vises, lathes, band saws, motor and gas or steam engines.

119. MEDIEVAL AND MODERN ARCHITECTURE—Winter quarter. One hour.

The architecture of the Middle Ages of the Renaissance. Lectures and readings on the principle which underlies the theory and the practice of architecture during this period, illustrated by lantern slides. Open to all students of the college.

120. ADVANCED WOODTURNING—On request. Four hours. Fee, \$2.00.

The topics emphasized in this course will include woods best suited for various work, glue, varnish, shellac, dowels, draft, shrinkage, and finish. The practical work will consist of patterns for hollow castings, building up and segment work.

121. ADVANCED CABINET MAKING—Spring quarter. Four hours. Fee, \$2.00.

The course is planned to cover advanced phases of cabinet work, including paneling, dovetailing, secret nailing and key joining. These technical processes will be worked out on individual projects.

124. MACHINE WORK—Winter quarter. Three 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—On request. Four hours.

The purpose of this course is to give the student a thorough knowledge of the handling of an advanced class in woodworking and also give him an opportunity to gain a better understanding of the handling of high grade material than could be gained by working in elementary or secondary classes. Hours to be arranged with individual students.

133a. ADVANCED PRINTING—Fall and spring quarters. Four hours. Fee, \$1.00.

Advanced work in the complete designing and producing of printed matter, with a study of plates, papers, and inks. Advanced imposition and press work.

133b. ADVANCED PRINTING—Winter and spring quarters. Two or four hours. Fee, \$1.00.

Special work in cutting and printing of linoleum blocks. Hand-letting and its application to printing.



134a. PRACTICAL NEWSPAPER WORK IN PRINTING—On request. Two or four hours.

The various processes incident to the printing of a newspaper will be performed by the student in this course, with stress upon good design in "ads" and make-up.

135. COST ACCOUNTING IN PRINTING—On request. Two hours.

Estimating and work dealing with the cost of printing.

136. SHOP MANAGEMENT IN PRINTING—On request. Two hours.

Keeping of records and accounts. Purchase of materials. Planning and laying out of equipment. Students will be encouraged to contribute and work out original ideas intended to broaden the scope of the shop's work and to increase its efficiency.

143a. ADVANCED LEATHER CRAFT AND ART BINDINGS—Fall and spring quarters. Four hours. Fee, \$1.00.

143b. ADVANCED LEATHER CRAFT AND COMMERCIAL BINDINGS.—On request. Two hours. Fee, \$1.00.

The technic involved in this course includes special work in lettering in gold and other materials and foils, tooling and use of stamping machine in applied design. In general, the course is a continuation of previous courses with additional technic and advanced projects in full leather bindings with raised panels, gilt, fancy, starch, and agate edges, finishing in antique and gold, hand-lettering.

144. SHOP MANAGEMENT IN BOOKBINDING—On request. Two hours.

This course deals with the organization and arrangement of a shop. Planning of the technical work in regard to particular pieces, the laying out of designs, selection of materials and methods of construction.

145. SECRETARIAL SCIENCE IN BOOKBINDING—On request. Four hours. Elective.

Keeping shop records. Selection and purchasing of all types of materials and equipment necessary for school bindery. Estimating cost of production and general shop expense.

201. SEMINAR—On request. Four hours.

Individual research in the field of practical arts. Problems to be selected upon consultation. This is a conference course. Conference hours will be arranged to meet the needs of students.

224. RESEARCH IN INDUSTRIAL ARTS—Three hours.

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

225. RESEARCH IN INDUSTRIAL ARTS—Three hours.

A continuation of Ind. A. 224.

## LIBRARY SCIENCE

The main Library of the College contains about 60,500 volumes with a large picture collection and all equipment for a very complete library. There is also a children's branch containing about 4,500 volumes for the use of the Training Schools. Good facilities are offered for a class in library training. The following courses are offered:

102. RECEIPT AND PREPARATION OF BOOKS—Fall quarter. Two hours.

This course includes care of books, physical make-up of the book, paper, binding, illustrating, aids and methods in book selection, checking bills, collating, preparation of books for the shelves, etc.

103. CLASSIFICATION AND CATALOGING—Winter quarter. Three 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. Formation of the card catalog, alphabetizing, Library of Congress cards, shelf lists, arrangement of books on shelves.

104. REFERENCE WORK—Spring quarter. Four hours.

The subject covers a study of the standard works of reference, such as the principal encyclopedias, dictionaries, atlases, and reference manuals of various kinds. Bibliographies and reading lists, indexes and aids, public documents. Practical questions and problems assigned.

105. PERIODICALS AND BINDING—Winter quarter. Two hours.

Selection and purchase, checking in, relation to printed indexes, filing. Periodicals for certain definite lines, Methods of acquiring in schools. Use—Current and bound. Collating, selection and preparation for bindery. The binding of books with a study of materials.

106. SCHOOL LIBRARIES—Fall quarter. Three hours.

Evaluation and selection of children's literature. Illustrators. Planning and organization of the school library. Relation between the public library and the school.

107. HISTORY AND ADMINISTRATION OF LIBRARIES—By arrangement. Two hours.

Historical points in general library development. A study of traveling and county libraries with general administration.

108. PRACTICAL WORK IN THE LIBRARY—By arrangement. Five hours  
Time required, two hours a day, for one quarter plus optional work by the student.

This is allowed only to those who have taken courses 102, 103, and 104, and calls for certain responsibility on the part of the student.

## LITERATURE AND ENGLISH

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

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

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

Colorado State Teachers College requires all its students to take an examination in the fundamentals of written English. Only those who pass the test may become English majors. Of the students who fail, those in the second quartile are required to take English 4 in class with collegiate credit, but those in the third and fourth quartiles are required to take English O without collegiate credit.

## COURSE OF STUDY

Courses marked \* are given also by extension.

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

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

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

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

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

0. FUNDAMENTALS OF ENGLISH—Every quarter.

No college credit.

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

\*1. MATERIAL AND METHODS IN LITERATURE—Every quarter. 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 study of values, material, and method of presentation of literature adapted to the needs of the child. This course provides for the teaching of literature in the elementary and junior high schools. The psychological principles of teaching reading, including eye span, rate of movement, etc., are not included in this course.

2. TEACHING OF WRITTEN ENGLISH—Fall, winter, and summer quarters. Prerequisite, English 4. Four hours.

This course takes up the problems of teaching formal English, both spoken and written, in the intermediate grades and the junior high school. The functional teaching of grammar is included.

4. SPEAKING AND WRITING ENGLISH—Required of all students whose grades in the English 4 Exemption Test place them in the second quartile. Every quarter. Three hours.

Minimum essentials of oral and written composition. Content and method of functional grammar. Theory and practice of composition of collegiate grade.

\*6. AMERICAN LITERATURE—Fall, spring, and summer quarters. Four hours.

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

\*8. THE HISTORY OF ENGLISH LITERATURE—Fall quarter. Four hours.

This is a course dealing with the beginnings of English language and 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.

Particular attention is given to the selection of material and to methods of handling that are suitable for use in the elementary and secondary schools.

\*9. THE HISTORY OF ENGLISH LITERATURE—Winter quarter. Four hours.

This course begins with the "Age of the Cavalier and the Puritan" (1625) and includes the Period of Classicism (1798). The same plan is followed as that indicated for English 8.

**\*10. THE HISTORY OF ENGLISH LITERATURE**—Spring quarter. Four hours.

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

**11. THE ENGLISH LANGUAGE**—Fall, spring, and summer quarters. Four hours.

Historical development of the English language. Etymologies, word origins, connotations, etc.

**12. ORAL EXPRESSION**—Every quarter. Three hours.

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

**13. THE ART OF STORY TELLING**—Every quarter. Three hours.

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

**14. DRAMATIC ART**—Fall quarter. Prerequisite, English 12. Four hours.

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

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

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

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

A second appreciation course similar to English 15, but dealing with the literature of not more than ten years back. Most teachers of literature leave the impression that literature must age like fiddles and wine before it is fit for human consumption. Such is not the case. Much good literature is being produced every year. After students leave school, it is just this current literature that they will be reading, if they read at all. This course helps them to form a discriminating taste for reading and to acquire a liking for reading, so that after they leave college they will be alive to what the world is thinking, feeling, doing, and saying.

**18. DEBATING**—Fall quarter. Two hours.

A practice course in debating open to any student interested in inter-class and intercollegiate debating, and prerequisite to English 105. The teams for the intercollegiate debates are chosen at the end of the quarter largely from the students enrolled in this group.

**19. DEBATING**—Winter quarter. Three hours.

Those students who were selected for the intercollegiate debate teams will comprise the classes in English 19, one for men and one for women. The work will consist of the preparation for the debates.

**\*20. ADVANCED COMPOSITION**—Every quarter. Prerequisite, English 4. Four hours.

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

\*31. THE SHORT STORY—Spring and summer quarters. Four hours.

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

100. JOURNALISM—Fall quarter. Three hours.

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

101. JOURNALISM—Winter quarter. Three hours.

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

102. JOURNALISM—Spring quarter. Three hours.

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

105. ORAL ENGLISH IN THE HIGH SCHOOL—Winter and summer quarters. Prerequisites, English 14 and 18. Three hours.

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

106. THE TEACHING OF ENGLISH IN THE HIGH SCHOOL—Fall and summer quarters. Three hours.

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

107. COMPARATIVE LITERATURE—Greek and Latin. Fall quarter. Four hours. Offered next in 1928.

A survey of the main contributions of classical culture to world literature. The reading in English translation of Homeric epics and the dramas of Aeschylus, Sophocles, and Euripides.

108. COMPARATIVE LITERATURE—Italian, Spanish, and French. Winter quarter. Four hours. Offered next in 1929.

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

109. COMPARATIVE LITERATURE—German, Scandinavian, and Russian. Spring quarter. Four hours. Offered next in 1929.

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

114. PLAY PRODUCTION—Winter and summer quarters. Prerequisite, English 14. Four hours.

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. Puppets and shadow shows are studied. Choice of materials for amateur theatricals is considered. Special emphasis is laid on the actual production of plays, including casting and directing.

120. LYRIC POETRY—Winter and summer quarters. Four hours. Offered next in 1928.

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

121. EARLY NINETEENTH CENTURY POETRY—Fall quarter. Four hours. Offered next in 1927.

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

122. VICTORIAN POETRY—Spring and summer quarters. Four hours. Offered next in 1928.

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

\*126. NINETEENTH CENTURY PROSE—Fall and summer quarters. Four hours. Offered next in 1928.

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

\*127. SHAKSPERE'S COMEDIES—Fall and summer quarters. Four hours. Offered next in 1927.

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

128. SHAKSPERE'S HISTORICAL PLAYS—Winter quarter. Four hours. Offered next in 1928.

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

129. SHAKSPERE'S TRAGEDIES—Spring and summer quarters. Four hours. Offered next in 1928.

The completion of the year's work in Shakspeare.

130. ELIZABETHAN DRAMA EXCLUSIVE OF SHAKSPERE—Fall quarter. Four hours. Offered next in 1928.

A knowledge of the dramatic literature of the early seventeenth century is incomplete without an acquaintance with the contemporaries and successors of Shakspeare from about 1585 to the closing of the theaters in 1642. The principal dramatists, with one or more of the typical plays of each, are studied in this course.

\*132. THE DEVELOPMENT OF THE NOVEL—Winter quarter. Four hours.

The development, technic, and significance of the novel.

\*133. THE RECENT NOVEL—Spring and summer quarters. Four hours.

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

\*134. MODERN PLAYS—Winter and summer quarters. Four hours.

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

160. OLD TESTAMENT LITERATURE—Winter quarter. Three hours.

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

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

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

## GRADUATE COURSES

207. COMPARATIVE LITERATURE  
 208. COMPARATIVE LITERATURE  
 209. COMPARATIVE LITERATURE  
 226. NINETEENTH CENTURY PROSE  
 234. MODERN PLAYS

The five courses listed above, corresponding in content, credit, and time to 107, 108, 109, 126, and 134, afford graduate students opportunities for regular class work and require reading and reports additional to those of the undergraduate students.

## 224. RESEARCH IN ENGLISH—Three hours.

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

## 225. RESEARCH IN ENGLISH—Three hours.

This is a continuation of Eng. 224.

## MATHEMATICS

Every course in this department is given strictly from the professional viewpoint. The aim is to present each topic in such a way that the student will get a real knowledge of the subject matter itself and at the same time be led to give careful consideration to the question of how that material can best be taught.

The attempt is being made also to give a course in mathematics in the freshman year which will bring in those topics of the subject which will give a teacher, no matter what his special field may be, a working knowledge of some of the most valuable parts of the great science of mathematics.

For this reason the old formal subjects of College algebra and trigonometry, with much of the useless, antiquated material which they have contained in the past, are being supplanted by a course in General Mathematics. The time saved by dropping the dead material will be utilized in giving an introduction to the most valuable parts of Analytically and the Calculus, and in making the application of mathematics to such vital topics as statistics. The formal subjects are still offered, but all who can do so should plan to take the courses in General Mathematics instead.

## COURSE OF STUDY

Courses marked \* are given also by extension.

In addition to the core subjects as listed on page 52, this department requires the following courses for those majoring in mathematics:

FIRST YEAR: Mathematics 1, 2, and 3, or Math. 5, 6, and 7.

SECOND YEAR: Mathematics 9, Physics 1, and four hours chosen from Math. 104, 105, 107, 108, 109, 110.

THIRD YEAR: Math. 101, 102, and either Math. 106 or Geog. 113.

FOURTH YEAR: Twelve hours of Mathematics, elective.

- \*1. GENERAL MATHEMATICS—Fall and summer quarters. Four hours.

This quarter's work deals with functions and graphs, simple derivation, simple integration, trigonometric functions, logarithms and exponential functions.

- \*2. GENERAL MATHEMATICS—Winter quarter. Four hours.

The second quarter deals with an analytical study of the straight line, circle and other conic sections, solution of equations, polar coordinates, and trigonometric analysis.

- \*3. GENERAL MATHEMATICS—Spring quarter. Four hours.

The integral as applied to areas, the progressions and other series, permutations, combinations, probability including the probability curve, and complex number.

- \*4. SOLID GEOMETRY—Fall and summer quarters. Four hours.

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

- \*5. COLLEGE ALGEBRA—Winter and summer quarters. Four hours.

This course opens with a thorough review of elementary algebra with a view to giving a clear knowledge of the principles of the subject. It continues with permutations and combinations, the progressions, and the functions and its graph.

- \*6. COLLEGE ALGEBRA—Spring and summer quarters. Four hours.

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

- \*7. PLANE TRIGONOMETRY—Winter and summer quarters. Four hours.

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

8. SURVEYING—Fall, spring, and summer quarters. Four hours.

In this course the student becomes familiar with the ordinary instruments of the surveyor; the transit, the compass, the level, etc. He takes up such practical problems as running a line of levels for an irrigation ditch, establishing a sidewalk grade, and measuring land.

- \*9. ANALYTIC GEOMETRY—Fall and summer quarters. Four hours.

This course opens to the student, in a small way, the great field of higher mathematics. It also connects closely with the subjects or graphs in algebra and forms the basis of the work in the calculus.

- \*101. DIFFERENTIAL CALCULUS—Winter and summer quarters. Four hours.

An introduction to the powerful subject of the calculus. While care is taken to see that the formal side of the subject is mastered, many problems of a practical nature are introduced from the realms of geometry, physics, and mechanics.

- \*102. INTEGRAL CALCULUS—Spring and summer quarters. Four hours.

This course takes up the ordinary formulas for integration and the commoner applications of the integral calculus.

- \*103. THEORY OF EQUATIONS—Spring quarter. Four hours.

This course deals with the graph, complex number, cubic and quartic equations, symmetric functions, and determinants.

- \*104. THE TEACHING OF ARITHMETIC—Every quarter. Four hours.

This course deals primarily with the modern movements and methods in the teaching of arithmetic. A brief history of the development of the subject and of the methods used in the past is given. The real problems of the classroom are taken up and discussed with a view to giving the student something definite that she can use when she gets into a school of her own.



105. THE TEACHING OF ARITHMETIC—Summer quarter. Two hours.

This course will follow the same lines as Course 104, but in less detail. It is especially suited to those students who can stay in school only half of the summer quarter.

106. DESCRIPTIVE ASTRONOMY—Winter and summer quarters. Four hours.

This course gives an introduction to the fascinating study of astronomy. It gives the idea of the principles, methods and results of the science; shows the steps by which the remarkable achievements in it have been attained; and covers the recent investigations respecting the origin and development of the solar system.

107. JUNIOR HIGH SCHOOL MATHEMATICS—Summer quarter. Two hours.

This course covers the same ground as Course 108 but takes up the work in briefer form. It is specially suited to summer students who can stay in school but half the summer.

\*108. JUNIOR HIGH SCHOOL MATHEMATICS—Every quarter. Four hours.

The almost universal adoption of the junior high school plan has given a great stimulus to the study of the character of the work in the common branches that should be pursued in the seventh, eighth, and ninth grades. This course attempts to solve the problems that arise concerning the mathematics in these grades.

109. THE TEACHING OF ALGEBRA—Fall, spring, and summer quarters. Four hours.

This course treats of professionalized subject-matter in algebra. It also deals with the practical problems which every modern teacher of algebra must solve, such as the purpose of algebra, its place in the curriculum, the principles used in the subject, and the best methods of teaching it.

110. GEOMETRY FOR TEACHERS—Winter and summer quarters. Four hours.

This course treats of professionalized subject-matter in Geometry. It aims at the extension of the student's knowledge of the field of plane geometry as well as the presentation of the best methods of teaching geometry.

\*200. ADVANCED CALCULUS—Fall quarter. Four hours.

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

\*201. DIFFERENTIAL EQUATIONS—Winter quarter. Four hours.

A discussion of problems which lead to differential equations and of the standard methods of their solution.

224. RESEARCH IN MATHEMATICS—Three hours.

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

225. RESEARCH IN MATHEMATICS—Three hours.

A continuation of Mathematics 224.

## MUSIC

The Department of Music is maintained primarily in order that teachers may be thoroughly trained to teach music in the public schools. The student life of the College is influenced directly by the large part music plays in all the student activities. It is necessary to maintain a large and highly trained music faculty in order properly to educate the public school music supervisor. Thus, it becomes possible to offer high-class instruction to those who are interested in the study of vocal and instrumental music. Send for special music bulletin.

Student recitals are given which provide the students an opportunity to appear in public. During the school year an oratorio is given by the College Chorus, and the Glee Clubs of the institution give an opera each spring.

The Greeley Philharmonic Orchestra is a symphony orchestra of fifty members, comprised of talent of the school and city, which gives monthly concerts. The standard symphonic compositions are studied and played. Advanced students capable of playing music used by the organization are eligible to join upon invitation of the director.

The College orchestra and band offer excellent training for those interested.

The course of study is planned on a four-year basis, although a two-year course may be taken. College credit is given for applied music under the following conditions:

1. An examination must be passed by all students who desire credit for applied music to show that they have completed the work of the second grade of the instrument in which they apply for further work. Second grade work must be equal to the following standard: sonatinas and pieces from Kuhlraw, Kullak, Clementi, and Bach. Twelve little preludes and pieces suited to the individual student. All forms of technical exercises, scales, trills, chords, arpeggios, double thirds, and octaves. Knowledge of tone production, phrasing, rudiments of harmony, use of pedal, and sight playing. Pieces by Mozart, Haydn, Bach, Beethoven.
2. A full year's work (three quarters) must be taken before credit shall be allowed.
3. College credit will be given for proper work in all instruments except the following: saxophone, ukelele, banjo, guitar, mandolin, fife, and single percussion instruments.
4. Beginning work in any instrument, except those mentioned in "3", will receive college credit when the examination in piano is passed to show the completion of two grades of work.
5. One hour of credit is given for not less than one lesson a week with practice under the instruction of a member of the music department of the College faculty. Two lessons a week in the same instrument shall not receive additional credit.

#### FOR MAJORS IN MUSIC

Examination must be taken in piano work before graduation.

The maximum credit in applied music will be twelve hours in the two years' course and twenty-four hours in the four years' course.

#### FOR NON-MAJORS IN MUSIC

The maximum credit in applied music is three hours a year, six hours in the two years' course, and twelve hours in the four years' course.

The five requirements applied to all students who wish to take lessons in applied music do not preclude beginning work in voice or piano or any other instruments, but in general they remove college credit from elementary work.

Band and orchestral instruments are rented at \$2.00 per quarter.

Courses marked \* are given by extension.

In addition to the core subjects as listed on page 52, this department requires for majors in public school music:

FIRST YEAR: 1b, 1c, 2, 20, 22, 45, 101.

SECOND YEAR: 3, 4, 5, 10, 11, 21, 23, 40, 101.

THIRD YEAR: 40, 101, 103, 104, 110, Ed. 2c, Phys. 114, Psyc. 112.

FOURTH YEAR: 40, 101, 105, 106, 107, 108, 114, 122.

All public school music majors are required to become members of the College chorus and orchestra. This may be taken with or without credit. 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. Consult the head of the department.

1a. **RUDIMENTS AND METHODS**—Every quarter. Three hours.

Required of Kindergarten, Primary and Intermediate majors. This course is designed for the purpose of equipping the grade teacher with the necessary musical skills, and methods for teaching the daily music lesson in the classroom. The materials and methods covered are those for: sight-singing, notation, musical terms, appreciation, rote-singing, games, etc.

1b. **SIGHT SINGING**—Fall and summer quarters. Three hours.

This course is required of music majors. Rudiments of music and beginning sight singing.

1c. **ADVANCED SIGHT SINGING**—Winter and summer quarters. Three hours.

Required of music majors. Prerequisite Music 1b. Continuation of Music 1b. The student will acquire speed and accuracy in hearing and sounding difficult intervals.

2. **TONE THINKING AND MELODY WRITING**—Spring and summer quarters. Three hours.

It is expected that students will become proficient in writing melodies in all kinds of rhythms. A great deal of dictation is done. Required of music majors. Prerequisite, Music 1b.

3. **INTRODUCTORY HARMONY**—Fall and summer quarters. Three hours.

This is a course consisting of the construction, classification and the progression of chords, and is put into practical use in the harmonization of melodies. Required of music majors.

4. **INTERMEDIATE HARMONY**—Winter and summer quarters. Three hours.

Continuation of Music 3. Required of music majors.

5. **ADVANCED HARMONY**—Spring quarter. Three hours.

A continuation of Music 4, taking up discords and modulations. Required of music majors.

10. **KINDERGARTEN-PRIMARY METHODS**—Fall and summer quarters. Three hours.

Methods for kindergarten, first, second, and third grades. Care of the child voice. Its range. The less musical child. The teaching of rote songs. Development of rhythm through free and suggested expression. The toy orchestra. Repertoire of songs for home and school use, with publishers. A graded course in music appreciation is desirable so that kindergarten and primary teachers may be able to play simple accompaniments on the piano. Required of music majors. Prerequisites, Music 1b, 1c.

11. **INTERMEDIATE METHODS**—Winter and summer quarters. Three hours.

Methods for fourth, fifth and sixth grades. The round. Part-singing. Chromatics. Intervals. Tone drills. Sight-singing. Building of major and minor scales on keyboard. Written notation. Simple song analysis. Repertoire of appropriate rote songs. Familiar songs for memorizing. Materials for music appreciation. Required of music majors. Prerequisites, Music 1b, 1c, 10.

20. HISTORY OF ANCIENT AND MEDIEVAL MUSIC—Fall and summer quarters. Three hours.

A cultural course which deals with the development of ancient and medieval music and musicians up to and including Beethoven, through the presentation of music by these different composers. Required of music majors.

21. MODERN COMPOSERS—Winter and summer quarters. Three hours.

A continuation of Music 20. The lives and music of the great masters since Beethoven will be studied. Through the aid of the phonograph the student will become acquainted with the different styles of these composers' compositions. Required of all music majors. Prerequisite, Music 20.

22. MUSIC APPRECIATION—Spring and summer quarters. Three hours.

A course open to all who wish to acquire a greater love for good music. The lives of many of the great artists and composers are taken up in this course. Records of bands, orchestras, choruses, soloists, etc., are taken up with the purpose in view of acquainting the student with the best music and teaching him how to appreciate it.

23. MUSICAL LITERATURE—Spring and summer quarters. Three hours.

A listening course wherein the student is taught to distinguish between the various forms of composition. A thorough knowledge of dance forms, song forms, etc., will be obtained.

30. INDIVIDUAL VOCAL LESSONS—Every quarter. One hour. Fee, \$24.00 and \$30.00. Student teacher, \$12.00.

Correct tone production, refined diction and intelligent interpretation of songs from classical and modern composers.

31. INDIVIDUAL PIANO LESSONS—Every quarter. One hour. Fee, \$24.00 and \$18.00. Student teacher, \$12.00.

High class instruction is offered to both beginners and advanced students using the standard technical works of Czerny, Clementi and others as well as the compositions of Beethoven, Bach, Schumann, Chopin and other classical and modern composers.

32. INDIVIDUAL VIOLIN LESSONS—Every quarter. One hour. Fee, \$24.00. Student teacher, \$12.00.

The work will be outlined according to the ability of the student. Only the best of teaching material is used and the bowing and finger technic are carefully supervised.

33. INDIVIDUAL PIPE ORGAN LESSONS—Every quarter. One hour. Fee, \$24.00.

Work is given in pipe organ to those students who have had enough piano instruction to be able to play Bach Two Part Inventions. The instruction starts with a thorough foundation in organ technic followed by study of Bach organ works. Mendelssohn Sonatas, Guilment, Rheinberger, Widor and other organ composers of like standing in the musical world.

34. PIANO CLASS LESSONS—Every quarter. One hour. Fee, \$6.00.

A course designed for the prospective teacher in piano classes.

35. INDIVIDUAL LESSONS FOR BRASS AND REED INSTRUMENTS—Every quarter. One hour. Fee, \$15.00.

Each instrument is carefully taught by a competent instructor. Special attention is given to beginners.

36. INDIVIDUAL 'CELLO LESSONS—Every quarter. One hour. Fee, \$24.00.

Modern methods are used and a thorough course is given presenting the best music literature for the 'cello.

38. COLLECTIVE VOICE TRAINING—Every quarter. One hour. Fee, \$6.00.

Fundamental work in voice building.

## 40. BEGINNING ORCHESTRA—Every quarter. One hour.

Beginners on orchestral instruments who have progressed sufficiently will find this an opportunity for ensemble rehearsal under competent direction.

## 41. MEN'S GLEE CLUB—Fall, winter, and spring quarters. One hour.

Entrance upon examination. This club prepares a program and makes an extended tour of Colorado and near-by states.

## 42. SCHUMANN GLEE CLUB—Fall, winter and spring quarters. One hour.

Entrance upon invitation after examination. This club is composed of forty female voices and takes a prominent part in the presentation of the annual oratorio and opera. A concert is given each spring quarter.

## 43. ADVANCED ORCHESTRA—Every quarter. One hour.

Only those are admitted to this orchestra who have had experience. Entrance upon examination only. All members must be present when called upon to play for College activities.

## 44. ADVANCED BAND—Every quarter. One hour.

The College band is maintained in order that experienced band men may have an opportunity to continue rehearsing under able direction. The College band plays for all College activities and all members are expected to be present when the band is called upon to perform.

## 45. ORCHESTRAL INSTRUMENTS—Every quarter. One hour. Fee, \$6.00.

A course in instrument study for the supervisors.

## 101. COLLEGE CHORUS—Fall and summer quarters. One hour.

Worth while music and standard choruses are studied and this chorus assists in giving the annual oratorio. Open to all students. Fall quarter only.

## 103. COUNTERPOINT—Fall and summer quarters. Three hours.

The rules of harmony are here applied to polyphonic writing. Required of majors in music. Prerequisite, Music 4.

## 104. ADVANCED COUNTERPOINT—Winter quarter. Three hours.

Continuation of Music 103. Required of majors in music.

## 105. BEGINNING ORCHESTRATION—Winter and Summer Quarters. Three hours.

A study is made of the several instruments of the symphony orchestra. Their pitch and quality of tone are studied singly and in combination. Beginning arranging for orchestra is begun. Prerequisite, Music 104.

## 106. ADVANCED ORCHESTRATION—Spring quarter. Three hours.

Continuation of Music 105. Required for a degree in music.

## 107. FORM ANALYSIS—Winter quarter. Three hours.

Analysis will be made of the smaller forms in music, also of symphonies from Haydn down to the present. Prerequisites, Music 104 and 106. Required of majors in music.

## 108. ADVANCED FORM ANALYSIS—Spring quarter. Three hours.

Continuation of Music 107. Required of majors in music.

## 110. SUPERVISOR'S COURSE—Spring and summer quarters. Three hours.

Survey of development of public school music. Its leaders. Comparison and discussion of various music series, and texts. Duties and responsibilities of the supervisor. Teachers' meetings, typical outlines for music work. Public school music surveys. Tests and measurements. Instrumental class methods. The adolescent voice. Materials for glee clubs and choruses. The school orchestra. The music memory contest. State music contests. Music magazines. Required of music majors. Prerequisites, Music 1b, 2, 3, 4, 10, 11.

111. CONDUCTING BY ASSIGNMENT—All quarters. Two hours.

114. METHODS IN CONDUCTING—Spring and summer quarters. Two hours.

The technic of the baton is obtained through the actual use of the same. Music in all forms is studied with special reference to the directors' problems.

123. APPRECIATION OF OPERA—Fall and summer quarters. One hour.

Monteverde to modern times. Classroom work will consist of lectures and the actual singing of the principal airs by the class. Librettos used as textbook.

130. INDIVIDUAL VOCAL LESSONS AND METHODS—Every quarter. One hour. Fee, \$24.00.

A method of approach in tone building will be discussed with special reference to the teachers' problem.

131. INDIVIDUAL PIANO LESSONS AND METHODS—Every quarter. One hour. Fee, \$18.00 and \$24.00.

An advanced course in piano playing with suggestions and helps for teaching the instrument.

132. INDIVIDUAL VIOLIN LESSONS AND METHODS—Every quarter. One hour. Fee, \$24.00.

Teaching problems will be discussed and classified teaching material will be suggested, making this a valuable course to the student preparing himself for teaching the violin.

133. INDIVIDUAL PIPE ORGAN LESSONS AND METHODS—Every quarter. One hour. Fee, \$24.00.

An advanced course in organ playing combined with instruction in teaching the instrument.

134. INDIVIDUAL 'CELLO LESSONS AND METHODS—Every quarter. One hour. Fee, \$24.00.

Discussions will be held with special regard to the methods pursued in teaching the 'cello.

224. RESEARCH IN PUBLIC SCHOOL MUSIC—Three hours.

225. RESEARCH IN PUBLIC SCHOOL MUSIC—Three hours.

This is a continuation of Music 224.

## PHYSICAL EDUCATION AND ATHLETICS FOR WOMEN

All first and second year students are required to take one active course in Physical Education each quarter in residence. Physical Education 30 will be substituted for an active course upon presentation of a request from the medical adviser.

No physical education course may be taken more than once for credit. Only two of the courses ranging from P. E. 13 to P. E. 17, inclusive, may be taken for credit.

A physical examination by the college medical adviser is required of every woman in college once each year.

Regulation costumes are required for the Physical Education work and should be purchased in Greeley in order to conform to the requirements.

A fee will be charged for the swimming classes and for all towels issued by the school.

A deposit will be charged for locker keys.

Freshmen women may choose any of the following courses to fulfill the year requirements, taking one course each quarter:

P. E. 2, P. E. 4, P. E. 5, P. E. 11 or P. E. 12, P. E. 26 and any one of the courses P. E. 13, P. E. 14, P. E. 17.

Sophomore women may choose any of the following courses, taking one each quarter unless the course was taken during the Freshman year:

P. E. 1, P. E. 3, P. E. 5, P. E. 6, P. E. 11 or P. E. 12, P. E. 26 or P. E. 27 and any one of courses P. E. 13, P. E. 14, P. E. 15, P. E. 16.

General students who are especially good in Physical Education work may take major classes with special permission.

### MAJOR REQUIREMENTS IN PHYSICAL EDUCATION

A four-year course is required of all Physical Education majors, therefore, no life certificate upon the completion of a two year course will be granted in this department. Physical Education students desiring life certificates at the end of two years should make primary, intermediate, or junior high school education their minor.

All women students majoring in Physical Education must be proficient enough in piano to play simple dances, marches, and skips before they can graduate.

Majors who have previously acquired sufficient skill in any sports listed under P. E. 13 to P. E. 26, inclusive, may be exempt, by the head of the department, from taking them.

All women majoring in this department must also take all major requirements in the department of Health Education.

Courses required in addition to the core subjects listed on page 52 are:

FIRST YEAR: P. E. 1, P. E. 2, P. E. 4, P. E. 5, P. E. 11, P. E. 14, and P. E. 26, Eng. 12 and 13, Chem. 1 and 2, Hist. 10.

SECOND YEAR: P. E. 3, P. E. 13, P. E. 15, P. E. 16, P. E. 27, P. E. 31, P. E. 36, Educational Psychology 1, Music 1a, H. A. 4, Eng. 14, Eng. 15, Chem. 12, Hist. 27.

THIRD YEAR: P. E. 101, P. E. 107, P. E. 111, P. E. 113, P. E. 123, P. E. 134, P. E. 137, Eng. 20, Chem. 108.

FOURTH YEAR: P. E. 103, P. E. 120, P. E. 132, P. E. 133, P. E. 135, P. E. 136, Biotics 101, Chem. 112.

### DESCRIPTION OF COURSES

✓1. CLOG AND ATHLETIC DANCING—Fall quarter. One hour.

This course will contain jigs, clogs, and athletic dances which are especially good for boys and girls in Junior High School.

✓2. NATURAL DANCING—Fall and winter quarters. One hour.

This course offers an opportunity for music interpretation and pantomime based upon a technic of free, natural movement.

✓3. NATURAL DANCING—Fall and winter quarters. One hour.

Open to those who have had P. E. 2. This course gives advanced work in P. E. 2.

✓4. SINGING GAMES—Fall and spring quarters. One hour.

Dramatic and singing games and simple dances suited to children in the elementary school. The material offered in this course is of special value to those majoring in Primary or Intermediate Education and Music.

✓5. FOLK DANCING—Every quarter. One hour.

Simple dances for beginners in folk dancing.

6. **FOLK DANCING**—Every quarter. One hour.

Prerequisite P. E. 5 or its equivalent. This course will present folk dances, especially suited to high school students.

7. **NATIONAL AND CHARACTERISTIC DANCING**—Every quarter. One hour.

This course will present typical national and character dances and will be of special value to the major in High School Education.

✓ 11. **PLAYS AND GAMES**—Fall and spring quarters. One hour.

This course is for Primary and Intermediate and Physical Education Majors only, and presents the games in graded form together with a brief review of the psychological age of the child.

12. **PLAYS AND GAMES**—Fall and spring quarters. One hour.

Not as technical a course and not as varied material as P. E. 11. A course open to the general student.

✓13. **TENNIS**—Fall and spring quarters. One hour.

This course will consist of a study of the rules of tennis and practice in the game.

✓14. **BASKETBALL**—Winter quarter. One hour.

This course will consist of a study of the rules of basketball and the development of skill in the technic.

✓15. **BASEBALL AND TRACK**—Spring quarter. One hour.

This course will consist of a study of the rules of baseball, the development of skill in it; practice of track events such as dashes, running, high jump, javelin throw, etc., also a discussion of events desirable for girls' track meet.

✓16. **HOCKEY AND SOCCER**—Fall quarter. One hour.

The rules of these games will be studied and skill in technic developed.

17. **VOLLEY BALL**—Winter quarter. One hour.

A game that can be played in the Intermediate grades and Junior High Schools.

18. **ARCHERY**—Every other year. (Not given in 1927-28.) One hour.

Open to Physical Education Majors and other students by permission of the instructor.

✓ 26. **BEGINNING SWIMMING**—Every quarter. One hour.

This course will take up the easier fundamental strokes of swimming, the way of regaining a standing position from either face submerged or floating position, and beginning diving.

✓ 27. **INTERMEDIATE SWIMMING**—Every quarter. One hour.

This course will take up more difficult swimming strokes and diving than P. E. 26. P. E. 26 or its equivalent is a prerequisite.

28. **ADVANCED SWIMMING**—Every quarter. One hour.

A more advanced course than either P. E. 26 or P. E. 27, and must be preceded by them.

30. **INDIVIDUAL GYMNASTICS**—Every quarter. One hour.

Open only to those students bearing an admittance slip from the Medical Adviser. Individual work for individual needs will be given.

✓31. **DANISH GYMNASTICS AND TUMBLING**—Fall quarter. Two hours.

This course will present the various types of Danish gymnastics, mat work, pyramid building and apparatus work.

✓ 36. **PAGEANTRY AND DRAMATIC EXPRESSION IN PHYSICAL EDUCATION**—Winter quarter. Three hours.

This work is for majors and is designed to give an appreciation of the art as developed through motor activities. Pantomimes, pageants and festivals will be discussed and original work required.



✓101. CLOG AND ATHLETIC DANCING—Spring quarter. Given alternate years. (Given next in 1927-28.) Two hours.

Students taking this course will be required to make up original dances and will be given the more difficult dances of this type. Best methods of presentation will also be discussed.

✓103. NATURAL DANCING—Spring quarter. Given alternate years. (Given next in 1927-28.) Two hours.

This course deals with the problems of natural dancing in a program of Physical Education, presents more difficult dances than P. E. 3 and requires original composition. A course for majors only.

✓107. NATIONAL AND CHARACTERISTIC DANCING—Winter quarter. Two hours.

This course is for majors and will present the typical character and national dances. Requires original composition and practice in presenting dances to groups.

✓111. PLAYS AND GAMES—Winter quarter. Given alternate years. (Not given 1927-28.) Two hours.

This course is for Physical Education Majors and gives the different types of games—the psychological age to which they belong, the methods of presenting them. Original games will be required.

✓113. WOMEN'S ATHLETIC GAMES—Winter quarter. Given alternate years. (Given next in 1927-28.) Two hours.

This course is given to present the rules of the sports listed in P. E. 13 to P. E. 20, inclusive. The best methods of teaching them will be discussed and an opportunity presented for the perfecting of skills in them.

✓120. COACHING PRACTICE—Each quarter. Two hours.

This course gives actual experience in coaching the different sports listed under P. E. 13 to P. E. 20. Students registering for this course should make arrangements with the head of the department for special assignments. These arrangements should be made as early as possible, preferably the preceding quarter.

✓128. ADVANCED SWIMMING FOR MAJORS—(Not given in 1927-28.) Three hours.

This course consists of swimming, diving, life-saving, and gives practice in teaching swimming. Students who have done exceptionally good work in P. E. 26 to P. E. 28, inclusive, may enroll for this work with special permission from the instructor.

✓132. THEORY OF INDIVIDUAL GYMNASTICS—Fall quarter. Two hours.

This course is for Physical Education Majors. It consists of the study of the faults of posture commonly found in growing children, such as lateral curvature of the spine, round shoulders, weak and flat feet, and the measures used in correcting them.

✓133. INDIVIDUAL GYMNASTICS APPLIED—Every quarter. Two hours.

This course will consist of carefully supervised practical work in correcting faults of posture in the children of the elementary and high schools.

✓134. HISTORY OF PHYSICAL EDUCATION—Given alternate years. (Not given in 1927-28.) Two hours.

This course deals with the bodily and play activities of primitive man and the development of physical education before and during the middle ages and the modern movements in the different countries.

✓135. ADMINISTRATION OF PHYSICAL EDUCATION—Given alternate years. (Not given in 1927-28.) Two hours.

This course takes up the general organization of a Physical Education Department such as courses, equipment, personnel and observation of work done in Public Schools.

✓136. SUPERVISION OF PHYSICAL EDUCATION—Every quarter. Five hours.

This course will consist of actual supervision of student teachers of Physical Education in the Training School.

137. MATERIALS AND METHODS IN PHYSICAL EDUCATION—Given alternate years. (Not given 1927-28.) Three hours.

This course will deal with the methods of presentation, of material, the problems of the supervisor of physical education, the distribution of materials to grades and the preparation of a program of physical education based on a definite school system.

## PHYSICS

The various courses in the Physics Department have primarily the object of preparing teachers to teach physics in secondary schools and colleges. The course of study, however, will fit the need of the following classes of students:

1. The physics or science teacher in the secondary schools.
2. The physics major, specializing for the purpose of teaching in secondary school or college.
3. The elementary teacher interested in science because of its growing introduction into the elementary schools.
4. The student interested as a future teacher in its cultural value.

Major students are expected to follow the course as outlined below. Minors in physics are expected to elect Physics 1, 2, 3, 11, 12, 13, 14, 103, and 108. Other courses may be elected by special arrangement.

Students preparing for college teaching, research, or engineering, should elect Physics 11 as a beginning course. Prerequisite, Mathematics 2, Plane Trigonometry.

### COURSE OF STUDY

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

FIRST YEAR: Physics 1, 2, and 3, Mathematics 2, 5, and 6.

SECOND YEAR: Physics, 11, 12, 13, and 14, Chemistry 1, 2, and 3.

THIRD YEAR: Physics 103-108, Botany 1-3, Zoology 1-2, Mathematics 7, 101, 102.

FOURTH YEAR: Physics 111 and 121, Mathematics 103.

1. CONTENT AND METHOD OF HIGH SCHOOL PHYSICS—MECHANICS—Fall quarter. Four hours. Fee, \$3.00.

2. CONTENT AND METHOD OF HIGH SCHOOL PHYSICS—ELECTRICITY—Winter quarter. Four hours. Fee, \$3.00.

3. CONTENT AND METHOD OF HIGH SCHOOL PHYSICS—HEAT, SOUND, AND LIGHT—Spring quarter. Four hours. Fee, \$3.00.

These three courses in professionalized high school physics are to be taken as a year's work by prospective high school teachers and by elementary teachers interested in science because of its growing introduction into the elementary school. The first quarter will be devoted to the content and method of teaching topics ordinarily included under the term mechanics, the second quarter electricity, and the third quarter heat, sound, and light. One high school text and one text on methods will be used in connection with other texts, periodicals, and pamphlets as collateral. Special emphasis will be placed upon the organization of demonstrations, experiments, projects, and field trips, having in mind the anticipation of the problems of the high school physics teacher.

**10. HOUSEHOLD PHYSICS—Spring quarter. Four hours. Fee, \$3.00.**

Elementary course given especially for household students. Two discussion periods and two double laboratory periods per week. A special study of the questions arising in the household. The principles underlying heating, ventilation, electrical appliances, etc.

For students who may wish to teach other sciences in addition to physics, this course may be modified to suit their needs.

**11. MECHANICS—Fall quarter. Three or four hours. Fee, \$3.00.**

Advanced course similar to Physics 1 but more theoretical and requiring careful quantitative analysis. A knowledge of logarithms, manipulation of formula, and trigonometry, are essential. Two discussion periods and one double laboratory period are required.

**12. ELECTRICITY AND MAGNETISM—Winter quarter. Three or four hours. Fee, \$3.00.**

Advanced course. Continuation of Physics 11.

**13. HEAT, SOUND, AND LIGHT—Spring quarter. Three or four hours. Fee, \$3.00.**

Advanced course. Continuation of Physics 12.

**14. CLASSROOM APPLICATION OF PRINCIPLES UNDERLYING VISUAL APPARATUS—Winter quarter. Three or four hours. Fee, \$3.00.**

This course is given on account of the demand for teachers of the elementary and secondary grades having a practical knowledge of how to make good photographs, lantern slides and how to operate the stereopticon, balopticon and moving picture machine. It will consist of lectures, discussions, field trips and laboratory practice. Especial attention will be given to the development of projects showing how visual apparatus may be used to advantage in teaching nature study, general science, chemistry, physics and biology. Students will be expected to elect projects in their major field of study.

**103. THEORY OF RADIO RECEPTION AND TRANSMISSION—Fall quarter. Three or four hours. Fee, \$3.00.**

An elementary course preferably preceded by at least a high school physics course. Two discussion and two double laboratory periods per week. It will comprise a review of the elementary principles of electricity underlying radio communication followed by an intensive study of the principles underlying the construction and operation of radio receivers and transmitters. A number of experiments or projects may be elected by the student.

**104. ADVANCED RADIO—Any quarter. Two to three hours.**

This course is a continuation of physics 103 and should be elected only after consultation with the head of the department.

**107. THE HISTORY OF EPOCH MAKING DISCOVERIES IN PHYSICS—Winter quarter. Two hours.**

The purpose of the course is to provide the science teacher with numerous human interest stories of scientific development which can be interwoven with classroom discussion. As far as possible original sources will be used, so as to give the student an appreciation of the philosophy and ideals of the centuries past.

**108. METHOD OF TEACHING PHYSICS IN THE SECONDARY SCHOOLS—Fall quarter. Four hours.**

This course is intended for teachers of both Physics and General Science. Its main purpose is the organization of projects, experiments, and study units in Elementary Physics.

**111. PROJECTS BASED UPON THE STUDY OF THE AUTOMOBILE—Winter quarter. Three or four hours. Fee, \$3.00.**

This course, although practical, will not enter into the narrow technicalities of the trade school course. The reason why this course is given lies primarily not in the importance acquired by the automobile in our every day life, but in the multiplicity of physical principles involved in the gasoline engine upon which many interesting experiments and projects can be organized for science teaching.

114. THE PHYSICS OF MUSICAL INSTRUMENTS—Spring quarter. Four hours. Fee, \$3.00.

Elementary course given especially for students majoring in music. Three discussion periods and one double laboratory period per week. The course will comprise a study of the nature of sound, sound waves, velocity of sound, resonance, beats, laws of strings, reeds, air columns, etc.

121. PROJECTS BASED UPON THE STUDY OF DIRECT AND ALTERNATING CURRENTS—(Prerequisites, Physics 2 and 103). Spring quarter. Three or four hours. Fee, \$3.00.

This course will enable the prospective teacher not only to understand the working of electrical instruments and machinery, but to organize electrical experiments which will act most stimulatingly upon the imagination of the young. The courses will be accomplished by problems, experiments and projects on D. C. and A. C. generators, motors, telephone, telegraph, radio, etc.

224. RESEARCH IN PHYSICS—Three hours. Fee, \$3.00.

An individual research course in connection with the graduate thesis. This is a conference course designed to guide students in the selection of problems, method of procedure, and interpretation of results. It should be elected only after consultation with the head of the department.

225. RESEARCH IN PHYSICS—Three hours. Fee, \$3.00.

This is a continuation of Physics 224.

## SOCIOLOGY, ANTHROPOLOGY, AND ECONOMICS

This department offers the following series of courses in Sociology, Anthropology, and Economics, to which other courses will be added from time to time. These courses are designed primarily to prepare the student for educational service as teacher, supervisor, or administrator. They are arranged and conducted so as to provide a desirable preparation for the successful teaching of the social sciences, and for those who combine teaching with social work. An unusually fine collection of anthropological and sociological material is available for the use of classes. A full four-year course is offered.

### COURSE OF STUDY

Courses marked \* are given also by Extension.

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

FIRST YEAR: Sociology 1, Sociology 10, and a course selected from the freshman requirements in the Department of History.

SECOND YEAR: Biotics 101, Anthropology 100, Geology 7, 8, or 100.

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

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

### SOCIOLOGY

\*1. INTRODUCTION TO THE SOCIAL SCIENCES—Each quarter. Four hours.

Following a comprehensive view of the sciences and the arts, the various subjects studied in the social sciences such as the family, the state, races, languages, industry, art, customs, religions, etc., are presented in sufficient detail to show what the social sciences are and to enable the student to choose intelligently among them.

\*3. EDUCATIONAL SOCIOLOGY—Spring and summer quarters. Three hours.

This course deals with sociology from the point of view of education, and presents the sociological ideas, laws, and principles necessary to the successful practice of teaching.

**\*18. RURAL SOCIOLOGY—Spring quarter. Four hours.**

A constructive study of country life, economic activities, social organizations, schools, clubs, churches, social centers, and modern efforts and successes in rural progress. The course is intended primarily for rural teachers, but is of value for all students of rural social conditions and needs.

**34. CHILD WELFARE—Fall and winter quarters. Two hours.**

A study of child accounting involving the problems of child labor, juvenile delinquency, the gifted child, and all child problems arising from social maladjustment.

**\*92. THE FAMILY—Winter and summer quarters. Three hours.**

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

**\*105. THE PRINCIPLES OF SOCIOLOGY—Each quarter. Four hours. Required of third year students.**

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

**120. SOCIAL SURVEYS AND SOCIAL STATISTICS—Spring quarter. Three hours.**

This course acquaints the student with the technic of social surveys and should enable him to interpret scientifically the data of such surveys through the application of statistical methods. Teachers are frequently called upon to make or to assist in making social and educational surveys. This course should be of direct practical value in securing accurate information from such surveys, and in interpreting the information so secured.

**130. SOCIAL PSYCHOLOGY—Fall, winter, and summer quarters. Four hours.**

A study of suggestion and imitation, crowds, mobs, fads, fashions, booms, crises, conventionality, custom, conflict, public opinions, leadership, and like topics. Text and syllabus.

**140. DEVELOPMENT OF SOCIAL THOUGHT—Fall and summer quarters. Three hours.**

A study of the evolution of social concepts.

**142. DEVELOPMENT OF SOCIAL THOUGHT—Spring quarter. Two hours.**

A continuation of Soc. 140.

**150. MODERN SOCIAL PROBLEMS—Each quarter. Four hours.**

A course involving a study of war, crime; the race question, divorce, poverty, etc., in the light of the more recent sociological investigations. The course is designed for both undergraduate and graduate students, and students are admitted with or without previous study in sociology.

**209. SEMINAR IN SOCIOLOGY—When requested by five or more students. Four hours.**

Only graduate students, or those capable of doing graduate work, will be admitted to this course. The exact nature of the work will be determined after consultation with the class, but it will probably be a study of the means, methods, and possibilities of the conscious improvement of society. Required of majors in Sociology.

**224. RESEARCH IN SOCIOLOGY—Three hours.**

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

**225. RESEARCH IN SOCIOLOGY—Three hours.**

A continuation of Soc. 224.

**ANTHROPOLOGY****100. GENERAL ANTHROPOLOGY—Fall quarter. Four hours.**

Primitive people, their physical characteristics, beliefs, customs, arts, industries, forms of government, religions; the evolution of the sciences and the arts, language, religion, law, government. This course is illustrated by concrete material. It is an introduction to, and a preparation for, the courses that follow, as well as for all advanced courses in the social sciences.

101. THE ORIGIN AND ANTIQUITY OF MAN—Winter and summer quarters. Four hours.

This course endeavors to present the knowledge that has been accumulated with respect to fossil man, with such scientific inferences as seem to be warranted by the facts thus far discovered.

102. EARLY CIVILIZATION IN AMERICA—Spring and summer quarters. Four hours.

A study of the early civilization of Central America, Mexico and Peru and of the Pueblo and other Indians of North America. Exclusive use is made of a fine collection of material illustrative of early American art and industry.

### ECONOMICS

\*10. ELEMENTARY ECONOMICS—Fall quarter. Three hours.

This is a course designed to give a practical knowledge of the common ideas, laws, terms, and principles of economics that are essential to good citizenship, and also to present an analysis of the basic factors on which the production of all wealth depends. It is a preparatory course in the general subject of economics and for courses 110 and 112.

110. PRINCIPLES OF ECONOMICS—Winter and summer quarters. Four hours.

A general course based upon one of the recognized texts in the subject. Attention is devoted chiefly to the phenomena of production, distribution, and exchange with the view of preparing the student for the intelligent discussion of the various present day economic problems such as immigration, the tariff, currency reform, taxation, insurance, and like topics.

112. LABOR AND SOCIETY—Spring quarter. Four hours.

A study of the relation of the work and the life of the laboring classes, their development, place, privileges, and rights in society and the relation of workers to systems of industrial administration. Specially commended to teachers of commercial and industrial education and to students of economics.

200. SOCIAL WASTE—Spring and summer quarters. Four hours.

A course in social as distinguished from political economy. The principles of social waste are discussed, and the social waste resulting from vice, crime, disease, unemployment, the present use and abuse of our natural resources, and like causes.

PART VI  
PROGRAM OF COURSES





## INSTRUCTIONS CONCERNING REGISTRATION

*Note*—Take this copy of CATALOG and YEAR BOOK with you when you register.

1. TIME AND PLACE FOR REGISTRATION—All registration takes place in the Gymnasium from 8:00 to 12:00 and from 1:00 to 4:00.

2. ORDER OF REGISTRATION—Do the following things on registration day:

- (a) Fill out the Registration Card (personal data) with PEN and present it for registration material.
- (b) Fill out the Temporary Enrollment Card with PEN and have it signed by your Faculty Adviser. This card will admit you to class the first week ONLY. It must be signed by each of your teachers before permanent registration. In making up your schedule consult the program change sheet constantly.

The Temporary Card must be exchanged for Permanent Cards at the Registrar's office on designated dates to be given out when you arrive at the place of registration. This exchange should be completed by 5:00 P. M. of the last day for permanent registration. Permanent cards, APPROVED BY THE REGISTRAR, must be presented to your teachers not later than the date thus arranged. All students who have not complied with the provision on or before this date will be dropped from class. However, DO NOT ATTEMPT THIS EXCHANGE UNTIL YOU, YOUR ADVISER AND YOUR TEACHERS ARE COMPLETELY SATISFIED WITH YOUR SCHEDULE. Be sure to get a copy of further instructions and a program change sheet to be given out on registration day. (Additional instructions to be supplied on Registration Day.)

3. STUDENT PROGRAM SIXTEEN HOURS—The normal program of a student is sixteen hours. Students whose outside work takes up a considerable part of their time must not enroll for more than twelve to fifteen hours, unless approved by the vice-president or registrar. Any student may make up a program of fifteen, sixteen, or seventeen hours; but if seventeen hours are taken in one quarter, fifteen must be taken at a later quarter, so that any three consecutive quarters, dating from the first quarter's work, may not average more than sixteen hours. Those wishing to take seventeen or eighteen hours regularly must take the classification test, given at 1:30 P. M. on registration day—Little Theater, Administration Building. No schedules will be approved for more than eighteen hours under any consideration.

4. **ALL FRESHMEN** are required to take an English test during freshmen week. Others wishing to be excused from taking English 4 may take the same test the day following each temporary registration day—1:30 P. M., Little Theater, Administration Building.
5. **NO STUDENT** will be allowed to register permanently who has not established a score in the classification test. The fee for group tests is \$1.00. The fee for individual tests is \$3.00. (Scores established in Thorndike or Thurstone tests only are valid.)
6. **LATE REGISTRATION**—A fee of \$1.00 is charged for registration after 4:00 P. M. the regular day for temporary registration. This fee is also exacted of students who register after the final date for permanent registration. Students more than two days late will have their programs limited in proportion to the time they miss from recitations.
7. **PHYSICAL EDUCATION**—All freshmen and sophomores, including the unclassified students, are required to take an **ACTIVE EXERCISE** course in physical education each quarter in residence. A non-credit course in Individual Gymnastics, Phys. Ed. 30, must be taken by women students who have been examined by the college physicians and exempted from active exercise. Students who take this course must present a certificate of examination from one of the medical advisers for women and register for the course as for any other subject.
8. **PHYSICAL EXAMINATIONS**—An annual health examination is required for each student. Unclassified students are **NOT** exempt from this requirement.
9. **EDUCATION 1** (Introduction to Education) must be taken by all candidates for graduation who have not already had the course, unless exempted.
10. **ENGLISH 4** is required of all candidates for graduation no matter what English courses they may have had elsewhere in high school or college, unless they are excused after passing the English exemption test. This test is given at the opening of each quarter. Time and place announced above.
11. Students who have been admitted to the College before October 1, 1923, should determine to their satisfaction that such admission is in accordance with regulations which have been in effect since that date. Students should determine also if they are affected by the new requirements for graduation which went into effect September 1, 1924. (See information beginning on page 40 of this bulletin.)

NOTE:—Classrooms not designated in the program will be assigned on registration day. Do not attempt to make a program until you have read carefully pages immediately preceding and special instructions to be supplied on registration day.

## PROGRAM OF THE THREE QUARTERS FALL QUARTER, 1927-28

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>8:00 to 8:50</b>					
Art 3a	Art Structure I	MTThF	4	Moore	G-200
Art 4b	Design	TWThF	4	Hill	G-203
Art 14	Industrial Art Methods for Intermediate Grades and Junior High School	TWThF	4	Lowe	G-204
Art 103a	Art Structure	MTThF	4		G-200
Ath. 52	Gymnastics	MWF	1		Gym. 101
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	MTWF	3	Page	301
Civ. 1	Intro. to Cont. Civ.	TThF	3	Blue	103
Com. Ed. 11	Principles of Typewriting I	TWThF	2	Knies	213
Com. Ed. 39	Introduction to Business	TW	2	Colvin	214
Com. Ed. 212	Com'l Ed. in Secondary Schools	ThF	2	Colvin	212
Ed. 1	Introduction to Education	TWThF	4	McKee	
Ed. 113	Org. & Adm. of a Junior High School	MTThF	4	Cornell	L-13
Elem. Sci. 1	Nature Study (Field trips arranged)	TWThF	4	Selberg	100
Eng. 0	Fundamentals of English	MTThF	0		T-13
Eng. 2	Teaching of Written English	MTThF	4	Johnson	202
Eng. 12	Oral Expression	Daily	3		202
French 5	Intermediate French	MTWTh	4		101
Geog. 12	Intermediate Geography	MTThF	4		
Hist. 203	International Relations	MTWTh	4		
H. A. 1	Textiles	TWTh	3	Dickerson	H.E.-304
H. Sc. 1	Foods and Cookery (double period)	MTThF	4	Wiebking	H.E.-202
Ind. Arts 1	Technic and Theory of Woodworking (dbl. pd.)	TWThF	4	Pickett	G-101
Ind. Arts 8a	Art Metal	MTWTh	4	Fouk	G-101
Ind. Arts 31a	Elementary Printing (2 pds.)	MTWTh	4	Hadden	G-104
				Bishop	

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Ind. Arts 32a	Intermediate Printing (2 pds.)	MTWTh	4	Bishop	G-104
Ind. Arts 41b	Elementary Bookbinding (2 pds.)	MWThF	4	Schaefer	G-100
Math. 1	General Math	MTThF	4	Finley	210
Math. 9	Analytic Geometry	MTThF	4		
Music 40	Beginning Orchestra	TTh	1	Thomas	Con-14
Music 45	Orchestral Instruments	TTh	1	Thomas	Con-14
P. E. 5	Folk Dancing (Beginners)	MWF	1	Keyes	Gym. 206
P. E. 13	Tennis	TTh	1		Gym. 125
P. E. 132	Theory of Individual Gymnastics	TTh	1		Gym. 126
Phys. 1	Content and Method of High School Physics (Lab. 8:00-9:50 T Th)	MF	3	Valentine	H.E.-106
Psych. 2b	Ed. Psych.	MTWTh	4	Hertzberg	T-13
Psych. 108a	Educational Tests and Meas.	MTWTh	4	Hellman	T-12
Span. 1	Elementary Spanish	MTWTh	4		205
Soc. 1	Introduction to the Social Sciences	MTWTh	4	Howarth	208
<b>9:00 to 9:50</b>					
Art 14	Industrial Arts Methods for Intermediate Grades and Junior High School	TWThF	4	Moore	G-204
Art 104	Color Theory and Composition	TWThF	4	Hill	G-203
Ath. 67	Intra-Mural Sports	MWF	1	Hancock	Field
Ath. 70	Swimming	TThF	1		Pool
Biol. 1	Educational Biology	TWThF	3	Page	301
Chem. 108	Organic Chemistry (Lab. by Appt.)	MW	3	Bowers	300
Chem. 110	Organic Chemistry (Lab. by Appt.)	MW	4	Bowers	300
Civ. 1	Intro. to Cont. Civ.	TThF	3	Blue	103
Com. Ed. 50	Principles of Accounting I	TWThF	4	Colvin	214
Ed. 1	Introduction to Education	TWThF	4	Mahan	
Ed. 2a	Pre-teaching Observation	TW	1		
Ed. 106	Types of Teaching and Learning	TWThF	4	McKee	
Ed. 116	Org. & Adm. of a Senior High School	MTThF	4	Cornell	L-13
Elem. Sci. 1	Nature Study (Field trips arranged)	TWThF	4	Selberg	100
Eng. 0	Fundamentals of English	TWThF	0		
Eng. 1	Mat. and Meth. in Literature	TWThF	4		202

FALL QUARTER

137

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Eng. 13	The Art of Story Telling	MTThF	3	Campbell	202
Eng. 16	Contemporary Literature	MWThF	4	Newman	103
Geog. 4	Geography of North America	MWThF	4		101
Hist. 5	Early Modern Europe	TWThF	4	Peake	H.E.-304
H. A. 1	Textiles	TWTh	3	Wiebking	Gym. 203
H. Ed. 1	Ind. and Soc. Hyg. (Men)	TWF	3	Long	Cottage
H. Sc. 7	Household Mang.	Daily	2	Pickett	
Lib. Sci. 102	Receipt and Prep. of Books	TTh	2	Carter	
Lib. Sci. 106	School Library	MWF	3	Carter	
Math. 104	Teaching Arithmetic	MTThF	4	Finley	210
Music 3	Introductory Harmony	MTThF	3	Thomas	Con-6
P. E. 1	Gymnastic Dancing	MTTh	1	Cave	Gym. 206-125
P. E. 6	Folk Dancing (Advanced)	TThF	1	Keyes	Gym. 206
P. E. 13	Tennis	MWF	1		Gym. 125
Psych. 2b	Ed. Psych.	MTWTh	3	Hertzberg	T-13
Psych. 212	Statistical Methods	MTWTh	3	Heilman	T-12
Psych. 222	Experimental Technic and Its Application	MTWTh	4	Whitney	
Span. 5	Intermediate Spanish	TWThF	4		
Soc. 10	Elementary Economics	MTWTh	4	Binnewies	205
Soc. 150	Social Problems	MTWTh	4	Howerth	207
					208
<b>10:00 to 10:50</b>					
Art 3	Freehand Drawing I	MTThF	4	Lowe	G-203
Art 13	Industrial Arts Methods for Primary	MTThF	4		G-200
Ath. 52	Gymnastics	MWF	1		Gym. 101
Biol. 1	Educational Biology (2 hrs. lab. arranged)	MTThF	3	Harrah	
Civi. 1	Intro. to Cont. Civ.	TThF	3	Blue	103
Com. Ed. 110	Office Appliances (10:00 to 12:00)	MTThF	4	Knies	213
Com. Ed. 155	Business Administration	MTThF	4	Colvin	214
Ed. 1	Introduction to Education	MTThF	4	Hargrove	
Ed. 3a	Primary Methods (Reading, Language, Spelling)	MTTh	3	Dulin	
Ed. 4a	Intermediate Methods (Reading, Lang., Spelling)	MTThF	4	Van Meter	
Ed. 10	Introduction to Curriculum Making	TThF	3	McKee	
Ed. 15	Educational Guidance	TThF	3	Mahan	

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Ed. 142	School Administration (First course)	MTThF	4	Cornell	L. Th.
Eng. 14	Dramatic Art	MTThF	4		100
Eng. 106	Teaching of English in High School	MTTh	3	Boardman	101
Geog. 102	The Changing Weather	MTThF	4	Barker	304
H. A. 108	Costume Design	MTThF	4	Wiebking	Gym. 203
H. Ed. 108	Ed. Hygiene	MTTh	3	Long	H.E.-202
H. Sc. 1	Foods and Cookery (double pd.)	MTThF	4	Pickett	G-1
Ind. Arts 6	Repair and Equipment Construction (double pd.)	MTThF	4	Foult	G-105
Ind. Arts 11	Projections, Shade, and Shadow	MTThF	4	Hadden	G-100
Ind. Arts 43a	Intermediate Bookbinding (double period)	MTThF	4	Schaefer	G-104
Ind. Arts 133a	Advanced Printing (double period)	MTThF	4	Bishop	210
Math. 107	Teaching Jr. H. Math.	MTThF	4	Finley	Con-14
Music 20	Ancient History	MTThF	3	Cline	Con-6
Music 103	Counter Point	MTThF	3	Thomas	
P. E. 11	Plays and Games (Primary, Intermediate and Junior High Majors)	MTTh	1	Cave	Gym. 125
P. E. 13	Tennis	TThF	1	Keyes	Gym. 206
P. E. 27	Swimming (Intermediate)	MTh	1	Doubenmier	Pool
P. E. 28	Swimming (Advanced)	TF	1	Doubenmier	Pool
Phys. 11	General Physics—Mechanics (Lab. to be arranged)	MTh	3	Valentine	H. E.-106
Pol. Sc. 1	Government of the U. S.	MTThF	4	Dickerson	
Psych. 109	Exam. of Training School Children	MTF	1-3		T-7
Psych. 114	Psychology of Juvenile Delinquency	MTWTh	4	Heilman	T-12
Span. 105	Advanced Spanish	MTThF	4		205
<b>11:00 to 11:50</b>					
Art 2	Fine Arts Methods for Primary	MTThF	4		G-200
Art 4a	Art Structure II	MWF	3	Moore	G-204
Art 104a	Art Structure	MWF	3	Moore	G-204
Ath. 66	Tennis	TWTh	1		Courts
Ath. 68	Cross Country	MWF	1	Hancock	Field
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	MTWTh	3	Jean	301
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	MTThF	3	Harrah	
Chem. 1	General Chemistry (Lab. by appt.)	MW	3	Bowers	300

FALL QUARTER

139

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Chem. 1	General Chemistry (Lab. by appt.)	TTh	3	Bowers	300
Chem. 4	General Chemistry (Lab. by appt.)	MW	4	Bowers	300
Chem. 4	General Chemistry (Lab. by appt.)	TTh	4	Bowers	300
Com. Ed. 1	Principles of Shorthand I	MTWTh	4		212
Com. Ed. 13	Principles of Typewriting III	TWTh	3	Knies	213
Com. Ed. 14	Methods of Teaching Typewriting	F	1	Knies	213
Com. Ed. 36	Handwriting Methods	MTWTh	2	Bedinger	214
Ed. 1	Introduction to Education	MTThF	4	Cornell	
Ed. 10	Introduction to Curriculum Making	TThF	3	McKee	
Ed. 101	Princ. of H. S. Teaching	TWThF	4	Blue	
Ed. 126	Project Curriculum for Rural Schools	MThF	3	Hargrove	
Ed. 152	The Child and His School	MTWTh	4	Lyford	202
Eng. 11	The English Language	MTThF	4		103
Eng. 15	Types of Literature	MTh	3	Cross	100
Eng. 127	Shakspere's Comedies	MTWTh	4	Boardman	101
Geog. 8	Human Geography	MTThF	4	Peake	
Hist. 1	Foundations of Am. Nationality	MTWTh	4		
Hist. 117	Teaching of History and Civics for Junior and Senior High Schools	TThF	3	Dickerson	
H. E. 111	Home Economic Education	TWThF	4		306
H. E. 13	First Aid	TTh	2	Long	Gym. 203
H. E. 112	Epidemiology	MWF	3	Long	Gym. 203
Ind. Arts 117	Elements of Machine Design I	MTWTh	4	Hadden	G-105
Math. 5	College Algebra	MTThF	4		
Music 1a	Sight Singing	MWF	3	Opp	Con-14
Music 122	Appreciation for the Concertgoer	T	1	Southard	Con-14
P. E. 2	Natural Dancing (Beginners)	MWF	1		Gym. 125
P. E. 4	Singing Games	TThF	1	Keyes	Gym. 206
P. E. 26	Swimming (Beginners)	MW	1	Cave	Pool
P. E. 26	Swimming (Beginners)	TTh	1	Cave	Pool
Phys. 111	Projects Based upon the study of the Automobile	MTWTh	4	Valentine	H.E.-106
Psych. 213	Conference Courses (hrs. by arrangement)	Arr.		Heilman	T-12
Soc. 100	General Anthropology	MTWTh	4	Howarth	208
Soc. 105	Principles of Sociology	MTWTh	4	Binnewies	207
Span. 226	Graduate Spanish	MTWTh	4		205

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
1:00 to 1:50					
Art 2	Fine Arts Methods for Primary	TWThF	4		G-200
Art 5	Water Color Painting	MTWTh	4	Hill	G-203
Art 105	Water Color Painting	MTWTh	4	Hill	G-203
Ath. 165	Football Coaching	MTW	3	Cooper	Gym. 103
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	MTWTh	3	Jean	301
Chem. 7	Qualitative Analysis	MTWTh	2-4	Bowers	302
Com. Ed. 150	Banking Practice	MTWTh	4	Colvin	214
Ed. 3c	Primary Methods (Literature, etc.)	MTW	3	Lyford	
Ed. 10	Introduction to Curriculum Making	TWF	3	McKee	
Ed. 20	Agricultural Education	MTThF	4	Hargrove	
Ed. 104	Project Method	TWThF	4	Mahan	
Ed. 210	Problem of the School Curriculum	MWTh	3	Rugg	
Eng. 0	Fundamentals of English	MTThF	0		L-1
Eng. 8	History of English Literature	MTThF	4	Tobey	202
Eng. 20	Advanced Composition	MTWTh	4	Boardman	100
Geog. 199	Conservation of Natural Resources	MTThF	4	Barker	101
German 1	Elementary German	MTWTh	4	Crates	205
Hist. 27	Contemporary History	MW	2	Dickerson	H.E.-306
H. Sc. 4	Elementary Nutrition	MTWTh	4	Newburn	H.E.-305
H. Sc. 7	Household Management (theory)	MT	2		H.E.-207
H. Sc. 105	Child Care	MTThF	4	Pickett	H.E.-304
H. Sc. 106	Home Care of the Sick	MTWTh	4	Wiebking	Gym. 4
Hyg. 1a	Ind. & Soc. Hyg. (Women)	MWTh	3	Bryson	G-105
Ind. Arts 5	Principles of Teaching Practical Art Subjects	F	3	Hadden	G-105
Ind. Arts 9	Classic Architecture	MTWTh	1	Fouk	G-1
Ind. Arts 14	Care and Management	MTWTh	2	Schaefer	G-100
Ind. Arts 143c	Advanced Binding & Leather Craft	MTWTh	3	Mohr	T-14
Music 1a	Rudiment and Methods	MWF	3	Hughes	Con-4
Music 34	Piano Class Lessons	M	1		
P. E. 17	Volley Ball	MWF	1		Gym. 125
P. E. 31	Danish Gymnastics and Tumbling	MWTh	2	Cave	Gym. 206



Time and Cat. Number	Description	Days	Gr. Hours	Teacher	Room
Phys. 103	Theory of Radio Reception and Transmission (Lab. to be arranged)	MTW	4	Valentine	H.E.-106
Psych. 2b	Educational Psychology	MTWTh	3	Hertzberg	T-13
Soc. 34	Child Welfare	MW	2	Binnewies	208
Zool. 1	General Zoology (Lab. 4 hrs. from any following periods: Mon 1-3, Wed 1-3, Tues 3-5)	TThF	4	Harrah	304
<b>2:00 to 2:50</b>					
Art 6	Art Appreciation	W	1	Moore	G-200
Art 7	Constructive Design	MTThF	4	Lowe	G-204
Art 106	Art Appreciation	W	1	Moore	G-200
Art 107	Constructive Design	MTThF	4	Lowe	G-204
Ath. 70	Swimming	MWF	1		Pool
Bot. 1	General Botany (Lab. 4 hrs. from any of following periods: Mon 1-3, Thurs 3-5, Fri 2-5)	MWTh	4	Jean	304
Chem. 114	Quantitative Analysis	MTWTh	4	Bowers	302
Civl. 1	Intro. to Cont. Civ.	TThF	3	Blue	103
Com. Ed. 37	Business Mathematics	MTWTh	4	Bedinger	214
Com. Ed. 103	Organization of Shorthand Material	MT	2		212
Com. Ed. 108	Secretarial Standards and Measurements	WThF	3		212
Com. Ed. 224	Research in Commercial Education	TWTh	3	Colvin	209
Ed. 3b	Primary Methods (Arithmetic, Social Science, Health)	MTTh	3	Rosenquist	
Ed. 4b	Intermediate Methods (Arithmetic, Social Science, Health)	MTWTh	4		
Ed. 52	Kindergarten Materials	MTW	3	Lyford	201
Ed. 123	Research for Senior College Students	MTWTh	3	Rugg	
Ed. 150	Foundations of Method	MTWTh	4	Armentrout	
Ed. 224	Research for Graduate Students	MTWTh	3	Rugg	201
Eng. 4	Speak, and Writing English	MTThF	3	Tobcy	202
Eng. 6	American Literature	MTWTh	4	Boardman	100
Eng. 100	Journalistic Writing	MWTh	3	Shaw	L-1
Eng. 121	Early Nineteenth Century Poetry	MWThF	4	Newman	103
Gen. Sci. 1	General Science	TWThF	4	Selberg	L-13

Time and Cat. Number	Description	Days	Gr. Hours	Teacher	Room
Geog. 113	Mathematical Geography	MTF	3	Barker	101
Geog. 130	Islands of the Sea	Th	1	Barker	
German 5	Intermediate German	MTWTh	4	Crates	205
H. Ed. 2	Anatomy Lect. (Lab. by arrangement)	MT	4	Long	Gym. 203
Hist. 10	Social and Industrial History of the U. S.	MTWTh	4	Peake	
Hyg. 1a	Ind. & Soc. Hygiene (Women) now H. Ed. 1a	MTTh	3	Bryson	Gym. 4
Ind. Arts 43c	Intermediate Bookbinding	MTWTh	2	Schaefer	G-100
Ind. Arts 144b	Shop Management	MTWTh	4	Schaefer	G-100
Ind. Arts 145b	Secretarial Science	MTWTh	4	Schaefer	G-100
Math. 4	Solid Geometry	MTThF	4		
Math. 200	Adv. Calculus	MTThF	4	Finley	210
Music 10	Kindergarten-Primary Methods	MWF	3	Mohr	T-14
Music 38	Collective Voice Training	T	1	Cline	T-1
Music 41	Men's Glee Club	MW	1	Cline	T-1
P. E. 7	Nat. and Characteristic Dancing	MWF	1	Keyes	Gym. 206
P. E. 13	Tennis	TThF	1		Gym. 125
Phys. 108	Method of Teaching Physics in the Secondary Schools	MTWTh	4	Valentine	H.E.-106
Pol. Sc. 102	International Relations	MTWTh	4	Dickerson	
Psych. 2a	Ed. Psych.	MTWTh	3		T-13
Psych. 110	General Psychology	MTWF	4	Hertzberg	T-12
Soc. 130	Social Psychology	MTWTh	4	Binnewies	208
Zool. 107	Elementary Entomology (2 hrs. Lab. TW, 3-5)	MTThF	4	Harrah	301
<b>3:00 to 3:50</b>					
Art 17	Lettering and Poster Composition	MW	2	Hill	G-200
Art 117	Lettering and Design	MTWF	4	Hill	G-200
Ath. 66	Football { Varsity Freshmen		1	Cooper	Field
Bot. 102	Botanical Technic and Histology (Lab. included in scheduled hours)		4	Hancock	
Chem. 114	Quantitative Analysis	MTW	4	Brown	
		MTWTh	4	Jean	304
			4	Bowers	302

FALL QUARTER

143

Time and Cat. Number	Description	Days	Gr. Hours	Teacher	Room
Civl. 1	Intro. to Cont. Civ.	TThF	3	Cross	
Com. Ed. 15	Business Reports and Compositions	MTWTF	4		212
Ed. 21	Rural School Problems	MTTh	3	Hargrove	
Ed. 154	Recent Investigations in Elementary Education	MTWTF	4	McCowen	
Ed. 223	Educational Research—Graduate Students (First quarter thesis course)	MTW	3	Whitney	
Eng. 6	American Literature	MTWTF	4	Tobey	202
French 105	Advanced French	MTWTF	4	Crates	205
Geog. 100	Geology	MTWTF	4	Barker	101
Hist. 2	Development of American Nationality	MTWTF	4	Peake	
Hyg. 1a	Ind. & Soc. Hyg. (Women) now H. Ed. 1a	MTWTF	3	Bryson	Gym. 4
Math. 109	Teaching Algebra	MTWTF	4		210
Music 42	Schumann Club	TTh	1	Cline	T-14
P. E. 5	Folk Dancing (Beginners)	MWTF	1	Keyes	Gym. 206
P. E. 16	Hockey and Soccer	MTF	1		Gym. 125
P. E. 26	Swimming (Beginners)	MW	1	Cave	Pool
P. E. 27	Swimming (Intermediate)	TF	1	Doubenmier	Pool
Psych. 2a	Ed. Psychology	MTWTF	3		T-13.
Soc. 140	Development of Social Thought	MTW	4	Binnewies	208
<b>4:00 to 4:50</b>					
Art 13	Industrial Arts Methods for Primary	MWThF	4		G-200
Chem. 221	Advanced Inorganic Chemistry	MW	4	Bowers	300
Com. Ed. 3	Secretarial Practice I	MWThF	4		212
Com. Ed. 53	Salesmanship	MWThF	4	Bedinger	214
Ed. 1	Introduction to Education	TWThF	4	Mahan	
Ed. 16	Elem. Tr. Course—Camp Fire	M	1	Lee	
Ed. 65	Bible Study—Religion of Israel	MT	2	Wilson	
Ed. 134	History of Education in United States	MTTh	3	Hargrove	
Ed. 208	Seminar—Educational Values (Two hour class, 4-6)	MT (4-6)	4	Rugg	
Eng. 0	Fundamentals of English	MTThF	0		L-1
Eng. 18	Debating	MW	2		Th. 202
Eng. 18	Debating	MW	2	Tobey	

Time and Cat. Number	Description	Days	Qr.	Hours	Teacher	Room
French 1	Elementary French	MTWTh	4			
Latin 1	Third Year Latin	MWThF	4		Crates	205
Music 43	Advanced Orchestra	MW	1		Thomas	Con-14
Music 44	Advanced Band	TTh	1		Thomas	Con-14
P. E. 6	Folk Dancing (Advanced)	MWFF	1		Keyes	Gym. 206
P. E. 13	Tennis	MW	1			Gym. 125
P. E. 26	Swimming (Beginners)	MW	1		Cave	Pool
P. E. 30	Individual Gymnastics	Daily	1			Gym. 126
P. E. 120	Coaching Practice	Daily	2		Cave	
Psych. 2a	Ed. Psych.	Daily	3			
Psych. 224	Thesis Conference (Hours by arr.)	MTWFF	3		Heilman	T-13
<b>7:00 to 7:50</b>						
Music 101	College Chorus	MTh	1		Cline	Con-14
Soc. 209	Soc. Seminar	MTh	4		Howerth	208

## WINTER QUARTER, 1927-28

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Art 1	Fine Arts Methods for Intermediate Grades and Junior High School	MTWTF	4	Moore	G-200
Art 108	Pottery I	MTThF	4	Lowe	G-204
Art 115	Pottery II	MTThF	2	Lowe	G-204
Ath. 52	Gymnastics	MWF	1	Selberg	Gym. 101
Bact. 100	Elementary Bacteriology (Lab. Wed. 1-4)	TWThF	4	Jean	L-13
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	MTWTh	3	Knies	301
Com. Ed. 12	Principles of Typewriting II	TWThF	2	Colvin	213
Com. Ed. 40	Investments	TW	2	Colvin	214
Com. Ed. 213	Com'l Ed. Curricula	ThF	2	Hargrove	212
Ed. 1	Introduction to Education	TWThF	4	McKee	
Ed. 10	Introduction to Curriculum Making	TThF	3	Cornell	
Ed. 143	School Administration (Second Course)	MTThF	4	Johnson	T-13
Eng. 0	Fundamentals of English	MTThF	0	Tobey	202
Eng. 2	Teaching of Written English	MTThF	4		L-1
Eng. 9	History of English Literature	MTThF	4		L-Th
French 7	Intermediate French	MTWTh	4	Dickerson	H.E.-304
Geog. 12	Methods in Intermediate Geography	MTWTh	4	Wiebking	H.E.-202
Hist. 208	The American Revolution	MTThF	4	Pickett	H.E.-305
H. A. 3	Garment Making (double period)	MTThF	4	Hadden	G-101
H. Sc. 2	Food and Cookery (double period)	MTWTh	2	Bishop	G-104
H. Sc. 108	Housing and House Sanitation	MTWTh	4	Bishop	G-104
Ind. Arts 8b	Art Metal	MTWTh	4	Schaefer	G-100
Ind. Arts 31b	Elementary Printing (double periods)	MTWTh	4	Hadden	G-101
Ind. Arts 32b	Intermediate Printing (double periods)	MTWTh	4	Foulk	G-7
Ind. Arts 41a	Elementary Bookbinding (double periods)	TWThF	4	Finley	210
Ind. Arts 109a	Art Metal	MTWTh	4	Thomas	Con-14
Ind. Arts 124	Machine Work	MTThF	3	Thomas	Con-14
Math. 2	General Math.	MTThF	4		
Math. 101	Differential Calculus	MTThF	1		
Music 40	Beginning Orchestra	TTh	1		
Music 45	Orchestral Instruments	MW	1		

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
P. E. 5	Folk Dancing (Beginners)	TThF	1	Keyes	Gym. 206
P. E. 14	Basketball (Beginners)	MWF	1		Gym. 125
Physics 2	Content and Method of High School Physics (Lab. 8:00-9:50 T Th)	MF	4	Valentine	H.E. 106
Psych. 1	Child Hygiene	MTWTh	4	Heilman	T-12
Psych. 2a	Ed. Psych.	MTWTh	3	Hertzberg	T-13
Span. 2	Elementary Spanish	MTWTh	4		205
Soc. 1	Introduction to the Social Sciences	MTWTh	4	Howarth	208
<b>9:00 to 9:50</b>					
Art 13	Industrial Arts Methods for Primary	TWThF	4		G-200
Art 16	Freehand Drawing II	TWThF	4	Lowe	G-203
Art 116	Freehand Drawing	TWThF	4	Lowe	G-203
Ath. 70	Swimming	TThF	1		Pool
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	TWThF	3	Page	301
Biol. 101	Hereditry and Eugenics	MTWTh	4	Jean	
Chem. 109	Organic Chemistry (Lab. by appt.)	MW	3	Bowers	300
Chem. 111	Organic Chemistry	MW	4	Bowers	300
Com. Ed. 157	Methods of Teaching Commercial Subjects	TWThF	4	Colvin	214
Ed. 1	Introduction to Education	TWThF	4	McKee	
Ed. 2a	Pre-Teaching Observation	TW	1		
Ed. 23	Rural School Management	TThF	3	Hargrove	
Ed. 141	Recent Educational Developments	MTThF	4	Mahan	
Ed. 144	School Publicity	MT	2	Shaw-Cornell	
Eng. 0	Fundamentals of English	TWThF	0		L-1
Eng. 4	Speaking and Writing English	MTThF	3	Tobey	202
Eng. 13	Art of Story Telling	TWThF	3	Campbell	103
Eng. 122	Victorian Poetry	MTWTh	4	Boardman	100
Gen. Sci. 1	General Science (2 hrs. Lab. T. 3-5)	TWThF	4	Seiberg	L-13
Geog. 5	Geography of the New Europe	MTThF	4		101
H. Ed. 1	Ind. and Soc. Hyg. (Men)	MWF	2	Long	Gym. 203
H. Ed. 110	Occupational Hygiene	TTh	2	Long	Gym. 203
Hist. 6	Modern European History	TWThF	4	Peake	
H. Sc. 7	Household Management (practice)	Daily	2	Pickett	
Lib. Sci. 103	Classification and Cataloging	MWF	3	Carter	Cottage Library

WINTER QUARTER

147

Time and Cat. Number	Description	Days	Gr. Hours	Teacher	Room
Lib. Sci. 105	Periodicals and Binding	TTh	2	Carter	Library
Math. 104	Teaching Arithmetic	MTThF	4	Finley	210
Music 4	Intermediate Harmony	MThF	3	Thomas	Con-6
P. E. 6	Folk Dancing (Advanced)	TThF	1	Keyes	Gym. 206
P. E. 14	Basketball (Beginners)	MTTh	1	Cave	Gym. 206
P. E. 14	Basketball (Advanced)	WTF	1		Gym. 125
Psych. 2b	Ed. Psych.	MTWTh	3	Heilman	T-13
Psych. 113	Vocational Psychology	MTWTh	4	Hertzberg	T-12
Span. 7	Intermediate Spanish	TWThF	4		205
Soc. 150	Social Problems	MTWTh	4	Howarth	208
Soc. 110	Principles of Economics	MTWTh	4	Binnewies	207
<b>10:00 to 10:50</b>					
Art 2	Fine Arts Methods for Primary	MTThF	4	Lowe	G-200
Art 103	Art Structure III	MTThF	4	Hill	G-203
Ath. 52	Gymnastics	WTF	1	Hancock	101
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	MTThF	3	Harrah	Gym. 301
Com. Ed. 51	Principles of Accounting II	MTThF	4	Colvin	214
Com. Ed. 111	Secretarial Bookkeeping	TWThF	4	Knies	212
Ed. 1	Introduction to Education	MTThF	4	Mahan	
Ed. 3a	Primary Methods (Reading, Lang., Spelling)	MTTh	3	Dulin	
Ed. 10	Introduction to Curriculum Making	TThF	3	McKee	
Ed. 100a	Problems of Education	MTTh	3	Cornell	
Ed. 125	Rural Education	TThF	3	Hargrove	
Eng. 15	Types of Literature	MTTh	3	Cross	103
Eng. 20	Advanced Composition	MTThF	4	Tobey	202
Geog. 7	Business Geography	MTThF	4	Barker	101
H. A. 3	Garment Making (double periods)	MTThF	4	Wiebking	H.E.-304
H. A. 109	Advanced Dressmaking	MTThF	4		H.E.-301
H. Ed. 8	Physiology (Lect. M. Lab. 2 double pds. by arrg.)	MTThF	3	Long	Gym. 203
H. Sc. 2	Foods and Cookery (double periods)	MTThF	4	Pickett	H.E.-202
Ind. Arts 12	Principles of Architectural Drawing II	MTThF	4	Hadden	G-105
Ind. Arts 19	Wood Turning (double periods)	MTThF	4	Foulk	G-7
Ind. Arts 133b	Advanced Printing (double periods)	MTThF	4	Bishop	G-104
Ind. Arts 143a	Advanced Binding & Leather Craft (double pds.)	MTThF	4	Schaefer	G-100

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Math. 107	Teaching Jr. H. Math.	MTThF	4	Finley	210
Music 21	Modern Composers	MThF	3	Cline	Con-14
Music 38	Collective Voice Training	T	1	Cline	
P. E. 2	Natural Dancing (Beginners)	MThF	1	Cave	Gym. 206
P. E. 14	Basketball (Advanced)	MTTh	1	Doubenmier	Gym. 125
P. E. 27	Swimming (Intermediate)	MTh	1	Doubenmier	Pool
P. E. 28	Swimming (Advanced)	TF	1	Doubenmier	Pool
Physics 12	General Physics—Electricity	MTh	3	Valentine	H.E.-106
Pol. Sc. 2	State Government	MTWTF	4	Dickerson	
Psych. 112	Psych. of Music	MTThF	4	Heilman	T-12
Span. 107	Advanced Spanish	MTThF	4		205
<b>11:00 to 11:50</b>					
Art 2	Fine Arts Methods for Primary	MTThF	4	Hill	G-200
Art 101	Drawing from the Figure	MTThF	4	Hancock	G-203
Ath. 55	Wrestling	MWF	1	Page	Gym. 130
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	MTWTF	3	Jean	301
Bot. 103	Plant Physiology (Lab. 3-5 Mon & Wed)	MTWTh	4	Jean	304
Chem. 2	General Chemistry (Lab. by appt.)	MW	3	Bowers	300
Chem. 2	General Chemistry (Lab. by appt.)	TTh	3	Bowers	300
Chem. 5	General Chemistry (Lab. by appt.)	MW	4	Bowers	300
Chem. 5	General Chemistry	TTh	4	Bowers	300
Com. Ed. 2	Principles of Shorthand II	MTWTh	4		212
Com. Ed. 36	Handwriting Methods	MTWTh	2	Bedinger	214
Com. Ed. 110	Office Appliances (10:00-12:00)	MTThF	4	Knies	213
Ed. 1	Introduction to Education	MTThF	4	Cornell	
Ed. 1	The Rural Community	TThF	3	Hargrove	
Ed. 24	Methods of Improving Reading	MTWTh	4	Davis	
Ed. 107	Org. and Admin. of an Elem. School	TWThF	4	McKee	103
Ed. 115	Contemporary Literature	MWThF	4	Newman	100
Eng. 16	Shakspeare's Historical Plays	MWThF	4	Boardman	101
Eng. 128	Geography of Colorado	MTWTh	4	Barker	
Geog. 150	Social and Industrial History of U. S.	MTThF	4	Peake	
Hist. 10	Elements of Machine Design II	MTWTh	4	Hadden	G-105



WINTER QUARTER

Time and Cat. Number	Description	Days	Gr. Hours	Teacher	Room
Math. 5	College Algebra	MTThF	4		
Music 1c	Advanced Sight Singing	MWF	3	Opp	Con-14
Music 105	Beginning Orchestration	MWF	3	Cline	Con-6
P. E. 7	National and Characteristic Dancing	TThF	1	Keyes	Gym. 206
P. E. 14	Basketball (Beginners)	MWF	1		Gym. 125
P. E. 17	Volley Ball	MTTh	1		Gym. 206-125
P. E. 26	Swimming (Beginners)	MW	1	Cave	Pool
P. E. 26	Swimming (Beginners)	TTh	1	Cave	Pool
Phys. 14	The Principles Underlying Visual Apparatus and their use in class room teaching.	MT	3 or 4	Valentine	H.E.-105
Pol. Sc. 101	American Diplomacy	MTWTh	4	Dickerson	
Psych. 107	Mental Tests	MTWTh	4	Hellman	T-12
Span. 227	Graduate Spanish	MTWTh	4		205
Soc. 101	Origin and Antiquity of Man	MTWTh	4	Howarth	208
Soc. 105	Principles of Sociology	MTWTh	4	Binnewies	
<b>1:00 to 1:50</b>					
Art 4a	Art Structure II	MWF	3	Moore	G-204
Art 104a	Art Structure	MWF	3	Moore	G-204
Art 120	Oil Painting	MTThF	4	Hill	G-203
Ath. 67	Intra-Mural Sports	WThF	1		Gym. 101
Ath. 166	Basketball Coaching	MTW	1	Cooper	Gym. 103
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	MTThF	3	Harrah	Gym. 301
Bot. 2	General Botany (Lab. 4 hrs. from any of following periods Thurs. 1-3, Fri. 1-5 Tues. 4-5)	MTW	4	Jean	304
Chem. 7	Qualitative Analysis	MTWTh	2-4	Bowers	302
Civl. 1	Intro. to Cont. Civ.	TThF	3	Blue	103
Com. Ed. 151	Cost Accounting	MTWTh	4	Colvin	214
Ed. 1	Introduction to Education	MTThF	4	Mahan	
Ed. 3c	Primary Methods (Literature, etc.)	MTW	3	Luford	
Ed. 4a	Intermediate Methods (Reading, Lang., Spelling)	MTWTh	4	Luzmoor	
Ed. 10	Introduction to Curriculum Making	MWF	3	Rugg	
Ed. 113	Org. and Admin. of a Junior High School	MTThF	4	Cornell	
Ed. 133	History of Modern Education	TThF	3	Hargrove	
Elem. Sci. 2	Physical Nature Study	TWThF	4	Selberg	L-13

Time and Cat. Number	Description	Days	Gr. Hours	Teacher	Room
Eng. 0	Fundamentals in English	MTWTh	0		
Eng. 1	Material and Methods in Literature	MTThF	4		L-1
Eng. 20	Advanced Composition	MTWTh	4	Boardman	202
Geog. 54	Geography of Africa	MTThF	4	Barker	100
Ger. 2	Elementary German	MTWTh	4	Crates	101
Hist. 4	Western American History	MTWTh	4	Dickerson	
Hvg. 1a	Ind. & Soc. Hygiene (Women)	MWTF	3	Bryson	Gym. 4
H. A. 5	Pattern Design (double period)	MTThF	4	Wiebking	H.E.-301
H. Ed. 108	Educational Hygiene	MWF	3	Long	Gym. 203
H. Sc. 104	Demonstration Cookery (double period)	MTThF	4	Pickett	H.E.-202
Ind. Arts 2	Technic and Theory of Woodworking (double period)	MTWTh	4	Foulk	G-1
Ind. Arts 42a	Intermediate Bookbinding (double period)	MTWTh	4	Schaefer	G-100
Ind. Arts 104	Pre-Vocational Education	MTW	3	Hadden	G-105
Ind. Arts 119	Medieval and Modern Architecture	Th	1	Hadden	G-105
Ind. Arts 144	Shop Management (on request)	MTWTh	4	Schaefer	G-100
Ind. Arts 145	Secretarial science (on request)	MTWTh	4	Schaefer	G-100
Math. 7	Trigonometry	MTThF	4		
Music 1a	Rudiment and Methods	TF	3	Mohr	Con-14
Music 104	Advanced Counterpoint	MWF	3	Thomas	Con-6
P. E. 3	Natural Dancing (Advanced)	MTTh	1		
P. E. 113	Athletics for Women (Majors)	MTWTh	2	Cave	Gym. 206
Phys. 104	Advanced Radio (Lab. to be arranged)	MTW	2 or 4	Valentine	Gym. 125
Psych. 2b	Ed. Psychology	MTWTh	3	Hertzberg	H.E.-106
Psych. 105a	Sr. H. School Subjects	MTWTh	4		T-13
Soc. 34	Child Welfare	MTWF	4	Binnewies	T-12
		MW	2		208
<b>2:00 to 2:50</b>					
Art 3	Freehand Drawing I	MTThF	4		G-203
Art 6	Art Appreciation	Th	1	Moore	G-200
Art 9	Art History	MTW	3	Moore	G-200
Art 106	Art Appreciation	Th	1	Moore	G-200
Ath. 55	Boxing	MTTh	1	Brown	Gym. 130
Ath. 70	Varsity Swimming	MWF	1		Pool
Chem. 114b	Quantitative Analysis	MTWTh	4	Bowers	302

WINTER QUARTER

151

Time and Cat. Number	Description	Days	Gr. Hours	Teacher	Room
Civl. 1	Intro. to Cont. Civ.	TThF	3	Blue	103
Com. Ed. 38	Commercial Law I	MTWTh	4	Bedinger	214
Com. Ed. 104	Methods of Training for Secretarial Service	MT	2		
Com. Ed. 106	Secretarial Science	WThF	3		212
Com. Ed. 225	Research in Commercial Education	TWTh	3	Colvin	209
Ed. 3b	Primary Methods (Arith., Social Science, Health)	TWTh	3	Turner	
Ed. 4b	Intermediate Methods				
Ed. 10	(Arith., Soc. Science, Health)	MTWTh	4		
Ed. 110	Introduction to Curriculum Making	TThF	3	McKee	
Ed. 111	Extra-curricular Activities	MTTh	3	Rugg	
Ed. 151	Philosophy of Education	MTWTh	4	Armentrout	
Eng. 12	Pre-School Education	MTWTh	4	Lyford	
Eng. 101	Oral Expression	Daily	3		202
Eng. 120	Journalistic Writing	MWTh	3	Shaw	
Eng. 132	Lyric Poetry	MWThF	4	Newman	100
Geog. 2	The Development of the Novel	MTWTh	4	Boardman	101
Ger. 7	Physiography	MTThF	4		205
Hist. 2	Intermediate German	MTWTh	4	Crates	
H. Sc. 7	Development of American Nationality	MT	4	Peake	
Hyg. 1a	Household Management (theory)	MTTh	2		H.E.-304
H. Ed. 5	Ind. & Social Hygiene (for women)	MTTh	3	Bryson	Gym. 4
Math. 106	Kinesiology Lect. (M. 2 periods lab. by arrgn.)	MTTh	3	Long	Gym. 203
Music 11	Descriptive Astronomy	MTThF	4	Finley	210
P. E. 14	Intermediate Methods	MTTh	3	Mohr	Con-14
P. E. 36	Schumann Club	TTh	1	Cline	Con-14
Phys. 107	Basketball (Advanced)	MTTh	1		Gym. 125
Psych. 2a	Pageantry in Physical Ed.	MTWThF		Keyes & McLane	Gym. 206
Psych. 2b	The History of Epoch Making				
Soc. 130	Discoveries in Physics	MW	2	Valentine	H.E.-106
Zool. 2	Ed. Psychology	MTWTh	3		
	Social Psychology	MTWTh	3	Hertzberg	T-13
	General Zoology (Lab. 4 hrs. from any of following periods, Tues. 3-5, Wed. 1-3, Thurs. 3-5)	MTWTh	4	Binnewies	208
		MTTh	4	Harrah	301

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>3:00 to 3:50</b>					
Art 4b	Design	MTWF	4	Hill	G-200
Ath. 66	Basketball	Daily	1	Cooper	Gym. 101
Civl. 1	Intro. to Cont. Civ.	TThF	3	Blue	103
Civl. 2	Intro. to Cont. Civ.	MWF	3	Cross	
Com. Ed. 109	Analytical Studies in Gregg Shorthand	MTW	3	Lyford	212
Ed. 52	Kindergarten Materials	MTW	3	Mahan	
Ed. 110b	Citizenship—Junior High School	MTW	3	Rugg	201
Ed. 123	Research—Senior College Students	MTWTh	4	Wilson	
Ed. 168	Problems of Religious Education	MWThF	4		
Ed. 223	Educational Research—Graduate Students (First quarter thesis course)	MTW	3	Whitney	
Ed. 224	Research for Graduate Students	MTWTh	3	Rugg	201
Eng. 114	Play Production	MTWF	4		L-Th
Eng. 160	Old Testament Literature	MTW	3	Church	100
Ft. 107	Advanced French	MTWF	4	Crates	205
Geog. 162	Geography of the Tropics	MTThF	4	Barker	101
Hist. 3	Recent American History	MTWF	4	Peake	
Hyg. 1a	Ind. & Soc. Hygiene (Women)	MTW	3	Bryson	Gym. 4
Math. 110	Geometry for Teachers	MTWF	4		210
Music 34	Piano Class Lessons	M	1	Hughes	Con-4
Music 107	Form Analysis	MWF	3	Thomas	Con-6
P. E. 14	Basketball (Advanced)	MTF	1		Gym. 125
P. E. 26	Swimming (Beginners)	MW	1	Cave	Pool
P. E. 27	Swimming (Intermediate)	Tf	1	Doubenmier	Pool
P. E. 107	National and Characteristic Dancing (Maj.)	MTWF	2	Keyes	Gym. 206
Psych. 105b	Psych. Sr. H. S. Subjects	MTWF	4		T-12
Soc. 92	The Family	MTW	3	Binnewies	203
<b>4:00 to 4:50</b>					
Art 13	Industrial Arts Methods for Primary	MWThF	4		G-200
Ath. 66	Basketball (Varsity)	Daily	1	Cooper	Gym. 101
Ath. 66	Wrestling (Varsity)	Daily	1	Hancock	Gym. 130
Chem. 222	Advanced Inorganic Chem. (Lab. by appt.)	MW	4	Bowers	Gym. 300

WINTER QUARTER

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Civl. II	Intro. to Cont. Civ.	TThF	3	Blue	103
Com. Ed. 2	Principles of Shorthand II	MWThF	4	Bedinger	212
Com. Ed. 55	Economics of Retailing	MWThF	4	Lee	214
Ed. 16	Elem. Tr. Course—Camp Fire	M	1	Lee	
Ed. 16a	Adv. Tr. Course—Camp Fire	W	1	Wilson	
Ed. 66	Bible Study—Personality and Teachings of Jesus	MW	2	Blue	
Ed. 218	Problems of Secondary Educ. (Two hour class)	MW (4-6)	4		
Eng. 0	Fundamentals of English	MTWTh	0		
Eng. 19	Debating	MWTh	3	Tobey	100
Eng. 105	Oral English in the High School	MWTh	3		202
Fr. 2	Elementary French	MTWTh	4		103
Latin 2	Third Year Latin	MTWTh	4		205
Music 43	Advanced Orchestra	MWThF	4	Crates	Con-14
Music 44	Advanced Band	MW	1	Thomas	Con-14
P. E. 5	Folk Dancing (Beginning)	TTh	1	Thomas	Gym. 206
P. E. 12	Plays and Games	MWF	1	Keyes	Gym. 206-125
P. E. 14	Basketball (Advanced)	TThF	1	Cave	1st floor gym.
P. E. 26	Swimming (Beginners)	MTTh	1		
P. E. 30	Individual Gym.	MW	1	Cave	Pool
P. E. 120	Coaching Practice	Daily	1	Cave	Gym. 126
Psych. 2a	Ed. Psychology	MWTF	2	Cave	
Psych. 224	Thesis Conferences (hrs. per arrangement)	Arr.	3	Heilman	T-13
7:00 to 7:50	Seminar	MTh	4	Howerth	205
Soc. 209					

SPRING QUARTER, 1927-28

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>8:00 to 8:50</b>					
Art 2	Fine Arts Methods for Primary	MTThF	4		G-200
Art 12	Household Art Design	MTThF	4	Moore	G-204
Art 112	Household Art Design	MTThF	4	Moore	G-204
Art 120	Oil Painting	MTWTh	4	Hill	G-203
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	MTWTh	3	Jean	301
Civl. II	Intro. to Cont. Civ.	TThF	3	Blue	103
Com. Ed. 13	Principles of Typewriting III	TWTh	3	Knies	213
Com. Ed. 14	Methods of Teaching Typewriting	F	1	Knies	213
Com. Ed. 41	Material and Methods for Junior H. S. Business Training	MT	2	Colvin	214
Com. Ed. 224	Research in Commercial Education	WThF	3	Colvin	200
Ed. 1	Introduction to Education	MTWTh	4	Mahan	
Ed. 258	Problems of Elem. Education	TWThF	4	McKee	
El. Sci. 1	Nature Study (Field trips arranged)	TWThF	4	Selberg	L-13
Eng. 0	Fundamentals of English	MTWTh	0		100
Eng. 12	Oral Expression	Daily	4		202
Fr. 9	Intermediate French	MTWTh	4		103
Geog. 14	Junior High School Methods	MTThF	4		101
Hist. 209	Slavery, Secession, Civil War, and Reconstruction	MTWTh	4	Dickerson	
H. A. 6	Elementary Dressmaking (double periods)	MTThF	4	Wiebking	H.E.-304
H. Ed. 12	Child Health	MTWTh	4	Long	Gym. 203
H. Sc. 3	Cookery and Table Science (double periods)	MTThF	4	Pickett	H.E.-202
Ind. Arts 1	Technic and Theory of Woodworking (double periods)	MTThF	4		
Ind. Arts 31c	Elementary Printing (double periods)	TWThF	4	Foulk	G-1
Ind. Arts 32c	Intermediate Printing (double periods)	MTWTh	4	Bishop	G-104
Ind. Arts 41c	Elementary Bookbinding	MTWTh	4	Bishop	G-104
Ind. Arts 109b	Art Metal	MTWTh	2	Schaefer	G-100
Math. 3	General Math.	MTWTh	4	Hadden	G-101
Math. 102	Integral Calculus	MTThF	4	Finley	210
Music 40	Beginning Orchestra	TTh	1	Thomas	Con-14
Music 45	Orchestral Instruments	MW	1	Thomas	Con-14

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
P. E. 5	Folk Dancing (Beginning)	TThF	1	Keyes	Gym. 206
P. E. 13	Tennis	MWF	1		Gym. 125
Phys. 3	Content and Method of High School Phys. (Lab. 8:00-9:50 T Th)	MF	4	Valentine	H.E.-106
Psych. 108b	Ed. Tests and Measurements	MTWTh	4	Hertzberg	T-13
Psych. 214	Ad. Ed. Psych.	MTWTh	4	Hellman	T-12
Span. 3	Elementary Spanish	MTWTh	4		205
Soc. 1	Introduction to the Social Sciences	MTWTh	4	Howarth	208
Zool. 3	Bird Study (Field trips arranged)	MTThF	3	Harrah	304
<b>9:00 to 9:50</b>					
Art 16	Freehand Drawing II	TWThF	4	Hill	G-203
Art 116	Freehand Drawing	TWThF	4	Hill	G-203
Ath. 70	Swimming	TThF	1		Pool
Ath. 170	Ad. of Phy. Ed. & Ath.	MW	2	Cooper	Gym. 103
Biol. 102	Teaching of Biology	MTWTh	4	Jean	304
Chem. 112	Food Chemistry (Lab. by appt.)	MW	3	Bowers	300
Civil. II	Intro. to Cont. Civ.	TThF	3	Blue	103
Chem. 113	Food Chemistry (Lab. by appt.)	MW	4	Bowers	300
Ed. 2a	Problems in Commercial Education	TWThF	4	Colvin	212
Ed. 10	Pre-Teaching Observation	TW	1		
Ed. 129	Introduction to Curriculum Making	TThF	3	McKee	103
Eng. 0	Current Educational Thought	MTThF	4	Cornell	
Eng. 1	Fundamentals of English	MTWTh	0		
Eng. 129	Material and Methods in Literature	MTWTh	4	Boardman	202
Gen. Sci. 1	Shakspere's Tragedies	MTWTh	4	Selberg	100
Geog. 52	General Science (Lab. 2 hrs. Tu 3-5)	TWThF	4	Barker	L-13
H. Sc. 7	Geography of South America	MTThF	4	Peake	101
H. Sc. 7	Twentieth Century Europe	TWThF	4		
H. Sc. 7	Household Management	Daily	2	Pickett	Cottage
H. Ed. 1	Ind. and Soc. Hyg. (Men)	MWF	2	Long	Gym. 203
Ind. Arts 42a	Intermediate Bookbinding	TWThF	3	Schaefer	G-100
Lib. Sci. 104	Reference Work	TWThF	4	Carter	Library
Math. 104	Teaching Arithmetic	MTThF	4	Finley	210
Music 5	Advanced Harmony	MThF	3	Thomas	Con-6

SPRING QUARTER

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Music 106	Advanced Orchestration	MTThF	3	Cline	Con-14
P. E. 6	Folk Dancing (Advanced)	TThF	1	Keyes	Gym. 206
P. E. 11	Plays and Games (Primary, Intermediate and Junior High Majors)	MTTh	1	Cave	Gym. 125
P. E. 13	Tennis	MWF	1	Courts-Gym.	206-125
Psych. 104	Psych. of Elementary School Subjects	MTWTh	4	Heilman	T-13
Psych. 215	Ad. Ed. Tests and Meas.	MTWTh	4	Hertzberg	T-12
Span. 9	Intermediate Spanish	TWThF	4		205
Soc. 112	Labor and Society	MTWTh	4	Binnewies	207
Soc. 150	Modern Social Problems	MTWTh	4	Howerth	208
Zool. 4	Economic Zoology	MTThF	4	Harrah	301
<b>10:00 to 10:50</b>					
Art 101	Drawing from the Figure	MTThF	4		G-200
Art 108	Pottery I	MTThF	4	Lowe	G-204
Art 115	Pottery II	MTThF	2	Lowe	G-204
Ath. 52	Gymnastics	MWF	1	Hancock	Gym. 101
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	MTThF	3	Harrah	301
Botany 3	Systematic Botany (Field 3 hrs. from any of following periods Mon. 3-5, Wed. 2-5)	MTWTh	4	Jean	304
Civ. II	Intro. to Cont. Civ.	TThF	3	Blue	103
Com. Ed. 52	Principles of Accounting, III	MTThF	4	Colvin	214
Com. Ed. 110	Office Appliances (10:00-12:00)	MTThF	4	Knies	215
Ed. 10	Introduction to Curriculum Making	TThF	3	McKee	
Ed. 28	School and Home Gardens	MTThF	4	Hargrove	
Ed. 116	Org. and Adm. of a Senior High School	MTThF	4	Cornell	
Eng. 13	The Art of Story Telling	MTThF	3	Campbell	202
Eng. 13	The Art of Story Telling	MTThF	3	Cross	101
Eng. 15	Types of Literature	MTTh	3	Cross	103
Eng. 224	Research in English	MTThF	3	Boardman	100
Geog. 103	Climatology	MTThF	4		101
History 3	Recent American History	MTTh	3	Peake	
H. A. 6	Elementary Dressmaking (double periods)	MTThF	4	Long	H.E.-301
H. Ed. 103	Anthropometry	MTWTh	4	Pickett	Gym. 203
H. Sc. 3	Cookery and Table Service (double periods)	MTThF	4		H.E.-202



SPRING QUARTER

157

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Ind. Arts 3	Woodworking for Primary & Secondary Schools	MTThF	4	Foulk	G-1
Ind. Arts 13	Principles of Architectural Drawing II	MTThF	4	Hadden	G-105
Ind. Arts 133a	Advanced Printing (2 periods)	MTThF	4	Bishop	G-104
Ind. Arts 133b	Advanced Printing (2 periods)	MTThF	4	Bishop	G-104
Ind. Arts 143a	Advanced Binding & Leather Craft (2 periods)	MTThF	4	Schaefer	G-100
Math. 6	Surveying (2 periods)	TTh	4		
Math. 107	Teaching Jr. H. Math.	MTThF	4	Finley	210
Music 2	Tone Thinking and Melody Writing	MTThF	3	Opp	Con-5
Music 108	Advanced Form Analysis	MThF	3	Thomas	
P. E. 15	Baseball and Track	MTF	1		
P. E. 27	Swimming (Intermediate)	MT	1		
P. E. 28	Swimming (Advanced)	TF	1	Doubennier	Pool
P. E. 101	Clog and Athletic Dancing (Maj.)	MTThF	2	Doubennier	Pool
Phys. 13	General Physics (Light, Sound)	MTTh	3	Cave	Gym. 125
Pol. Sci. 3	Municipal Government	MTTh	3	Valentine	H.E.-106
Psych. 2b	Ed. Psych.	MTWTh	3	Dickerson	
Span. 109	Advanced Spanish	MTWTh	4	Helman	T-13
Soc. 200	Social Waste	MTThF	4		205
Soc. 142	Development of Social Thought	MTThF	4	Howarth	208
		MTTh	3	Binnewies	207
<b>11:00 to 11:50</b>					
Art 14	Industrial Arts Methods for Intermediate Grades and Junior High School	MTWTh	4	Moore	G-204
Art 17	Lettering and Poster Composition	MW	2	Hill	G-200
Art 117	Intra-Mural Sports	MTWTh	4	Hill	G-200
Ath. 67	Lettering and Design	MWF	1	Hancock	Field
Biol. 1	Educational Biology (2 hours lab. arr.)	MTWTh	3	Jean	301
Chem. 3	General Chemistry (Lab. by appt.)	TTh	3	Bowers	300
Chem. 3b	Household Chemistry (Lab. by appt.)	MW	3-4	Bowers	300
Chem. 6	General Chemistry (Lab. by appt.)	TTh	4	Bowers	300
Com. Ed. 1	Principles of Shorthand I	MTWTh	4		212
Com. Ed. 16	Material and Methods for Teaching Filing	TWThF	4	Knies	215
Com. Ed. 36	Handwriting Methods	MTWTh	2	Bedinger	214
Ed. 1	Introduction to Education	MTThF	4	Cornell	
Ed. 101	Principles of Teaching in High School	TWThF	4	Blue	

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Ed. 108	Educational Supervision	TWThF	4	McKee	
Eng. 11	The English Language	MWThF	4	Newman	103
Eng. 20	Advanced Composition	MTThF	4	Tobey	
Eng. 31	The Short Story	MTThF	4		202
Eng. 133	The Recent Novel	MTWTh	4	Boardman	100
Geog. 55	Geography of Australia	MTThF	4	Barker	101
Hist. 101	Commercial and Financial History of the United States	MTWTh	4	Dickerson	
H. Sc. 7	Household Management (theory)	MT	2		H.E.-306
Ind. Arts 105	Advanced Architectural Drawing	MTWTh	4	Hadden	G-105
Music 22	Appreciation	MWF	3	Cline	Con-14
Music 38	Collective Voice Training	TTh	1	Cline	Con-1
P. E. 4	Singing Games	TThF	1	Keyes	Gym. 125
P. E. 26	Swimming (Beginners)	MW	1	Cave	Pool
P. E. 26	Swimming (Beginners)	TTh	1	Cave	Pool
P. E. 103	Natural Dancing (Majors)	MWThF	2		Gym. 206
Phys. 121	Projects Based upon the study of direct and alternating currents	MTWTh	4	Valentine	H.E.-106
Psych. 106	Clinical Psychology	MTWTh	4	Heilman	T-12
Rom. Lang. 131	Teaching of Romance Languages	MWThF	4		205
Soc. 102	Early Civilization	MTWTh	4	Howerth	208
Soc. 105	Principles of Sociology	MTWTh	4	Binnewies	
<b>1:00 to 1:50</b>					
Art 13	Industrial Arts Methods for Primary	MTThF	4		G-200
Art 5	Water Color Painting	MTWTh	4	Hill	G-203
Art 105	Water Color Painting	MTWTh	4	Hill	G-203
Ath. 168	Track Coaching	TTh	2	Hancock	Gym. 103
Ath. 169	Baseball Coaching	MWF	2	Cooper	Gym. 103
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	MTWF	3	Page	301
Chem. 7	Qualitative Chemistry	MTWTh	2-4	Bowers	302
Com. Ed. 159	Auditing	MTWTh	4	Colvin	214
Ed. 1	Introduction to Education	MTThF	4	Hargrove	
Ed. 52	Kindergarten Materials	MTW	3	Lyford	
Ed. 109	Supervised Study	MTWTh	4	Mahan	

SPRING QUARTER

159

Time and Cat. Number	Description	Days	Gr. Hours	Teacher	Room
Ed. 213	Problems of the Junior High School	MTWTh	3	Rugg	
Eng. 10	History of English Literature	MTThF	4	Tobey	202
Eng. 20	Advanced Composition	MTWTh	4	Boardman	100
Geog. 170	Geography of Polar Lands	MTThF	4	Barker	101
Ger. 3	Elementary German	MTWTh	4	Crates	205
Hist. 1	Foundation of American Nationality	MTWTh	4	Peake	
Hyg. 1a	Ind. & Soc. Hygiene (Women)	MTWTh	3	Bryson	Gym. 4
H. A. 4	Millinery (double periods)	MTThF	4	Wiebking	H.E.-301
H. A. 112	Home Decoration	MTThF	4	Pickett	H.E.-304
H. Sc. 103	Dietetics (double periods)	MTThF	4	Hadden	H.E.-202
Ind. Arts 10	Mechanical Drawing	MTWTh	2-4	Schaefer	G-105
Ind. Arts 43b	Intermediate Bookbinding (double periods)	MTWTh	4	Schaefer	G-100
Ind. Arts 121	Advanced Cabinet Making (double periods)	MTWTh	4	Foulk	G-1
Ind. Arts 144a	Shop Management (on request)	MTWTh	4	Schaefer	G-100
Ind. Arts 145a	Secretarial Science (on request)	MTWTh	4	Schaefer	G-100
Music 1a	Rudiments and Methods	MT	3	Mohr	Con-14
Music 114	Methods in Conducting	TTh	2	Cline	Con-14
P. E. 7	National and Characteristic Dancing	MWF	1	Keyes	Gym. 206
Psych. 2b	Ed. Psychology	MTWTh	3	Hertzberg	T-13
Psych. 3	Child Development	MTWF	4	Hertzberg	T-12
Soc. 3	Educational Sociology	MTTh	3	Binnewies	208
Zool. 102	Economic Zoology	TThF	4	Harrah	301
<b>2:00 to 2:50</b>					
Art 6	Art Appreciation	W	1	Moore	G-200
Art 7	Constructive Design	MTThF	4	Lowe	G-204
Art 13	Industrial Arts Methods for Primary	MTThF	4		G-200
Art 106	Art Appreciation	W	1	Moore	G-200
Art 107	Constructive Design	MTThF	4	Lowe	G-204
Ath. 70	Swimming	MTTh	1		Pool
Chem. 114	Quantitative Chemistry	MTWTh	4	Bowers	302
Civ. II	Intro. to Cont. Civ.	TThF	3	Blue	103
Com. Ed. 3	Secretarial Practice I	TWThF	4	Bedinger	212
Com. Ed. 42	Advertising	MTWTh	4	Bedinger	214
Ed. 1	Introduction to Education	TWThF	4	Mahan	

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
Ed. 3a	Primary Methods (Reading, Language, Spelling)	MTW	3	Turner	
Ed. 3c	Primary Methods (Literature, etc.)	MTW	3	Lyford	
Ed. 4b	Intermediate Methods (Arith., Soc. Science, Health)	MTWTh	4		
Ed. 21	Rural School Problems	TThF	3	Hargrove	
Ed. 110	Extra-Curricular Activities	MWTh	3	Rugg	
Ed. 211	Conceptions of Mind in Educ. Theory	MTWTh	4	Armentrout	
El. Sci. 1	Nature Study (Field trips arranged)	TWThF	4	Selberg	L-13
Eng. 6	American Literature	MTThF	4	Tobey	202
Eng. 102	Journalistic Writing	MWTh	3	Shaw	L-1
Geog. 144	Biogeography	MTThF	4	Barker	101
Ger. 9	Intermediate German	MTWTh	4	Crates	205
Hist. 10	Social and Industrial History of the United States	MTWTh	4	Peake	
Hist. 13	Teaching of History and Civics in the Elementary School	TWTh	3	Dickerson	
Hist. 104	Literature of American History	MF	2	Dickerson	
H. Ed. 20	Experimental Physiology Lect. (M. 2 lab. periods by arrangement)				
Hyg. 1a	Ind. & Soc. Hygiene (for Women)	MTTh	3	Long	Gym. 203
Math. 6	College Algebra	MTThF	3	Bryson	Gym. 4
Math. 103	Theory of Equations	MTThF	4		
Music 34	Piano Class	M	1	Finley	210
Music 41	Men's Glee Club	MW	1	Hughes	Con-4
Music 110	Supervisors' Course	MWF	1	Cline	Con-1
P. E. 6	Folk Dancing (Advanced)	MWF	3	Mohr	Con-14
P. E. 12	Plays and Games	MWF	1	Keyes	Gym. 206
P. E. 13	Tennis	TThF	1		Gym. 125-206
Phys. 114	The Physics of Musical Instruments (Lab. to be arranged)	MTTh	1		Gym. 125
Psych. 2a	Ed. Psych.	MTW	4	Valentine	H.E.-106
Psych. 2b	Ed. Psych.	MTWF	3		T-12
Soc. 18	Rural Sociology	MTWTh	3	Hertzberg	T-13
		MTWTh	4	Binnewies	208

Time and Cat. Number	Description	Days	Qr. Hours	Teacher	Room
<b>3:00 to 3:50</b>					
Art 100	Supervision of Art Education	MTW	2	Moore	G-203
Ath. 66a	Football Fundamentals	Daily	1-2	Cooper-Hancock	Field
Biol. 1	Educational Biology (2 hrs. Lab. arranged)	MTWTF	3	Page	301
Civl. II	Intro. to Cont. Civ.	MWTF	3	Cross	
Com. Ed. 4	Methods of Teaching Shorthand	F	1		212
Com. Ed. 107	Secretarial Science II	MTW	3		212
Ed. 1	Introduction to Education	MTWTF	4	Mahan	
Ed. 3b	Primary Methods (Arith., Social Science, Health)	MTW	3	Harrison	
Ed. 4a	Intermediate Methods (Read., Lang., Spelling)	MTWTF	4	Lehr.	
Ed. 15	Educational Guidance	MTF	3	Hargrove	
Ed. 123	Research—Senior College Students	MTWTh	4	Ragg	201
Ed. 155	Recent Invest.—Kindergarten	MTW	3	Lyford	
Ed. 223	Educational Research—Graduate Students	MTW	3	Whitney	
Ed. 225	Research for Graduate Students	MTWTh	3	Ragg	
Eng. 0	Fundamentals of English	MTWTF	0		201
Eng. 4	Speaking and Writing English	MTWTF	3	Tobey	L-1
Eng. 161	Old Testament Literature	MTW	3	Church	202
French 109	The Romantic Drama	MTWTF	4	Crates	103
Geog. 12	Methods of Intermediate Geography	MTThF	4		205
Hyg. 1a	Ind. & Soc. Hyg. (Women)	MTW	3	Bryson	101
Math. 109	Teaching of Algebra	MTWTF	3		Gym. 4
Music 23	Musical Literature	MTWTF	4		210
Music 42	Schumann Club	MWF	3	Opp	Con-6
P. E. 5	Folk Dancing (Beginners)	MW	1	Cline	Con-14
P. E. 13	Tennis	MWF	1	Keyes	Gym. 206
P. E. 26	Swimming (Beginners)	MTF	1		Gym. 125
P. E. 27	Swimming (Intermediate)	MW	1	Cave	Pool
Phys. 10	Household Physics (Lab. to be arranged)	TF	1	Doubenmier	Pool
Psych. 2a	Ed. Psych.	MTW	4	Valentine	H.E.-106
Soc. 120	Social Surveys and Social Statistics	MTWTF	3		T-13
		MTW	3	Binnewies	208

Time and Cat. Number	Description	Days	Gr. Hours	Teacher	Room
Art. 2	Fine Arts Methods for Primary	MWThF	4	Lowe	G-200
Ath. 66	Baseball	Daily	1	Cooper	Field
Ath. 66	Track	Daily	1	Hancock	Courts
Ath. 66	Tennis	Daily	1		Field
Ath. 66a	Football (Freshmen)	Daily	1-2	Cooper	302
Chem. 118	Textile Chemistry	MWThF	2-4	Bowers	212
Com. Ed. 105	Secretarial Practice II	MWThF	4		214
Com. Ed. 144	Commercial Law II	MWThF	4		
Ed. 16	Elem. Tr. Course—Camp Fire	M	1	Lee	
Ed. 16a	Adv. Tr. Course—Camp Fire	W	1	Lee	
Ed. 17	Boy Scout Work	M	1	Moore	
Ed. 67	Bible Study—Paul and the Growth of the Church	MT	2	Wilson	
Ed. 244	Problems of School Administration (2 hr class)	MW (4-6)	4	Cornell	
Eng. 0	Fundamentals of English	MWTh	0		100
Fr. 3	Elementary French	MTWTh	4		100
Lat. 3	Third Year Latin	MWThF	4		205
Music 43	Advanced Orchestra	MW	1	Crates	
Music 44	Advanced Band	TTh	1	Thomas	
P. E. 13	Tennis	MWF	1	Keyes	Gym. 206
P. E. 15	Baseball and Track	MWF	1		Gym. 125
P. E. 26	Swimming (Beginners)	MW	1	Cave	Pool
P. E. 30	Individual Gym.	Daily	1		Gym. 126
P. E. 120	Coaching Practice	Daily	2	Cave	
Psych. 2a	Ed. Psych.	Daily	2		
Psych. 225	Thesis Conferences (Hrs. by arrangement)	MTWTF	3	Heilman	T-13
		Art.	3		
7:00 to 7:50	Seminar	MTh	4	Howerth	208
Soc. 209					

# INDEX

Page		Page	
Administration .....	7	Entrance Requirements.....	39
Administration Building .....	23	Equipment .....	26
Admission .....	2, 29, 39	Expenses .....	28, 29
Adult School .....	39	Extension Department .....	32
Advanced Standing .....	40	Faculty .....	8-19
Agricultural Education .....	74	Fees and Expenses .....	28, 29
Anthropology .....	129	Fellowships .....	47
Architectural Drawing .....	106	Fraternities .....	35
Art—Fine and Applied .....	53	Freshmen Enrollment.....	39
Industrial .....	104	Folk Dancing .....	124
Art Metal .....	105	Foreign Languages .....	87
Athletics—Men .....	56	French .....	83
Women .....	122	Function of Teachers College.....	27
Bacteriology .....	60	Gardens .....	26
Bible Study .....	75	Geography .....	91
Biological Science .....	57	Geology .....	91
Biotics .....	60	German .....	89
Board and Room .....	28	Gifts to the College .....	35
Board of Trustees .....	7	Government of the College.....	27
Bookbinding .....	107	Grading System .....	42
Botany .....	58	Graduate Council .....	7
Buildings .....	23-26	Graduate Loan Funds.....	47, 48
Calendar .....	2	Graduate Work .....	45, 47
Campus .....	26	Graduate Scholarships.....	47, 48
Chemistry .....	61	Graduation .....	40
Child Study .....	82	Gymnasium .....	24
Christian Associations .....	33	Health Education .....	94
Civilization .....	72	History and Political Science.....	96
Classification Test .....	39	History of the College.....	23
Club House .....	24	Household Arts .....	24, 103
Commercial Education .....	64	Household Science.....	101
Conditional Admission .....	39	Home Economics .....	101
Conservatory of Music.....	24	Honorary Fraternities.....	35
Contemporary Civilization .....	72	Industrial Arts .....	24, 104
Contents .....	3	Journalism .....	113
Core Subjects .....	52	Kindergarten .....	75
Correspondence Courses .....	32	Languages .....	87
Course of Study.....	51-130	Latin .....	89
Credits .....	41	Leather Craft .....	109
Curricula .....	51	Length of Course .....	52
Dancing .....	123	Library .....	23, 109
Debating .....	112	Library Science .....	109
Degrees .....	40, 46	Literature and English .....	110
Departmental Museums .....	26	Life Certificate .....	40
Diplomas and Degrees .....	40, 46	Living Accommodations .....	25, 28
Dormitories .....	25, 28	Loan Funds .....	33, 34
Dramatic Art .....	112	Location of the College.....	23
Economics .....	130	Maintenance of the College.....	26
Education .....	72	Mathematics .....	115
Education—Rural Schools .....	75	Mechanical Drawing .....	106
Elementary .....	73	Mental Tests .....	84
Secondary .....	79	Model Cottage .....	24
Educational Psychology .....	81	Modern Languages—Foreign.....	87
Elementary Science .....	61	Music .....	117
Elementary Training School .....		Museums .....	26
.....	30, 31, 32		
English and Literature.....	110		
Enrollment .....	39, 41		

## INDEX (Continued)

	Page		Page
Newman Club .....	33	School Gardens .....	26
Officers of Administration .....	7	School of Adults .....	39
Officers of the Board of Trustees .....	7	School Publicity .....	78
Oral English .....	112	Sociology .....	128
Orchestral Music .....	121	Spanish .....	90
Organ .....	120	Standard of the College .....	27
Physical Education—Men .....	56	Student Teaching .....	31, 32
Women .....	122	Student Government .....	27
Physical Examinations .....	42	Student Loan Funds .....	33, 34, 48, 49
Physics .....	126	Summer Quarter .....	29
Physiography .....	91	Summer School Faculty .....	19
Piano .....	120, 122	Teachers Bureau .....	33
Placement Bureau .....	33	Tests .....	39
Plant .....	23	Tests and Measurements .....	84
Political Science .....	100	Textbooks .....	29
Printing .....	106	Training Schools .....	30, 31, 32
Program of Courses .....	135-162	Trustees .....	7
Psychology .....	81	Tuition .....	28
Publicity .....	78	Unclassified Students .....	39
Public Speaking .....	112	Ungraded School for Adults .....	39
Registration .....	39, 133	Unit of Credit .....	40
Religious Organizations .....	33	Violin .....	120
Required Work .....	51, 52	Voice Culture .....	120
Residence Requirements .....	40	Water Supply .....	26
Romance Languages .....	91	Woodworking .....	105
Rooming Regulations .....	27	Y. M. C. A. .....	33
Rooms .....	27, 28	Y. W. C. A. .....	33
Rural Schools .....	75	Zoology .....	59
Secondary Training School .....	31		
Scholarships .....	34, 35, 48		



**COLORADO STATE TEACHERS COLLEGE**

Is a member of the American Association  
of Teachers Colleges and of the North  
Central Association of Colleges and Sec-  
ondary Schools.



COLORADO STATE TEACHERS COLLEGE

BULLETIN



FRESHMAN  
ENROLLMENT

September 21-26

1927

GREELEY

SERIES XXVII

NUMBER 2

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

# FRESHMAN ENROLLMENT

## Colorado State Teachers College

SEPTEMBER 1927

---

Freshmen enrolling in Colorado State Teachers College for the first time are required to be present in Greeley September 21 for the first freshmen assembly at half past ten in the Little Theater of the College. In the past there has been a great deal of confusion in getting the details of admission adjusted and in making first quarter programs. All these details will be taken care of during the days from September 21 to the beginning of classes Wednesday, September 28. There will be an assembly each morning with addresses by the president, vice-president, director of instruction, and dean of women. In the afternoons the various tests will be given, your photograph taken, and a physical examination given. The College provides entertainment for the evenings. There will be ample time in the afternoons to make arrangements for room and board, and for employment if you are earning your own way through school. Freshmen boys wishing to make the freshmen football squad will have opportunities for practice.

The following things must be attended to:

1. *High School Transcript.* At the assembly, Wednesday, September 21, at 10:30 a. m. you must hand to the registrar a complete transcript of your high school record if this has not already been mailed to him before September 1. Get this from the principal of your high school or from some one authorized by him to issue the transcript. Use the enclosed blank. If you have already received a report on your admission, do not bring in another transcript.
2. *The Classification Test.* This is a test given to all freshmen to indicate to the College what your scholastic aptitude is. You will be told on Wednesday when and where the test will be given. Fee \$1.00.
3. *The English Test.* This test, if successfully passed (upper quartile), will exempt you from English 4, the required fresh-

man English course. If your mark is in the lower half you will be required to take English 0, without credit. Fee 25 cents.

4. *The Physical Examination.* All freshmen are given a physical and health examination to determine whether the student is physically qualified to become a teacher. Those having communicable diseases or marked physical deformities will not be accepted as students. No fee.

5. *The Achievement Test.* This is a series of tests in the common school branches such as language, arithmetic, geography, history, etc., to ascertain whether you have a sufficient knowledge in these branches to enable you to teach in public schools. The tests cover about the same ground as is covered in the eighth grade. Fee 50 cents.

6. *Photograph.* Six small photographs to be attached to records are made for identification. The College makes the photograph. Fee 25 cents.

If you have a scholarship, present the certificate when you enroll Monday, September 26. This is necessary.

---



---

## THE COLLEGE CALENDAR

1927

Sept. 21, 22, <i>Wednesday, Thursday</i> } 23, 26, <i>Friday, Monday</i> }	}	{ Matriculation and { Registration of freshmen
Sept. 27, <i>Tuesday</i> .....		Registration of upper classmen
Sept. 28, <i>Wednesday</i> .....		Classes begin
Nov. 24-25, <i>Thursday-Friday</i> .....		Thanksgiving recess
Dec. 16, <i>Thursday</i> .....		Fall Quarter closes
Dec. 28, <i>Tuesday</i> .....		Winter Quarter begins

1928

Mar. 11, <i>Friday</i> .....		Winter Quarter closes
Mar. 15, <i>Tuesday</i> .....		Spring Quarter begins
May 6, <i>Friday</i> .....		Insignia Day
June 1, <i>Wednesday</i> .....		Commencement
June 14, <i>Tuesday</i> .....		Registration for Summer Quarter
June 15, <i>Wednesday</i> .....		Classes begin
Sept. 27, <i>Tuesday</i> .....		Fall Quarter begins



COLORADO STATE TEACHERS COLLEGE

BULLETIN

# The Graduate School



## Rules and Regulations

Greeley, Colorado

1927

Series XXVII

JUNE

Number 3

Published Monthly by Colorado State Teachers College, Greeley, Colorado.

Entered as second class matter at the Postoffice at Greeley, Colorado,  
under the Act of August 24, 1912.

## CLASSES OF GRADUATE STUDENTS RECOGNIZED

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

### ADMISSION TO THE GRADUATE SCHOOL

1. Application for admission to graduate study for either of the purposes named above must be made to the Registrar of the College. Formal blanks for this purpose will be furnished by his office.
2. The requirements for admission are:
  - a. The Degree of Bachelor of Arts, Philosophy, Science, or other four-year degree from a reputable institution authorized by law to confer these degrees and approved by this institution.
  - b. Official credentials to be filed with the Registrar giving, (1) a record of the high school work, (2) a transcript of the undergraduate, college or university grades.
  - c. Satisfactory classification test scores to be filed with the Registrar as a matter of record.

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

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

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

---

### ADMISSION TO CANDIDACY FOR THE MASTER OF ARTS DEGREE

1. Not later than the tenth week of the student's first quarter, application for admission should be made to the Registrar of the College. Formal blanks will be furnished by his office.
2. Before a student can be admitted to candidacy, he must meet the following requirements:
  - a. He must have demonstrated his ability to do a high grade of work in his field of specialization and must have shown promise of ability to do research.
  - b. The average of his first quarter's grades must be above the mean grade of "C".
  - c. He must have given evidence to the Director of the Training School of his ability to teach. This may have been done by either of the following ways: (1) Successful teaching experience; (2) Successful student teaching.
  - d. He must have established satisfactory classification test scores.
  - e. He must have demonstrated, in Education 223, a proficiency in organizing and expressing thought in writing. If the student shows an inability to do this, he is required to take English 120 *without credit*.



- f. He must have shown his personal fitness to become a candidate.
  - g. The head of the student's major department must have filed with the Registrar a statement endorsing the student for admission to candidacy, and giving the subject of his thesis. Blanks for this purpose will be furnished by the Registrar's office.
3. A candidate may be required by the head of his major department to pass either a written or an oral preliminary examination before he is recommended to the Graduate Council for admission to candidacy.
  4. Graduate students will not be permitted to engage in more than one extra curricular activity per quarter and then only when they reach a 50 percentile rank on the intelligence test and have made an average of "B" or more in their course work. Extra curricular activities shall be construed to include athletics, debates, oratory, dramatics, student publications, student participation in government, and the Boosters' Club.

### TIME LIMIT FOR DEGREE

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

1. Students entering upon graduate work after September 1, 1927, during any one of the regular academic quarters (fall, winter, or spring) must complete and have approved by the Graduate Council all graduate work including the thesis within two years from the time graduate work is begun, or additional requirements may be made by the Graduate Council.
2. Students who restrict their graduate work entirely to the summer quarters must complete and have approved by the Graduate Council all requirements including the thesis within five summer quarters, or additional requirements may be made by the Graduate Council.

### REQUIREMENTS FOR THE DEGREE

1. Beyond the four-year undergraduate course, the student working for the degree, Master of Arts, must earn graduate credits amounting to 48 quarter hours. Three quarters of work in residence are required, but one quarter of approved graduate work may be transferred from another institution; or 16 hours of approved graduate work may be done in extra-mural group classes conducted by members of the Teachers College faculty. In no case shall these provisions reduce the two full quarters of work (32 hours) required to be done on the campus.
2. Research culminating in the writing of a thesis upon some selected problem shall be an integral part of the work required for the degree. A maximum of 9 hours credit may be granted for this research, 3 hours of which shall be taken in Education 223. The additional 6 hours shall be granted the student for work done in research courses numbered 224 and 225, respectively, in his major department.
3. Every student must register for Education 223, during his first full quarter of regular graduate work.
4. The student must have at least 64 quarter hours of undergraduate and graduate work in his major or closely related subjects.

5. He must have not less than 32 hours of undergraduate and graduate professional work in education and related fields, as educational psychology, educational sociology, and educational biology. If the candidate majors in Education, 64 quarter hours will be required, but only work in education or educational psychology will be accepted for such undergraduate and graduate work.
6. At least 4 weeks before the date upon which the degree is to be conferred, three copies of his thesis must be filed with the head of his major department for examination by the Thesis Reviewing Committee before going to the Graduate Council for final approval.  
The Thesis Reviewing Committee shall consist of the head of the student's major department, a representative of the Graduate Council appointed by the Chairman, and the instructor who is the thesis adviser, provided he is other than the head of the student's major department.
7. At least 2 weeks before the date upon which the degree is to be conferred, the complete thesis in final form must be approved and 2 copies, properly signed, filed with the Graduate Council, one of which must be an original copy. Also two dollars to bind these copies must be deposited with the Business Agent by the student.
8. The thesis must conform to definite standards. It must be type-written on paper of good quality, size 8½ by 11 inches, and be properly bound. The arrangement of the title page is as follows:

COLORADO STATE TEACHERS COLLEGE  
 (Title of Thesis)  
 A Thesis Submitted in Partial Fulfillment of the Requirements  
 for the Degree of Master of Arts  
 by  
 (Student's Name)  
 (Title of Major Department)  
 (Date)

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

Approved by:

Thesis Adviser .....

Department.....

Thesis Reviewing Committee

.....

Department.....

.....

Department.....

Chairman of the Graduate Council

.....

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

No graduate credit will be given for courses numbered under 100, or for scattered and unrelated courses. All courses numbered under 200 require additional work for graduate credit.

The undergraduate rule as to load applies to the Graduate School. In determining the maximum amount of work, research upon thesis must be included within the limit stated.

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

COLORADO STATE TEACHERS COLLEGE

BULLETIN

Series XXVII

JULY, 1927

Number 4

Course of Study  
*in*  
Health Education



Published Monthly by Colorado State Teachers College, Greeley, Colorado.  
Entered as second class matter at the Postoffice at Greeley, Colorado, under the  
Act of August 24, 1912.



# COURSE OF STUDY

## IN

# HEALTH EDUCATION

---

This course of study has been made possible through the efforts and support of the Colorado Tuberculosis Association. Through the financial aid of this organization, the services of Dr. Glenadine Snow of Ypsilanti, Michigan, were obtained for the Summer Quarter of 1926. This course of study was worked out in the College Elementary School under her supervision with the help of members of the Elementary School faculty: Misses Genevieve L. Lyford, Bertha Stephens, Ethel Dulin, Lucy Rosenquist, Floss Ann Turner, Annie McCowen, Elizabeth Luzmoor, Mrs. Susan Van Meter; Helen C. Davis, Principal of the Elementary School, and Dr. W. D. Armentrout, Director of Training Schools.

In working out this course of study, the ideas contained in "Health Education," the report of the Joint Committee of Health Problems in Education of the National Education Association and the American Medical Association have been used as the basis. It is not to be assumed that this outline constitutes the permanent course of study, since it is the result of only a short period of work.

This tentative outline has been organized around those topics or problems which are adapted to the needs, ability, and understanding of the pupils of the different grades of the elementary school. The activities, habits and attitudes, and knowledge which are related to these topics or problems and help to make them more concrete to the pupils are indicated. Not all the problems which will be necessary to cover the subject matter are included in this outline. It is not possible to anticipate specific situations which will arise from time to time in teaching a certain unit of subject matter in a given grade. Problems will be worked out to meet the needs as occasion arises. Furthermore, it is felt that the student teachers in the College Elementary School should have the experience of working out and stating some problems with the pupils. Public school teachers who use this as a guide in health education will find problems peculiar to their own community which must be provided for.

Changes and additions will necessarily be made as the material is used in the classrooms more fully. Blank pages have been inserted after the last page of work for each grade. It is to be hoped that public school teachers who follow this outline will use these pages to indicate specific ways in which the course of study may be made more valuable.



**PART I**

In this course of study provision has been made for a health examination of each pupil in the school. This is used as a basis for determining what corrective work will be given. All corrective work is done under the supervision of a member of the physical education department who is trained for that work. The active work or physical exercise is a definite part of the daily program in each grade. The actual plays, games, and exercises used will be those as given in the bulletins, "Health Education," supplemented by the teacher's own supply.

Limited time has prevented the emphasis of all aspects of health. Until further work can be done with the cooperation of the psychology department, the following taken from "Health Education," pp. 23, 24, 62-64, is given as suggestive helps to the teachers:

"Health education can be promoted only by emphasizing all aspects of health, physical, mental, social, and moral. The ideal of health is the realization of the highest physical, mental, and spiritual possibilities of the individual.

**"The Healthy Personality: Mental, Emotional, Moral  
and Social Health**

"To picture the healthy mental, emotional, moral, and social qualities of the child is to describe the healthy personality. In describing the characteristics of a healthy personality, it is desirable to allow for a variety and range of individual differences. To be well balanced it is not necessary to suppress one's individual qualities, or to conform to a uniform pattern. It is, nevertheless, useful, keeping this in mind, to describe the simplest and most significant evidences of a healthy personality. They are as follows:

"1. The child possesses intelligence adequate to meet the demands of his life. This includes the whole range of intelligence from very superior to somewhat below the average. Some very healthy personalities are found among those, whose intelligence is inferior to the average, but is, nevertheless, sufficient to meet the demands of their simple lives of manual work.

"2. He is able to concentrate his attention upon the matter before him, and to perceive the important elements of the situation with accuracy and alertness.

"3. He is interested in the world about him, and curious to understand it.

"4. He is generally self-confident; he expects success and achieves it with reasonable frequency.

"5. He is active in overcoming difficulties; he does not 'day dream' so much that he fails to meet the actual situation.

"6. His predominating emotional qualities are happiness, cheerfulness, courageousness. He is not troubled by unnecessary fears, shyness, or timidity. His emotional responses are those that are appropriate and useful for the occasion.

"7. He does not ordinarily brood or sulk, or indulge in morbid introspection.

"8. He has many objective interests; friends, hobbies, games in which he finds adequate self-expression.

"9. He is companionable and mingles easily with other children. He adapts himself easily to cooperative enterprises; to leadership or followership.

"10. The child's relationships with children of the opposite sex are wholesome.

"11. He has a sense of responsibility for the happiness and well-being of his friends, schoolmates, and members of his family.

"There are important applications of mental hygiene which should be made to the school. It would be desirable to have a complete examination of every school child upon entrance into the school, this examination to include the child's mental as well as his physical health. This is a goal that is far from being realized, but there are still many things which teachers can do. A few suggestions are given:

"1. Teachers should help their pupils to acquire emotional control, and should avoid any course or action which will arouse undesirable emotions. Children should never be frightened; a childhood fright may become the basis of an adult psychosis. Children should not be ridiculed, shamed, or embarrassed; a child's fear of ridicule may be so intense as to paralyze effort. There should be a calm orderly atmosphere in the school room which avoids both undue restraint and emotional excitement.

"2. Help the shy, easily embarrassed child to overcome his bashfulness and emotional disturbance, so that he may carry on his work and play with other people more happily and efficiently.

"3. Teachers should help their pupils to establish habits of intellectual honesty; to meet problems squarely and not to dodge the issue.

"4. The habit of concentrating on the present task is one which should be encouraged. Teachers should help their pupils to learn how to work successfully and efficiently. A certain amount of physical and mental work is healthful. Much unhappiness and mental distress come both to children and adults, from inability to work successfully.

'Children should not be lied to concerning important matters, especially about the matter of sex. The lying and deceit are soon discovered, and the experience is exceedingly bad for the child. Much of the unhappiness, worry, and failure at school, and the nervous illnesses of young adolescents, as well as the nervous and mental breakdowns of later life, are due to the misunderstanding of these matters that has been brought about by the lying and deceit of others. It is of very great importance that this be avoided. The questions of a child along these lines should be answered honestly and without embarrassment, in accordance with the ability of the child to understand.'—(Mental Hygiene and Childhood, Frankwood E. Williams.)

"5. Children should be encouraged to find a real solution to each problem that faces them, to meet their problems by activity instead of day-dreaming. The day-dreaming is not harmful if it issues in activity, but excessive day-dreaming which leads nowhere is undesirable.

"6. The teacher should make every effort to keep the children from developing a feeling of inferiority. Each child should have a chance to succeed at something; constant failure establishes the habit of failing, and an almost insurmountable obstacle of discouragement or indifference. Teachers should adjudge success upon the basis of effort.

"7. Encourage activities which inherently emphasize the desirable qualities, e.g., cooperative sports, school papers, student government, civic activities, hobbies, development of special talents and abilities, scouting activities.

"8. Encourage socially useful activities, and the development of interest in other people's welfare.



"9. The adolescent age is characterized by a combination of emotional instability and increasing independence which often results in what appears to be perfectly unreasonable behavior. It is worth the teacher's while to attempt to understand all such occasions, and herself to be not only reasonable, but intelligently constructive in dealing with her pupils at such times.

"To sum up, habits of truthfulness and honesty, cheerfulness, unselfishness, helpfulness, sociability, courage, persistence, and resourcefulness should be among those most emphasized.

"Applied to health education activities, these mean that:

"1. Selection of subject matter should emphasize the wholesome, objective aspects of health rather than the introspective, pathological or morbid.

"2. Activities should be conducted so as to obtain the most desirable by-products in attitudes and emotional habits. 'Whole-hearted, purposeful activity carried out in a social environment,' i. e., the 'project method,' promises to be one of the most healthful ways of carrying on school activities.

"3. A part of every teacher's preparation should be such study of child psychology and physiology as will help her to understand her pupils.

"The child's early years should be devoted primarily to establishing health habits, learning simple rules and developing an attitude of self control and a feeling of responsibility for his own health conduct."

S

COLORADO STATE TEACHERS COLLEGE

Suggestions—

Suggestions—

## PART II

## KINDERGARTEN, GRADES I, II, III

## Individual Health Problems:

In the early primary grades, daily inspection shows the progress of the children in establishing habits of cleanliness.

In these grades, no definite time is set aside for health education instruction. The aim is to make health habits and attitudes the outcome of every activity. The knowledge acquired is used as a basis of reading and language lessons. The children are weighed each month and the figures obtained used for simple problems in arithmetic.

## I. Personal Cleanliness

## A. Hands

## 1. Activities

## a. Inspection of hands

Demonstration of best way for washing hands clean and for cleaning nails.

One child with soiled hands washes in cold water and wipes on clean towel. Another washes in cold water and soap, then wipes hands. A third washes hands in warm water and soap, then wipes hands on towel. Children examine hands and towel.

## b. Inspect hands before handling books or paper. Each child inspects his own hands and washes them if soiled because he wishes to keep his books clean.

## c. Time given for washing hands before lunch and after recess.

## d. Fold paper and make a nail cleaner.

## e. Demonstration—use of nail file.

## 2. Habits and Attitudes

## a. Washes hands before eating.

## b. Washes hands before handling food.

## c. Washes hands before handling clean material.

## d. Washes hands before going to bed.

## e. Washes hands after eating.

## f. Washes hands after the toilet.

## 3. Knowledge

## a. Clean hands keep toys, books, and papers clean.

## b. Clean hands keep food clean.

## c. Other people enjoy seeing clean hands.

## d. Hands should be washed with warm water and soap.

## e. Hands after washing should be thoroughly dried.

## f. Nails should be kept clean and short.

## g. Biting nails spoils the shape of fingers.

## B. Care of Skin

## 1. Activities

## a. Watch birds bathe.

## 2. Habits and Attitudes

## a. Take a cleansing bath at least twice a week.

## b. Use only individual towels and wash cloths.

## c. Face, neck, and ears are washed every day.

## 3. Knowledge

## a. A warm bath makes the skin clean.

## b. The skin must be clean to be healthy.

## c. Other people enjoy seeing clean faces, neck and ears.

## d. The air in the room is pleasanter when bodies are clean.

## C. Mouth and Teeth

1. Activities
  - a. Each child examines his own teeth in a mirror to find out whether they are clean and sound.
  - b. Demonstration—how to brush teeth. Tooth brush drill using finger or wooden tongue depressor.
2. Habits and Attitudes
  - a. Brushes teeth at least twice a day.
  - b. Each child has his own tooth brush.
  - c. Puts only proper things in his mouth.
3. Knowledge
  - a. Tooth brush should be put in the sun every day.
  - b. Teeth need good food like milk, leafy vegetables, and fruits.

## D. Care of Nose

1. Activities
  - a. Learns to blow nose gently without closing nostrils.
  - b. Learns how to cover a cough and sneeze.
2. Habits and Attitudes
  - a. Breathes with mouth closed.
  - b. Uses only his own handkerchief.
  - c. Brings to school a clean handkerchief each day.
3. Knowledge
  - a. It is polite to cover a cough and sneeze.

## E. Clothing

1. Activities
  - a. Learns how to dress himself.
  - b. Puts on and takes off rubbers.
  - c. Learns how to hang wraps on his own hook.
2. Habits and Attitudes
  - a. Hangs up his wraps on his own hook.
  - b. Is independent in caring for his own clothing at school.
3. Knowledge
  - a. Wraps and rubbers should be worn outdoors and removed when inside.
  - b. All clothing should be kept clean.
  - c. Clothes should be kept fastened.
  - d. Wet clothing should be changed or dried immediately.
  - e. Clothing should be aired at night.

## II. Food

1. Activities
  - a. Cut out and make a paper drinking cup.
  - b. Play store
    - (1) Buy food for a good breakfast.
    - (2) Buy food for a school lunch.
  - c. Play cafeteria
    - (1) Choose a good lunch.
  - d. Learns how to swat flies.
2. Habits and Attitudes
  - a. Drinks four cups of milk daily.
  - b. Eats whole cereal every day.
  - c. Eats two vegetables besides potatoes daily.
  - d. Eats fruit every day.
  - e. Eats slowly—chewing food well.
  - f. Drinks four to six glasses of water daily.

## 3. Knowledge

- a. Milk and cereals help children to grow.
- b. Milk, bread, butter, and vegetables help children work and play and keep them warm.
- c. Drinking plenty of water helps to keep children well.
- d. Food that has been on the floor or partially eaten should be thrown in the waste basket.
- e. Table silver that has been in your mouth should be put only in your own food.
- f. Eats only good food that has been kept free from flies and dust.

## III. Sleep and Relaxation

## 1. Activities

- a. Watch how and when baby brother or sister sleeps.
- b. Watch pets at home—birds, cats, kittens, dogs.  
(1) Do little kittens and puppies sleep more than cats and dogs?
- c. Learns how to rest  
Children lie on floor, tables, or chairs stretching out arms and legs and relax for five or ten minutes every day. Children are not required to close their eyes.

## 2. Habits and Attitudes

- a. Sleeps eleven hours every night.
- b. Has a regular bed-time.
- c. Sleeps with windows open.
- d. Sleeps in a quiet place.
- e. Does not want a light in the room where he sleeps.

## 3. Knowledge

- a. Sleep helps young animals and children to grow.
- b. Children rest better when they sleep with windows open.
- c. Babies and children need more sleep than grown-ups.

## IV. Safety First

## 1. Activities

- a. Dramatization of safety first activities.
- b. Pupils act as traffic cops about school buildings and yard and hall.
- c. Making of "Safety First" posters.
- d. Keeping to the right in halls and on stairways.
- e. Taking one's turn at fountain, play, etc.
- f. Handling sharp instruments carefully, as scissors, knives, etc.
- g. Picking up all articles over which one might stumble.
- h. Hurting no one's person or clothing in play intentionally.

## 2. Habits and Attitudes

- a. Keeps to the right on passageways and on highways.
- b. Looks to the left until in the middle of the street, then to the right the rest of the way.
- c. Crosses the street directly, not at right angles.
- d. Is careful in crossing car tracks.
- e. Obeys traffic laws and signals.
- f. Looks on policemen and traffic officers as friends and public servants.
- g. Awaits one's turn at ticket-windows, fountains, etc.
- h. Helps very young, very old, crippled, and blind persons when possible.
- i. Does not disturb others by loitering along streets or passageways.
- j. Does not lean too far out of windows or other openings.
- k. Does not climb about unfinished buildings.
- l. Does not hang onto vehicles or enter or leave them while in motion.

- m. Avoids getting too close to blazes, especially at a time of festivity as at Christmas and during play around a bonfire.
  - n. Picks up articles from floor or street.
  - o. Walks carefully on slippery surfaces and helps others to do so when possible.
  - p. Handles all sharp instruments, as scissors and knives, carefully.
  - q. Does not injure another person's clothing or property in play.
  - r. Knows streets, blocks, and general directions, especially those near school and home.
  - s. Avoids playing with matches, strange substances, and loose or fallen wires.
3. Knowledge
- a. Pedestrians should keep to the right in passageways and on highways.
  - b. People should look to the left until in the middle of the street, then to the right the rest of the way.
  - c. One should cross the street directly, not at right angles.
  - d. One should be careful in crossing car tracks.
  - e. One should obey traffic signals and laws.
  - f. Policemen and traffic officers are friends to the public and public servants.
  - g. One should await one's turn at ticket windows, fountains, and other public places where it is the custom to do so.
  - h. One should help very young, very old, crippled, and blind people when possible.
  - i. Loitering along streets and passageways is disturbing to others.
  - j. Leaning too far out of windows and other openings is dangerous for self and others.
  - k. To climb about unfinished buildings is unsafe and is trespassing on other's property.
  - l. Hanging onto vehicles or entering or leaving them while in motion is dangerous.
  - m. All blazes are dangerous especially at a time of festivity or play, as at Christmas or around a bonfire.
  - n. Articles should be picked up from floor or street as they may cause someone to stumble.
  - o. One should walk carefully on slippery surfaces and warn others of such danger when possible.
  - p. Sharp instruments like scissors and knives, are very dangerous if handled carelessly.
  - q. Play or pranks should not involve injury to another person's property or clothing.
  - r. To know streets, blocks, and general directions is helpful to self and others.
  - s. Playing with matches, unknown substances, and fallen wires may be most dangerous.

## V. Play Activities

### 1. Activities

- a. Plays out of doors daily.
- b. Enters into the spirit of the game.
- c. Is helpful in the game.
- d. Dresses suitably for outdoor play.
- e. Plays fair.
- f. Plays happily with others.
- g. Takes turn at selecting game.
- h. Thinks and acts quickly in response to music.
- i. Plays carefully in all indoor games.

2. Habits and Attitudes
  - a. Selects material with which he wishes to play.
  - b. Plays with the material which he selects.
  - c. Puts away the material when finished.
  - d. Waits his turn patiently.
  - e. Is congenial in the group.
  - f. Helps in group play.
  - g. Enjoys play.
3. Knowledge
  - a. Children should play out of doors rather than indoors whenever possible.
  - b. Outdoor play helps to make one strong and well.
  - c. Children should be dressed suitably when playing out of doors (not too many wraps).
  - d. Play helps children to grow.
  - e. Lights, windows, and furniture are often broken by careless indoor play.

## VI. Courtesy

1. Activities
  - a. Practices habits of courtesy in school situations.
  - b. Does things to make others happy.
  - c. Helps to settle their own quarrels.
  - d. Takes responsibility of caring for younger or weaker child on playground or on way home.
  - e. Takes responsibility for finding owner of an article found on playground or street or gives it to a person in charge of lost articles.
  - f. Shares possessions with friends.
2. Habits and Attitudes
  - a. Boys remove caps and hats in the house.
  - b. Wiping shoes or rubbers before coming into house on wet days.
  - c. Picking up objects dropped by other people for them when it is helpful to them.
  - d. Looking out for smaller children at home or at school.
  - e. Keeping feet off other's chairs.
  - f. Saying "thank you" when something is done for one.
  - g. Offering a chair to an older person or visitor.
  - h. Looking at others when speaking or being spoken to.
  - i. Not speaking when others are speaking.
  - j. Saying "Excuse me," or "Please pardon me," when passing in front of others, when a wrong has been done accidentally, and when interfering with others unintentionally.
3. Knowledge
  - a. Knows under what conditions, courtesy requires one to ask to be excused.
  - b. Knows how to excuse oneself when courtesy requires it.
  - c. Knows that boys should remove hats or caps in the house.
  - d. Knows when to say "thank you."
  - e. Knows that it is courteous to offer a chair to an older person or visitor.
  - f. Knows that other people and their things should be let alone.
  - g. Knows what to do with lost articles.

## ILLUSTRATION OF PROBLEM DEVELOPMENT

### Candy Problem

#### SECOND GRADE

This grade kept a candy chart for one week, recording on chart each day the candy each child in the grade ate. The chart also showed the kind and amount of candy, time eaten, and cost.



At the end of the study the children dramatized what they had learned about candy.

Posters were made showing

- (1) When to eat candy
- (2) How much candy to eat
- (3) What kind of candy to eat
  - (a) Wrapped candy
  - (b) Pure candy
  - (c) Small pieces
  - (d) Candies that grow—raisins, prunes, figs, dates.

The cost of candy eaten by grade one week was estimated and a poster was made showing what attractive toys could have been bought if the money had been put in the bank and spent that way.

### Dramatization

#### One Scene

**Stage:** Representation of a candy store. The candy is exposed to the dirt and flies; the floor is littered with papers and the clerk is dirty, with soiled clothes and ruffled hair.

#### Situation 1.

Two children enter. One child notices a piece of candy on the walk (supposedly in front of the store) and is going to pick it up and eat it. The other child stops him, and, after telling him that the candy has been lying on the dirty sidewalk, that ants may have walked over it, convinces him that the candy is not fit to eat and he throws it down again. They start on, then the child who threw the candy away decides not to leave the candy there for someone else to eat who might not know that it was dirty, and throws it to one side, away from the walk.

These same two children enter the store intending to buy some candy, but the store is so dirty and the candy does not look clean so they decide to go on down the street to buy their candy.

#### Situation 2.

Some more children come to the store to buy candy. They meet a little girl playing along the street and ask her to go along, but she refuses because she is saving her money to buy her mother a birthday present. They discuss saving money instead of spending it for candy. The little girl goes on down the street and the other children go on to buy their candy. One child speaks of the flies, another of his handling the candy with his hands, and they decide that they, too, will go on down the street to buy their candy.

#### Situation 3.

The clerk is worried because they will not buy his candy. He looks around his store and decides that it is pretty dirty and unattractive. He decides to clean it up, so puts a sign "Help wanted," in the window. Soon a little girl comes along and applies for the job. He hires her and tells her what to do. She cleans up the store, sweeping, dusting, swatting flies while he goes outside and cleans himself up. When he comes back on the stage he wears a white cap and apron, and is carrying some new glass candy cases, and clean wrapped candy. They arrange the store neatly, he pays his helper and she leaves.

#### Situation 4.

A group of children enter. The clerk is polite. The children think his store is clean, the candy looks good, and they buy from him. One girl buys raisins because they are good as they grow on trees. Another child buys a sack of candy and offers another a piece with his hands which he refuses and asks to be allowed to take one out of the sack himself. This he does not eat. On being asked why, he says that it spoils his dinner to eat candy before dinner. The other child decides to keep his candy until after dinner, also, as he remembers having his dinner spoiled by eating before meal time.

The storekeeper decides that it pays to keep one's store clean so that people will buy his candy.

Suggestions—

Suggestions—

**PART III****GRADES IV, V, VI****Group Health Problems**

In these grades, personal health habits are still emphasized. Health habits surveys are made during the year. The outlines for earlier grades are reviewed to meet any need found by surveys. The pupils are weighed each month; these weights are then used to help teach them the relationship between health habits and satisfactory weight. The work in the early part of the fourth grade provides the means of giving the child a broader viewpoint and of turning his attention from his own personal health problems to those of the group. More technical information is given in response to the child's felt need for knowing "why" but should not confuse him by details he cannot understand. Definite time is set aside in the daily program for health instruction. However, a definite connection and tying up of the study of health, hygiene, and geography is made throughout the intermediate grades. The child is made to feel that what he has learned in the period set aside for health instruction should carry over into all his activities.

A health habit scale forms one means of calling the attention of the pupils to their practices in health and safety habits. Only those habits are considered that can be checked at school by the pupils under the supervision of their teacher.

**Health Habit Scale**

1. Is clean and neat in appearance.
  - a. Keeps his body clean.
  - b. Has clean, well-brushed hair.
  - c. Has clean teeth.
  - d. Keeps his finger nails short and clean.
  - e. Wears clean, neat clothing.
2. Helps keep the school clean.
3. Helps take care of school property.
4. Tries to sit and stand properly.
5. Cooperates in all play.
  - a. Enjoys play.
  - b. Plays fair.
  - c. Responds to signals.
  - d. Is a good loser and a good winner.
6. Takes proper care of eyes, nose, and mouth.
  - a. Reads only in good light.
  - b. Holds his book in correct position.
  - c. Uses only his own clean handkerchief.
  - d. Covers cough and sneeze with clean handkerchief.
  - e. Puts only proper things in his mouth.
7. Tries to protect himself and others from colds.
  - a. Avoids getting near people with colds.
  - b. Stays at home when he has a cold.
  - c. Uses good judgment in wearing wraps, rubbers, etc.
  - d. Exposes himself as little as possible to wet and cold.
8. Is considerate of other people.
  - a. Is courteous.
  - b. Is cheerful.
  - c. Is truthful.
  - d. Is punctual.
9. Observes safety first rules.

## FOURTH GRADE

## I. Nutrition

## 1. Problems

- a. How can I keep up to standard weight?
- b. What is standard weight?
- c. What foods do I need to help keep my weight standard?

## 2. Activities

- a. Children are weighed every month and measured at beginning and end of year.
- b. Analyze lunches
  - (1) To classify foods.
  - (2) For vitamins.
- c. Make balanced lunch menus
  - (1) Home.
  - (2) School.
- d. Make posters.
  - (1) Food friends.
  - (2) Balanced meals.

## 3. Habits and Attitudes

- a. Eats only at regular meals.
- b. Eats meals that are well-balanced; chooses his food wisely.
- c. Eats the amount of food needed at regular meals.
- d. Has self-control to refuse foods that are not good for him.
- e. Drinks four to six glasses of water daily.
- f. Drinks at least one pint of milk daily.
- g. Drinks no tea or coffee.
- h. Thinks of cheerful things while he eats.

## 4. Knowledge

- a. Certain foods build the body by supplying different materials to the body.

## (1) Proteins—build and repair

## (a) Foods which contain protein

milk	meat	peas
cheese	fish	beans
eggs	nuts	cereals

## (2) Carbohydrates—supply heat and energy

## (a) Foods which contain carbohydrates

milk	cereals	hominy
bread	crackers	macaroni
potatoes	honey	syrup
cornmeal	rice	cornstarch
tapioca	sago	molasses
jellies	fruits	sugar

## (3) Fats—supply heat and energy

## (a) Foods which contain fat

milk	fat meats
butter	peanut butter
cheese	nuts

## (4) Minerals—build bones and teeth

## (a) Foods which contain minerals

milk	fruit
vegetables	eggs

- b. Certain foods build the body by keeping it in running order.
  - (1) Vitamines
    - (a) Foods which contain vitamines
      - milk
      - fruit—lemons, oranges, grapefruit, tomatoes, apples.
      - vegetables—green leafy vegetables
      - cod liver oil
      - eggs
    - (2) Bulky foods are body cleansers
      - whole wheat bread
      - whole cereals
      - vegetables
    - (3) Hard foods exercise the teeth
      - hard breads, zwieback, toast
- c. Certain food habits help build the body and make us grow
  - (1) Regular meals
  - (2) Well-balanced meals
  - (3) Drink
    - plenty of water
    - plenty of milk
    - no tea or coffee

## References:

- Andress and Evans, **Health and Success**, pp. 69-81, 88-96, 97-107  
**Health and Good Citizenship**, pp. 77-92  
 Jewett, F. C., **Good Health**, pp. 153-158  
 Carter, Howe, and Mason, **Nutrition and Clinical Dietetics**  
 Eddy, W. H., **Vitamine Manual**, pp. 56-61  
 O'Shea and Kellogg, **Building Health Habits**, pp. 134, 142  
**Keeping the Body in Health**, pp. 44-54  
 Ritchie and Caldwell, **Primer of Hygiene**, pp. 32-37  
 Metropolitan Life Insurance Company, **All About Milk**  
 Department of the Interior, Bureau of Education, Health Bulletin No. 11  
 (1922) **Milk and School Children**

## II. Bacteria

1. Problems
  - a. How do bacteria or germs affect my growth?
  - b. What habits should I form to avoid them?
2. Activities
  - a. Visit bakery. Note:
    - (1) Wrapped bread
    - (2) Food in cases
  - b. Visit groceries. Note:
    - (1) Candy Displays
      - (a) Wrapped Candy
      - (b) Candy in cases
      - (c) Candy not protected
    - (2) Food put up in sanitary packages
    - (3) Groceries in bulk in covered receptacles
  - c. Put sound apple touching rotten one to show how the bacteria affect the sound one.
3. Habits and Attitudes
  - a. Washes hands before every meal.
  - b. Keeps his mouth clean
    - (1) By brushing teeth.
    - (2) By keeping fingers and other objects out of mouth.

- c. Refuses to drink from cup or glass which has been used by someone else.
  - d. Never puts bread wrappers in the bread box.
  - e. When selecting food at a cafeteria, does not talk across the food.
  - f. Scalds thoroly all dishes before wiping them.
  - g. Refuses to take soft drinks or ice cream at a confectionery which does not scald its dishes.
4. Knowledge
- a. Bacteria or germs are tiny invisible plants that are found everywhere.
    - (1) Out of every 100 bacteria, 95 are good and helpful and only five are bad.
    - (2) Bacteria help make butter and cheese and give it a good taste.
    - (3) Bacteria help make the soil fertile so trees and plants will grow.
    - (4) Bacteria help make vinegar.
    - (5) Some germs are mischievous and turn milk sour, etc.
    - (6) A few bacteria are bad and make people sick.

## References :

- O'Shea and Kellogg, **Keeping the Body in Health**, pp. 248-252  
 Chambers, Mary D., **Nature Secrets**, pp. 20-23, pp. 61-69, pp. 133-142

## III. Clothing

## 1. Problems

- a. What clothing should I wear in order to keep well?
- b. How should I take care of my clothing so that I may be well and appear well-dressed?

## 2. Activities

- a. Observes the covering of animals, hair, wool, feathers, etc. Difference in summer and in winter.
- b. Finds out whether his shoes fit his feet.
  - (1) Child stands on a piece of paper and with red pencil draws an outline of his bare foot. Placing the heel of his shoe on the heel of his outline, he draws with a black pencil the outline of his shoe. Examines the two outlines.
- c. Exhibit of right kind of shoes for children.
- d. Exhibit of proper clothing.
- e. Inspection of clothing—for neatness, cleanliness, etc.
- f. Sews on missing buttons.
- g. Shines shoes.

## 3. Habits and Attitudes

- a. Assumes responsibility for wearing wraps and rubbers outdoors when needed.
- b. Assumes responsibility for removing wraps and rubbers indoors.
- c. Knows when shoes fit the feet and is unwilling to accept any others.
- d. Takes pride in keeping clothing clean and mended.

## 4. Knowledge

- a. Proper clothing helps the body keep right temperature.
  - (1) Dress very lightly in warm weather.
  - (2) Dress lightly indoors in cold weather.
- b. Clothing should be loose
  - (1) Garters
  - (2) Waist band
  - (3) Collars

- c. Clothing should be well cared for
  - (1) Day clothing should be hung up to air at night.
  - (2) Buttons should be kept sewed on.
  - (3) Shoes should be mended.
  - (4) Stockings should be aired every night.
  - (5) Stockings should be kept clean.
- d. Shoes should fit the feet
  - (1) Good shoes have low heels, broad toes, and straight inner line.

## References :

- O'Shea and Kellogg, **Building Health Habits**, pp. 190-193
- Andress and Evans, **Health and Success**, pp. 169-176
- Bigelow and Broadhurst, **Health for Every Day**, pp. 131-144
- Andress and Evans, **Health and Good Citizenship**, pp. 50-58

## IV. Shelter

- 1. Problems
  - a. In what kind of a home should I live in order to keep well?
  - b. What habits should I form in regard to heat, ventilation, and light in the home?
- 2. Activities
  - a. Draw plan of lot showing location of house, trees, and other buildings.
  - b. Draw plan of block in which your house stands.
  - c. Draw plan of sleeping room—showing location of bed and windows.
  - d. Show effect of light on sprouting potato.
  - e. Observe what styles of windows are used in the houses on your way to school.
  - f. Keep a thermometer chart of the living room for one week.
- 3. Habits and Attitudes
  - a. Watches temperature of room at home to see if it is not above 68°.
  - b. Sleeps with windows open.
  - c. Avoids drafts.
  - d. Sits with light coming over left shoulder.
  - e. Insists upon having good light on his books or work.
- 4. Knowledge
  - a. Healthful homes help to keep us well.
    - (1) Houses should be located so as to have plenty of sun and air.
    - (2) Houses should have plenty of windows.
      - (a) Every room should have an outside window.
      - (b) Electric light is the best artificial light. Why?
    - (3) Air in rooms should be fresh and odorless.
    - (4) The temperature of rooms should be between 68° and 70°.

## References :

- Andress and Evans, **Health and Success**, pp. 110-11
- Health and Good Citizenship**, Chap. XIII
- Bigelow and Broadhurst, **Health in Home and Neighborhood**, Chap. III, Chap. IV, Chap. V
- Dresslar, **School Hygiene**, pp. 140-149, 164
- O'Shea and Kellogg, **Building Health Habits**, Chap. XII



## FIFTH GRADE

## I. Colds

## 1. Problems

- a. How can we prevent colds in our room and school?
- b. Why do we wish to prevent colds? What harm are they to us?
- c. What causes colds?
- d. What should we do when we have a cold?
- e. How can we prevent the spread of colds in our room?

## 2. Activities

- a. Determine the number of children in room who have colds.
- b. Keep record of number of absences due to colds.

## 3. Habits and Attitudes

- a. Proper use of handkerchief when sneezing and coughing during a cold.
- b. Habit of keeping away from people during a cold.
- c. Habit of not using a drinking cup, towel, or handkerchief that is to be used by others.

## 4. Knowledge

## a. Colds

- (1) Are unpleasant to ourselves and other people.
- (2) Make us feel ill.
- (3) Make us susceptible to disease—tuberculosis, influenza, sinus infections, and catarrh.
- (4) May cause others to have colds.

- b. Colds are caused by germs or bacteria. These are spread by careless people who have colds.

## c. Colds may be cured by

- (1) Staying home from school. Keeping away from others.
- (2) Eating lightly.
- (3) Drinking a glass of water every hour.
- (4) Taking a mild laxative.
- (5) Keeping quiet.

## References:

Andress and Evans, **Health and Good Citizenship**, pp. 229-235.

## II. Nose, Throat, and Ear

## 1. Problems

- a. What is the proper way to take care of the nose, throat, and ear?
- b. What is the structure of the air passages of the nose?
- c. What are the common causes of trouble in these organs?

## 2. Activities

- a. Laboratory study of models showing structure of these organs.
- b. Make a list of simple statements telling how to keep nose, throat, and ears in good condition.

## 3. Habits and Attitudes

- a. Proper habits in taking care of nose, throat, and ears.
- b. Habit of reporting promptly to nurse about sore throat or earache.

## 4. Knowledge

- a. The path the air takes to the lungs.
- b. The use of lining of the air passages.

- c. Openings from air passages to ears and other parts of the body.
- d. Dangerous results of
  - (1) Neglected colds.
  - (2) Obstructions not removed promptly from nose.
  - (3) Breathing dusty or smoky air.
  - (4) Breathing air which is too dry or hot.
  - (5) Diseased tonsils.

## Reference :

Andress and Evans, **Health and Good Citizenship**, pp. 156-169

## III. Eyes

- 1. Problems
  - a. What is the proper way to care for our eyes?
  - b. What is the structure of our eyes?
  - c. How do our eyes tell us that they need care?
  - d. What are the common causes of eye trouble?
- 2. Activities
  - a. Determine the number of pupils in the room who wear glasses.
  - b. Determine the number of pupils in the room whose eyesight was reported as satisfactory in the health examination.
  - c. List causes of eye trouble among pupils in room.
- 3. Habits and Attitudes
  - a. Holding reading matter at proper distance.
  - b. Sitting when reading with light coming from left.
  - c. Resting the eyes at intervals when reading, writing, or sewing.
- 4. Knowledge
  - a. The protective coverings of the eye.
  - b. The structure of the eye.
  - c. Indications of eye strain such as squinting, frowning, headaches, inflamed eyes, blurring of eyes when reading.
  - d. Causes of eye trouble are
    - (1) Reading or doing careful work in a poor light or in dust and smoke.
    - (2) Infecting eyes by rubbing, putting hands or soiled handkerchiefs in them.
    - (3) Facing a strong light.
    - (4) Not consulting an oculist as soon as eyes hurt.

## Reference :

Andress and Evans, **Health and Good Citizenship**, pp. 156-169

## IV. Teeth

- 1. Problems
  - a. How should we care for the teeth?
  - b. What is the structure of our teeth?
  - c. How many teeth should we have?
  - d. What are the common causes of trouble with our teeth?
  - e. What causes unhealthy gums?
- 2. Activities
  - a. Prepare posters showing good and bad ways of taking care of teeth.
  - b. Prepare a mouth wash suitable for use in cleaning teeth.
- 3. Habits and Attitudes
  - a. Brushing teeth regularly after meals.
  - b. Consulting a dentist regularly for inspection and whenever a tooth aches.
- 4. Knowledge
  - a. Difference between baby teeth and permanent teeth in structure and number.
  - b. Effect of improper food, improper brushing, and neglected cavities upon teeth and gums.

- c. Causes of crooked teeth are
  - (1) Baby teeth removed too early or too late.
  - (2) Adenoids.
- d. Causes of unhealthy gums are
  - (1) Improper food and brushing of teeth.
  - (2) Fillings with rough edges.
  - (3) Collecting of tartar and food on teeth.
  - (4) Infections such as pyorrhea, abscess, gumboils.
- e. Food having mineral content such as milk, fresh vegetables, and fresh fruits should be eaten.

## References:

Metropolitan Life Insurance Company, **Care of the Teeth.**  
 Andress and Evans, **Health and Good Citizenship**, pp. 59-67.  
 O'Shea and Kellogg, **Building Health Habits**, pp. 163-172

## V. Sanitation Survey of Our School

## A. School Room

## 1. Problems

## a. Lighting

- (1) Is the window space at least one-fifth of the floor space?
- (2) Is every desk well lighted?
- (3) Are the desks so placed as never to face direct sunlight?
- (4) From which direction does the light enter the room?
- (5) Are the walls light-colored and clean?

## b. Temperature

- (1) Is there a thermometer in each room?
- (2) Is a daily temperature chart kept in each room?
- (3) Is the temperature kept between 66° and 70°?
- (4) How is the building heated?

## c. Ventilation

- (1) Does the air smell clean and fresh?
- (2) How is fresh out-door air let in?
- (3) How does stale air get out?
- (4) What makes air stale?
- (5) Is there some way for furnishing moisture to the air?  
Why do we need moisture in the air?
- (6) How can you tell whether air has sufficient moisture?  
How much moisture should air in a school room have?

## 2. Activities

- a. Measure the square units in the window space and in the floor space.
- b. Keep an hourly temperature chart.
- c. Draw a room plan showing windows and radiators.
- d. In science class, measure humidity before and after a pan of water has been left in school room.
- e. Find number of cubic feet of air per child in room.

## 3. Habits and Attitudes

- a. Keeps desk in good order without directions from teacher.
- b. Keeps floor around desk free from waste paper.
- c. Takes active part in keeping blackboards, bulletin boards, and reading table in good order.
- d. Uses sitting posture that is best suited to good light for work at desk.

## 4. Knowledge

- a. The proper temperature for working conditions in a school room.
- b. How frequently a room should be ventilated.
- c. Window space should be one-fifth the floor space of the room.
- d. The number of cubic feet of air per pupil should be about 250.
- e. Air should be in circulation in the room to maintain satisfactory working conditions.

## B. Toilets

1. Problems
  - a. Are they kept clean?
  - b. Are there sufficient facilities for washing hands?
2. Activities
  - a. Estimate the number of lavatories in relation to number of pupils using them.
  - b. Determine whether walls of toilet rooms have been marred by pupils' writing.
3. Habits and Attitudes
  - a. Throws paper toweling in proper container instead of on floor.
  - b. Takes active part in keeping walls of toilet rooms free from pencil markings.
  - c. Reports to teacher dirty condition of lavatories or toilets.
  - d. Is careful not to leave water in lavatory after washing hands.
  - e. Is careful not to waste supplies in toilet room.
4. Knowledge
  - a. Fresh air and sunlight are necessary in the toilet rooms.
  - b. Clean toilets and lavatories are healthful.

## C. Playground

1. Problems
  - a. Is it large enough for the number of pupils using it?
  - b. Is it kept clean?
  - c. What equipment does it have?
2. Activities
  - a. Measure playground for size and shape.
  - b. Make a list of equipment on playground.
  - c. Make a list of equipment not on playground that could be used.
  - d. Work out a plan for use of playground, so that all pupils will have an opportunity for play.
  - e. Work out plan for taking care of equipment so it is not lost or destroyed.
3. Habits and Attitudes
  - a. Takes care of equipment so that it is not destroyed or lost.
  - b. Helps to keep playground free from paper and thrash.
4. Knowledge
  - a. Importance of keeping in condition so that all pupils can use it.
  - b. Importance of keeping equipment in good condition.

## VI. Safety Survey of Our School

1. Problems
  - a. Are there enough exits to empty all rooms quickly in case of fire or other accidents?
  - b. Do all pupils know what to do in case of fire?
  - c. Do all the doorways in our building open outward?
  - d. Are stairways and hallways wide enough for people to pass quickly and easily?
  - e. Are all stairways and openings protected by railings?
  - f. Where do we play on the campus?
  - g. What places has Greeley provided for us to play? Does Greeley ever let us play on the streets? Should we play on the streets?
2. Activities
  - a. Determine the location of exits and fire escapes.
  - b. Measure width of hallways and stairways.
  - c. Examine the doorways to see how they are opened from the inside.
  - d. Organize a room safety committee to report on ways to prevent accidents in the school and on the playground.

3. Habits and Attitudes
  - a. Looks before going in and out of doors and does not push on stairways.
  - b. Helps very small pupils in going up and down stairways and on playgrounds.
4. Knowledge
  - a. Fire Prevention Week has been instituted because of the great loss of property and life due to fire.
  - b. Great loss of life due to avoidable accidents.
  - c. We must start now in learning how to prevent accidents.
  - d. In case of accidents on playground, call older person at once.

## VII. Food

1. Problems
  - a. What is a good yet inexpensive diet?
  - b. What is the measure of food in heat and energy in one's body?
  - c. How many calories does my body need every day?
  - d. What amounts of common foods are necessary to give 100 calories?
  - e. What are the prices of common foods per pound? What number of calories is contained in each pound?
  - f. What foods are needed for a well-balanced meal (breakfast, lunch, dinner)? Review from fourth grade.
  - g. Is my favorite menu a well-balanced meal?
2. Activities
  - a. Plan menus for the different meals of the day. Select the best ones.
  - b. Estimate the number of calories provided by the foods included in these menus.
  - c. Estimate the cost of these menus.
  - d. Plan a school lunch providing one hot dish.
  - e. Prepare the school lunch and serve it to the pupils of the grade.
3. Habits and Attitudes
  - a. Proper habits of eating school lunches as well as regular meals at home.
  - b. Desire to be healthy through eating right kinds of foods at regular times.
4. Knowledge
  - a. Understanding that a calorie is used to measure the heat energy in foods.
  - b. Kinds of foods most valuable for providing heat and energy.
  - c. What a well-balanced menu is.

TABLE I\*

Number of calories needed daily by a growing child who is of average weight for height and age:

Age	Calories per pound of body weight
1-2	45-40
2-5	40-36
6-9	36-32
10-13	34-30
14-17	30-23

TABLE II\*

Number of hundred-calorie portions needed by children of varying ages:

Age	Boys	Girls
Under 2	9(00)-12(00)	9(00)-12(00)
2-5	10(00)-15(00)	10(00)-15(00)
5-9	13(00)-19(00)	12(00)-18(00)
9-12	17(00)-24(00)	15(00)-20(00)
12-14	23(00)-30(00)	19(00)-23(00)
14-16	26(00)-35(00)	21(00)-25(00)

\*Rose, Mary Swartz, **Feeding the Family.**

TABLE III\*

Quantity of common foods required to give one hundred calories.

## Bread—

White, two slices, 3 in. x 3½ in. x ½ in.  
 Whole Wheat, two slices, 2½ in. x 2¾ x ¼ in.

## Cereals—

Cornflakes .....	1¼ cups	Grape-nuts .....	3 tbsp.
Oatmeal, cooked.....	1 cup	Puffed rice.....	1½ cups
Puffed Wheat.....	1½ cups	Rice, steamed.....	¾ cup
Wheat, shredded .....	1 biscuit	Cream of Wheat	

## Dairy Products—

Butter .....	1 tbsp.	Buttermilk.....	1⅛ cup
Cheese (American).....	1⅛ in. cube	Milk .....	⅝ cup
Cheese, Cottage.....	5½ tbsp.		

## Fruits—

Applesauce .....	⅝ cup	Banana .....	1 large
Cantaloupe .....	1 melon, 4½ in. diam.		
Oranges .....	1 large		
Peaches .....	3 medium		
Peaches, canned .....	2 large halves, 3 tbsp. juice		
Pears .....	2 medium		
Apricots .....	3 medium		
Apple.....	1 large		
Raisins .....	¼ cup		
Raspberries .....	1½ cups		
Strawberries .....	1⅓ cups		

## Meats—

Steaks (Beef) .....	1 slice 2 in. x 1½ in. x ¾ in.
Bacon .....	4-5 small slices
Lamb .....	1 chop, 2 in. x 2 in. x ½ in.
Pork .....	1 chop, 2 in. x 2 in. x ½ in.

## Nuts—

Almonds .....	12-15 nuts
Brazil .....	2 nuts
Peanuts .....	20-24 single nuts
Peanut Butter .....	2½ tsp.
Pecans .....	12 meats
Walnuts, English .....	16 meats

## Pies—

Apple .....	Section 1½ in. at circumference
Custard .....	Section 2 in. at circumference
Lemon .....	Section 1 in. at circumference
Mince Meat .....	Section 1 in. at circumference

## Vegetables—

Asparagus, fresh .....	20 large stalks
Beans, baked .....	½ cup
Lima Beans, fresh.....	½ cup
Beets .....	4 beets 2 in. diam.
Cabbage, shredded .....	5 cups
Carrots .....	4-5 young carrots, ¾ in. 1
Cauliflower .....	1 small head
Corn .....	½ cup
Lettuce .....	2 large heads
Peas .....	¾ cup
String Beans .....	10 tbsp.
Potatoes, sweet, baked .....	½ medium
Potatoes, white, baked.....	1 medium
Potatoes, white, creamed .....	⅔ cup
Spinach, boiled .....	2½ cups
Tomatoes .....	1¾ cups
Onions .....	¾ medium

\*Note: Taken from "Feeding the Family"—Mary Swartz Rose.

TABLE V  
Food Values and Costs

	Costs per Pound as Purchased, in Cents	Costs per 100 Calories as Pur- chased, in Cents	Calories Purchased for Five Cents
Rolled oats .....	5	.28	1811
Corn meal .....	5	.31	1620
Beans, dry white.....	9	.58	869
Bread, white .....	9	.75	666
Rice .....	12	.75	663
Potatoes, Irish .....	4	1.36	369
Butter .....	52	1.49	336
Cheese .....	54	1.71	293
Potatoes, sweet .....	10	2.18	230
Milk, whole .....	7	2.26	221
Bananas* .....	7	2.33	214
Mutton, hind quarter.....	30	2.43	206
Corned rump .....	32	2.68	167
Onions .....	7	3.42	147
Mackerel .....	12.5	3.42	146
Beef ribs .....	40	3.53	142
Lamb, hind quarter.....	41	4.16	120
Cod, dressed .....	9	4.19	119
Cabbage .....	5	4.35	115
Beef, round, medium.....	39	4.38	114
Apples .....	10	4.55	110
Squash .....	5	4.76	105
Haddock .....	8.5	5.15	97
Beans, string .....	10	5.56	90
Beets .....	10	5.87	85
Beans, fresh lima.....	15	5.89	85
Grapes .....	20	5.97	84
Eggs, uncooked .....	40	6.30	79
Oranges .....	12	7.06	71
Veal cutlets .....	65	9.41	53
Flounder .....	12.5	10.85	46
Strawberries .....	23	13.15	38
Oysters, solids .....	45	13.41	37
Tomatoes .....	15	15.80	32

\*Bananas calculated on the basis of 4.27 pounds to the dozen.

Note—Taken from "The Story of the Banana."

References:

Address and Evans, **Health and Good Citizenship**, pp. 77-94

Bigelow and Broadhurst, **Health in Home and Neighborhood**, pp. 1-70

VIII. Pure Water

1. Problems

- Where are the drinking fountains in our building? on the campus? in Greeley?
- In each place are there enough?
- Where does our water come from?

2. Activities

- Survey of water supply of homes of children in grade.  
Wells—city water.
- Survey of water supply for Greeley.

3. Habits and Attitudes

- When hiking or camping—desires to know source of water before drinking it.
- Insists upon clean water for drinking, bathing, and swimming.
- Drinks 4-6 glasses water daily.

## 4. Knowledge

## a. Necessity for pure water

- (1) For drinking.
- (2) For bathing.
- (3) For washing dishes.
- (4) For swimming—in rivers, lakes, public pools, sea.

## b. Source of water

- (1) Underground water
  - (a) Wells—cisterns, artesian, driven.
  - (b) Spring.
- (2) Surface water
  - (a) Rivers and lakes.
  - (b) Melting snow and glacier.
  - (c) Reservoirs.
- (3) Rain water

## c. Diseases spread by impure water as typhoid.

## d. Purifying water.

- (1) Natural purification as in well water and springs.
- (2) Artificial purification
  - (a) Chemical as chlorine and iodine.
  - (b) Mechanical as filtering or boiling.

## e. Keeping water pure.

- (1) Piping
  - (a) Clean pipes.
  - (b) Non-leaking.
- (2) Storage
  - (a) Wells.
  - (b) Cisterns.
  - (c) Springs.
  - (d) Reservoirs.
  - (e) Tanks and standpipes.
- (3) Home and school
  - (a) Clean water taps.
  - (b) Drinking fountains—proper use.
  - (c) Buckets, bottles, jars.

## References:

Andress and Evans, **Health and Good Citizenship**, pp. 282-289  
**Health and Success**, pp. 88-96

Bigelow and Broadhurst, **Health in Home and Neighborhood**, pp. 71-138

## IX. Pure Milk

## 1. Problems

- a. Why should we insist upon pure clean milk?
- b. What is the value of milk as a food?
- c. How should we take care of milk after the dairyman has delivered it?

## 2. Activities

- a. Survey of milk supply in homes of children in grade and care of milk in the home.
- b. Visit to a dairy.
- c. Visit to a creamery.

## 3. Habits and Attitudes

- a. Drinks at least a pint of milk daily.
- b. Brings milk in from porch early in morning and keeps it in a cool place.
- c. Washes caps or covers of bottles before removing milk from bottle.



4. Knowledge
  - a. Importance of milk as a food. Review Fourth Grade outline.
  - b. Source of supply
    - (1) Family cow or goat.
    - (2) Dairy.
    - (3) Condensed and evaporated milk.
    - (4) Powdered milk.
  - c. Diseases spread by impure milk
    - (1) Typhoid.
    - (2) Tuberculosis.
    - (3) Scarlet fever.
  - d. Keeping milk pure
    - (1) Watching herd
      - (a) Correct food.
      - (b) Water.
      - (c) Clean stables.
      - (d) Clean equipment.
      - (e) Clean cows.
      - (f) Clean milkers.
      - (g) Free from ticks, parasites, etc.
      - (h) Free from disease.
      - (i) Tuberculosis test.
    - (2) Keeping milk fresh
      - (a) Clean
      - (b) Cool
      - (c) Pasteurization

## References :

- Metropolitan Life Insurance Company—**All About Milk**  
 Bigelow and Broadhurst, **Health for Every Day**, pp. 171-173  
 Address and Evans, **Health and Good Citizenship**, pp. 290-298

## X. Some Insect Carriers of Disease

## A. House Fly

1. Problems
  - a. Why do we have flies?
  - b. What harm do flies do?
  - c. Where do we find breeding places in Greeley?
  - d. How can we help get rid of flies in Greeley?
2. Activities
  - a. Make or show models of fly traps.
  - b. List places in school district which may be breeding places of flies.
3. Habits and Attitudes
  - a. Is interested in cleaning up breeding places for flies.
  - b. Helps keep things clean so flies cannot find a breeding place.
4. Knowledge
  - a. Life history or stages in growth of fly.
  - b. Breeding places of fly.
  - c. Flies are of harm because they
    - (1) Annoy people.
    - (2) Spread disease.
    - (3) Contaminate food.
    - (4) Make things dirty.

## References :

- O'Shea and Kellogg, **Building Health Habits**, pp. 198-209

## B. The Mosquito

## 1. Problems

- a. Why do we have mosquitoes?
- b. What harm do they do?
- c. Where do they breed in Greeley?
- d. How can we help get rid of them in Greeley?
- e. What part have they played in our history?

## 2. Activities

- a. List places in Greeley where mosquito breeds.
- b. Show in science laboratory how use of oil destroys breeding place.

## 3. Habits and Attitudes

- a. Keeps all rubbish such as open water barrels, tin cans, etc., away so mosquitoes will not breed there.
- b. Prevents formation of pools of stagnant water.
- c. Keeps surface of such pools of stagnant water as are necessary covered with oil.
- d. Puncture cans, buckets, etc., before throwing them away.
- e. Keep weeds cut on your own lot and on vacant lots and road-sides.

## 4. Knowledge

- a. Learns life history of mosquito.
- b. Learns harm done by mosquito such as spreading malaria and yellow fever.
- c. Studies life of General Gorgas and Dr. Walter Reed in connection with history and geography.

## Reference:

O'Shea and Kellogg, **Building Health Habits**, pp. 210-224

## SIXTH GRADE

## I. Our Health Standing

## 1. Problems

- a. What is my weight?
- b. How does it compare with that of the other boys and girls of my age?
- c. How much should I weigh?
- d. What is my score in the hand grip test and in chinning the bar?

## 2. Activities

- a. Health examination.
- b. Measurement of height and weight.
- c. Ability tests; spirometer, hand grip, chinning bar.

## 3. Habits and Attitudes

- a. Regular time for health examination.
- b. Desire for physical fitness.

## 4. Knowledge

- a. Correct weight for given height and age.
- b. Relationship of eating and of school lunch to weight.

## References:

- Andress and Evans, **Health and Good Citizenship**, pp. 365-367  
 Bigelow and Broadhurst, **Health for Every Day**, p. 100  
 Hallock and Winslow, **Land of Health**, p. 200  
 O'Shea and Kellogg, **Keeping the Body in Health**, pp. 279-280  
 Payne, **We and Our Health**, Book III, p. 166  
**We and Our Health**, Book IV, p. 195

## II. Prevention of Diseases

## A. What is being done in Greeley now?

1. Problems
  - a. Why are the restaurants downtown placarded with inspection cards?
  - b. What is the City Board of Health? What is its work?
  - c. Are the laws well enforced which help keep us well?
  - d. How do we guard against contagious diseases in our school?
  - e. How does our grade compare in absences with the other grades?
2. Activities
  - a. A visit to the city public health office.
  - b. Plotting of curve of absences in room due to illness.
  - c. To find out what the city health department does to insure pure water, pure food, and satisfactory eating houses.
3. Habits and Attitudes
  - a. Personal responsibility for caring for cleanliness of streets, public buildings, and for taking care of garbage in mountains or around wells or houses.
4. Knowledge
  - a. The laws of city or state regarding public health.
  - b. How these laws are enforced.

## Reference :

Andress and Evans, **Health and Good Citizenship**, pp. 102-112, pp. 206-212, pp. 236-344

## B. How the past has helped us

1. Problems
  - a. What contagious diseases do we have?
  - b. How have we learned to control them?
  - c. Why are they not so fatal now as formerly?
  - d. How have we learned to keep these diseases from spreading?
  - e. What men have done valuable work or made important discoveries about these diseases?
2. Activities
  - a. Find out the cases of contagious diseases the pupils know of as occurring within last year.
  - b. Find out how we prevented these diseases from spreading.
  - c. Study of lives of Pasteur, Trudeau, Reed, Jenner, Lister.
3. Habits and Attitudes
  - a. Desire to observe quarantine rigorously.
  - b. Habit of consulting a doctor without delay when ill in times of epidemic.
  - c. Epidemics of children's diseases can be prevented.
  - d. Appreciation of work done by scientists in the past in determining the causes of diseases.
4. Knowledge
  - a. History of contagious or infectious diseases, such as: tuberculosis, scarlet fever, diphtheria, yellow fever, smallpox, typhoid fever.
  - b. How to prevent these diseases.

## References :

Andress and Evans, **Health and Good Citizenship**, pp. 212-229  
Metropolitan Life Insurance Company, Series of booklets, **Health Heroes**

## III. The Circulatory System

1. Problems
  - a. Of what is the blood composed?
  - b. What is the work of the blood?
  - c. What organ controls circulation?

- d. What are the parts of the heart?
  - e. What vessels carry blood and what is their work?
  - f. How does the blood circulate?
  - g. How is the blood purified?
  - h. Who discovered the facts about the circulation of the blood?
  - i. How can we have a healthy heart and circulatory system?
  - j. What is lymph? What relation does it have with the circulation of blood?
2. Activities
    - a. Examine model of the heart.
    - b. Make a diagram of the circulation of the blood.
    - c. Find out what effect exercise has on the heart and the circulation.
    - d. Count pulse before and after exercise.
    - e. Study the life of Harvey.
  3. Habits and Attitudes
    - a. Appreciation of the work done by Harvey.
    - b. Desire to have a healthy heart and circulation.
    - c. Habit of consulting a doctor for treatment in case of heart diseases.
  4. Knowledge
    - a. The important facts concerning the circulatory system including the lungs.
    - b. Knowledge of how to have a healthy heart.
    - c. What effect does the exercise have upon circulation?
    - d. Knowledge of the important facts of Harvey's life and work.
    - e. The number of deaths due to heart diseases.
    - f. The structure and use of the lymphatic system.

## References:

- Andress and Evans, **Health and Good Citizenship**, pp. 102-112  
**Health Education**  
 Emerson and Betts, **Hygiene and Health**, pp. 79-84, 95-99  
 Ritchie, **Primer of Sanitation**, p. 208  
 Hutchinson, **A Handbook of Health**, pp. 108-129  
 Blount, **Health**, pp. 112-118  
 Ritchie, **Primer of Physiology**, pp. 39-51  
 Emerson and Betts, **Physiology and Hygiene, Book Two**, pp. 90-114

## IV. The Digestive System

1. Problems
  - a. How is our food made a part of our body?
  - b. What can we do to aid digestion?
2. Activities
  - a. Make a list of foods which digest easily.
  - b. Make a list of foods which are hard to digest.
  - c. Tabulate the length of time it takes certain foods to digest.
  - d. Make a list of health habits which will aid the digestion of food and the elimination of waste.
3. Habits and Attitudes
  - a. Desire to aid digestion by observing careful eating habits.
  - b. Desire to have good health thru the proper elimination of waste.
4. Knowledge
  - a. Organs of digestion and elimination.
  - b. The digestive juices.
  - c. The process of digestion and elimination.
  - d. How we can aid the digestion of food and the elimination of waste.

## References:

- Hutchinson, **A Handbook of Health**, pp. 4-20  
 Ritchie, **Primer of Physiology**, pp. 145-156  
 Blount, **Health**, pp. 100-111  
 Andress and Evans, **Health and Good Citizenship**, pp. 68-75  
 Emerson and Betts, **Physiology and Hygiene, Book II**, pp. 184-191

## V. The Bony and Muscular Framework of the Body

1. Problems
  - a. What constitutes good posture?
  - b. How can we have good posture?
2. Activities
  - a. Collecting pictures of examples of good and bad posture.
  - b. Use of models or pictures to illustrate the bony framework.
  - c. Use of models to illustrate good posture.
3. Habits and Attitudes
  - a. Desire to have good posture.
  - b. Desire to have a well-formed body.
4. Knowledge
  - a. How we can have good posture.
  - b. How we can have healthy bones.
  - c. The important parts of the body framework.
  - d. The function of the bones.
  - e. The structure of the bones.

## References:

- Andress and Evans, **Health and Good Citizenship**, pp. 23-29, 42-49  
 Ritchie, **Primer of Physiology**, pp. 16-38  
 Hutchinson, **A Handbook of Health**, pp. 202-215  
 Emerson and Betts, **Physiology and Hygiene**, pp. 1-48  
**Hygiene and Health**, pp. 100-106

## VI. The Nervous System

1. Problems
  - a. How can I have a healthy mind?
  - b. How can I develop good habits?
2. Activities
  - a. List habits that make our work better.
  - b. List habits that make us good playmates.
3. Habits and Attitudes
  - a. To form good habits of living.
  - b. To break bad habits of living.
4. Knowledge
  - a. How to have good habits of work and play.
  - b. Of what the nervous system is composed.
  - c. How the nervous system works.
  - d. How to care for the nervous system.

## References:

- Emerson and Betts, **Physiology and Hygiene, Book Two**, pp. 56-89  
 Andress and Evans, **Health and Good Citizenship**, pp. 142-155  
 Ritchie, **Primer of Physiology**, pp. 91-108  
 Hutchinson, **A Handbook of Health**, pp. 216-227, 235-240  
 Emerson and Betts, **Hygiene and Health**, pp. 1-7

## VII. The Ductless Glands

1. Problems
  - a. What causes some people to become giants?
  - b. Why are some people dwarfs?
2. Activities
  - a. Collect pictures and articles relating to persons suffering from diseases of the ductless glands.

3. Habits and Attitudes
  - a. Desire to avoid diseases due to poor functioning of the ductless glands.
  - b. Desire to eat food which would aid the glands in functioning properly.
  - c. Habit of consulting a physician in case of unnatural growth.
4. Knowledge
  - a. The names and location of the important glands.
  - b. The function of each gland.
  - c. How to keep the glands healthy.

## References:

Andress and Evans, **Health and Good Citizenship**, Chap. XI  
 Blount, **Health**, pp. 36-37  
 Ritchie, **Primer of Physiology**, pp. 244-252

## VIII. How to be Attractive

1. Problems
  - a. What constitutes an attractive appearance?
  - b. How can I have an attractive appearance?
2. Activities
  - a. Pictures to illustrate persons who are attractive.
  - b. Keeping of charts as a result of health inspection by nurse or teacher.
3. Habits and Attitudes
  - a. Desire to be clean and neat.
  - b. Desire to be attractive.
4. Knowledge
  - a. Factors that make for an attractive appearance.
  - b. How to be attractive
    - (1) How to care for the skin.
    - (2) Appropriate clothing to wear, and how to care for it.
    - (3) How to care for the nails.
    - (4) How to care for the hair.
    - (5) How to care for the teeth.

## References:

Andress and Evans, **Health and Good Citizenship**  
 Emerson and Betts, **Hygiene and Health**, pp. 113-117, 118-123, 140-145,  
 146-151, 152-157  
 Bigelow and Broadhurst, **Health for Every Day**, pp. 131-160

## IX. How to prevent accidents

1. Problems
  - a. What are the most common accidents?
  - b. How may accidents be prevented?
2. Activities
  - a. List accidents which the pupils have read or heard about.
  - b. Find out which accidents cause the most deaths.
  - c. List accidents occurring in our school or city.
  - d. Class demonstration of right and wrong types of acts in which safety is involved: as crossing streets, going up and down stairways, riding bicycles, using the playground, etc.
3. Habits and Attitudes
  - a. Desire to avoid accidents.
  - b. Desire to keep others from being injured.
4. Knowledge
  - a. How many deaths due to accidents occur in the United States each year.
  - b. Which accidents cause the most deaths.
  - c. How accidents may be prevented.
  - d. Laws regulating the riding of bicycles on streets and highways.
  - e. Laws regulating crossing of streets.

## References:

- Health Education**, p. 18  
 Andress and Evans, **Health and Good Citizenship**, pp. 170-181  
 Hutchinson, **A Handbook of Health**, pp. 314-330  
 Bigelow and Broadhurst, **Health for Every Day**, pp. 1-35  
 O'Shea and Kellogg, **Building Health Habits**, pp. 258-262

## X. How to avoid accidents common to winter.

1. Problems
  - a. What are the accidents common to winter?
  - b. How can we avoid these accidents?
2. Activities
  - a. List accidents.
  - b. List accidents occurring in our school.
3. Habits and Attitudes
  - a. To avoid accidents.
  - b. To keep other people from being injured.
4. Knowledge
  - a. Accidents common to winter
    - (1) Cars skidding on slippery streets.
    - (2) Falling on slippery sidewalks.
    - (3) Frostbite.
    - (4) Hurting people with snowballs.
    - (5) Fires caused by overheated stoves or furnaces.
  - b. How to prevent these accidents
    - (1) Ashes on sidewalk.
    - (2) Driving with chains on car.
    - (3) Regulating fires.
    - (4) Not skating or coasting on sidewalks or used streets.
    - (5) Not making hard snowballs.
    - (6) Protecting body from cold.

## References:

- Payne and Schroeder, **Health and Safety in the New Curriculum**  
 Emerson and Betts, **Hygiene and Health**, p. 184  
 Bigelow and Broadhurst, **Health for Every Day**, pp. 1-35

## XI. How to administer first aid treatment

1. Problems
  - a. What should we do when an accident occurs?
  - b. What materials are necessary to have?
2. Activities
  - a. Demonstration of first aid work on pupils in classroom.
  - b. Demonstration of first aid treatment by a trained person.
3. Habits and Attitudes
  - a. In case of injury call on older person first.
  - b. Desire to know how to give first aid treatment.
4. Knowledge
  - a. Knowledge of how to apply first aid in case of
    - (1) Drowning
    - (2) Clothing on fire
    - (3) Nose bleed
    - (4) Wounds
    - (5) Woodtick bites
    - (6) Bleeding from cut
    - (7) Frostbite
    - (8) Broken bones
    - (9) Poison Ivy
    - (10) Sprains and dislocations
  - b. What material to have on hand for first aid treatment.
  - c. Whom to call in case of injury.

## References :

**Boy Scout Manual**

**Girl Scout Manual, Campfire**

**Campfire Manual**

**Red Cross Handbook**

Andress and Evans, **Health and Good Citizenship**, pp. 182-189, 334-336

Ritchie, **Primer of Physiology**, pp. 22-23

Hutchinson, **A Handbook of Health**, pp. 314-330

Emerson and Betts, **Hygiene and Health**, pp. 178-184

Bigelow and Broadhurst, **Health for Every Day**, pp. 1-35

Payne, **We and Our Health**, Book II, Book III, Book IV



Suggestions—

Suggestions—

## PART IV

## BIBLIOGRAPHY

## Books for Teachers

1. Carter, H. S., Howe, P. E., Mason, H. H., **Nutrition and Clinical Dietetics**, Lea & Febiger, Philadelphia
2. Department of Interior, Bureau of Education, Health Bulletin No. 11 (1922), **Milk and School Children**
3. Dresslar, F. B., **School Hygiene**, Macmillan Company
4. Eddy, W. H., **Vitamine Manual**, Williams and Wilkins Company, Baltimore
5. Joint Committee on Health Problems in Education, **Health Education**. Prepared under the direction of Thomas D. Wood, 525 West 120th st., New York City, 1925
6. Payne-Schroeder, **Health and Safety in the New Curriculum**, American Viewpoint Society, New York
8. Wootten, K. W., **A Health Education Procedure**, National Tuberculosis Association, New York

## Bulletins for Teachers

1. Baldwin, Bird T., **Physical Growth of School Children**, University of Iowa Extension Bulletin No. 59
2. Payne, E. G., **A Complete Plan of School Instruction in Accident Prevention**, Elliott Service Company, New York City

## For Pupils

## TEXTBOOKS

1. Andress and Evans, **Health and Success**, Ginn and Company
2. Andress and Evans, **Health and Good Citizenship**, Ginn and Company
3. Bigelow and Broadhurst, **Health for Every Day**, Silver, Burdett and Company
4. Bigelow and Broadhurst, **Health for Home and Neighborhood**, Silver, Burdett and Company
5. Blount, R. E., **Health**, Allyn and Bacon
6. Chambers, Mary D., **Nature Secrets**, Atlantic Monthly Press
7. Emerson and Betts, **Hygiene and Health, Book I**, Bobbs Merrill
8. Emerson and Betts, **Physiology and Hygiene, Book II**, Bobbs Merrill
9. Hallock and Winslow, **Land of Health**, C. E. Merrill Company
10. Hutchinson, Woods, **A Handbook of Health**, Houghton Mifflin
11. Jewett, F. G., **Good Health**, Book I of Gulick Hygiene Series, Ginn and Company
12. O'Shea and Kellogg, **Building Health Habits**, Macmillan Company
13. O'Shea and Kellogg, **Keeping the Body in Health**, Macmillan Company
14. Payne, **We and Our Health**, Books I, II, III, IV, The American Viewpoint Society, Inc., New York City
15. Ritchie, **Primer of Sanitation**, World Book Company
16. Ritchie and Caldwell, **Primer of Hygiene**, World Book Company
17. Ritchie, **Primer of Physiology**, World Book Company

## Bulletins

1. Boy Scouts of America, **Boy Scout Manual**, 200 Fifth Ave., New York City
2. Camp Fire Girls, **Camp Fire Manual**, 527 Fifth Avenue, New York City
3. Girl Scouts, **Girl Scout Manual**, 527 Fifth Avenue, New York City
4. Metropolitan Life Insurance Company, posters, charts, and booklets, New York City
5. American Red Cross, **Red Cross Handbook**, Washington; D. C.

Suggestions—

Suggestions—



COLORADO STATE TEACHERS COLLEGE

# BULLETIN

---

SERIES XXVII

AUGUST, 1927

NUMBER 6

---

## High School Opportunities in Colorado

(Research Bulletin No. 12)



Department of Educational Research  
Frederick L. Whitney, Director





COLORADO STATE TEACHERS COLLEGE

HIGH SCHOOL OPPORTUNITIES  
IN COLORADO

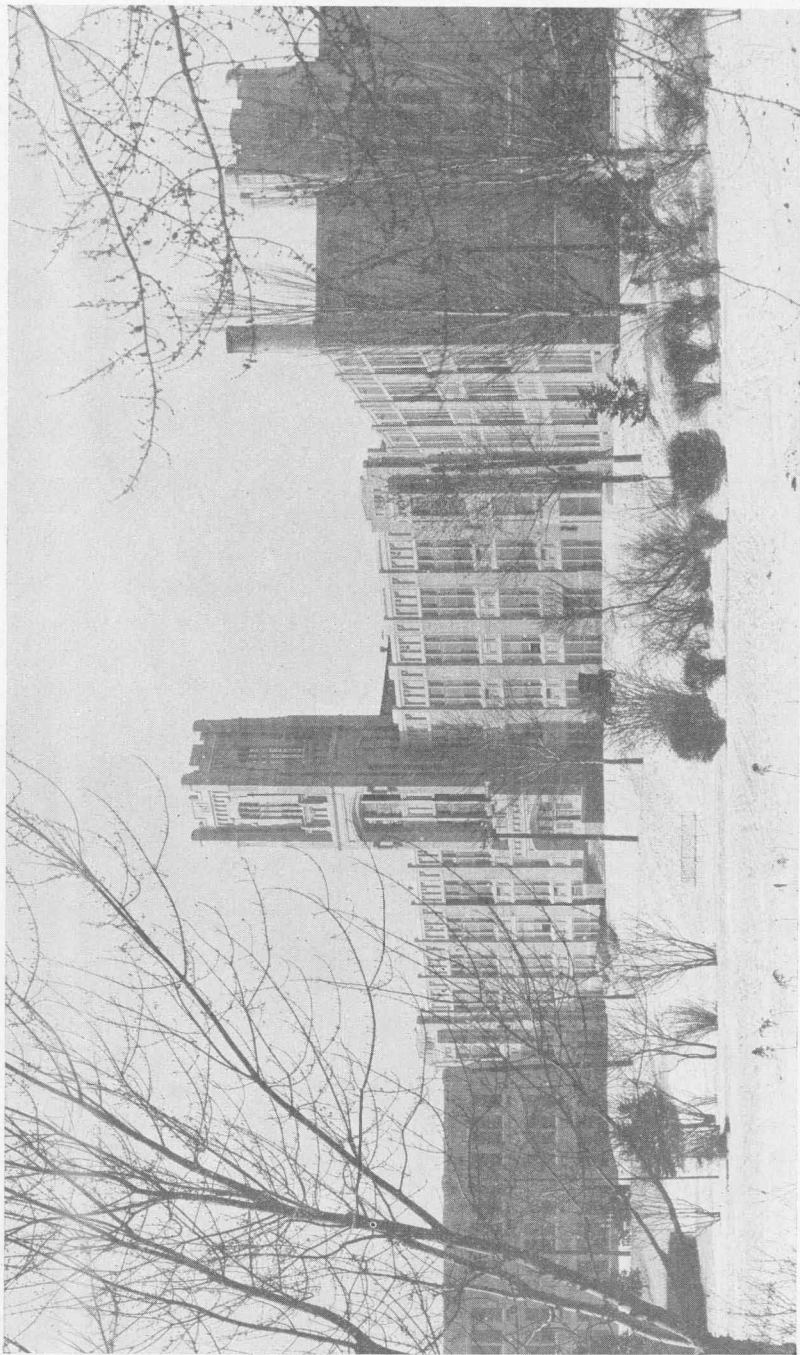
(Research Bulletin No. 12)

Published by the College  
GREELEY, COLORADO

*Price \$1.00*

---

Published monthly by Colorado State Teachers College, Greeley, Colorado. Entered as second class matter at the Postoffice at Greeley, Colorado, under Act of August 24, 1912.



West High School in Denver, Dr. Harry V. Kepner, Principal, is representative of the best type of secondary school opportunities in Colorado.

## PREFACE

During the month of February, 1926, President George Willard Frasier of Colorado State Teachers College offered the services of the Department of Educational Research of the College for a study of the selective character of high school education in Colorado.

A sum of money became available at that time from sources outside of the funds of the College which for purposes of record was handled under the name of The Colorado Research Foundation. The donors were the Educational Committee of the Supreme Council, Ancient and Accepted Scottish Rite of Freemasonry, acting under the personal direction of Stanley C. Warner, Inspector-General in Colorado. The local committee in charge consisted of Harry V. Kepner, Principal of West High School, Denver, Colorado, and President of the Board of Trustees, Colorado State Teachers College; Jesse H. Newlon, at that time Superintendent of the Denver public school system, and Charles A. Lory, President of the Colorado State Agricultural College.

The Research Committee of Colorado State Teachers College planned the investigation in the large. The personnel of the committee at that time was as follows: Mr. L. W. Boardman, Professor of Literature and English; Doctor H. S. Ganders, Professor of Educational Administration; Doctor J. D. Heilman, Professor of Educational Psychology; Doctor F. C. Jean, Professor of Biology; Doctor E. U. Rugg, Professor of Education; Doctor F. L. Whitney, Director of Educational Research, Chairman. Mr. Boardman was away from the College at the time the details of the study were planned. President Frasier, Mr. H. G. Blue, at that time Principal of the Teachers College High School, and Doctor G. C. Gamble, Professor of Education, met with the Committee and helped materially with the work.

Twelve county school superintendents of Colorado cooperated in the eighth grade study, the testing program, and the age-grade-progress checking undertaken. A group of thirty-five advanced students at Colorado State Teachers Col-

lege took part in the scoring of tests, and the classification and tabulation of material and the typing of results. Miss Jessie L. Thompson, Research Secretary, had charge of this work. Mr. Wilford H. Woody, Research Assistant, conducted the correlation studies in the investigation, which involved the finding of relationships in terms of coefficients of partial and multiple correlation of the seventh order.

The details of the data resulting from this investigation are included in 400 (c.) tables on file in the office of the Department of Educational Research, Colorado State Teachers College. The write-up in extenso covers 731 typed pages and 289 tables.

TABLE OF CONTENTS

	Page
CHAPTER I. INTRODUCTION .....	1
1. The Field of Investigation .....	1
2. Procedure and Technic .....	6
3. Brief Statement of Findings .....	9
CHAPTER II. EIGHTH GRADE FAILURES AND HIGH SCHOOL ELIGIBLES .....	11
1. The June Examinations .....	11
2. Elementary Retards .....	11
3. Secondary School Possibilities .....	17
4. Summary .....	20
CHAPTER III. THE TYPE OF YOUTH SELECTED FOR HIGH SCHOOL ATTENDANCE .....	21
1. Sex .....	21
2. Life Age .....	22
3. Native Intelligence .....	23
4. Home Background .....	23
5. School Conduct and Attitude .....	24
6. School Achievement .....	25
7. Summary .....	26
CHAPTER IV. THE EFFECT OF HIGH SCHOOL EXPERIENCE ON YOUTH ENROLLED .....	29
1. Sex .....	29
2. Life Age .....	30
3. Native Intelligence .....	31
4. Home Background .....	32
5. School Conduct and Attitude .....	33
6. School Achievement .....	33
7. Summary .....	34
CHAPTER V. AGE-GRADE-PROGRESS IN THE HIGH SCHOOL....	36
1. Life Age and Grade Location .....	36
2. Progress and Grade Location .....	38
3. Summary .....	41
CHAPTER VI. FREE HIGH SCHOOL PRIVILEGES .....	43
1. Tuition for Outside High School Attendance .....	43
2. The Ability to Offer Free High School Tuition .....	48
3. A Desirable and Possible High School Tuition Law .....	51
4. Summary .....	53
CHAPTER VII. LARGE AND SMALL HIGH SCHOOLS IN URBAN AND IN RURAL SYSTEMS .....	58
1. High School Facts .....	58
2. High School Opportunities and Size of Unit .....	61
3. Specific Efficiency Factors .....	62
4. Summary .....	70
CHAPTER VIII. TENTATIVE CONCLUSIONS .....	71
1. The Selection of Pupils for High School Attendance .....	71
2. The Progress and Success of High School Pupils .....	78
3. The Efficiency of Large and Small High Schools .....	81

## LIST OF TABLES

Table	Page
I Colorado Geographic, Industrial, and School Organization Types Included in This Investigation .....	2
II The Sampling of the Colorado Public School Situation Included in This Investigation .....	3
III The Details of Pupil Contacts Established in the State High School Survey of Colorado .....	4
IV The Form of the Chapman Home Status Scale Used in This Study .....	5
V Information about 1924-25 Eighth Grade Children (I) Who Were Not Promoted from Eighth Grade to High School at the Close of the School Year, and (II) Who Were Promoted but Are Not Now in High School.....	12
VI The Results of the June, 1925, Examination of 4056 Eighth Grade Children in the Public Schools of Eleven Colorado Counties .....	13
VII Reasons for the Non-Attendance of 312 Colorado Public School Children in Eleven Representative Counties Who Failed in the Eighth Grade Examination in June, 1925 .....	14
VIII The Present Status of 312 Colorado Public School Children in Eleven Representative Counties Who Failed in the Eighth Grade Examinations of June, 1925 .....	16
IX Reasons for the Non-Attendance of 504 Colorado Public School Children in Eleven Representative Counties Who Were Promoted to High School (June, 1925) But Are Not Now Attending .....	17
X The Present Status of 504 Colorado Public School Children in Eleven Representative Counties Who Were Promoted at the Time of the June, 1925, Examination but Were Not in High School in March, 1926.....	19
XI The Proportion of Boys and of Girls Among 24,843 Pupils in Grade One, Six, Eight, and Nine in the Public Schools of Eight Colorado Counties, 1925-26 .....	21
XII The Home Status of 675 Eighth and Ninth Grade Boys and 763 Eighth and Ninth Grade Girls in Four Types of Weld County, Colorado, Schools as Measured by the Chapman Scale, 1925-26 .....	24
XIII The Achievement of Pupils in the Elementary and the Ninth Grades of Nine Colorado Counties in Reading, Arithmetic, Natural Science, and Social Science (Composite Score of the Stanford Achievement Test, Advanced Examination, Form A), 1925-26 .....	25
XIV The Multiple Relationship of Seven Determining Variables to the Criterion, (1) School Achievement (Stanford Achievement, Advanced Examination, Form A) for Elementary and Secondary School Boys and Girls in Weld County, Colorado, 1925-26 .....	25

## LIST OF TABLES (Continued)

Table	Page
XV The Proportion of Boys and of Girls Among 6,626 Pupils in Grades Nine and Twelve in the Public Schools of Eight Colorado Counties, 1925-26 .....	29
XVI Life Age Distribution in Terms of Years of 7,189 Boys and Girls in Eight Counties of Colorado in Grades Nine and Twelve, 1925-26 .....	30
XVII Mental Age Distribution in Terms of Months of 424 Boys and 546 Girls in the Ninth and Twelfth Grades in Four Types of Weld County, Colorado, Schools, 1925-26 .....	31
XVIII The Relationship of (9) Mental Age to (1) School Achievement (Stanford Achievement, Advanced Examination, Form A) for Freshmen and Senior Boys and Girls in Weld County, Colorado, 1925-26 .....	32
XIX The Home Status of 418 Boys and 535 Girls in the Ninth and Twelfth Grades in the Over Three Teacher Schools of Weld County, Colorado, as Measured by the Chapman Scale, 1925-26 .....	32
XX Differences in Levels of School Achievement in Terms of the Composite Score of the Stanford Achievement, Advanced Examination, Form A, in Freshmen and in Senior High School Classes in Nine Colorado Counties, 1925-26 .....	34
XXI Relation of the Criterion, School Achievement, to all other variables for Ninth and Twelfth Grade Boys and Girls in Weld County, 1925-26 .....	34
XXII Life Age and Grade Location in the Ninth, Tenth, Eleventh, and Twelfth Grades of Four Types of Administrative Units in Colorado Compared with Like Data Elsewhere, 1925-26 .....	37
XXIII Grade Progress as Related to Size of Administrative Unit in the Case of Secondary Education in Colorado, 1925-26 .....	39
XXIV The Efficiency of Four Sizes of Administrative Units in Colorado in Terms of the Grade Progress of That Part of the Pupil Population Found in the Secondary Schools and on the Basis of Total School Experience Compared with Like Facts in Two Other Situations, 1925-26 .....	41
XXV The Practice of Boards of Education in 582 Districts (93 Percent of All Districts) in Eleven Counties of the State of Colorado in the Payment of High School Tuition of Pupils Who Attended Outside Their Own District, 1924-26 .....	47
XXVI The Proportion of Districts in Ten Counties of the State of Colorado That Pay the Tuition of Pupils Who Attended Outside Their Own Districts and the Annual Amount Paid Per Pupil, 1924-26 .....	48
XXVII The Economic Conditions in the 24 Colorado Counties in Which 231 Boards of Directors Were Reported as Refusing To Pay Outside High School Tuition, 1926 .....	49

## LIST OF TABLES (Continued)

XXVIII	The Possibilities for Public Education in Colorado Compared with All States, 1925-26 .....	50
XXIX	Sex Distribution of Pupils and Holding Power of County High Schools and of All Other Colorado Secondary Schools, 1926 .....	59
XXX	The Enrollment of 27,844 Public School Pupils in Grades One, Six, Eight, Nine, and Twelve in Ten Colorado Counties, 1925-26 .....	59
XXXI	Sampling Figures from Grades Six, Eight, Nine, and Twelve in a Study of Relative School Efficiency in the First Class and Third Class Districts of Ten Colorado Counties, 1925-26 .....	60
XXXII	A Comparison of All Colorado High Schools with 82 Such Schools in the North Central Association of Colleges and Secondary Schools, 1926 .....	60
XXXIII	Sex Distribution in the Senior and Junior High Schools of Colorado Compared with That for All Children of School Age, 1926 .....	61
XXXIV	The Relative Value of Seven Independent Variables as Determining the Criterion, Achievement in Terms of Educational Age, in the Upper Grade and High School Work of Weld County, Colorado, 1925-26 .....	64
XXXV	Differences Found in Seven Items of Information About High School Pupils in First and Third Class Districts of Colorado, 1925-26 .....	65
XXXVI	Differences in the Life Age and Grade Location of 12,190 Colorado Public School Children Doing Secondary Work in Grades Nine, Ten, Eleven, and Twelve in Four Sizes of School Unit, 1925-26 .....	68
XXXVII	Differences in the Rate of Grade Progress of 6,493 Colorado Public School Children Doing Secondary Work in Grades Nine, Ten, Eleven, and Twelve in Four Sizes of School Unit, 1925-26 .....	68
XXXVIII	Differences in the Efficiency of the Secondary Work in Four Sizes of School Unit in Colorado, 6,493 Pupils in Grades Nine, Ten, Eleven, and Twelve, 1925-26 .....	69



## CHAPTER I

### INTRODUCTION

The felt need for an investigation of high school opportunities in the state was rather a vague condition of unrest in the minds of leaders in business and in the schools, often present when a commonwealth is emerging from pioneer conditions. It was not based upon specific knowledge of the situation. This knowledge was desired. At the same time, inadequacies in educational legislation were recognized, in particular with regard to high school tuition; and the fact of disparities in the size of pupil groups in succeeding grades of work was well known. The donors were in particular conscious of the fact that the first year of high school (ninth grade) did not include all children enrolled the year previous. Their specific inquiry was, "What becomes of the eighth grade pupils?" The rapid increase of high school enrollment and expenditures for the country as a whole was known also. It was the desire to determine what part the state was taking in this general condition.

From the viewpoint of the College, it was thought to be desirable, not only to conduct an investigation which would aid in solving the educational problems of the home state, but to make a contribution to the country-wide question of the status of secondary education in terms of a careful checking of the situation in a representative western state.

Three reports of progress in this study have been made to the donors, in May, 1926, in November, 1926, and in January, 1927. In June, 1927, a brief statement of objectives, procedures, and generalizations was furnished to be used with the financial report to the Educational Committee of the Supreme Council.

#### 1. THE FIELD OF INVESTIGATION

As the specific purpose of this undertaking was to make as valuable a contribution as possible to the problems of secondary education in the state with time and money available, it was not practicable to confine the investigation to local conditions in any selected portion of the state nor to any single type of high school organization. On the other hand, restricted funds would not permit a complete checking of all of the 2,003 school districts in the 63 counties of the

state. Further, experience in other surveys shows that returns from carefully chosen portions of an area and population are as representative of the facts in the total situation as a complete sampling would be.

The problem, then, was to select from all counties of the state as many as could be handled in the study and to include all important geographic, industrial, and school organization types. Table I gives the final selection of the field of investi-

TABLE I

COLORADO GEOGRAPHIC, INDUSTRIAL, AND SCHOOL ORGANIZATION TYPES INCLUDED IN THIS INVESTIGATION

County and County Seat	Geographic Type and Industry	Type of High School Organization
1	2	3
1. Baca Springfield	Dry farming	Local Board Control and Union High School
2. Bent Las Animas	Irrigated crop, dry farming	County High School District
3. Boulder Boulder	Fruit, mining, beets, potatoes	Local Board Control
4. Costilla San Acacio	Mining	Local Board Control
5. Delta Delta	Fruit, cattle, mining	Local Board Control
6. Denver Denver	City	County Unit
7. El Paso Colorado Springs	Dry farming, mining	Local Board Control and Union High School
8. Garfield Glenwood Springs	Cattle, mining	County High School and Union High School
9. Las Animas Trinidad	Mining, dry farming	County High School District and Local Units
10. Logan Sterling	Beets, dry farming	County High School District
11. Routt Steamboat Springs	Farming, mining	Local Board Control and Union High School
12. Weld Greeley	Beets, potatoes, dry farming, mining	Local Board Control
13. Yuma Wray	Dry Farming	Union High School District and County High School District

gation. There are a total of thirteen counties. City and town conditions are represented in the city and county of Denver and in such municipalities as Colorado Springs, Trinidad, and smaller communities. All schools in every county are included. Dry and irrigated farming of all kinds, and mining, and grazing, all typical industries of the state, outside of urban situations, are represented. All kinds of high school organization are found in Table I also.

The important details of the school situation in each county included in the survey are given in Table II. Seventy thousand school children are represented in all types of checkings, and approximately 13,000 in the testing program.

TABLE II

THE SAMPLING OF THE COLORADO PUBLIC SCHOOL SITUATION INCLUDED IN THIS INVESTIGATION

County	Districts	Teachers	Average Daily Attendance of Pupils	Schools	Persons of School Age	Sampling	
						Age-Grade-Progress	Tests
1	2	3	4	5	6	7	8
1. Baca	64	116	1658	103	2443	(a)	(a)
2. Bent	38	90	1405	57	2479	845	500
3. Boulder	50	300	6264	69	9662	646	950
4. Costilla	14	39	877	25	3441	(a)	(a)
5. Delta	21	157	3138	37	5259	2270	636
6. Denver	1	1544	43751	1	75953	42702	1100(b)
7. El Paso	38	429	8216	48	12559	6100	2392
8. Garfield	40	127	1793	46	2842	297	450
9. Las Animas	124	402	7645	144	14109	5426	1489
10. Logan	56	235	4022	85	6767	2906	1090
11. Routt	43	127	1619	67	2569	815	321
12. Weld	135	613	12186	162	18605	7725	3118
13. Yuma	112	212	3278	126	4589	1482	832
Total	736	4391	95852	970	161277	71214	12878
Colorado	2003	9233	186166	3396	302516		
Percent	31	48	52	29	53		

a. The testing program was omitted.

b. A selected group

The details of pupil checkings are shown in Table III. Sixteen inquiries were made about the physiological, sociological, economic, parental nativity, psychological, and vocational status of each public school pupil. The first nine

of these are the elements of the Stanford Achievement Test, Advanced Examination, Form A. These give a complete answer to the question, How well is each pupil doing his school

TABLE III

THE DETAILS OF PUPIL CONTACTS ESTABLISHED IN THE STATE HIGH SCHOOL SURVEY OF COLORADO

Information groups	Number of elements	Number of sixth, eighth, ninth, and twelfth grade pupils reached in eleven counties	Number of elements scored and classified
1	2	3	4
1. Paragraph meaning	29	13,000	377,000
2. Sentence meaning	80	13,000	1,040,000
3. Word meaning	85	13,000	1,105,000
4. Arithmetic computation	47	13,000	611,000
5. Arithmetic reasoning	40	13,000	520,000
6. Nature study and science	95	13,000	1,235,000
7. History and literature	95	13,000	1,235,000
8. Language usage	60	13,000	780,000
9. Word dictation	15	13,000	195,000
10. Chapman Scale	12	13,000	156,000
11. Physiological, social, and economic status	14	13,000	182,000
12. Nativity of parents	2	13,000	26,000
13. Character rating	1	13,000	13,000
14. Multi-Mental Scale	100	13,000	1,300,000
15. Age-grade-progress status	10	70,000 (a)	700,000
16. Destination of eighth grade pupils	5	8,000 (b)	40,000
Total	690		9,515,000

a. All pupils in all schools

b. The groups of 1924-25 and 1925-26

tasks? In classifying and reporting the returns on this inquiry the total score (composite score) is given, and the nine tests are grouped as reading, arithmetic, science, and social science, and recorded in terms of educational ages. The Chapman scale<sup>1</sup> (Item 10) gives twelve points of information about the homes of the children included in the study. Table IV reproduces the scale in the form in which it was used by teachers and parents. Fourteen other facts describing the physiological, social, and economic status of pupils were furnished by parents and teachers also. The last

<sup>1</sup> Chapman, J. C. and Sims, V. M. "Quantitative Measurement of Certain Aspects of Socio-economic Status," *Journal of Educational Psychology*, September, 1925

TABLE IV

THE FORM OF THE CHAPMAN HOME STATUS SCALE USED IN THIS STUDY

COLORADO RESEARCH FOUNDATION

To the Teacher:

Please help each child answer the questions. When necessary, check the answers by oral questioning of individual pupils. **Fill out column 2 only.**

Pupil's name..... Grade..... District Number..... Date.....

1	2	3	4	5
Characteristic	Answer	Possession	Non-Possession	Given Score
1. Did your Mother attend high school?		59	43	
2. About how many books are there in your home?		60	43	
3. Do you have a piano in your home?		54	37	
4. How many magazines do you take regularly in your home?		55	39	
5. Do you have a telephone in your home?		55	42	
6. Do you have an auto other than a truck?		58	45	
7. Did your father attend high school?		57	44	
8. Is your house heated by a big furnace in the basement?		54	41	
9. Is English the only language spoken in your home?		54	41	
10. Do you have a Victrola or Edison in your home? (a)		53	43	
11. How many daily papers do you regularly take in your home?		53	47	

a. This means **any** phonograph

11a. Have you a radio in your home?.....

school census returns were examined to determine the nativity of the father and the mother of each child. Each teacher gave a rough character judgment for each child in terms of his general school attitude and conduct. McCall's Multi-Mental Scale, Elementary School, Form 1, a divination test, was used as a measure of native intelligence. As a measuring tool, the scale is economical of both time and

money and has a high validity. ( $r$  is 0.904 with a criterion consisting of the National Intelligence Test, Scale A, the Binet-Simon Scale, and the Multi-Mental Scale with one seventh weight each.) The age-grade-progress blanks secured from each pupil his name, sex, date of birth, and the grade of progress he had reached in each year of school attendance. A rating of the business of the fathers of the pupils included in the study was made in terms of the Barr Occupation Scale,<sup>2</sup> but the preponderance of a single occupation, that of farming, made the arrays of little value in the correlation calculations. Finally, (Item 16) teachers and parents reported for each eighth grade pupil for two successive school years his name, his district, where he was at the time of checking, what he was doing, his earnings, if he was at work, and the reasons for non-attendance, if out of school. In addition to information bearing directly on the status of pupil groups, each county superintendent made contact either by telephone or by letter with the secretaries of all school boards in his county asking for a report for two successive years of the number of pupils attending high school in outside districts whose tuition was paid by the home board and the total amount of high school tuition paid in that way.

## 2. PROCEDURE AND TECHNIC

The Research Committee of Colorado State Teachers College drew up a tentative plan for the investigation which would provide for the specific inquiry of the donors and for an interpretation of findings on this inquiry from a background of facts about the status of school enrollment in general and racial, psychological, and socio-economic conditions among representative pupil groups in particular. This plan included (1) a checking of the eighth grade groups of the school year 1924-25, (2) an intensive study of sixth, eighth, ninth, and twelfth grade groups as well as the age-grade-progress status of all pupils in representative situations during the school year, 1925-26, and (3) a discovery during the first school months of 1926-27 of all eighth grade pupils of the previous school year in terms of their educational and vocational destination.

The plan as finally accepted by the donors appears in the following outline:

<sup>2</sup> Barr, F. C. *A Scale for Measuring Mental Ability in Vocations and Some of its Applications*. Unpublished Master's Thesis, Leand Stanford Junior University, 1918

A PLAN FOR A STUDY OF OPPORTUNITIES FOR  
SECONDARY EDUCATION IN COLORADO

## A. ULTIMATE PURPOSE

- I. To determine the selective character of secondary education in the state of Colorado
- II. To use the facts revealed in planning for a wider offering of high school privileges for the youth of Colorado
- III. To work toward mandatory legislation affecting equality of high school privileges in Colorado

## B. PROXIMATE PURPOSE

- I. To review other studies of the high school population for comparison with findings in Colorado
- II. To review mandatory and permissive legislation in Colorado affecting universality of high school privileges
- III. To determine the legal basis of free secondary education in other states
- IV. To make a descriptive tabulation of all types of high schools in Colorado
- V. To survey the practice among boards of education in Colorado under the present legislation permitting the payment of the tuition of pupils attending in other districts
- VI. To determine the educational and vocational destination of Colorado public school children completing the elementary school course
- VII. To compare the public elementary and secondary school pupils of Colorado in the following variables:
  1. Racial
    - a. Nativity of parents
    - b. Nationality origin of American born parents
  2. Psychological
    - a. Life age
    - b. Native capacity (general intelligence)
    - c. Character traits (general intelligence)
    - d. School advancement (age-grade-progress-facts)
    - e. Schol achievement (educational age)
  3. Socio-economic
    - a. Occupation of father (Barr scale)
    - b. Home status (Chapman scale)
    - c. Vital statistics
      - (1) Size of family
      - (2) Relative age of children
      - (3) Integrity of family
    - d. Distance from high school
    - e. Density of population
    - f. Religious affiliation
    - g. Physical development

## C. PROCEDURE

- I. An immediate trial of the tentative plan in Weld County. The County Superintendent is interested as a prospective master of Colorado State Teachers College.
- II. In the fall of 1926, a location of every eighth grade pupil of 1925-26 in high schools or in industry
- III. Report and publication—during the summer of 1926, a mimeographed report of progress can be made, and very probably a final report can be published in the winter of 1926

It is thought that the selection of counties for cooperation in the investigation makes the study a state survey of high school opportunities. Every principal variety of economic condition, both rural and urban, is included as well as every type of high school organization and control.

The list of items of procedure finally decided on for use in each county was as follows:

- I. Preliminary investigation
  1. Location of each eighth grade pupil of 1924-25 in school or in industry
    - a. Failures
    - b. Promoted to ninth grade
    - c. Report of total eighth grade enrollment, number examined at the close of the school year, and number failed
- II. Report of payment of high school tuition by boards of education for 1924-25 and 1925-26
  1. Number of pupils involved
  2. Total amounts paid
  3. Pupil unit payments
- III. Study of 1925-26 pupil groups
  1. Age-grade-progress, grades from kindergarten to twelve, inclusive
  2. Socio-economic background data, grades six, eight, nine, and twelve
  3. Character rating, "General School Attitude and Behavior," grades six, eight, nine, and twelve
  4. Physique rating, height-weight ratio, grades six, eight, nine, and twelve
  5. Intelligence, grades six, eight, nine, and twelve
  6. School achievement, grades six, eight, nine, and twelve
- IV. Final study
  1. Location of each eighth grade pupil of 1925-26 in October, 1926, in school or in industry

During the spring and summer of 1926, the material from the field was classified and the facts of achievement and progress reported back to the county superintendents' offices, the eighth grade scores being sent before the close of the school year 1925-26 so that they might become a part of the usual "final examination" data used to determine the future status of eighth grade pupil groups. Care was taken to get accuracy in scoring and in tabulation. Each person applying for work was put through a period of try-out with cross checking for errors, and an individual record of speed and accuracy was kept for each worker. In this manner, raw data were rendered as accurate as possible with the large office force necessary. In the case of that part of the returns used to determine relationships among variables, the technic



of partial and multiple correlation constituted a final method of accuracy which served to refine still further original data. Reliability of material was further established through the inclusiveness of sampling affected.

### 3. BRIEF STATEMENT OF FINDINGS

The returns from the investigation show that at least one fourth of the eighth grade pupils disappear at the eighth-to-ninth grade gap and that this mortality affects first of all the boys. It is found further that in the high school work itself girls are on the whole more successful than boys and that nearly 10 per cent more of them persist into the senior year. Non-attendance and failure seem to result more often from negative character traits than from lack of intelligence or even necessity, but it appears that the drawing power of high school offerings cannot compete with the attraction of closer social and economic objectives. Data on type of home background point to the fact that the secondary school is still undemocratic to a large degree, and the facts about tuition requirements and the furnishing of textbooks and of work for pay justify the indictment that the high school is not an integral part of the free public school system of the state but a higher school whose opportunities only a privileged group can embrace.

When the progress and success of high school pupils are considered, it is found that the actual length of the course is less than four years as but one-half of the freshmen are found in the senior class. Further, high school class work is largely a matter of mass teaching instead of the application of the technic of individual instruction to the needs and abilities of pupils resulting from a business-like organization of personnel work. Perhaps the most serious lack in the curriculum is found in the fact that high school experience does not insure that pupils shall develop normally in terms of those desirable social character traits which are necessary for happy citizenship. A comparison with other states, too, shows that Colorado pupils are on a lower level of achievement in their reaction to the academic curriculum.

When a comparison of the efficiency of high school education in large and in small high schools in urban and in rural communities is made, it is found that attempted high school

work in rural situations and in small towns is on the whole rather futile. Small pupil groups, immature, incompetent teachers, inexperienced leadership, brief faculty tenure, lack of supervision of instruction—all are items of inefficiency which characterize secondary education in the smaller units of administration.

## CHAPTER II

EIGHTH GRADE FAILURES AND HIGH SCHOOL  
ELIGIBLES

It was with a more or less definite consciousness of trouble at the grade-to-high school point and with knowledge of many individual cases of educational deprivation there that the donors of the Colorado Research Foundation asked the question, What becomes of the eighth graders? To get definite answers to this inquiry, the question was analyzed as in Table V, and information obtained about all eighth grade pupils who took the June examinations in 1925 and 1926 in the counties cooperating in the investigation. The two sections of the blank, which was filled in by eighth grade teachers with the aid of children and parents, provides for the two possible contingencies, (I) pupils who failed of promotion to high school and (II) those who did not fail but who dropped out at the close of the eighth grade year.

## 1. THE JUNE EXAMINATIONS

On the whole, and considering the difficulties encountered, the returns from this eighth grade checking were reliable and illuminating. The second reports from county superintendents were not as satisfactory as the first because of their absorption with politics in the 1926 election. (Two cooperating superintendents were defeated at the polls.) The *Preliminary Report* issued in May, 1926, gave in 40 tables complete information about each of 4056 pupils who took the eighth grade examinations in June, 1925. These data are summarized for eleven counties in Table VI.

Out of 4056 eighth grade pupils who were examined, over 350 failed, nearly 9 percent. Out of 3697 pupils who were ready for promotion, over 500 did not attend high school. This constitutes nearly one-fifth of the number who were eligible for higher work but are not taking it. It is a rough measure of the proportion of educational deprivation in the state at the secondary level.

## 2. ELEMENTARY RETARDS

The inquiry about the eighth grade classes asked for information about both the "failures" and those who "passed." on the theory that in both groups would be found many cases of educational deprivation.

TABLE V

INFORMATION ABOUT 1924-25 EIGHTH GRADE CHILDREN (I) WHO WERE NOT PROMOTED FROM EIGHTH GRADE TO HIGH SCHOOL AT THE CLOSE OF THE SCHOOL YEAR, AND (II) WHO WERE PROMOTED BUT ARE NOT NOW IN HIGH SCHOOL

.....  
 District..... County..... Teacher..... Address.....

Name	Where is the pupil now?	What is the pupil doing?	How much is the pupil earning per month?	Give the reasons for the pupil's present non-attendance in eighth grade or in high school.
1	2	3	4	5
(Sample report)				
John Loe	At home	Working for his father	Nothing	His father could not afford other help.
Mary Means	Greeley	Clerking	\$25	She wanted "to earn money."

I. Eighth grade pupils who failed of promotion into high school

--	--	--	--	--

II. Eighth grade pupils who were promoted but are not now in high school

--	--	--	--	--

Footnote d, Table VI, reports the fact that the problem of the retarded eighth grade child in the eleven counties co-operating is first of all a boy problem. The central tendency of proportions of boys and girls shows two-thirds of them to be boys and but one-third girls, and the extremes run as high as 84 percent (Las Animas). In this large southern agricultural county, as large as the state of Connecticut, the public schools are failing to hold for high school education too large a part of all eighth grade boys.

TABLE VI

THE RESULTS OF THE JUNE, 1925, EXAMINATION OF 4056 EIGHTH GRADE CHILDREN IN THE PUBLIC SCHOOLS OF ELEVEN COLORADO COUNTIES

County	Examined	Passed	Failed	Percent of failures (4 ÷ 2)	Passed but not in high school	Percent passing but not in high school (6 ÷ 3)
1	2	3	4	5	6	7
1. Bent	128	124	4	3.1	11	8.9
2. Boulder	314	260	54	17.2	24	9.2
3. Costilla	28	25	3(a)	10.3	0	0.0
4. Delta	240	225	15	6.2	43	19.1
5. Denver	1044(b)	991	53	5.1	14(c)	21.8 (c)
6. El Paso	198	170	28	14.2	39	22.9
7. Las Animas	430	411	19	4.4	77	18.7
8. Logan	331	305	26	7.8	43	14.0
9. Routt	174	163	11	6.3	31	19.0
10. Weld	844	758	86	10.1	152	20.0
11. Yuma	325	265	60	18.6	70	26.3
Total	4056	3697	359(d)	8.9	504	13.3
Approximate median	314	260	26	7.8	39	19.0

- The county superintendent reports (May 20, 1926) that "our three eighth grade students who failed last year have been in school this year and have taken the eighth grade examination and passed."
- This is the figure for all elementary schools. Including the junior high schools, there was a total of 3351 eighth grade pupils.
- These figures are based upon a random sampling of 70 pupils from two typical schools, one an elementary school with grades kindergarten to eighth inclusive, and the other a junior high school.
- Boys, 62.4 percent; girls, 37.6 percent.

It is the judgment of many educators that in such a situation it is the public school that is "failing," not the eighth grade boys and girls. Perhaps we are not ready to interpret our demand for democracy in education to mean 100 percent of high school attendance on the part of all eighth grade children. But, where such an amount of elimination and such discrimination against boy rights as that shown is found, the situation demands the serious consideration of educational, municipal, state, and national leaders, students of the ills attendant upon America's trial of universal education.

In the case of 312 (76 no data) of the pupils who failed of promotion at the close of the school year, the reports were complete as to reasons given for not attending school the next year. (Table VII) Item 1, "Repeating eighth grade," does not belong logically in the table. It is highly significant, however. Thirty-six percent of the membership of eighth grade classes, condemned to another year of identical curricu-

lar experiences, are serving their sentences. Lack of knowledge of what to do and of professional imagination on the part of the school management permits this. Even a short summer school term might prevent many cases of time waste of this sort; but only one pupil is reported as having made good in this way for high school in the fall.

TABLE VII

REASONS FOR THE NON-ATTENDANCE OF 312 COLORADO PUBLIC SCHOOL CHILDREN IN ELEVEN REPRESENTATIVE COUNTIES WHO FAILED IN THE EIGHTH GRADE EXAMINATION IN JUNE, 1925

Rank	Reasons	Frequency	Percent
1	2	3	4
1	Repeating eighth grade	111	35.7
2	No data	76(a)	24.4
3	Lack of ambition	23	7.4
6	Married	11	3.5
6	Needed for family support	11	3.5
6	Overage (reached capacity)	11	3.5
6	Moved	11	3.5
6	Low intelligence	11	3.5
9	Help needed with home work	8	2.7
11	Did not like school	7	2.2
11	Parents not interested	7(b)	2.2
11	Ill health	7	2.2
13	Personal desire for money	6	1.9
14.5	In parochial, private, or business school	3	1.0
14.5	Died	3	1.0
16.5	Reformatory	2	0.6
16.5	School too far	2	0.6
18.5	Could not afford school	1	0.3
18.5	Suspended	1	0.3
	Total	312	100.0

a. The teachers and superintendent were unable to locate these children.

b. One of this number is traveling with parents.

Item two, (Table VII) "No data," is a shameful comment upon administrative inefficiency in the school offices involved. A loss of nearly 25 percent from spring to fall is too many and cannot be explained. It is a severe criticism on the school management in any system when any child disappears from the records. The situation is serious indeed when this is true in the case of an adolescent of thirteen to fifteen in whom the state has already an investment of eight, nine, or ten years of schooling. Elimination at previous grade

points has made the eighth grade children a selected group, possible future leaders in the democracy. Theoretically, the state stands ready to invest further and greater amounts of time and money in the preparation of these citizens for participation in the activities of adult life. Actually, the ledger is closed, the pupil is lost to the "system," or appears later in the records of a welfare organization or a state corrective or penal institution. This is poor business. The state-wide adoption of a system of uniform records and reports, such as is found in Michigan and in two or three other states, would help to make conditions better.

"Lack of ambition" is given most frequently as the reason for non-attendance after failing in the June eighth grade examination. This is the viewpoint of the teachers, no doubt, and as to character traits very probably their judgment is better than that of parents. If the two cases (16.5a) who were sent to the reformatory and the one (18.5b) suspended are added, the total makes just one-fifth of all reasons outside of repeaters and "No data." Character is, of course, the driving force in any situation. Intellect is but a tool whose effective use is determined by such traits as ambition, persistency, honesty, and the like.

Very likely those who are again in the eighth grade illustrate reasons which may be subsumed under both character and intelligence. If other reasons relative to intelligence are sought, "overageness" and "low intelligence" are noticed. These constitute 22 children, a number comparable to the "character" group. The eleven girls who married may, perhaps, be added to the overage group.

Economic reasons are suggested in "Needed for family support," "Help needed with home work," "Personal desire for money," "Could not afford school," and probably "Parents not interested," which may indicate that they are more interested in the earning value of the child than in his educational advancement. Thirty-three cases are found under these headings.

Finally, there is the suggestion in this list of nineteen reasons for dropping at the end of the eighth grade that children and parents have not been fully persuaded of the worthwhileness of upper grade offerings and in a balance of relative values prefer the nearer immediate good rather than the remote and doubtful gains to be secured by persistence into

the high school. The economic reasons given reveal this attitude as well as do "Did not like school," "Parents not interested," and the decision to attend schools outside the public system. It is interesting to note that distance (16.5b) ranks low as a cause of non-attendance.

Closely related to reasons for non-attendance and confirmatory of them are the facts about the actual status of 312 pupils who failed in the eighth grade examinations. These are given in Table VIII. Here, the group of repeaters constitute over one-third of all and those lost from the records over one-fifth. Home work, including "Idle at home," which very probably means earning nothing, accounts for one-fourth.

These checkings of groups of eighth grade failures furnish a picture of educational and economic waste which thinking citizens must consider. Here is a field for educational research worthy of the skill of advanced students of the curriculum. As intimated above, the suggestion for a junior high school organization is as yet untried effectively in the schools included in this investigation. State leaders should investigate its operation elsewhere and exert influence toward its adoption more widely, if they believe there lies therein a reasonable chance of bridging the gap between the elementary and the secondary school.

TABLE VIII

THE PRESENT STATUS OF 312 COLORADO PUBLIC SCHOOL CHILDREN IN ELEVEN REPRESENTATIVE COUNTIES WHO FAILED IN THE EIGHTH GRADE EXAMINATIONS OF JUNE, 1925

Rank	Item	Failures	
		Number	Percent
1	2	3	4
1	Reviewing eighth grade	111	35.5
2	No data	69	22.1
3	Helping with housework or farm work	51	16.3
4	Day laborer	32	10.1
5	Idle at home	28	8.9
6	Moved out of state	7	2.2
7	In parochial, private, or business school	5	1.6
9	Married	2	0.6
9	Reformatory	2	0.6
9	Deceased	2	0.6
12	Mining	1	0.5
12	United States Army	1	0.5
12	Clerking	1	0.5
	Total	312	100.0



## 3. SECONDARY SCHOOL POSSIBILITIES

Unprofessional, routine methods of public school administration and supervision permit many upper grade pupils to shorten their lives by an extra year in grade eight. Failures to fit school offerings to child need and capability result too often in closing the school career of many boys and girls at the eighth-to-ninth grade gap. But more serious than this is the loss from further preparation for citizenship of that group of selected pupils who have done so well in the elementary school that they are thought worthy of promotion to secondary opportunities. These future leaders, amounting in the study reported in this book to nearly 20 percent of all who "passed," should be retained for further contact with worth while high school experiences so that they may be able to function on higher levels of efficiency in the adult community group.

TABLE IX

REASONS FOR THE NON-ATTENDANCE OF 504 COLORADO PUBLIC SCHOOL CHILDREN IN ELEVEN REPRESENTATIVE COUNTIES WHO WERE PROMOTED TO HIGH SCHOOL (JUNE, 1925) BUT ARE NOT NOW ATTENDING

Rank	Reasons	Frequency	Percent
1	2	3	4
1	Help needed with home work or farm work	73	14.5
2	No data	59	11.7
3	Lack of ambition	58	11.5
4	Could not afford school	52	10.3
5	Parents not interested	44	8.7
6	Moved away	35	6.9
7	Personal desire for money	31	6.2
8	Needed for family support	28	5.6
9	Repeating eighth grade	21	4.2
10	Ill health	20	3.9
11	Low intelligence	19	3.7
12	Did not like school	16	3.2
13	Had to support self	14	2.8
14	School too far	12	2.4
15	Overage	8	1.6
16	Married	7	1.4
17.5	In parochial, private, or business school	3	0.6
17.5	Underage	3	0.6
19	Died	1	0.2
	Total	504(a)	100.0

a. Boys, 59.5 percent; girls, 40.5 percent.

And, unless absolute equality of sex comes in the next generation, the preponderance of boys among pupils who are eligible for high school classes but do not enroll makes the whole matter under decision more serious. Footnote a, Table IX shows 60 percent of the total to be boys and 40 percent girls. That this is practically the same distribution as is found among eighth grade failures (63 percent and 37 percent) is significant. Evidently, whatever the factors are which make it impossible for upper grade pupils to fit themselves successfully into the curriculum and which cause those who do succeed to neglect further public school offerings, affect boys more seriously than they do girls. Here, then, is the first lesson in differentiation for curriculum makers and administrators of upper grade work.

For 504 of the eighth grade pupils who were promoted to high school, reasons for non-attendance are available, except that 19 percent (Items 2 and 6) are lost from the public school records. It will be seen that 14 percent (73, item 1) are needed at home; and, if the reasons "Could not afford school," "Parents not interested," "Needed for family support," and "Had to support self" are added, economic causes account for over one-fourth (27 percent) of the cases. No doubt item seven, "Personal desire for money," might be added to this total also, as this attitude most often comes from a stringency in family income.

The facts of character traits are, of course, operative under every item of reasons, but they are specifically stated in "Lack of ambition," which includes 12 percent of all. Low intelligence, mentioned nineteen times, and overageness, eight, are perhaps related. Distance includes twelve pupils. It is impossible to know why 21 are repeating eighth grade, but perhaps distance and underageness (item 17.5b) are involved.

The failure of the high school to advertise its advantages among patrons is indicated in such items as "Parents not interested," "Did not like school," and "In parochial, private, or business school." The public school administration which assumes the "Take-it-or-leave-it" attitude toward the most expensive segment of total offerings is failing to conceive its full duty to the constituency served. School publicity is as necessary as is publicity in any other big business.

The facts of the actual occupation of the group of 504 high school non-attendants are given in Table X. They sup-

TABLE X

THE PRESENT STATUS OF 504 COLORADO PUBLIC SCHOOL CHILDREN IN ELEVEN REPRESENTATIVE COUNTIES WHO WERE PROMOTED AT THE TIME OF THE JUNE, 1925, EXAMINATION BUT WERE NOT IN HIGH SCHOOL IN MARCH, 1926

Rank	Item	Promotions	
		Number	Percent
1	2	3	4
1	Helping with housework or farm work	201	40.0
2	Day laborer	122	24.3
3	Idle at home	51	9.2
4	No data	43	8.6
5	Reviewing eighth grade	29	5.9
6	Moved out of state	28	5.7
7	Mining	12	2.5
8	Clerking	8	1.7
9	Married	5	1.1
10	In parochial, private, or business school	3	0.6
11.5	United States Army	1	0.2
11.5	Deceased	1	0.2
	Total	504	100.0

plement the list of reasons just discussed. Here, 71 out of 504 are lost from the records (item 4 and 6). The rank order listing shows the largest group, 40 percent, to be required for home work. One fourth are working at day labor, and these two items together with items three and seven indicate clearly the pressing need for guidance. It may be that there is a waste of ability in the case of young men and women who have successfully reached the secondary level in the public school system, if they are not aided in placement so that talents may be employed on a possible level of efficiency. On the other hand, it would be a more serious mistake if the upper grade and high school curriculum should result in the white-collar-job attitude exclusively as in the Philippines,<sup>1</sup> and perhaps that is the trouble with the 9 percent who are reported as "Idle at home."

Without dealing with the remaining items of Table X, it may be said that these facts of mortality at the eighth-to-ninth grade gap must give all thinking citizens pause and must cause them to inquire seriously as to just what the matter is. The public schools are obligated to explain the obvious failure

<sup>1</sup> Monroe, Paul and Others. *A Survey of the Educational System of the Philippine Islands*, Bureau of Printing, Manila, 1925

of the "system" at this point in the curriculum. Here is a research problem yet unsolved and worthy of the best ability available.

#### 4. SUMMARY

A listing of facts connected with the giving of the usual final eighth grade examination in eleven Colorado counties shows that on the average nearly 9 percent failed and nearly 20 percent more dropped out of school at the eighth-to-ninth grade gap. A loss of one-fourth is a conservative estimate of high school deprivation in terms of both failures and non-attendants. Two-thirds of these children were boys, and it appears that the problem presented is first of all a boy problem. Over one-third of the pupils who failed are repeating the eighth grade work another year, and failure is reported to be caused chiefly because of negative character traits and not because of low intelligence. Nearly one-fifth are helping with home work, and the next largest group are day laborers. But many are lost from the records of the systems, and their status is not known.

The group of pupils who passed the final examinations successfully (nearly 20 percent) but did not attend high school contained the same proportion of boys and girls as did failures. The majority of these children (40 percent) were helping at home also, and deficiencies of attitude are again found among causes rather than low intelligence. One-fourth have dropped out of school to engage in day labor, many are lost from the records, and many are repeating the eighth grade in spite of the fact that they are eligible for high school attendance.

When the facts of social and economic background and of personality among the four possibilities of destination illustrated are compared, it is found that on the whole such factors as home and physique are rather constant, but that pupils who were promoted are youngest, have conformed more closely to school requirements, and have done best in their school studies.

## CHAPTER III

## THE TYPE OF YOUTH SELECTED FOR HIGH SCHOOL ATTENDANCE

In addition to the facts of elimination at the eighth-to-ninth grade gap reported in the preceding chapter, it is significant to make a checking in response to the inquiry, What type of pupil does the high school select for membership? A tentative answer, for the schools included in this study, can be made in the terms of sex, life age, native intelligence, home background, and like personal and environmental factors.

## 1. SEX

The findings of Chapter II, to the effect that the problem of failure in the eighth grade and of non-attendance in the high school was first of all a boy problem, would suggest that different proportions of boys and girls would be found in grade enrollment and in high school classes. The facts with regard to this for 24,843 children in eight Colorado counties are given in Table XI. When all the pupils in the four grade groups considered are distributed by sex, the division is seen to differ from 50-50 by but 0.4 percent and to be about like the proportions found in grades one and six. But when the sex distributions of grades eight and nine are examined, it is seen that the eighth grade group has a larger percent of boys than does the ninth grade group. In

TABLE XI

THE PROPORTION OF BOYS AND OF GIRLS AMONG 24,843 PUPILS IN GRADE ONE, SIX, EIGHT, AND NINE IN THE PUBLIC SCHOOLS OF EIGHT COLORADO COUNTIES, 1925-26

Grade	Number	Boys		Girls		Percent	
		Boys	Girls	Boys	Girls		
1	2	3	4	5	6		
One	7612	3358	3654	52.0	48.0		
Six	7034	3575	3519	50.4	49.6		
Eight	5738	2835	2903	49.4	50.6		
Nine	4399	2101	2298	47.8	52.2		
Total	24843	12469	12374	50.2	49.8		

fact, while for all four grades there are found 95 fewer girls than boys, in the eighth grade there are found 68 fewer boys and in the ninth grade 197 fewer boys.

One must conclude, then, that there is less than the normal proportion of boys in the first year of secondary work in the eight counties examined. Evidently, there are factors within and without the school which repel and attract. What the causes are which affect this lack of balance in numbers and which deprive a rather large group of the boys of even a year of high school work will appear, perhaps, in the following sections.

## 2. LIFE AGE

When a large group of 24,979 pupils in grades one, six, eight, and nine are examined, one finds the median ages advancing through progressive grades in about the normal increments, one year to the grade. But at the eighth-to-ninth grade interval, while it might be expected that the ninth grade boys group would have a median age of 15.3 years, it seems that they are two-tenths of a year younger, and the girls are one-tenth of a year younger than the expectation. If McCall's<sup>1</sup> estimate of thirteen months as "the average time required for the average pupil to pass from grade to grade" is taken, the obtained age of the boys in grade nine would be 15 years 6 months and that of girls 15 years 4.6 months. This is 4.8 months older than the actual age for boys and 2.2 months older than that for girls. It is found also that, while the extreme range in ages for eighth and ninth grade boys is identical (9 years), for girls it is 8 years and 10 years. Thus, the high school girls' group seems to be scattered more widely, and an examination of the Q's shows that they are grouped more compactly at the middle of the distribution also. This seems to indicate that the high school is selecting boys and girls who are somewhat younger and who are distributed in terms of life age more compactly than in the elementary school. However, when an inquiry is made as to the effect of these facts of life age on school achievement, the conclusion is that there is practically no relationship.

---

<sup>1</sup> McCall, W. A., *How to Measure in Education*, The Macmillan Company, 1922

### 3. NATIVE INTELLIGENCE

Data on 1537 pupils in grades eight and nine show the differences in median mental ages to be marked, but perhaps no more than might be expected from a year's growth (0.95 years). However, if Terman's mental grade interval of 12.6 months (1.05 years) be taken, ninth grade pupils should reach a mental age of 14.95 years (based on eighth grade figures) while they actually have an age of 14.85 years. This does not seem to show a selection on the basis of superior mentality. Boys are of distinctly lower mental ability in both grades, as measured by means of the McCall Multi-Mental Scale. The distributions are more compact in the first year of the high school, as the upper range reaches are identical. This seems to show that selection is on the whole in terms of the medium and superior types of mentality. The correlation study made indicates that, in terms of success in school subjects, the levels of intelligence represented are of great importance, as all the expressed relationships are close enough to be positively significant even when the influence of six associated factors are held constant ( $r_{19.245678}$ ). There does not appear to be much difference in the coefficients in eighth and in ninth grades, but the effect of intelligence on achievement in the case of the girls' groups is much greater than in the case of the boys.

### 4. HOME BACKGROUND

In terms of the culture items of the Chapman-Sims scale (Chapter I), Table XII shows a marked difference in the social level of the homes of eighth and of ninth grade boys and an appreciable difference in the case of girls. The type of distribution, however, remains about the same except that certain extremes in the upper ranges for boys and in the lower for girls are cut off. It is found, also, that the high schools are selecting fewer farmer's children by 45 percent than are the elementary schools and that but 40 percent of high school membership comes from farms and centers with less than 500 inhabitants. It appears, too that among groups of 1491 and 9990 families examined there is a difference in size of family amounting to fully one child, the homes of high school pupils being the larger and more often sending

<sup>2</sup> Terman, L. M. *The Intelligence of School Children*, Houghton, Mifflin Company, 1919

TABLE XII

THE HOME STATUS OF 675 EIGHTH AND NINTH GRADE BOYS AND 763 EIGHTH AND NINTH GRADE GIRLS IN FOUR TYPES OF WELD COUNTY, COLORADO, SCHOOLS AS MEASURED BY THE CHAPMAN SCALE, 1925-26

Summary	Eighth Grade		Ninth Grade	
	Boys	Girls	Boys	Girls
1	2	3	4	5
N	388	466	287	297
Q <sub>3</sub>	555.5	558.4	573.1	569.3
Median	532.1	534.1	547.3	541.7
Q <sub>1</sub>	507.7	511.8	526.2	519.7
Q	23.9	23.3	23.5	24.8

oldest children to school. Further, when the nativity and church affiliation of parents is checked, it is found that native stock is preponderant in the homes of high school children by the difference of nearly 15 percent of all, and that church membership is more usual by the difference between 20 and 9 percent.

##### 5. SCHOOL CONDUCT AND ATTITUDE

This study does not have an adequate measure of character traits. However, some indication of levels of cooperation on which school activities were being carried on was obtained by a request that each teacher rate her pupils (on a scale of 1 to 5) in general attitude toward the school and their work and in conformity to the necessities of the situation. This is, of course, a highly subjective rating. Further, a low mark, if the school situation in terms of curricular inadequacy and teacher incompetence was not worthy, might indicate the possession of more desirable character traits on the part of the pupil than would a high rating.

An examination of the relationship between pupil conduct and attitude and school achievement reveals no differences in grades eight and nine. This may be a comment upon the inefficiency of the school and not an indictment of pupils because of undesirable character traits. The facts suggest either (1) that the secondary schools included in the investigation are selecting for membership only those elementary school pupils incapable of further development toward maturity of character or (2) that the school is failing to per-



mit expression of more mature attitudes or growth into them. If the facts of the situation are represented by either suggestion, the high school is under indictment for inefficiency. If the second suggestion is in accord with the truth, sources of leadership for American democracy are in danger.

## 6. SCHOOL ACHIEVEMENT

In the matter of possible success in academic work, Tables XIII and XIV seem to say that the high schools represented in this study are very probably selecting pupils who are more able to achieve on higher levels. The composite scores in Table XIII show a difference in educational age of four months (15-0 and 14-8) between the median for eighth and ninth grade groups, but the latter are three points farther from the norm (item 3) than the former. It is discouraging,

### TABLE XIII

THE ACHIEVEMENT OF PUPILS IN THE ELEMENTARY AND THE NINTH GRADES OF NINE COLORADO COUNTIES IN READING, ARITHMETIC, NATURAL SCIENCE, AND SOCIAL SCIENCE (COMPOSITE SCORE ON THE STANFORD ACHIEVEMENT TEST, ADVANCED EXAMINATION, FORM A), 1925-26

Size of Schools	N	Grade six	Grade eight	Grade nine
1	2	3	4	5
1. One, Two, and Three Teacher	1211 (a)	53.7	72.5	73.8
2. Over Three Teacher	9432 (a)	56.5	73.3	77.5
3. United States (b)	9816	59.0	76.0	82.0

a. Grades six, eight, nine, and twelve

b. 9816 pupils "from many parts of the United States," Ruch, G. M., Terman, L. M., and Kelly, T. L., *Stanford Achievement Test, Manual of Directions*, World Book Company, 1926

### TABLE XIV

THE MULTIPLE RELATIONSHIP OF SEVEN DETERMINING VARIABLES TO THE CRITERION, (1) SCHOOL ACHIEVEMENT (STANFORD ACHIEVEMENT, ADVANCED EXAMINATION, FORM A) FOR ELEMENTARY AND SECONDARY SCHOOL BOYS AND GIRLS IN WELD COUNTY, COLORADO, 1925-26

Group	Eighth Grade				Ninth Grade			
	Boys		Girls		Boys		Girls	
	R	N	R	N	R	N	R	N
1	2	3	4	5	6	7	8	9
1.2456789	0.546	436	0.705	466	0.627	292	0.613	308

though, to see a greater difference in item three when a large group of pupils outside of Colorado is reported on. On the other hand, this might be an encouraging indication of democracy of high school membership, if so many other data in this chapter did not show like deficiencies. Table XIV shows that the predictive value of seven other factors in the school situation is identical in eighth grade and in ninth grade, if sex is not considered; but that the relationship is higher in high school for boys and lower for girls. This indicates some sex differentiation in selection for high school membership, when school achievement is taken as the criterion.

## 7. SUMMARY

Following the fact finding report of Chapter II, which showed a mortality at the eighth-to-ninth grade gap of nearly 25 percent, tentative generalizations with regard to the group selected for enrollment in the first year of the high school work are possible in this chapter.

a. In addition to the fact that two-thirds of the eighth grade pupils who do not attend high school are boys (Chapter II), it is found that the proportion of boys and girls in grade nine is not normal (boys, 48 percent, and girls, 52 percent). The distribution of 5738 boys and girls in grade eight is 49.4 percent and 50.6 percent.

b. The life age of ninth grade boys and girls is at least 2 months and 1 month respectively younger than the expectation, based on eighth grade ages. Using McCall's "average time estimate of 13 months, boys are nearly 6 months younger and girls over 2 months younger than the expected ages in the first year of high school. But this "youngness" has no more effect on school work than do comparable facts of life age in grade eight.

c. The evidence does not point to a distinct choice of superior mentality for high school membership. But 0.95 years mental age difference is found between eighth and ninth grade groups, while Terman's norm asks for 1.05 years. But the ninth grade distributions for both boys and girls are more compact, and the lower ranges are cut off. Perhaps, on the whole, selection is in terms of medium and upper types of intelligence. Any difference in native ability that does appear in favor of the freshman group, however, is not affecting school achievement there to any greater extent than in the eighth grade group. But marked sex differences appear.

High school girls are using native gifts to a more favorable limit than are high school boys.

d. High school pupils come from homes having more of a cultural background than the homes of eighth grade pupils, but there is a lower relationship there with school achievement. However, the high school work of boys is on the whole affected more by home status than is that of high school girls.

e. The fathers' occupation in the case of pupils in the larger systems having high schools is less often farming by at least 45 percent of the children involved. Nearly 90 percent of the fathers of pupils in the rural schools are engaged in agriculture.

f. The homes of 99.6 percent of the pupils in the smaller, largely elementary schools, are on farms or in communities of less than 500 people, but in the larger systems but 40 percent come from like situations.

g. The enrollment in secondary schools is on the whole from small families in contradistinction from that in the lower grades. A median difference of one child (5.30 and 4.39) is found in groups of 1491 and 9990 families checked.

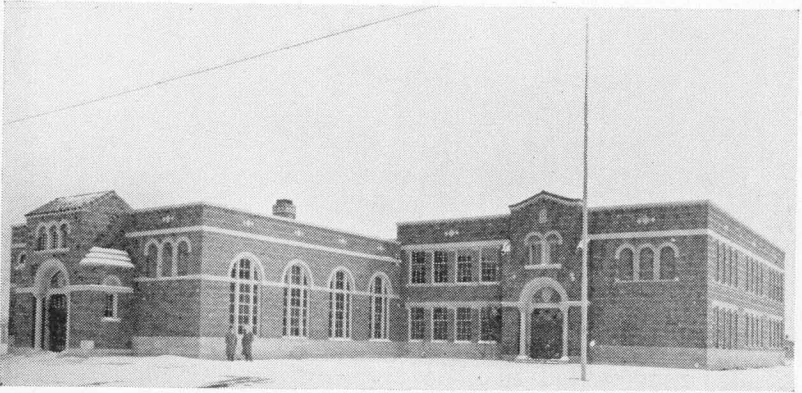
h. Secondary schools enroll more of the oldest children in families represented than do the elementary schools, where they are perhaps kept out of school because of their economic value.

i. High school enrollment is largely in terms of native stock by a difference of 10 percent to 15 percent, but it does not appear that this difference does not represent a similar distribution in the population at large.

j. There are more types of religious belief in the homes of urban high school pupils than in rural homes, and fewer homes unaffiliated with any organized church (rural, 20 percent; urban 8.8 percent). Perhaps the secondary school is selecting pupils first of all from homes benefitting from the cultural and moral values of a "church" tradition and habit of attendance.

k. What evidence is had on character traits points to a possible failure on the part of the secondary school to train for development in desirable attitude and conduct.

l. Freshman high school pupils achieve on a higher level than do eighth grade groups, but the predictive value of seven other factors in the school situation is identical in elementary and in secondary school.



The new high school at Brighton in Adams county, A. J. Foster, Superintendent of Schools, represents the best type of Colorado secondary school small town opportunities. Four hundred pupils are cared for here, and a differentiated four term course above the elementary school is offered. The building is brick and fire proofed. There are steel boilers with automatic feed controlled by the Johnson service. In contrast to deprivation of all social education in isolated, small-group attempts in secondary education, this school has organized extra-class organizations such as debating and glee clubs, an orchestra, a Girl's Reserve, and Hi Y, Commercial, Sewing, and Boys' Farm Clubs. A beautiful auditorium to seat 552 and a gymnasium (48x80) with 450 bleacher capacity help to take care of these activities.

## CHAPTER IV

THE EFFECT OF HIGH SCHOOL EXPERIENCE  
ON YOUTH ENROLLED

Tentative data have been presented in the two preceding chapters in answer to the questions, What type of child disappears at the eighth-to-ninth grade gap? and What type of pupil appears in the entering classes of the high school? Here, partial evidence will be presented on the type of individual who survives at the twelfth grade level in representative secondary schools of a pioneer state.

## 1. SEX

Total survival and sex distribution at ninth and twelfth grade levels are shown in Table XV. But one-half of the total number of freshmen pupils persist into the senior class (column 2), and there are 16 percent more girls than boys found there. (58 percent-42 percent) Further, the proportion of boys in the twelfth grade (column 5) is much lower than in the ninth, while that of girls is larger.

So far as 6626 high school pupils in eight Colorado counties are concerned, it appears that elimination is largely in terms of boys enrolled. Are the schools girls' schools? Are activities outside the school more real, more interesting, and more profitable? Answers must be forthcoming, if the prestige of secondary education is to be maintained. Unless it is decided that higher work in public education is to be offered exclusively to girls, a mortality of nearly 60 percent in

TABLE XV

THE PROPORTION OF BOYS AND OF GIRLS AMONG 6626 PUPILS IN GRADES NINE AND TWELVE IN THE PUBLIC SCHOOLS OF EIGHT COLORADO COUNTIES, 1925-26

Grade	Number	Boys	Girls	Boys	Girls
1	2	3	4	5	6
Nine	4399	2101	2298	47.7	52.3
Twelve	2227	1041	1186	42.2	57.8
Total	6626	3142	3484	47.2	52.8

four years' time and a discrepancy such as shown in columns 5 and 6 of Table XV are not to be explained.

## 2. LIFE AGE

It appeared in Chapter III that the high school, as represented by the data of this study, was selecting youth who were slightly younger than the norm and who were distributed more compactly than in eighth grades contributing to its membership. When median freshman and senior ages are compared in Table XVI in this chapter, similar facts seem to appear, if thirteen months be again taken as the time used for a grade's work. The average median age in grade nine is 15 years 1.8 months, and the expectation for grade twelve would be 18 years 4.8. It is seen, though, that the actual age is but 18 years 1.2 months. It may be that the effect of high school experience is to eliminate older pupils, as there is found in the groups of 4660 and 2529 here examined a discrepancy of 3.6 months between the central tendencies of obtained and actual ages. The Q's in Table XVI are all very similar, the twelfth grade group being slightly more widely scattered (0.85 and 0.95). If the spread were more marked, it might be said that the high school was giving opportunity for the development of characteristic individual abilities, but a difference of but 0.1 Q will not warrant such a generalization. Perhaps it may be said that the high schools here represented are retaining the younger pupils for four years of

TABLE XVI

LIFE AGE DISTRIBUTION IN TERMS OF YEARS OF 7189 BOYS AND GIRLS IN EIGHT COUNTIES OF COLORADO IN GRADES NINE AND TWELVE, 1925-26

Summary	Ninth Grade		Twelfth Grade	
	Boys	Girls	Boys	Girls
1	2	3	4	5
N	2297	2363	1185	1344
Q <sub>3</sub>	16.2	16.0	19.2	18.9
Median	15.1	15.2	18.2	18.0
Q <sub>1</sub>	14.5	14.4	17.3	17.1
Q	0.9	0.8	1.0	0.9

continuous membership, but are failing to provide educational opportunities such that all advancement may be commensurate with individual possibilities.

## 3. NATIVE INTELLIGENCE

The median mental ages (McCall Multi-Mental Scale) of 600 ninth grade and 370 twelfth grade pupils are given in Table XVII. The mean for the freshman groups is 14.85 years, and for the senior class 17.25 years. If it be assumed that Terman's mental growth of 1.05 years to the grade applies at this level also, the figure ought to be 18 years (14.85 + 3.15) for the twelfth grade. This seems to show an elimination of intelligence as a result of three or four years of

TABLE XVII

MENTAL AGE DISTRIBUTION IN TERMS OF MONTHS OF 424 BOYS AND 546 GIRLS IN THE NINTH AND TWELFTH GRADES IN FOUR TYPES OF WELD COUNTY, COLORADO, SCHOOLS, 1925-26

Summary	Ninth Grade		Twelfth Grade	
	Boys	Girls	Boys	Girls
1	2	3	4	5
N	292	308	132	238
Q <sub>3</sub>	16.0	17.1	17.9	18.8
Median	14.6	15.1	17.2	17.3
Q <sub>1</sub>	12.9	14.1	14.6	15.2
Q	1.6	1.5	1.6	1.9

high school experience. The sex differences are significant. Freshman boys are more immature mentally than freshman girls by an appreciable difference, but this is smoothed out in the senior group. It will be noticed also that the distributions for boys are identical in spread at both levels of advancement but that the girls' Q is larger, as they appear more frequently toward the excellent end of the array. In Table XVIII, it will be seen that there is a significant positive relationship between native intelligence and school achievement even when six important related variables are held constant ( $r_{19.245678}$ ). Somewhat larger coefficients are found in the ninth grade than in the senior group, and it may be that as a determiner of levels of school success native intelligence plays a larger part there than in the twelfth grade. But it will be noticed that very similar sex differences in favor of the boys appear also.

TABLE XVIII

THE RELATIONSHIP OF (9) MENTAL AGE TO (1) SCHOOL ACHIEVEMENT (STANFORD ACHIEVEMENT, ADVANCED EXAMINATION, FORM A) FOR FRESHMEN AND SENIOR BOYS AND GIRLS IN WELD COUNTY, COLORADO, 1925-26

Variables	Ninth Grade				Twelfth Grade			
	Boys		Girls		Boys		Girls	
	r	N	r	N	r	N	r	N
1	2	3	4	5	6	7	8	9
19	0.545	292	0.516	308	0.524	209	0.438	239
19.245678	0.473	292	0.540	308	0.497	209	0.377	239

## 4. HOME BACKGROUND

A report on the facts for home status as measured by the Chapman scale (Table XIX) shows a higher social and economic level in grade twelve than in the freshman group. When the figures for 584 and 369 pupils are compared, an advantage of fifteen points appears for the latter. This does not augur well for democracy in the high schools surveyed. However, the study of relationships shows that, so far as school achievement is concerned, type of home does not affect school success to any marked degree. The coefficients of the sixth order ( $r_{14.256789}$ ) are very close to zero. If there are significant facts here, it may be that the home has more effect on school work at the senior level, that there is a closer relationship for boys than for girls, and that the homes of senior pupils are more permanent by a difference of two years of residence (8.7 and 6.71).

TABLE XIX

THE HOME STATUS OF 418 BOYS AND 535 GIRLS IN THE NINTH AND TWELFTH GRADES IN THE OVER THREE TEACHER SCHOOLS OF WELD COUNTY, COLORADO, AS MEASURED BY THE CHAPMAN SCALE, 1925-26

Summary	Ninth Grade		Twelfth Grade	
	Boys	Girls	Boys	Girls
1	2	3	4	5
N	287	297	131	238
$Q_3$	573.1	569.3	584.6	582.1
Median	547.3	541.7	560.5	557.9
$Q_1$	526.2	519.7	533.8	537.3
Q	23.5	24.8	25.4	22.4



## 5. SCHOOL CONDUCT AND ATTITUDE

In the light of the discussion on school attitude and behavior in the preceding chapter, it may be that differences in relationship found in ninth and in twelfth grade groups are highly significant. It is safe to assume that desirable character traits ought to be related more closely to school achievement as growth approaches nearer to maturity, and one would expect a larger coefficient in senior classes than in freshman. However, the reverse proves to be true, as  $r$  for ninth grade is 0.339 and for twelfth grade 0.297. If these figures be interpreted naively, a choice might appear between two horns of a serious dilemma. Can it be that (1) high school curriculum offerings are eliminating those individuals capable of higher development toward maturity of character? Or is it possible that, as was suggested in Chapter III, (2) the type of organization and control in the secondary school does not permit expression of more mature attitudes or growth into them? If caught on either horn, secondary education is sure to be tossed into a limbo of difficulties requiring administrative skill of the highest type for release.

## 6. SCHOOL ACHIEVEMENT

The composite scores of Table XX show a difference in educational age of one year and six months (16-6 and 15-0) between the median for ninth and twelfth grade groups (items 1 and 2). The ninth grade is 6.4 points below the norm (item 3), but no like comparison is possible for grade twelve, unless a continuity norm of 94 be assumed. If this be done, a discrepancy of 5.3 points appears. These two bits of evidence may point to a survival of the more fit (in terms of school achievement) as a result of high school experience. If so, the findings would be in accord with data on high school persistency and elimination found elsewhere in this report. Table XXI shows that the predictive value of seven factors in high school experience is greater in ninth grade (0.620) than in twelfth (0.572), and that the coefficients are rather consistent in terms of sex. Possibly other unmeasured variables cloud the issue, but it may be that high school experience as offered differentiates between groups who attain (in terms of the Stanford Achievement examination) on higher and on lower levels.

TABLE XX

DIFFERENCES IN LEVELS OF SCHOOL ACHIEVEMENT IN TERMS OF THE COMPOSITE SCORE OF THE STANFORD ACHIEVEMENT, ADVANCED EXAMINATION, FORM A, IN FRESHMAN AND IN SENIOR HIGH SCHOOL CLASSES IN NINE COLORADO COUNTIES, 1925-26

Groups	N	Ninth Grade	Twelfth Grade
1	2	3	4
1. One, Two, and Three Teacher	1211 (a)	73.8	87.5
2. Over Three Teacher	9432 (a)	77.5	88.7
3. United States (b)	9816	82.0	94.0 (c)

a. Grades six, eight, nine, and twelve

b. 9816 pupils "from many parts of the United States," Ruch, G. M., Terman, L. M., and Kelley, T. L., *Stanford Achievement Test, Manual of Directions*, World Book Company, 1926

c. An assumed continuity norm

TABLE XXI

RELATION OF THE CRITERION, SCHOOL ACHIEVEMENT, TO ALL OTHER VARIABLES FOR NINTH AND TWELFTH GRADE BOYS AND GIRLS IN WELD COUNTY, 1925-26

Group	Ninth Grade				Twelfth Grade			
	Boys		Girls		Boys		Girls	
	R	N	R	N	R	N	R	N
1	2	3	4	5	6	7	8	9
1.2456789	0.627	292	0.613	308	0.587	209	0.557	239

## 7. SUMMARY

The specific inquiry of this chapter is with regard to differences which appear among groups of ninth grade and twelfth grade pupils when a number of significant variables are examined.

a. But one-half of the freshmen pupils persist into the senior class, and there are 16 percent more girls than boys found there.

b. The effect of high school experience is to eliminate older pupils, as a discrepancy of 3.6 months is found between obtained and actual ages in grade twelve. But it appears that curricular offerings do not take care adequately of individual possibilities.

c. That the high school loses its more intelligent pupils in the ninth-to-twelfth grade interval is shown by the dis-

crepancy of 0.75 years between obtained and actual mental ages, and native intelligence plays a larger part in determining school achievement in the freshman than in the senior group.

d. Senior pupils come from homes on a higher cultural and economic level than do freshman pupils. But this fact does not affect school achievement materially at either stage of advancement, although there is a slightly closer relationship in the twelfth grade.

e. That the high school loses pupils coming from the more impermanent homes is shown by the fact that length of residence in the homes of seniors is two years longer than in the case of freshmen. But there is a like unexplained sex difference which clouds the issue, and length of home residence does not seem to have any appreciable effect on school achievement at either level of advancement.

f. The high school fails to provide curriculum offerings which will insure that pupils shall develop normally in terms of desirable social character traits.

g. The educational age of Colorado twelfth grade pupils is 1 year and 6 months higher than that of the ninth grade group, but both are five or six points (composite score) below the normal achievement of youth in other states. Seven factors in the high school situation have a higher predictive value in ninth grade than in twelfth grade.

## CHAPTER V

## AGE-GRADE-PROGRESS IN THE HIGH SCHOOL

The facts reported in this chapter have to do with differences found in the relationship of life age, grade location, and school progress in the secondary grades of four sizes of administrative unit present in the counties included in the investigation. (1) Denver county and city is illustrative of the large city situation, 300,000 population (c.). (2) Colorado Springs is taken as the small city, 30,000 population. (3) The upper four grades in systems with more than three teacher schools found in seven counties form a third illustrative group. (4) Finally, a small and scattered group of pupils found in grades nine, ten, eleven, and twelve of the one, two, and three teacher schools of four counties is examined as the strictly rural unorganized secondary group.

## 1. LIFE AGE AND GRADE LOCATION

The facts of retardation, acceleration, and normal classification of the pupils in these schools of four sizes is shown in Table XXII. The Denver figures are for 6155 pupils in the senior high schools. This figure does not include 2109 children enrolled in the ninth grades of Denver junior high schools, and it is interesting to know that the age-grade figures for these ninth grade junior high school pupils are 22.5 percent acceleration, 46.7 percent normalcy, and 30.8 percent retardation. In the Denver senior high schools, the figures for 740 ninth grade pupils are 19.7 percent acceleration, 36.6 percent normalcy, and 43.7 percent retardation. Evidently, the junior high schools have a highly selected enrollment in this grade, but a contrary situation appears when the entire junior high school group of 7614 pupils in grades seven, eight, and nine (20.4, 44.5, and 35.1 percent) is compared with all senior high school pupils (27.0, 40.4, and 32.6 percent).

The facts for 1089 Colorado Springs pupils are found in item four. Practically half of the high school group is

TABLE XXII

LIFE AGE AND GRADE LOCATION IN THE NINTH, TENTH, ELEVENTH, AND TWELFTH GRADES OF FOUR TYPES OF ADMINISTRATIVE UNITS IN COLORADO COMPARED WITH LIKE DATA ELSEWHERE, 1925-26

System	Percent Underage	Percent Normal	Percent Overage
1	2	3	4
1. Seattle, Washington (a)	18.5	36.1	45.4
2. Boston, Massachusetts (b)	21.7	44.2	31.1
3. Denver, Colorado	27.0	40.4	32.6
4. Colorado Springs, Colorado	1.8	50.5	47.7
5. Farm pupils (10,000 in six states) (c)	29.0	54.0	17.0
6. Non-farm pupils (8492 in six states) (c)	27.0	56.0	17.0
7. Colorado larger systems	2.6	49.9	47.5
8. Colorado one, two, and three teacher schools	5.8	46.5	47.7

- a. Ayer, F. C., "Progress of Pupils," Chapter VII, *Studies of Administrative Research*, Seattle, Washington, Public Schools, Department of Research, 1924
- b. Kallom, A. W., *Report on Age and Progress of Pupils in the Boston Public Schools*, School Document No. 12, Boston Public Schools, 1925.
- c. Windes, E. E., *High School Education of the Farm Population in Selected States*, Bureau of Education Bulletin (1925), No. 6

found to be normal and half retarded, while but nineteen out of 1089 are younger than the normal age in the grades in which they are found.

Nearly 5,000 high school pupils were found in the larger systems of Colorado counties outside of Denver, and their age-grade status appears in item seven. This is seen to be, as in Colorado Springs, nearly fifty-fifty as to normalcy and retardation with a very small group (124 out of 4,787) accelerated.

It was thought to be worth while to isolate for examination all pupils found in grades nine, ten, eleven, and twelve in the strictly rural schools with one, two, and three teachers.

This was done for four cooperating counties, and the age-grade status of the group of 159 discovered is shown in item eight. The facts for this group are significant, although it is so small. The upper grade pupils here included are found in the usual situation, scattered in small numbers (one or two to a half dozen, perhaps) where secondary work is attempted in one to three room isolated rural schools.

These facts for four sizes of administrative unit are compared with typical situations in items one, two, five, and six. At first glance, a perfect correlation does not seem to appear in the eight items of the table between age-grade status and size of system. However, if items five and six are disregarded, it will help to clear up the table; and in the author's judgment the figures given by Windes are in doubt, as he does not report the details of their derivation. This leaves a comparison between the facts for three large systems (items 1, 2, and 3) and for Colorado outside of Denver (items 4, 7, and 8) more possible, and it is seen that the larger units have a smaller amount of overageness and a much larger percent of acceleration.

In defense of the one room school, it has been said that the small enrollment furnishes an ideal situation for an application of the technic of individual instruction. The answer, so far as normal advancement by grade units is concerned, is that this opportunity is not recognized by teachers in charge. The small underage percents in Table XXII show this for the situations studied in this investigation. It would seem that the findings of this section are confirmatory of other checkings in systems of similar sizes and that it may be said that one of the sure causes of deprivation of adequate opportunities for high school education is found in lack of organization of systems into larger units of administration.

## 2. PROGRESS AND GRADE LOCATION

A more significant checking in relation to grade location for the secondary segment of administrative units of different sizes in Colorado, that of time used to reach a given grade level, is found in summary form in Table XXIII.

TABLE XXIII

GRADE PROGRESS AS RELATED TO SIZE OF ADMINISTRATIVE UNIT IN THE CASE OF SECONDARY EDUCATION IN COLORADO, 1925-26

Rate of Progress	Denver (a)		Colorado Springs		Colorado over three teacher schools		Colorado one, two, and three teacher schools	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8	9
1. Over three years rapid	3	0.7	0	0.0	4			
2. Three years rapid	10	2.3	3	0.2	28	0.4		
3. Two years rapid	35	8.3	39	2.7	135	2.7		
4. One year rapid	101	24.1	219	16.2	709	16.4		
5. Normal progress	236	56.3	784	57.6	2490	53.9	19	19.0
6. One year slow	30	7.1	268	19.8	985	21.2	22	22.0
7. Two years slow	3	0.7	37	2.8	205	4.3	11	11.0
8. Three years slow	1	0.5	8	0.5	50	1.0	2	2.0
9. Over three years slow	0	0.0	2	0.2	8	0.1	2	2.0
Total	419	100.0	1360	100.0	4614	100.0	100	100.0
Percent Rapid	149	35.5	261	18.5	876	19.1	19	19.0
Percent Normal	236	56.3	784	57.6	2490	53.9	44	44.0
Percent Slow	34	8.2	315	23.9	1248	27.0	37	37.0

a. A four year high school in a typical location

It will be seen that there is a marked relationship between size of system and rate of progress, positive for normal and rapid, and negative for slow.

When the ratio of progress to time used is figured, the results for the same situations appear as in Table XXIV. The extremes of difference are found in items one and four, column five, where it is seen that Denver is saving a half school year in the twelve year course and that in the smallest Colorado schools where secondary work is attempted a half year extra is required to complete twelve years of work.

It is interesting to compare grade-progress and efficiency figures derived from the data of the Illinois survey and from a recent Boston report (items 5 and 6). The graduates of 22 Illinois high schools used from three to six years to complete the four year course, a median of 4.3 years. In the Boston high schools nearly all (92 percent) of the pupils made normal progress. This gives the former a median index of efficiency of 0.93, and the latter an index of 0.96.

The checking in all grades of the public school system shows a distinct relationship between size of administrative unit and the grade location and school progress of public school pupils. Negative conditions of retardation and of slow progress were not found in such large amounts and proportions in the larger systems as in the smaller. The case is not so clear, though, when the last four years of work are considered as a unit. In fact, except for extremes of size, the expressions of amount for grade placement as related to life age and school entrance show infrequent discrepancies. Two explanations appear. It may be that the secondary school has arranged its curriculum to fit the needs and capabilities of youth perfectly. Or it may be that the child who might appear in percentages of retardation and among the lagging group has fallen by the wayside before he is able to influence efficiency figures such as these. However this may be for secondary education at large, it is certain that the latter view must be taken of the high school situation in the pioneer state of Colorado. The lessening figures of this chapter, as grade groups have been examined on higher and higher levels, have presented the facts of elimination, and Chapter II above has reported on the amount of mortality at the eighth-to-ninth grade gap. Further, Chapters III and IV have shown not only the process of selection operating at the point of entrance to secondary work but the constant sifting of the misfit throughout the four-year course and in particular in the first year.

It seems apparent to the writer, in the light of this difficulty analysis, that the next most outstanding need is an attack through professionally directed secondary research on curriculum offerings in this segment of the public school system and study by administrators and supervisors of problems connected with its effective application. The high school is not efficient unless it provides for the steady advancement of all youth asking for its privileges and opportunities. There is an obligation to provide worth while, happy activities for all levels of capacity and of ultimate destination present in the pupil group.



TABLE XXIV

THE EFFICIENCY OF FOUR SIZES OF ADMINISTRATIVE UNITS IN COLORADO IN TERMS OF THE GRADE PROGRESS OF THAT PART OF THE PUPIL POPULATION FOUND IN THE SECONDARY SCHOOLS AND ON THE BASIS OF TOTAL SCHOOL EXPERIENCE COMPARED WITH LIKE FACTS IN TWO OTHER SITUATIONS, 1925-26

Unit	Number of Pupils	Progress	Rate	Twelve Years	Index (12 ÷ column 5)
1	2	3	4	5	6
1. Denver (a)	419	1.040	0.960	11.52	1.04
2. Colorado Springs	1360	0.994	1.004	12.05	0.99
3. Colorado over three teacher systems	4614	1.010	0.989	11.87	1.01
4. Colorado one, two, and three teacher schools	100	0.961	1.040	12.48	0.96
5. Twenty-two Illinois high schools (b)				4.30(d)	0.93(d)
6. Boston High School (c)	21052	0.955	1.046	4.18(d)	0.96(d)

a. A representative four year high school

b. Coffman, L. D., *Illinois School Survey; A cooperative Investigation of School Conditions and Efficiency Initiated and Conducted by the Teachers of Illinois in the Interest of all the Children of all the People*, Illinois State Teachers' Association, 1917

c. Kallom, A. W., *Report on Age and Progress of Pupils in the Boston Public Schools*, School Document No. 12, Boston Public Schools, 1925

d. Four years of secondary work

### 3. SUMMARY

A checking of age-grade data for 70,734 pupils in all grades in ten Colorado counties reveals 50 percent of retardation, if the urban situation in the Denver system be omitted from the calculation, and practically no differences among schools of different sizes. To include Denver's pupil population lowers the figures from 49 percent to 25 percent for over three teacher schools and decreases state over-ageness to 27 percent. These figures correspond very well with like facts elsewhere, but a recent report for Boston shows a much larger accelerated group than Denver has.

When grade-progress facts are obtained for the four types of schools studied (outside of Denver), it is found that for all of them there is a lag such that nearly an extra three-fourths of a school year must be used to complete the elementary course of eight years and that the one teacher schools must extend the time used by nearly thirty days more than is

necessary in the urban schools. This situation is far below an ideal condition such as that reported for Seattle elementary schools where the index of efficiency is above unity (1.012) while in the Colorado schools it is below (0.917).

Examination of grade status with reference to life age and progress for 35,531 boys and 35,203 girls in separate groups shows sex differences amounting to 5 percent more retardation among boys, but a greater proportion of girls accelerated and normally placed. A similar relationship to progress is indicated by the fact that boys require three-fourths of a school year more to complete the elementary course and a half-year more for twelve years of work.

Four sizes of administrative unit were examined with reference to facts of age-grade-progress, a large city system, a small city, schools with more than three teachers, and the smallest isolated situations. It was found that age-grade status is closely related to size of unit, the larger systems having the lesser amounts of retardation. The same relationship was found also for grade-progress. The larger the system the greater proportion of the pupil population was found making normal and rapid progress, and the smaller the number who were found lagging behind. The check on time used to complete a year's school work showed a similar situation, from Denver where less than the allotted school year is needed to the smallest schools where three-fourths of a year's extra time would be required to do eight years of work. The indices of efficiency were 1.008 and 0.916.

The final section of this chapter shows that the same relationship of age-grade-progress to size of administrative unit does not obtain when the high school alone is considered. Whether secondary work is undertaken in the largest systems or in the one room rural school, differences of retardation and of time used do not appear so surely as when all grades, one to twelve, are included. A tentative conclusion is that mortality along the way has eliminated the retard and that the high school is taking care of a highly selected group.

It will be noted that this summary of the checking of the status of public school pupils with relation to their advancement includes the Colorado and comparative facts for all grades as well as those for the high school as given in the preceding paragraph. This gives a more inclusive idea of the complete situation.

## CHAPTER VI

## FREE HIGH SCHOOL PRIVILEGES

The modern movement for the extension of universal secondary school privileges without regard to parental residence is a logical development of educational opportunities beyond the elementary level. From the time of Benjamin Franklin's *Proposals Relating to the Education of Youth in Pennsylvania* which resulted in the first academy<sup>1</sup> (1749), through the history of the high school beginning with the English High School of Boston (1821), the offerings of our middle schools have become wider year by year. The decision by the Supreme Court of Michigan of the Kalamazoo high school case added secondary education to our public school curriculum on a legal basis. Since that time the tendency has been toward uninterrupted schooling from the first grade to twelfth all under charge of public taxation. The state of Colorado has taken her part in this general movement.<sup>3</sup>

Toward the latter part of this period of development, two distinctive tendencies have appeared, (1) the establishment of larger units of control, (2) the offering of free high school tuition without regard to district boundaries.

## 1. TUITION FOR OUTSIDE HIGH SCHOOL ATTENDANCE

As a background for the facts in Colorado, a checking was made of recent statutes in 48 states which revealed the present status of the law on the matter of the payment of tuition for high school attendance away from the home district. At least seven types of situations are found.

a. In eighteen states, it is said definitely either that districts "must" pay the tuition or that the schools are "free."

b. In ten states, tuition is provided for either by a larger unit of administration or by a special county levy, although in one state the county high school board makes a "nominal charge."

c. In seven states, there is mandatory legislation, but the amount of tuition per pupil for the school month and

<sup>1</sup> Edmunds, F. S., *History of the Central High School of Philadelphia*, J. B. Lippincott Company, 1902 "A Number of the Poorer Sort" were to be prepared "to teach children Reading, Writing, Arithmetic, and the Grammar of their Mother Tongue."

<sup>2</sup> 30 Michigan and *Report of the Superintendent of Public Instruction of Michigan*, 1874

<sup>3</sup> Hale, H. M., Gove, A., Shattuck, J. C., Editors, *Education in Colorado*, 1861-1885, State Teachers' Association of Colorado, 1886

year is set or limited. The limits are from \$2.50 to \$12 per month, and it is probable that even the largest amount is below the actual per capita total high school costs. In one state the upper limit is set as "the amount of school tax paid by parent."

d. In three states, the payment of tuition is a matter of bargaining between district boards interested, or depends upon a vote of the district or a majority petition of voters.

e. In eight states, state aid is provided for the payment of tuition in whole or in part.

f. In one state, the district "charges" tuition not to exceed \$2.00 per school week.

g. In one state, tuition is charged but there is no definite payment provision.

It is seen, then, that definite mandatory legislation is found in a total of at least 25 states, that ten others have rather tentative provisions for a payment of all or part of the high school tuition, and that in ten states the county unit takes care of all or the greater part of any possible tuition charge. Two states have legislation which provides for a district vote or petition to effect the payment of tuition; and in one state, Colorado, permissive legislation makes it a matter of agreement between district boards.

Legislation on the payment of high school tuition began in Colorado in 1908 with Subdivision 15 of Section 5925 R. S.<sup>4</sup> This was amended by Chapter 202, Laws of 1909 and by Chapter 142, Laws of 1913. Both laws were attempts to make provision for the attendance of pupils of one district in the high school of another district with a mandate for the payment of tuition by the home district. This was to hold when the school house in the adjoining district was more accessible, but it provided that the board might refuse to admit pupils because of insufficient room. This act of 1913 amended the 1909 Session Laws, which had made it compulsory on the board of one district to permit a pupil of another district to attend school in whichever school was more accessible and made it compulsory on the directors of the pupil's district to pay a reasonable tuition.

---

<sup>4</sup> Letters from W. R. Kelly, County Attorney of Weld County, and J. C. Vivian, Assistant to the Attorney General of Colorado

The Act of 1909, and that of 1913 by analogy, was held to be unconstitutional by the state Supreme Court. The decision is in 60th Colorado Supreme Court Reports (Case 8376) and is the case of School District No. 16 in Adams County vs. Union High School No. One in Adams County. The Court said:

"We think the law is invalid when tested by the provisions of Section 15 of Art. IX of our organic law. The section is as follows: 'The general assembly shall, by law, provide for organization of school districts of convenient size, in each of which shall be established a board of education, to consist of three or more directors to be elected by the qualified electors of the district. Said directors shall have control of instruction in the public schools of their respective districts.' Here is a constitutional mandate that instruction in the public schools of every school district shall be under the control of the directors thereof. Nevertheless, the general assembly, by this attempted legislation, seeks to divest the directors of district, wherein there is no high school, of control of instruction therein, beyond a certain attainment and invest such control in the pupils residing therein or in the board of directors of an adjoining district. The legislature, in providing for the education of the pupils of a given district in the schools of another district, and imposing the cost thereof upon the former, clearly interfered with the control of instruction in such district. No discretion is left in the board of directors of the district wherein there is no high school as to the character of high school instruction the pupils thereof shall receive at the cost of the district. There can be no difference in principle between what is attempted by the legislation in question, and an effort of the general assembly to cause schools to be established and maintained, in whole or in part, at the cost of particular districts, and invest the management thereof in boards of directors of other districts."

To meet this fact of unconstitutionality by leaving the matter of attendance and tuition to the discretion of the boards of directors of the school districts interested, the Act of 1919 was passed. (Subdivision 15th of 8333, Compiled Laws of Colorado, 1921.) This is as follows:

"Whenever a pupil resident in one district desires to attend high school or any other school in another school district of any character, whether in another county or not, either because of convenience or of lack of either high school or other school provisions in the district in which such pupil is resident or for any other proper reason whatsoever which shall appear sufficient to both the board of directors of the district wherein such pupil is resident and of the district in which such pupil desires to attend school; the said boards

of directors shall have authority to make arrangements therefor by agreement, including arrangements for reasonable compensation from the funds of the district in which such pupil is resident, to be paid to the district in which such pupil desires to attend and any such arrangement so made shall be enforceable at law."

It is clear from this statement of the present law that the payment of any tuition whatever is a matter of option and of any arrangement possible to be made between districts concerned.

It would be the first judgment of any citizen reading this statement that permissive legislation such as this would be sufficient to meet any needs which might arise, that the fact of the presence of public spirited men on district school boards would insure a broad minded attitude toward the desirability of universal high school privileges in the state on the part of any group of directors to whom such needs might become known.

The facts are that it is not possible to be so optimistic about this. Table XXV reports an intensive checking of the actual attitude of 582 boards of directors in eleven representative counties. These counties are representative in that they include every important geographic, industrial, economic, and social situation, and every type of high school organization in the state. They constitute a good sampling. The total shows that in 93 percent of the districts only 50 to 60 percent of the boards are paying any tuition, and while the total sums paid look large they reduce to but \$55 to \$60 per pupil per year. This is probably below the actual cost of educational privileges received (Table XXVI).

In addition to these facts on the status of free high school privileges in eleven selected situations, reports were received from 54 out of the total of 63 county superintendents of Colorado on the general condition with regard to secondary school offerings in their counties. It appeared that over three-fourths of the school districts in the state were without high schools and that in 16 percent of these districts the boards of education paid no tuition at all for attendance in high schools outside the district. This made a total of nearly 13 percent of all districts in the state in which high school tuition was not taken care of in the case of outside attendance. A distribution of these returns among classes of dis-

TABLE XXV

THE PRACTICE OF BOARDS OF EDUCATION IN 582 DISTRICTS (93 PERCENT OF ALL DISTRICTS) IN ELEVEN COUNTIES OF THE STATE OF COLORADO IN THE PAYMENT OF HIGH SCHOOL TUITION OF PUPILS WHO ATTENDED OUTSIDE THEIR OWN DISTRICT, 1924-26

County	Total Number of Districts	Number of Districts Reporting	Number of Districts Paying Tuition				Number of Tuition Pupils		Total Tuition Paid	
			1924-25		1925-26		1924-25	1925-26	1924-25	1925-26
			Yes	No	Yes	No				
1	2	3	4	5	6	7	8	9	10	11
1. Baca	65	65	26	39	26	39	(a)	(a)	(a)	(a)
2. Boulder	53	52	30	22	30	22	149	127	\$8,526.75	\$7,044.25
3. Costilla	14	14	(b)	14	(b)	14	95	96	6,170.75	6,843.00
4. Delta	21	21	12	9	13	8	(c)	(c)	2,706.25	3,106.25
5. Denver	1	1	(c)	1	(c)	1	50	57	3,683.50	4,582.00
6. El Paso	38	13	11	2	11	2	(d)	(d)	16,449.14	18,312.72
7. Las Animas	88	88	88	(d)	88	(d)	64	75		
8. Logan	56	56	56	(e)	56	(e)	351	393		
9. Routt	43	43	20	23	22	21	(f)	(f)		
10. Weld	135	117	64	53	60	57				
11. Yuma	112	112	112	(f)	112	(f)				
Total	626	582	419	163	418	164	709	748	\$37,536.39	\$39,888.22

a. According to a statement by E. C. Denney, former county superintendent, about 40 percent of the boards of education are willing to pay the tuition of high school pupils who attend outside their home districts.  
 b. "The attitude of the boards of education in Costilla county in the matter of payment of the tuition of eighth grade graduates in other districts than their own is objection." No tuition was paid either year in question.  
 c. The county, city, and school districts of Denver are coextensive.  
 d. "We have no districts in this county who are paying tuition of eighth grade graduates attending high school in districts outside their own. Las Animas county was organized into a County High School District some five years ago, and all students who cannot attend one of the county high school units has his or her tuition paid to any other high school by the County High School District."  
 e. "In this county we have thirteen high schools all under the administration of the Logan County High School Committee. There are no tuition charges. I happen to know that no school districts in this county are paying tuition for high school pupils attending schools outside the county since we have no tuition charges for our own high school students."  
 f. Yuma has a county high school system with a Union High School at Yuma city. There is no tuition problem.

tricts showed that actual refusal to pay tuition was confined to directors in the third class districts only. However, it is found that there are twenty out of 71 of the second class districts without any high school privileges at all.

When these items of negation are multiplied by the figures for state area and for total pupil enrollment in the public schools, tentative figures of most alarming size are

TABLE XXVI

THE PROPORTION OF DISTRICTS IN TEN COUNTIES OF THE STATE OF COLORADO THAT PAY THE TUITION OF PUPILS WHO ATTENDED OUTSIDE THEIR OWN DISTRICTS AND THE ANNUAL AMOUNT PAID PER PUPIL, 1924-26

County	Percent of Districts Reporting that Pay Tuition		Average Amount Paid per Pupil	
	1924-25	1925-26	1924-25	1925-26
1	2	3	4	5
1. Baca	40.0 (a)	40.0 (a)		
2. Boulder	57.8	57.5	\$57.74	\$55.46
3. Costilla	00.0	00.0	0.00	0.00
4. Delta	57.1	61.9	64.94	71.28
5. El Paso	84.6	84.6	54.12	54.49
6. Las Animas	100.0	100.0		
7. Logan	100.0	100.0		
8. Routt	46.5	51.9	57.55	61.08
9. Weld	54.7	51.2	46.86	46.59
10. Yuma	100.0	100.0		
Approximate				

<sup>N</sup>According to a statement by E. C. Denney, former county superintendent, about 40 percent of the boards of education are willing to pay the tuition of high school pupils who attend outside their home districts.

obtained on deprivation of high school privileges in the state. The details of these will not be given here, but in bulk they furnish additional evidence on the futility of the present permissive legislation on the matter of the payment of outside high school tuition. One cannot regard the situation with complacency, assuming that when directors see need for district aid they will provide for it.

## 2. THE ABILITY TO OFFER FREE HIGH SCHOOL TUITION

The large fact that appears is that a part of Colorado's youth, too large a group, is deprived of opportunities for further public school education beyond the elementary school because local boards will not pay their high school tuition wherever secondary class work may be obtained. The natural inquiry is as to why this is possible at a time when and in a state where the high school is in general favor and has been



accepted as a logical and necessary continuation of primary education. Complete evidence is not available in answer to this question, but it is possible to prove that economic necessity outside of the home is not the reason and that it is not because the public schools are discriminated against in the distribution of public taxes.

A detailed examination of economic conditions in the 24 counties of the state in which the 231 boards of education were found who refused to provide for high school tuition for outside attendance revealed facts as given in column two of Table XXVII. When these are compared item by item with like data in the remaining counties (column 3) and in all 63 counties of the state (column 4), no valid reason is found in the realm of necessity for a refusal to take care of outside tuition costs in cases where aid is needed. In fact, money figures like items six and eight seem to say that the public school system as a whole is in distinct favor in these 24 counties; and item nine shows no discrepancy which ought to affect high school privileges. It must be that causes outside

TABLE XXVII  
THE ECONOMIC CONDITIONS IN THE 24 COLORADO COUNTIES IN WHICH 231 BOARDS OF DIRECTORS WERE REPORTED AS REFUSING TO PAY OUTSIDE HIGH SCHOOL TUITION, 1926

Item	Median for 24 Counties	Median for 39 other Counties	Median for the State
1	2	3	4
1. Percent of cultivated area (a)	7.2	7.0	5.9
2. Median acres capable of irrigation (b)	32,956	32,430	34,623
3. Rank in valuation of all crops (a)	26.5	31.5	30.5
4. Rank in total assessed valuation (a)	27.0	33.5	31.5
5. Percent of state assessed valuation (a)	1.05	0.70	0.85
6. Taxes assessed per capita (a)	\$43.06	\$41.20	\$40.05
7. Percent school revenue is of total county tax (a)	46.3	50.8	48.2
8. Median per capita cost of education based on enrollment (a)	\$93.60	\$89.91	\$93.50
9. Median per capita cost of education based on total receipts and total population (a)	\$25.91	\$27.37	\$26.09

a. Ingram, T. R., *Yearbook of the State of Colorado*, Colorado State Board of Immigration, 1926

b. *United States Census Reports*, 1920

of economic conditions are responsible for the situation revealed in the section above. The 24 counties under criticism are as able and do provide for the elementary schools on a level comparable to that found in the entire state, but secondary education is not fully a part of the free public school system.

It is interesting and significant in this connection to note the place Colorado has in a comparison with country-wide conditions in educational ability and achievement (Table XXVIII). The percents of items one and two reveal no peculiar basic deficiency in state economic wealth, and the remarkable proportionate increase in total costs shown in item ten is but what would be expected in the rapid development of a state emerging from pioneer conditions. Further, the rank figures in items three to nine inclusive are all above and close to the upper quartile position, and those in items eleven, twelve, and thirteen indicate no condition of illiteracy or of

TABLE XXVIII

THE POSSIBILITIES FOR PUBLIC EDUCATION IN COLORADO COMPARED WITH ALL STATES, 1925-26

Item	Colorado	United States
1	2	3
1. Percent that average total income is of wealth (a)	23.6	23.9
2. Percent that average current income is of wealth (a)	21.3	21.8
3. Rank in ability to support education (a)	21	
4. Rank in total income per child (a)	13	
5. Rank current income per child (a)	17	
6. Rank in total amount expended per child (b)	12	
7. Rank in average salaries paid (b)	22	
8. Rank in cost excluding salaries (b)	14	
9. Rank in assessed valuation of school property (c)	26	
10. Percent of increases for 42 years in total school costs (a)	4799.9	1902.3
11. Rank in percent of illiteracy (d)	27	
12. Rank in circulation of popular magazines (e)	7	
13. Rank in circulation of magazines of opinion (e)	13	

a. Norton, J. K., *The Ability of the States to Support Education*, Research Bulletin of the National Education Association, Vol. IV, Nos. 1 and 2, 1926

b. *Supplement to American School Board Journal*, December, 1924

c. *Statistics of State School Systems*, United States Bureau of Education, Bulletin 1924, No. 31

d. *United States Census Reports*, 1920

e. *Bulletin of the Elementary School Principals*, Vol. III, No. 2, 1924

lack of general intelligence such as is found in many states which are retarded in educational development.

### 3. A DESIRABLE AND POSSIBLE HIGH SCHOOL TUITION LAW

It has been seen that the mandatory laws of 1909 and 1913 have been held to be unconstitutional by the Colorado Supreme Court. The provision cited is Section 15 of Article IX:

The general assembly shall, by law, provide for organization of school districts of convenient size, in each of which shall be established a board of education, to consist of three or more directors to be elected by the qualified electors of the district. Said directors *shall have control of instruction in the public schools of the respective districts.*

The opinion held is that, when a pupil attends in a district outside that of the residence of his parents, the home board of directors loses control of the type of instruction which shall be offered him. For this reason, boards of directors cannot be *compelled* to provide for attendance of eligibles in neighboring high schools when no secondary school privileges are offered at home, and the present law goes no farther than to give boards "authority to make arrangements." This opinion disregards a preceding section of the constitution in which every child between the ages of six and twenty-one years is guaranteed a "free common school education." Evidently the high school is held to be not a part of but an addition to the public common school system of the state.

For comparison with this situation a typical statute on high school tuition is quoted here, that in New Hampshire:

Any district not maintaining a high school or school of corresponding grade shall pay for the tuition of any child who with parents or guardian resides in said district and who attends high school or academy in another district in this state, and the parent or guardian of such child shall notify the school board of the district in which he resides of the high school or academy which he has determined to attend; provided, however, except as in section 21, that no district shall be liable for tuition of a child in any school, in excess of the average cost per child of instruction for the regularly employed teachers of that school or of all the public high schools of the state, and the cost of textbooks, supplies and apparatus during the school year preceding, and in senior high school work only. (Public Laws, Art. 120, Section 19, 1925)

The article of the New Hampshire constitution on education says:

Knowledge and learning generally diffused through a community being essential to the preservation of a free government, and spreading the opportunities and advantages of education through the various parts of the country being highly conducive to promote this end, it shall be the duty of the legislators and magistrates, in all future periods of this government, to cherish the interest of literature and the sciences, and all seminaries and public schools; to encourage private and public institutions, rewards, and immunities for the promotion of agriculture, arts, sciences, commerce, trades, manufactures, and natural history of the country; to countenance and inculcate the principles of humanity and general benevolence, public and private charity, industry and economy, honesty and punctuality, sincerity, sobriety, and all social affections and generous sentiments, among the people; provided, nevertheless, that no money raised by taxation shall ever be granted or applied for the use of the schools or institutions of any religious sect or denomination. (Article 82)

It is seen that this contains no provision for the location of the control of the public school in the local district. It assumes that public education is a state matter, and that larger units of control will secure to local districts better schools.

The contrast of the situations in Colorado and in New Hampshire is striking. Colorado can make plans for improvements in school organization, but cannot compel anything which will infringe on the power of local boards. Consolidated, county, and union high school districts take care of the matter of high school tuition within their own territories, but all of the 24 counties where deprivation of high school opportunities has been found do not have them and cannot be compelled so to organize.

Competent legal advice discourages any attempt to frame a law which would be fully mandatory. It has been thought that provision to take care of specific cases of deprivation might be made. For example, when an eighth grade graduate wishes to attend the secondary school in another district and the boards of directors cannot agree as to attendance or tuition, could not the county superintendent act as

arbitrator and the county commissioners take care of the tuition amount? Or, might it not be possible to provide for appeal to the State Superintendent's office upon failure of the school boards directly interested to agree upon the tuition? But such laws could not be anything but permissive. If made mandatory, they might interfere with the right of control of the home district.

It seems to be the final conclusion that anything short of a radical change in the organic law of the state cannot insure to every prospective high school child a right to attend school free of charge.

It is well known among state educational leaders that there are other archaic situations in the state educational system of Colorado which need study and revision. The procedure in a number of other states, where like deficiencies have been corrected, has consisted first of all of the initiation of a movement for a complete state educational survey by the research and the legislative committees of the state teachers' association. This has shown the need and has secured the interest and financial cooperation of the legislature. The survey has been conducted, as a rule, by outside agencies, usually the office of the United States Commissioner of Education or one of the large educational foundations.

#### 4. SUMMARY

a. The legal requirements in 48 states in the matter of the payment of high school tuition for attendance outside the home district are as follows:

(1) In eighteen states, districts must pay the tuition, or the schools are said to be "free."

(2) In ten states, tuition is provided for either by a larger unit of administration or by a special county levy, although in one state the county high school board makes a "nominal charge."

(3) In seven states, there is mandatory legislation, but the amount of tuition per pupil for the school month and year is set or limited. The limits are from \$2.50 to \$12 per month, and it is probable that even the largest amount is below the actual per capita total high school costs. In one state the upper limit is set as "the amount of school tax paid by parent."

(4) In three states, the payment of tuition is a matter of bargaining between district boards interested (Colorado), or depends upon a vote of the district or upon a majority petition of voters.

(5) In eight states, state aid is provided for the payment of tuition in whole or in part.

(6) In one state, the district "charges" tuition not to exceed \$2.00 per school week.

(7) In one state, tuition is charged, but there is no definite payment provision.

b. Definite mandatory legislation is found in a total of at least 25 states, ten others have rather tentative provisions for a payment of all or part of the high school tuition, and in ten states the county unit takes care of all or the greater part of any possible tuition charge.

c. Two states have legislation which provides for a district vote or petition to effect the payment of tuition, and in one state (Colorado) permissive legislation makes it a matter of agreement between district boards.

d. The Colorado state laws of 1909 made it compulsory on the board of directors of one district to permit a pupil of another district to attend school in the more accessible district and compelled the home district to pay a reasonable tuition.

e. The Colorado law of 1913 provided that the board of directors might refuse to admit outside pupils because of insufficient room.

f. Both laws have been held to be unconstitutional by the State Supreme Court of Colorado on the ground that there is a constitutional mandate that instruction in the public schools in every school district shall be under the control of the directors thereof. To provide for the education of the children of a given district in the schools of another district, imposing the cost upon the former, was held to be an interference with the control of instruction, as no discretion was left in the board where there was no high school as to the character of instruction pupils would receive at their cost.

g. The present law in Colorado is that of 1919 which leaves the matter of attendance and tuition to the boards of

directors of the school districts interested. It is a matter of bargaining between boards.

h. It is not possible to leave this matter to an arrangement between boards of directors with an assurance that no Colorado child who is eligible for high school membership will be deprived of it.

i. In the case of 93 percent of 582 district boards in eleven representative Colorado counties, only 50 to 60 percent are paying any high school tuition for outside attendance. The average amount paid is but \$55 to \$60 per pupil per school year.

j. Returns from 54 out of 63 counties gave tentative facts like the following on high school opportunities in Colorado:

(1) Number of districts without high schools—  
1437

(2) Proportion of districts without high schools  
—78.3 percent

(3) Number of districts without high schools  
in which boards do not pay outside tuition—231

(4) Proportion of districts without high schools  
in which boards do not pay outside tuition—16.0  
percent

(5) Proportion of all districts in the state  
where high school tuition is not paid in the case of  
outside attendance—12.5 percent

k. Refusal to pay outside high school tuition is confined to boards of directors in third class districts.

l. Tentative statements like the following may be made on high school deprivation in Colorado in terms of pupils:

(1) Approximate number of pupils without  
high school privileges—122,000

(2) Approximate proportion of pupils without  
high school privileges—50 percent

(3) Approximate number of pupils without dis-  
trict aid for needed high school tuition—24,000

(4) Approximate proportion of pupils without  
district aid for needed high school tuition—19 per-  
cent

(5) Approximate proportion of all pupils without district aid for needed high school tuition—10 percent

m. Tentative statements like the following may be made on high school deprivation in Colorado in terms of area:

(1) Approximate area without high schools—47,000 square miles

(2) Approximate proportion of entire state without high schools—50 percent

(3) Approximate area without district aid for high school tuition—10,000 square miles

(4) Approximate proportion of area without high school and without aid for needed high school tuition—20 percent

(5) Approximate proportion of the entire state without aid for needed high school tuition—10 percent

n. The economic conditions in the 24 Colorado counties in which 231 boards of directors were reported as refusing to pay outside high school tuition reveal no basic reasons for deprivation of high school privileges when comparison is made with the situation in the 39 other counties and in the entire state.

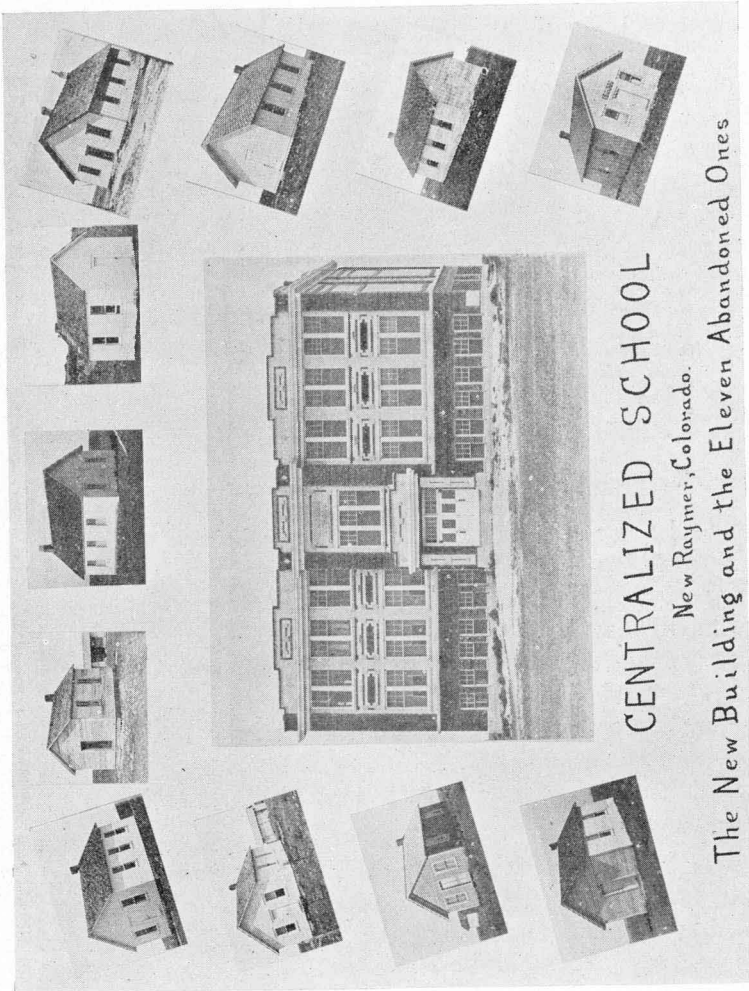
o. Colorado's educational ability and achievement is comparable to conditions found in a country-wide checking.

p. A majority of the states have definite mandatory laws in the matter of high school tuition. That of New Hampshire is typical of these.

r. Colorado's laws are permissive only, and it is the opinion of competent legal advice that it is useless to attempt to frame a statement which will have in it any compulsory feature, as the constitution places the central authority squarely with local boards of directors.

s. Nothing short of a constitutional amendment can take care of the deprivation of high school opportunities found in Colorado. Any such attempt should be the culminating feature of a long-time, serious study of the educational system of the state resulting in a state-wide survey by outside educational leaders.





## CENTRALIZED SCHOOL

New Raymer, Colorado.

The New Building and the Eleven Abandoned Ones

The New Raymer Consolidated School, Weld county, illustrates the desirability of a larger unit of administration in the secondary school. Before consolidation, high school work was attempted for a total of six pupils in these small schools. Now, 54 pupils are in high school classes, the school is a four year state accredited high school, teaching has been improved, and personal supervision is possible.

## CHAPTER VII

## LARGE AND SMALL HIGH SCHOOLS IN URBAN AND IN RURAL SYSTEMS

The material presented thus far on opportunities for high school education in Colorado suggests (1) that the problem of child loss at the eighth-to-ninth grade gap is far from solution, (2) that selection of youth for high school membership is undemocratic and largely on the basis of chance, (3) that the high school curriculum fails to fit pupil needs and capabilities, (4) that there is waste of pupil and teacher time and of all facilities which the high school offers because of slow progress through the four year course, (5) and that the high school is not an integral part of the free common school system of the state in any real and inclusive sense. It remains to make as careful a survey as possible, with data available, of different levels of educational efficiency found among larger and smaller units of high school organization found in typical city and country situations.

## 1. HIGH SCHOOL FACTS

The background of fact for secondary education in Colorado is indicated in part by the figures of Table XXIX. This table deals with organizations having the name of high school, but later in this section account will be taken also of attempted secondary school work in grades above the eighth in relatively unorganized small school situations. The most significant figures here are those for total high school and grade enrollment. It is seen that over one-fifth (22.3 percent) of the public school pupils in the state are in high school.

Further evidence on enrollment in high school grades is found in the next three tables. In Table XXX, it is seen that in ten representative counties the sixth grade group is 94 percent of beginning pupils, but that the entering high school group is but 62 percent and the twelfth grade but one-third of the first grade group. This distribution is confirmed in Table XXXI which reports by grades the 7877 cases used in a comparison of school efficiency in first and third class districts. It is seen that but three-fourths of the eighth grade children enter high school and but one-half of those entering reach the twelfth grade.

TABLE XXIX

SEX DISTRIBUTION OF PUPILS AND HOLDING POWER OF COUNTY HIGH SCHOOLS AND OF ALL OTHER COLORADO SECONDARY SCHOOLS, 1926 (a)

Type of High School	Total	Number		Percent	
		Boys	Girls	Boys	Girls
1	2	3	4	5	6
1. Junior and senior high schools (including union high schools)					
a. Enrollment	50720	24191	26529	47.7	52.3
b. Graduated	6002	2566	3436	42.8	57.2
c. Percent graduated	11.8	10.6	12.9		
2. County high schools (including 50 branches)					
a. Enrollment	5034	2337	2697	46.5	53.5
b. Graduated	801	339	462	42.4	57.6
c. Percent graduated	15.8	14.5	17.1		
Total high school enrollment	55,754	26,528	29,226	47.6	52.4
Total grade school enrollment (b)	194,333				
Total	250,087				

a. Bradford, Mary C. C., *Twenty-Fifth Biennial Report of the State Superintendent of Public Instruction, Colorado, 1925-26*

b. Including 13,210 in night schools

TABLE XXX

THE ENROLLMENT OF 27,844 PUBLIC SCHOOL PUPILS IN GRADES ONE, SIX, EIGHT, NINE, AND TWELVE IN TEN COLORADO COUNTIES, 1925-26

Grade	Boys	Girls	Total	Relation-ship to Grade One	Percent
1	2	3	4	5	6
One	4004	3581	7585		27.2
Six	3539	3600	7139	94.1	25.6
Eight	2885	2982	5867	77.4	21.1
Ninth	2299	2426	4725	62.3	17.0
Twelve	1184	1344	2528	33.3	9.1
Total	13,911	13,933	27,844		100.0

Two more groups of facts (Tables XXXII and XXXIII) add to the introductory summary of high school conditions in Colorado. Out of a total of 280 high schools in the state, 82 are members of the North Central Association of Colleges and Secondary Schools and include 47 percent of the total secondary school enrollment. And it is seen (Table XXXIII) that the senior high schools are first of all girls' schools with

TABLE XXXI

SAMPLING FIGURES FROM GRADES SIX, EIGHT, NINE, AND TWELVE IN A STUDY OF RELATIVE SCHOOL EFFICIENCY IN THE FIRST CLASS AND THIRD CLASS DISTRICTS OF TEN COLORADO COUNTIES, 1925-26 (a)

Grade	Sampling			Percent reaching the higher grade		
	First Class	Third Class	Total	First Class	Third Class	Total
1	2	3	4	5	6	7
Six	1308	1562	2870			
Eight	1186	1126	2312	90.7	72.1	80.6
Nine	1105	640	1745	93.2	56.8	75.5
Twelve	701	249	950	63.4	38.9	54.4

a. Hadley, H. H., *Size of Educational Unit and School Efficiency in Colorado*, Unpublished Master's Thesis, Colorado State Teachers College, 1927

TABLE XXXII

A COMPARISON OF ALL COLORADO HIGH SCHOOLS WITH 82 SUCH SCHOOLS IN THE NORTH CENTRAL ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS, 1926

Item	All Secondary Schools (a)	82 Secondary Schools in the North Central Association (b)
1	2	3
1. Total enrollment	55,754	26,313
2. Number of graduates	6,803	4,855
3. Percent graduated	12.2	18.4
4. Length of school year (weeks)	36.2 (mean)	36.23 (median)
5. Salary (average)		
a. Men	\$1,690	\$1,856
b. Women	\$1,300	\$1,601

a. Bradford, Mary C. C., *Twenty-Fifth Biennial Report of the State Superintendent of Public Instruction, Colorado, 1925-26*

b. Childs, H. G., "Proceedings of the Commission on Secondary Schools," *North Central Association Quarterly*, June, 1926

TABLE XXXIII

SEX DISTRIBUTION IN THE SENIOR AND JUNIOR HIGH SCHOOLS OF COLORADO COMPARED WITH THAT FOR ALL CHILDREN OF SCHOOL AGE, 1926 (a)

Type of High School	Number		Total Percent	
	Boys	Girls	Boys	Girls
1	2	3	4	5
1. Children of school age (6-21 years)	152,638	149,145	50.6	49.4
2. Senior high school	16,190	18,590	46.6 (b)	53.4 (b)
3. Junior high school	10,333	10,636	49.4 (c)	50.6 (c)
4. Senior high school graduates	2,566	3,436	42.8	57.2

- a. Bradford, Mary C. C., *Twenty-Fifth Biennial Report of the State Superintendent of Public Instruction, Colorado, 1925-26*
- b. Boys, 44.1 and girls, 55.9; Phillips, F. M., *Statistics of Public High Schools, 1921-22*, Bureau of Education (1924), No. 7.
- c. Phillips' study; boys, 48.1 and girls, 51.9

respect to both enrollment (item 2) and percentage of graduates (item 4), and Phillips' figures (notes b and c) confirm this statement.

## 2. HIGH SCHOOL OPPORTUNITIES AND SIZE OF UNIT

The specific inquiry of this section has to do with possible differences in the value of secondary school offerings in larger and in smaller school situations. The tables just presented offer interesting evidence on this question. In Table XXXII, it may be understood that the 82 North Central schools are larger than the remaining high schools of the state. They have an average of 321 pupils while the others have but 105, and it is seen that although there is no significant difference in the length of the school year the larger schools graduate a larger percentage of the enrollment and employ teachers worthy of better salaries. In Table XXXI, the assumption is that the secondary work in first class districts represents larger organizations than in third class districts, and it is seen that a much larger portion of the eighth grade group enters high school in first class districts (93 percent) than in third class districts (57 percent) while nearly twice as many reach the twelfth grade (63 percent and

39 percent). Further, it is seen in Table XXIX that the county high schools (item 2) are superior in respect to the proportion of total enrollment graduated (16 percent as compared with 12 percent). It is assumed that each county high school with its branches constitutes a unit of organization, and they are found to be larger than other high schools in the state.<sup>1</sup> (Average enrollment in eight county high schools, 420; in 74 other high schools, 308.)

One other item of evidence on the status of secondary school work in Colorado has been discussed in Chapter VI, Section 1. There it was said that, in a checking including 1817 school districts (90.7 percent of all), 231 not only had no high schools but the district boards refused to pay the tuition of pupils attending high school in other districts. The significant thing for the present chapter is the fact that these 231 districts were all in the third class where units of school organization are probably smallest of all in terms of pupil enrollment and teaching staff. Sixty percent of the boards of education reported that they provided for this tuition, but these were all found in first and second class districts. Twenty out of 71 second class districts were without high schools.

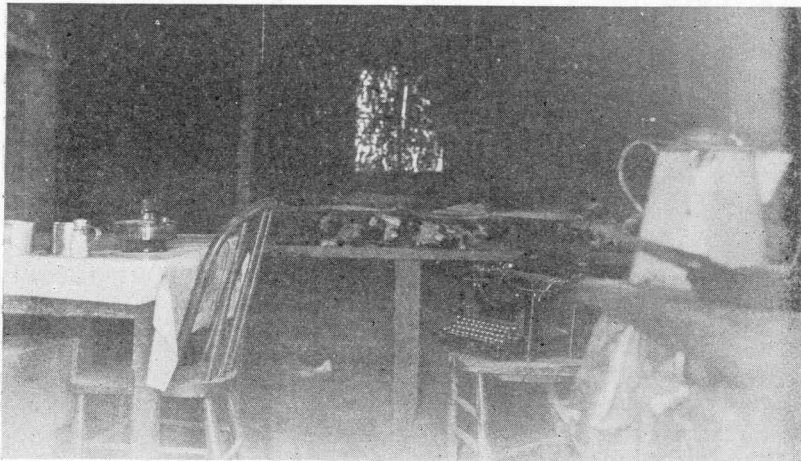
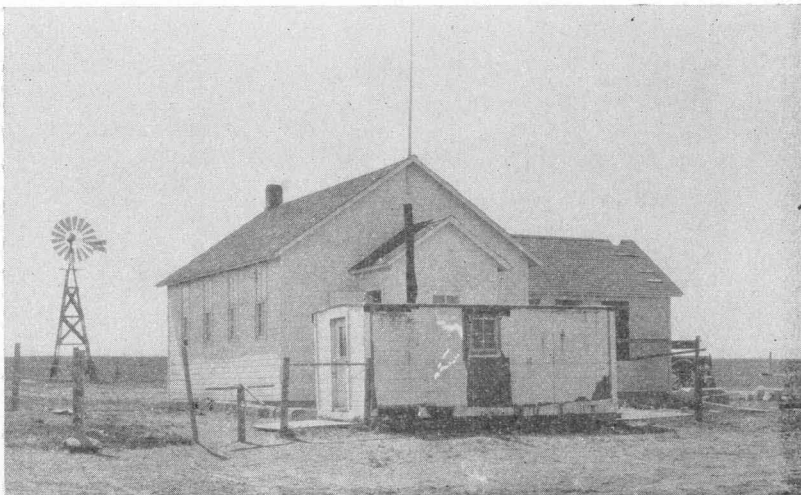
It is apparent that on four counts at least educational opportunity on the secondary level correlates with size of unit of organization in Colorado. (1) The North Central high schools are found to graduate larger groups and to pay better salaries to teachers. (2) In first class districts more eighth grade pupils enter high school and reach the senior class. (3) The county high schools graduate a larger percent of their enrollment than do smaller organizations. (4) Deprivation of high school privileges because of inability to pay tuition is confined to the small schools in third class districts. It would seem that no further evidence would be needed, if a sincere attitude be taken toward the relative value of high school work in smaller and in larger educational units. None of the facts discovered point to the superiority of the former.

### 3. SPECIFIC EFFICIENCY FACTORS

In an investigation of factors which affect educational efficiency in a large Colorado county of 135 districts (Weld

---

<sup>1</sup> Childs, H. G. "Proceedings of the Commission on Secondary Schools," *North Central Association Quarterly*, June, 1926



This two-room school, located in the dry farming country in northern Colorado, illustrates an effort by the addition of a wing to the original cubicle to take care of a total of 27 pupils including eight above the elementary school. Here, four years of high school work are attempted without adequate equipment in books and apparatus, without expert, well-prepared teaching, with no frequent supervision, and with a total lack of that social education possible where the pupil group is large.

The 16x6x6 shack in front of the school building is the teacherage for the district. Here, three persons live, the two teachers, a Mother and her daughter, as well as the little sister. The cut of the interior shows that most of the floor space is taken by the stove, the table, and the bed. There are two small windows. The tar paper will possibly be renewed before winter.

county), it was found that each of the seven variables there studied has a relative effect upon the educational advancement of school children as indicated by its rank and expression of amount in Table XXXIV. The mentality of the pupil is of first importance in determining his educational age, that is the level of achievement he has reached in his school subjects as

TABLE XXXIV

THE RELATIVE VALUE OF SEVEN INDEPENDENT VARIABLES AS DETERMINING THE CRITERION, ACHIEVEMENT IN TERMS OF EDUCATIONAL AGE, IN THE UPPER GRADE AND HIGH SCHOOL WORK OF WELD COUNTY, COLORADO, 1925-26

Factor	Boys		Girls		Total Rank
	Weight	Rank	Weight	Rank	
1	2	3	4	5	6
1. Mental age	110	1	6.4	1	1
2. Life age	64	2	3.2	2	2
3. Length of school training	19	4	1.6	3	3
4. School status	27	3	0.1	7	4.5
5. Physique index	8	6	1.0	4.5	4.5
6. Distance from school	11	5	0.2	6	6
7. Permanence of residence	1	7	1.0	4.5	7

compared with the average achievement of many other pupils of the same life age. Second in value come chronological age and third the length of school training, while the type of home he comes from (social status), and three other factors are next in rank and of far less importance. A number of these seven items of information will be used in contrasting school efficiency in secondary work done in larger and in smaller units of organization.

From a recent master's study at Colorado State Teachers' College,<sup>2</sup> at least seven items of contrast have appeared in the checking of differences among high school groups found in first class and in third class districts. These are collected in Table XXXV. It is seen that the first class districts enroll pupils who are farther advanced in their school work (item 1, column 2), but that it may be that they do not make the total gain in achievement that third class pupils do. This may be explained by the greater mental age in

<sup>2</sup> Hadley, H. H., *Size of Educational Unit and School Efficiency in Colorado*, Unpublished Master's Thesis, Colorado State Teachers College, 1927



the latter situation (item 2, column 4), but the pupils of first class districts seem to be distinctly superior in terms of I. Q. (item 3). No contrasts in life age appear; but the home background in first class districts is much more cultural and on a higher economic level, as well as nearer the school buildings.

TABLE XXXV

DIFFERENCES FOUND IN SEVEN ITEMS OF INFORMATION ABOUT HIGH SCHOOL PUPILS IN FIRST AND THIRD CLASS DISTRICTS OF COLORADO, 1925-26 (a)

Item	First Class		Third Class	
	Ninth Grade	Twelfth Grade	Ninth Grade	Twelfth Grade
1	2	3	4	5
1. Educational age (b)	15-4	16-4	14-11	16-4
2. Mental age (months)	159.0	190.0	177.4	198.1
3. I. Q.	99.4	102.8	90.6	89.6
4. Life age (years and months)	15-3	18-3	15-6	18-3
5. Home status (Chapman score)	551.3	563.9	533.3	544.1
6. Distance from school (miles)	1.2	1.0	3.1	2.1
7. Permanence of residence (years)	8.3	10.6	8.3	10.1

- a. Hadley, H. H., *Size of Educational Unit and School Efficiency in Colorado*. Unpublished Master's Thesis, Colorado State Teachers College, 1927
- b. When size of educational unit is considered in terms of number of teachers in the corps, the educational age in the ninth and twelfth grades of the largest schools is found to be 15 - 3 and 16 - 7, while in the smallest schools it is but 14 - 8 and 16 - 5

Another type of evidence, which may be taken from a group of case studies made in connection with the checking of the destination of eighth grade pupils (Chapter II), has to do with sources of membership in the freshman classes of high schools in first and in third class districts. The detailed data cannot be given here, but they illustrate the type of youth prevented from embracing secondary school opportunities because of artificial barriers set up in the usual June county superintendent's examinations. On the whole, it was found that the candidates for high school enrollment examined

when found in first class districts come from a higher type of home background, are somewhat younger in life age, and have made a better school record. And it is sure that, given a modern secondary curriculum and skillful teaching aided by adequate supervision, a number of these cases would have done excellent high school work had they been enrolled in freshman classes. A distinct loss to future American leadership results from a situation such as this.

More conclusive evidence on the superiority of secondary school conditions in larger school units is found in Tables XXXVI, XXXVII, XXXVIII. Here, school situations of four sizes are examined, and it is seen that items of excellence appear more often in the larger. Table XXXVI reports the age-grade facts in grades nine, ten, eleven, and twelve for Denver, Colorado Springs, and the larger and smaller schools outside of Denver. The contrast in overageness (column 5) and in underageness (column 3) in Denver and in smaller school organizations is striking. The largest system has discovered a comparatively large group of superior pupils for acceleration while other situations have not. Denver's retarded group is smaller than in other systems examined also.

Efficiency of secondary school work in terms of rate of progress of pupils is reported in Tables XXXVII and XXXVIII. It is apparent that there is almost perfect correlation between normal progress and size of school situation, and the contrast between Denver and outside districts in the size of rapid and slow groups (columns 3 and 5) is striking. Evidently, high school pupils in the smaller schools must use more time to conquer curricular requirements than is necessary in the larger schools. Table XXXVIII gives expressions of amount for these time differences. In Denver, less than a year is needed to do a year's high school work (column 4), and in smaller systems the figures come nearer to a full year and more. These contrasts are accentuated when a total of 12 years of school experience is considered. Denver, on the basis of a ten month school year, has 4.8 months to spare, while the smallest schools (item 4) are an identical fraction (0.48) behind, but the school year is but 9.04 months long there.



This one room school, located in the dry land region of northern Colorado, is representative of small, isolated situations where secondary school work is attempted. Twelve pupils attend, four of whom are in high school classes in grades nine and ten. Usually in such schools the teacher is a one or two year graduate of a teachers college, and inadequately prepared by personality and experience to take charge of high school work. It happens that this school is the extreme exception, as the teacher is a college graduate with fourteen years of successful experience. Two of her high school pupils are to continue their secondary work in the nearest town next year. A skillful application of the technic of individual instruction has insured their success in the remaining years of their high school experience.

But in all such small schools, in addition to negative items of educational opportunity usually present resulting from poor teaching, lack of apparatus, books, and the like, the small group of youth compelled to take high school tuition there if anywhere are deprived of all of the advantages of preparation for happy and successful future citizenship which are offered by the social contacts and extra-class activities of the larger unit of administration located in an urban center.

TABLE XXXVI

DIFFERENCES IN THE LIFE AGE AND GRADE LOCATION OF 12,190 COLORADO PUBLIC SCHOOL CHILDREN DOING SECONDARY WORK IN GRADES NINE, TEN, ELEVEN, AND TWELVE IN FOUR SIZES OF SCHOOL UNIT, 1925-26

Size of School Unit	Number of Pupils	Percent		
		Underage	Normal	Overage
1	2	3	4	5
1. Denver	6155	27.0	40.4	32.6
2. Colorado Springs	1089	1.8	50.5	47.7
3. Over three teacher schools in seven counties outside of Denver	4787	2.6	49.9	47.5
4. One, two, and three teacher schools in four counties	159	5.8	46.5	47.7

TABLE XXXVII

DIFFERENCES IN THE RATE OF GRADE PROGRESS OF 6493 COLORADO PUBLIC SCHOOL CHILDREN DOING SECONDARY WORK IN GRADES NINE, TEN, ELEVEN, AND TWELVE IN FOUR SIZES OF SCHOOL UNIT, 1925-26

Unit	Number of Pupils	Percent		
		Rapid	Normal	Slow
1	2	3	4	5
1. Denver	419 (a)	35.5	56.3	8.2
2. Colorado Springs	1360	18.5	57.6	53.9
3. Over three teacher schools in seven counties outside of Denver	4614	19.1	53.9	27.0
4. One, two, and three teacher schools in four counties	100	19.0	44.0	37.0

a. A four year high school in a typical urban location

TABLE XXXVIII

DIFFERENCES IN THE EFFICIENCY OF THE SECONDARY WORK  
IN FOUR SIZES OF SCHOOL UNIT IN COLORADO, 6493 PUPILS  
IN GRADES NINE, TEN, ELEVEN, AND TWELVE, 1925-26

Unit	Number of Pupils	Number of years of progress made in one school year	Number of years used to make one year of school progress	Number of years used to make twelve years of school progress	Index of Efficiency (12 ÷ column 5)
1	2	3	4	5	6
1. Denver	419 (a)	1.040	0.960	11.52	1.04
2. Colorado Springs	1360	0.994	1.004	12.05	0.99
3. Over three teacher schools in seven counties outside of Denver	4614	1.010	0.989	11.87	1.01
4. One, two, and three teacher schools in four counties	100	0.961	1.040	12.48	0.96

a. A four year high school in a typical urban location

High school conditions are clearly better when found in larger units of administration. The indices of efficiency in column 6, Table XXXVIII, express very inadequately the contrasts found. The whole situation is worth a more extensive and intensive investigation than has been possible in the study reported in this bulletin. No claim is made for finality of findings. Here is a problem for the next student in the secondary field. However, it is believed that the argument for larger units of administrative control here presented cannot be disregarded as of no value by the thoughtful student of this problem. The total area and the size of pupil groups used must supplement roughness of original data and inadequacies in technic. The burden of proof lies with any conservative clientele which will attempt to argue for a maintenance of the present status quo.

#### 4. SUMMARY

This chapter has presented a total of fifteen to twenty groups of facts of rather high objectivity which show high school work as carried on in more strictly urban and larger systems to be on a better level of efficiency than when attempted in smaller and in rural situations.

It seems to be in accord with the trend of thought represented in the studies reported to conclude that the larger unit of administration in secondary school education gives opportunities for the application of efficient principles of curriculum making, supervision, and teaching which are not to be found among smaller high schools. Centralization of pupil groups, then, should be the objective. But, at the same time, as in elementary education, professional attention should be directed to the improvement of opportunities for secondary work in isolated situations where distance and economic necessity retain small groups of youth who cannot get into personal touch with the larger high schools.

In a state such as Colorado, the educational frontiers, as represented by extremely scattered distribution of population, will not be obliterated for some time. It will not be professional or scientific to assume that nothing can be done for these groups in the meantime. A study of the possibilities of individual instruction and of experience in similar situations<sup>3</sup> will suggest lines of endeavor for further research in this field. Knowledge of the details of perhaps the most successful modern attempt to educate for efficient leadership in secondary education<sup>4</sup> will help to clear up ultimate objectives and will furnish tentative items of procedure.

---

<sup>3</sup> Robinson, T. H. (Editor), "Educating a Scanty Population Scattered Over Enormous Area" (Western Australia) *School Life*, May, 1927

<sup>4</sup> Hart, J. K., *Light from the North*, Henry Holt and Company, 1927

## CHAPTER VIII

## TENTATIVE CONCLUSIONS

Over 70,000 public school pupils of Colorado have been included in the study reported in this bulletin, and nearly 13,000 of these have been subjected to the analysis of standard and fact-finding tests. Sixteen inquiries have been made about the physiological, sociological, economic, parental nativity, psychological, and vocational status of each child, a total of 690 facts for each individual. A force of over 35 workers have assembled, scored, and tabulated this material, amounting finally to 9,515,000 separate elements. The data have been organized and interpreted by the Department of Educational Research, Colorado State Teachers College.

Instead of attempting to give in any detail complete summaries of the content of the preceding chapters, the most important data revealed by the investigation will be put into the form of tentative generalizations with brief comment on each. It is recognized that these general statements are of different value and that the body of the findings support them in varying degrees. They are given more with the purpose of stimulating thought than as even approximations to absolute truth. Further, they are based in some cases on material not given in detail in this bulletin but included in the basic data on file in the Department of Educational Research, Colorado State Teachers College.

## 1. THE SELECTION OF PUPILS FOR HIGH SCHOOL ATTENDANCE

a. A LOSS OF ONE-FOURTH OF THE EIGHTH GRADE PUPILS IS A CONSERVATIVE ESTIMATE OF HIGH SCHOOL DEPRIVATION AT THE EIGHTH-TO-NINTH GRADE GAP.

A listing of the facts connected with the usual final eighth grade examination given by county superintendents shows that on the average 9 percent fail and 20 percent more drop out before entering high school. Both the elementary and the high school are under indictment here. Are candidates for high school privileges well prepared? Do high school offerings have adequate drawing power because of their worth whileness?

b. THE PROBLEM OF EDUCATIONAL DEPRIVATION AT THE EIGHTH-TO-NINTH GRADE LEVEL IS FIRST OF ALL A BOY PROBLEM.

It is found that over two-thirds of failures and non-attendants are boys. Further, a comparative count of boys and girls in eighth grade and in ninth grade shows the distribution of sex to be 50-50 in the former, but in the first year of high school boys constitute but 48 percent of all and girls 52 percent. If we are to look to the high school, the "people's college," for a preparation of future leaders for our democracy, will it be safe to discriminate in terms of sex, when enrollment figures are decided on?

c. THE HIGH SCHOOL IS PRIMARILY A GIRLS' SCHOOL.

Not only are more boys than girls failing to enter high school, but on the whole the girls react more favorably to the opportunities offered in high school attendance. In the checking of the relationship of mentality to success in school work, it is found that high school girls are using their native gifts of intelligence to a more favorable limit than are the boys. Further, 8 percent more of the girls are able to and do remain in school into the fourth or senior year. Can it be that the curriculum of the high school is distinctly unpalatable to boys, or is elimination a matter of the superior attraction of real outside life issues? The high school is on trial here before a jury of American youth. It would appear that there is danger of a verdict of "guilty."

d. THE PROBLEM OF FAILURE AND NON-ATTENDANCE IN HIGH SCHOOL IS MORE ONE OF CHARACTER EDUCATION THAN OF LACK OF INTELLIGENCE OR OF ECONOMIC DIFFICULTY.

The checking shows that over one-third of the pupils who failed to pass the eighth grade examination are repeating the eighth grade work another year. Further, failure is reported to be caused chiefly because of negative personality traits and not because of low intelligence. It appears, too, that but one-fifth of the pupils who failed are helping with the work at home, and a smaller group still are employed as day laborers. But, shameful to say, many are lost entirely from the records of the school and from the memory of all school officers. Their status is not known.



e. THE DRAWING POWER OF PRESENT HIGH SCHOOL OFFERINGS CANNOT COMPETE WITH THE ATTRACTION OF CLOSER SOCIAL AND ECONOMIC OBJECTIVES.

It is surprising to find that nearly 20 percent of those who were successful in the high school entrance examination did not attend. The largest group of these youth (40 percent) were found helping with home house work or on the farm. One-fourth were engaged in day labor. Nearly 10 percent were reported to be idle at home. Why a good sized group (6 percent) are reviewing eighth grade work is hard to explain. Again, many (the fourth group in rank) are lost entirely from school memory and records.

The reasons given for non-attendance are again to be listed as deficiencies of attitude (lack of ambition, dislike for school, and so forth) and not low intelligence; but a strong desire for an immediate improvement of economic status is shown in many cases. Evidently, the high school has not as yet sold itself to the youth of the state and their parents. Is the trouble to be found in poor publicity or in lack of merit in the high school curriculum itself?

f. THE PERSONALITY OF THE PUPIL IS THE PRIME FACTOR IN A DETERMINATION OF HIS ADVANCEMENT INTO HIGH SCHOOL WORK.

Case studies among (1) high school eligibles, (2) eighth grade repeaters, (3) eighth grade eliminates, and (4) eighth grade pupils who were accepted for high school membership "on condition" show that the type of social and economic background found in the home has very little effect upon their enrollment in high school classes when compared with more intimate personality facts. On the whole, it is found that those pupils are promoted who are youngest, have conformed most closely to all school requirements (are not non-conformists), and have done best in their school studies. This seems to be a good showing for democracy of selection when future leaders are chosen for further education.

**g. THE GROUP OF YOUTH ENTERING HIGH SCHOOL CONSISTS OF MORE OF THE YOUNGER PUPILS THAN OF THE OLDER.**

Based on eighth grade ages, it is found that the life age of ninth grade pupils is younger than the expectation. If the standard estimate of 13 months be used as the average time required to pass from grade to grade, ninth grade boys are nearly six months younger and ninth grade girls over two months younger than the expected ages in the first year of the high school. Why are the more mature individuals not found taking advantage of this higher schooling provided? The study shows that this "youngness" has no more effect on the quality of school work in grade nine than it does in grade eight. It cannot be, then, that the older pupils are failing. Evidently, some interest more gripping than those offered by the high school is attracting toward outside activities.

**h. IT CANNOT BE SAID THAT ONLY THOSE INDIVIDUALS WHO ARE SUPERIOR MENTALLY ARE CHOSEN FOR HIGH SCHOOL ATTENDANCE.**

The evidence of the investigation does not point to a distinct choice of superior intelligence for membership in the secondary school. The standard expectation of increases in mental age for each grade covered is 1.05 years, but the figures show increase between eighth to ninth grades of but 0.95 years. But it is found that, in the distribution of mental scores for ninth grade youth, the lower figures are cut off as compared with the eighth grade distribution; and it may be that on the whole selection for high school attendance is to some extent in terms of medium and upper types of intelligence.

**i. THE HIGH SCHOOL IS STILL UNDEMOCRATIC TO LARGE DEGREE.**

When the type of home both eighth grade and ninth grade pupils come from is examined, it is found that high school pupils come from homes having more of the modern conveniences and luxuries and with more evidence of culture than do elementary school pupils, and the same difference in favor of senior pupils is discovered when ninth and twelfth grade groups are considered. On the whole, pupils in the larger school systems where high schools are always found come less often from farm homes by a difference of at least

45 percent, and 90 percent of the fathers of pupils in the rural schools where high school privileges are less universal are engaged in agriculture. Further, high school enrollment seems to be largely in terms of native stock by a difference of 10 to 15 percent and from homes more often affiliated with the organized church. However, on the whole, high school membership seems to be representative of social and economic groups found in the entire population in many communities, but this does not appear to be so true in Colorado as in certain other states.

This study does not aim to discuss the moot question of complete democracy in secondary school education. There is involved the double inquiry, *should* we have it and *could* we have it. If we should, can we afford it? However this may be, the fact of a wider selection from the total population for high school attendance is becoming more of a problem year by year. But more serious than the matter of finance is that of the curriculum, and expert professional leadership cannot do much effectively there until all concerned can agree upon desirable ultimate objectives. The fact is that secondary education has not made the advancement in these respects that is found in elementary education, and in Colorado the situation is that to be expected in a typical pioneer state. The high school is still aristocratic here, but inefficient even on that level.

#### j. A DISTINCT TYPE OF HOME BACKGROUND IS REPRESENTED IN HIGH SCHOOL ATTENDANCE.

Not only are high school pupils as a rule from homes on a distinctly higher economic and cultural level, but certain other minor but perhaps significant differences are found also. They come from smaller homes than do elementary pupils by a difference of one child. They are more often the oldest child in the family. More often (by a small percent) the father is deceased, and the family has moved more frequently. The home is nearer school by a difference of 1.5 miles also. Here is further evidence of the lack of equality of opportunity in secondary education.

k. THE HIGH SCHOOL IS NOT A PART OF THE FREE PUBLIC SCHOOL SYSTEM OF THE STATE.

The whole attitude of the community, as represented by the board of education, is to nullify whatever legal status the high school has attained as an integral part of a free common school system in the 53 years since the Supreme Court of Michigan (Kalamazoo case) gave it such. It is found, even in the matter of free textbooks, that there is more universal provision in the elementary schools. And, when pupils must attend away from home, but nineteen out of 6500 pupils were found to be provided with board and room, while but 2.3 percent were given work for pay so that they might be self-supporting in part.

Further, while a nation-wide checking shows at least 25 states requiring the local district to pay high school tuition when pupils must go away from home to get secondary school privileges, ten other states having tentative provisions for taking care of all or a part of it, and ten more with universal county units, Colorado has simply a permissive law which makes it a matter of agreement between district boards. Detailed returns from 93 percent of 582 such boards in eleven representative counties indicate that this cannot with safety be left to the judgment of the boards with assurance that no pupil who is eligible for high school membership will be deprived of it. Only 50 to 60 percent of these boards were reported as paying any high school tuition at all for outside attendance, and these expended but an average of \$55 to \$60 per pupil per school year. Returns from 54 of the 63 counties of the state show also that (1) at least three-fourths of the districts are without high schools, (2) 16 percent of the boards in such districts do not pay any outside high school tuition, (3) the boards in 13 percent of all districts in the state do not pay outside high school tuition; and (4) this refusal is confined to boards of directors in third class districts only.

**l. FAILURE TO MAKE THE HIGH SCHOOL AN INTEGRAL PART OF THE FREE PUBLIC SCHOOL SYSTEM OF THE STATE RESULTS FROM LACK OF VISION, NOT FROM ECONOMIC NECESSITY.**

The 231 boards of directors who are reported as refusing to pay outside high school tuition are found in 24 Colorado counties. A checking of crop, valuation, tax, and school expenditure facts in these counties, in comparison with like data in the 39 other counties and in all 63 counties in the state, shows that they are as able to take care of high school education as are counties where boards take a more liberal and broader minded attitude.

Further, when Colorado's educational ability and achievement is compared with country-wide conditions, no reason appears why the facts of deprivation of high school opportunities should attain such a bad eminence.

**m. THE HIGH SCHOOL CANNOT BECOME A TRUE PART OF FREE PUBLIC EDUCATION IN COLORADO WITHOUT A CHANGE IN THE ORGANIC LAW OF THE STATE.**

It was undoubtedly the intent of the framers of the state constitution that the free public school system should include the secondary school. One of the sections of this instrument guarantees to every individual between the ages of six and 21 years a "free common school education." But later legislation nullified this provision on the theory that the local directors should "have control of instruction in the public schools of their respective districts" and that if they were compelled by mandatory legislation to provide for the attendance of high school eligibles in neighboring high schools when no such privileges were offered at home they would lose control of their instruction. Bargaining between boards, provided for in the present permissive law, evidently does not take care of the matter. An amendment to the state constitution is necessary. This should be the culminating result of long time study on the part of state research agencies together with competent aid from outside professional leaders and should provide for the fundamental difficulty in the state educational organization, lack of competent leadership in a state unit of administration.

## 2. THE PROGRESS AND SUCCESS OF HIGH SCHOOL PUPILS.

### a. THE ACTUAL LENGTH OF THE HIGH SCHOOL COURSE IS LESS THAN FOUR YEARS.

The figures of the survey show that but one-half of the freshman pupils persist into the senior class. If it be desirable to select for final graduation certain types of youth only, there are fairer, more business like and scientific methods than by the process of elimination during progress.

### b. HIGH SCHOOL CLASS WORK IS "MASS EDUCATION," NOT IN TERMS OF THE NEEDS AND ABILITY OF THE INDIVIDUAL PUPIL.

It has been noted above that a disregard of sex differences tends to eliminate many of the boys during progress from freshman to senior work. It is found as well that the older pupils drop out, as the senior classes are 3.6 months younger than the obtained ages, if normal increase in life age be considered. The fact that the spread of life age is not much wider in senior than it is in freshman classes seems to point toward a neglect of extremes of individual personality also.

The figures seem to show, also, that the high school loses many of its more intelligent pupils in the ninth-to-twelfth grade interval, as there is a discrepancy of 0.75 years between obtained and actual mental ages. It is found too that senior pupils are not using what native intelligence they have to the limit that freshman groups are.

It would seem that, if anywhere in the public school course, the technic of individual instruction ought to be found in secondary work where one chief purpose is the discovery of attitudes and trends and the development of skills and knowledges pertinent to possibilities in the personality of each future citizen.

### c. HIGH SCHOOL EXPERIENCE SELECTS A DISTINCT TYPE OF HOME BACKGROUND FOR SENIOR CLASS MEMBERSHIP.

It has been noted above that, on the whole, twelfth grade pupils are from homes on a higher social and economic level than the homes of freshman groups. It is found also that senior homes are more permanent, as parents do not move so often, and that they are nearer school by one-fourth of a mile.

d. THE HIGH SCHOOL FAILS TO PROVIDE CURRICULUM OFFERINGS WHICH WILL INSURE THAT PUPILS SHALL DEVELOP NORMALLY IN TERMS OF DESIRABLE SOCIAL CHARACTER TRAITS.

The relationship between school achievement and school attitude and behavior is found to be lower in senior than in freshman classes. On the whole, there is higher achievement in school class work. There ought to be development in character traits also in terms of broader outlooks and a new attitude toward school and school associates, appearing as greater self-control and higher altruism approaching maturity. But it must be admitted that in the history of school management on the secondary level, plans for pupil self-government, and like movements which have tried to put into actual operation the theory that adolescence is no longer childhood but almost manhood, have on the whole been a series of futile attempts to cause high school groups to function on a school level commensurate with their life age. It is only very recently and only in the most advanced and most skilfully organized systems that, largely in so-called extra-curricular activities, high school pupils are living up to their true possibilities in social attitude and school conduct.

e. THE ACHIEVEMENT OF HIGH SCHOOL PUPILS IN COLORADO IS ON A LOWER LEVEL THAN IN OTHER STATES.

A growth in educational age from fifteen years in the ninth grade to 16 years 6 months in the twelfth is found (Stanford Achievement Test). This points again to a survival of the more fit only, but average scores earned in both groups are distinctly below those of 10,000 pupils in high schools elsewhere. While this is not a conclusive measurement of true criteria for high school efficiency, it is an indication that the high schools of the state are not excelling even in the administration of the academic curriculum which they offer.

f. PUPIL SUCCESS IN HIGH SCHOOL IS DEPENDENT MOST OF ALL UPON MENTALITY.

In this investigation, this is found to be more often true for boys than for girls, and more often in ninth grade than in twelfth. When seven factors affecting high school work (mental age, life age, home background, length of total school attendance, distance of home from school, physical develop-

ment, permanence of home residence) are studied to determine their relative importance, mentality and chronological age are found to be preeminent as determining levels of achievement reached by both boys and girls. A study of causes proves mental age to be more potent and shows that home status, while influencing to some degree the school achievement of high school boys, apparently has no effect in the case of the girls.

However, the study seems to show that very probably all of the more important factors which might influence the school success of high school pupils are not included in the seven used. Most important of all, perhaps, are factors which furnish the motive power of effective teacher and pupil effort, those which we speak of as character traits. Intelligence, after all, is but a tool. How it shall be used in any realm of activity is determined by such personal qualities as persistence, honesty, unselfishness, and like desirable attitudes. It is not too much to say that the most effective organization of the high school, as of all other stages of advancement in the public school system, awaits successful research which will furnish measurements here so that true expressions of amount in such character items may appear as an important part of the information at hand when studies are undertaken in the field of the secondary school.

**g. HIGH SCHOOL TRAINING FAILS TO INCREASE THE RATE OF PROGRESS OF PUPILS WHEN FRESHMAN AND SENIOR GROUPS ARE CONSIDERED.**

The survey shows that the retardation in all high school classes is very similar and that no appreciable improvement occurs toward the close of the course. Both freshman and senior pupils use more than an extra half year in reaching the stage of advancement at which they are found. Is the fault to be found in the high school curriculum? Or may it be that mortality along the way has been in terms of individuals who would be able to "speed up."

**h. HIGH SCHOOL ADMINISTRATION IS OBLIGATED TO USE MORE BUSINESS-LIKE METHODS IN PERSONNEL WORK WITH PUPILS ENROLLED.**

First of all, if high school membership is to be selective, a surer method of choice than the clumsy "final examination" at the close of elementary attendance must be used. Further, many future leaders will be saved for four full years of more



valuable training, if guidance into and through high school courses be organized on a basis of individual personnel contact. The study did not discover any high school faculty using such methods to any valuable degree. A method of analysis, prediction, and guidance is suggested and described in detail in the final report which, if adopted, ought to raise the efficiency of high school work so that more pupils will be able to progress happily on their own level of ability.

### 3. THE EFFICIENCY OF LARGE AND SMALL SCHOOLS

#### a. SMALL, ISOLATED SCHOOLS IN AMERICA ARE FOUND AS A RULE TO BE INEFFICIENT.

A careful search among investigations of problems found in the public schools in small town and rural situations (the latter including 188,000 one room schools) reveals the fact that the preponderance of evidence for efficiency is in favor of larger units of organization in urban centers.

#### b. ATTEMPTED HIGH SCHOOL WORK IN THE SMALLER, ISOLATED AMERICAN SCHOOLS IS INEFFICIENT.

The above conclusion ("a") is true in particular of the small high school. Nearly all attempts to continue the public school progress of small groups of youth on to the secondary level have and are proving to be futile. Even in a very few cases, where the use of the technic of individual instruction seems to have solved the problem so far as mastery of subject matter is concerned, there is always lacking the other and more important phase of secondary education, training in the theory and practice of the social sciences. Actual large group contact in classroom and extra-curricular activities is necessary for adequate preparation of young citizens for the larger group life of adulthood.

#### c. SMALL SCHOOLS IN COLORADO ARE NOT EFFICIENT.

An analysis of nearly two dozen separate groups of facts found in all grades of the large and small public school situations in Colorado shows nearly 90 percent of them giving concrete evidence favoring the larger school unit. Two apparent exceptions are found in the fact (1) that more rural school and village pupils in the districts reporting are furnished with free textbooks and (2) that a closer relationship is

found there between the school attitude and conduct of children and their success in school work. The former fact very probably shows the influence of the county superintendent in certain counties where his office is rather well organized and furnishes an excellent argument for the county unit of public school organization. The latter fact, if significant at all, reveals the possibility of individual instruction where the personal contact of pupil and teacher makes certain an efficient mastery of the basic habits dealt with in the elementary school and needed by every citizen in a democracy.

Until the frontier in public school education is obliterated in Colorado, as it is in a few of the eastern states where the population is no longer sparse, the problem of the isolated one room school will exist. It seems, then, that so far as the rural elementary school is concerned the purpose of effort ought to be not only (1) consolidation and centralization but (2) the immediate improvement of one room rural school education by the adoption of the methods of individual instruction carried on under as expert supervision as can be provided by state, county, and district authorities.

#### d. ATTEMPTED HIGH SCHOOL WORK IN RURAL SITUATIONS AND IN THE SMALL TOWNS OF COLORADO IS FUTILE.

An analysis of a total of fifteen to twenty groups of facts in representative urban and large system situations as compared with rural and small schools in Colorado invariably reveals better secondary opportunities for groups enrolled in the former. Attempts in particular to permit single pupils or very small groups to advance into high school subject matter in one room schools are found to be a waste of time because many one room rural teachers are not competent high school tutors and because the social life of the large high school is always lacking. Further, the small town high school is as a rule inefficient. Too often competent leadership is lacking and teaching is on the trial-and-error level. Brief tenure and lack of forethought often shortens the school year by a week or more of fumbling and lost time in the fall. Lack of experience and immaturity on the part of the faculty deprives pupils of even that level of moral and character education which the certain control of strong personalities would furnish. Lack of amalgamation into a larger unit of administration makes impossible expert professional supervision. All

of the data of the present investigation point toward organization of the secondary work of the state into large units of administration and supervision in order that the inequalities of educational opportunity for secondary education found may be corrected.

















COLORADO STATE TEACHERS COLLEGE  
BULLETIN

ADVANCED COURSE  
IN  
NURSING EDUCATION

*A College Course for  
Graduate Nurses*

SUMMER QUARTER  
(First Half)

Greeley, Colorado, June 16--July 21  
1928

*Volume XXVII*

*Number 6*

Published Monthly by Colorado State Teachers College, Greeley, Colorado  
Entered as second class matter at the Postoffice at Greeley, Colorado, under  
the Act of August 24, 1912.

**Please Post Where Your Nurses May Read**

COLORADO STATE LEAGUE OF NURSING EDUCATION

*President*

LAURA ELDER, R. N. ....  
.. *Director of School of Nursing, St. Luke's Hospital, Denver*

*Vice-President*

FRIEDA OFF, R. N. ....  
.....*Director of Education, Denver General Hospital, Denver*

*Secretary*

RUTH COLESTOCK, R. N. ....  
... *Instructor in Nursing, Colorado General Hospital, Denver*

*Treasurer*

ELSIE T. HEAD, R. N. ....  
.....*Director of Supervision, St. Luke's Hospital, Denver*

---

COMMITTEE ON NURSING EDUCATION

IRENE MURCHISON, R. N., *Director of Education, St. Luke's Hospital, Denver.*

LORETTA MULHERIN, R. N., *Director of School of Nursing, St. Joseph's Hospital, Denver.*

FRIEDA OFF, R. N., *Director of Education, Denver General Hospital, Denver.*

Encouraged by the success of the venture last year, and in response to a demand which has come from nurses near and far, Colorado State Teachers College has decided to conduct another School for Nurses during the summer quarter, 1928.

In response to a request last year that such a school be established in order that the great army of women engaged in the nursing profession might have the advantage of academic courses essential to their profession, and particularly for the benefit of those in charge of training schools for nurses, Colorado State Teachers College made provision for the same and brought to Colorado one of the outstanding teachers of nursing and nursing education, namely Miss Carolyn Elizabeth Gray.

This first school of its kind in the Rocky Mountain West was attended by fifty-five students, graduate nurses, members of hospital staffs and private nurses from widely scattered sections over the country. The course covered five weeks, and at its close the administration received enthusiastic praise, accompanied by many favorable comments on the type of work offered and the conduct of the class as a whole.

Miss Gray herself in commenting on the school declared it was the largest and most successful new school she had ever presided over. Miss Gray has been instrumental in opening several schools of this kind in the east and on the Pacific coast, but at none had there been the large attendance, enthusiasm, and perfection of operation as that attending the first Nursing Education School conducted at Colorado State Teachers College.

This success is attributed in very large part to the Colorado State League of Nursing Education, which was the organization that interested the administration in the project and which played an important part in arranging the program and putting it through.

The request for a continuation of the school has come from several of those nurses who attended last summer—they say they want to return, even if the course is a complete repetition. Miss Gray, however, who has been retained to conduct the school again this year, will most likely have some changes in the course. This

is plainly evident when it is seen that the course will be given five days a week this year as compared to four days a week last year.

A large number of nurses inquiring about the course last year but who found it impossible to attend indicated that they would enroll this summer if the school was continued. There have been many requests since from nurses who contemplate attending.

As announced last summer, it is not the purpose of the College to teach nursing or to perform the services now being carried out by schools of nursing. The aim is to further assist those persons intrusted with the task of instructing students learning to become professional nurses. As a professional teacher-training institution, Colorado State Teachers College believes that it can help teachers of Nursing Education.

Miss Gray's abilities and prominence in the nursing profession are attested by her record. She has been Superintendent of Gouverneur Hospital, New York City, 1893-95; Superintendent of Fordham Hospital, 1895-1907; Instructor, New York City Training School for Nurses, 1907-11; Superintendent of Nurses, Pittsburgh Homeopathic Hospital, 1911-13; Superintendent of City Hospital School of Nursing, New York, 1914-19; Secretary, State Board of Nurse Examiners, New York, 1919-20; Assistant Secretary of Committee on Nursing Education, 1920-21; Associate Professor of Nursing Education College for Women (Ohio) 1921-23; Professor and Dean of School of Nursing, 1923-24; Lecturer, Department of Nursing Education, Teachers College, New York, 1925-26. Co-author: Kimber and Gray's Anatomy and Physiology.

### ADMISSION TO THE COURSE

The course is open only to graduate nurses from accredited schools of nursing and to such others as may have the necessary credits for admission to the College.

Provision may be made for the admission of nurses who may be interested in the course but who have not had the credits to meet the college entrance requirements. In such cases credit will be withheld until the student matriculates.

## REGISTRATION

Students enrolling in this course will be registered as special students. Those meeting the college entrance requirements may become candidates for the Bachelor of Arts degree. Credits in the nursing education course will count toward such degree.

## CREDITS

The number of credits will depend on the subjects chosen. For instance, the course offered by Miss Gray, Nursing Education 100, and Nursing Education 101, carry 3 hours credit each, depending on the amount of additional laboratory work.

Students taking this course are advised to supplement it by courses in psychology, sociology, education, and hygiene. All of the regular courses offered by the College, however, are open to these students, and additional credits may be earned, at no additional cost.

## SUGGESTED PROGRAM

While students registering in this course are primarily interested in nursing and nursing topics, still the student who is anxious for professional advancement will seek wider educational contacts and with this in mind, it is recommended that other subjects such as psychology, sociology, education, and hygiene or physiology be included in the program, with possibly some work in English if the student finds time.

In addition to the courses already mentioned the College offers during the summer quarter work in the following subjects of interest to nurses: biology, chemistry, education, geology and geography, history and political science, home economics, physics, music, foreign languages.

## THE CALENDAR

Saturday, June 16.....	Registration
Monday, June 18.....	Classes Begin
Saturday, July 21.....	Classes End

## THE SUBJECTS

NURSING EDUCATION 100. Teaching of Nursing Principles and Methods—Three hours credit.

Planned for those who are to teach Nursing Procedures. A study of the scientific principles involved in the nursing care of patients, the selection of subject matter, the sequence of classes, the planning of lessons and demonstrations.

NURSING EDUCATION 101. Nursing Supervision—Three hours credit.

This course is planned for head nurses, supervisors, teachers and administrators who require a general knowledge of organization and administration in Hospitals, Schools of Nursing and Public Health Organizations. It includes (a) a study of the principles upon which skillful supervision is based, (b) investigation into the practice of successful supervision, and (c) professional problems.

In addition to the courses mentioned above a student should carry a program of eight hours a week, from the following courses which are of especial benefit in her profession: Ed. 5, Principles of Teaching; Ed. 150, Foundations of Method; H. Ed. 1a, Individual and Social Hygiene; H. Ed. 108, Educational Hygiene; Psychology 2a and 2b, Education Psychology; Psyc. 117, Psychology of Adolescence; Sociology 1, Introduction to the Social Sciences; H. Sc. 105, Child Care; H. Sc. 108, Housing and Sanitation. More than 100 other courses are offered in various departments of the College during the summer quarter, enabling the students to make a wide selection for elective study.

## EXPENSE

Tuition (Regular summer tuition, half quarter) .....	\$16.00
Special fee (for each nursing course \$3.50) .....	7.00
Library Fee.....	2.00
	<hr/>
Total.....	\$25.00

Non-residents of Colorado are required to pay an additional fee of \$2.50 for the half quarter.



## LIVING ACCOMMODATIONS

ROOMS—Private homes in the vicinity of the college provide rooms for students at moderate rates. All rooms are under the strict supervision of the College. All rooms must be approved. The cost of rooms is from \$10.00 to \$12.00 a month for each student where two students occupy a room; for one student in a room the cost is from \$12.00 to \$18.00.

DORMITORIES—The dormitory triangle, adjoining the campus, provides accommodations for a limited number of students. Each room is provided with two beds and complete accommodations for two students. The demand for rooms in the dormitories is so great that reservations must be made very early if one expects to obtain accommodations therein. Rooms in the dormitories cost from \$15.00 to \$18.00 for a half-quarter. Students in the dormitories are required to furnish their own bed linen and towels.

Additional information concerning rooms may be had and reservations made by writing to the dean of women.

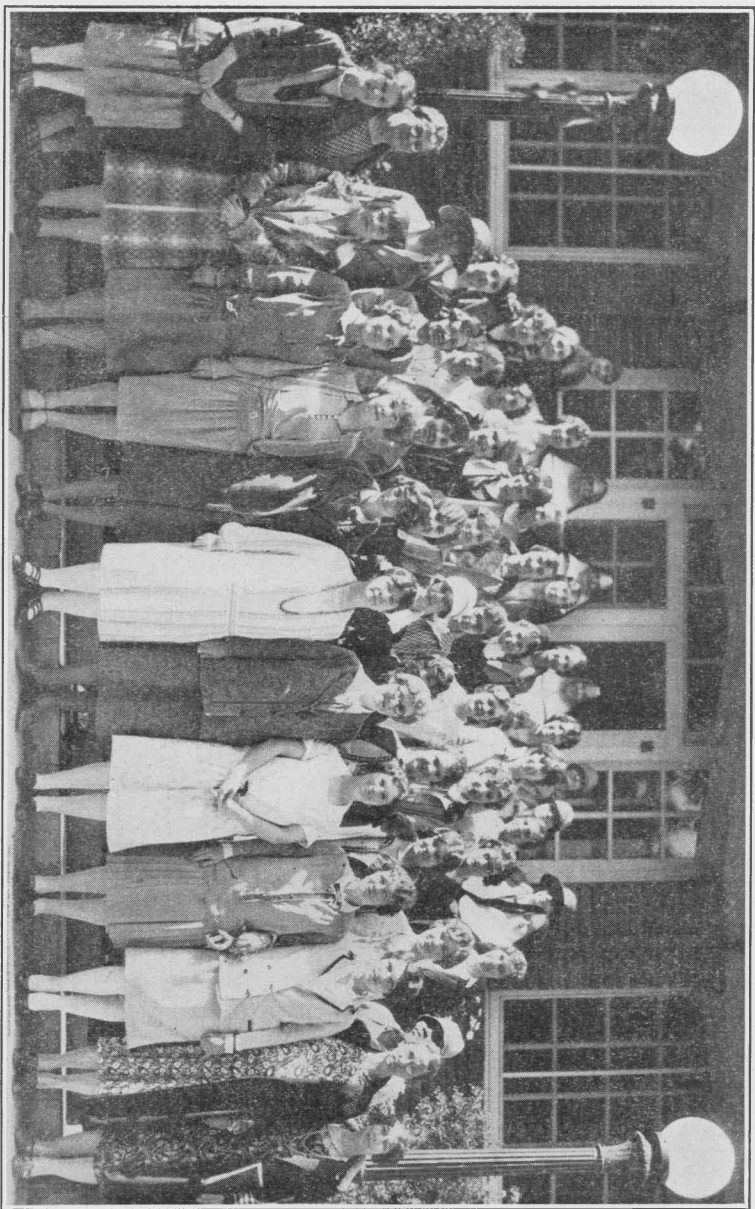
BOARD—Students board in private houses and in the College cafeteria. The average cost for board in the cafeteria is \$5.50 a week; in private boarding houses the rate averages \$6.00.

## RECREATION

Students attending Colorado State Teachers College find ample opportunity for wholesome, invigorating and pleasant recreation. Because of the location of the college so close to the mountains, less than an hour's drive from the gateway to Rocky Mountain (Estes) National Park, students are able to make frequent outings to this wonderful playground. Week-end trips to the mountains are a feature of student life during the summer quarter at Colorado State Teachers College.

Detailed information concerning the full program of courses offered by the college in the summer quarter will be found in the regular college bulletin. Copies of this bulletin and any additional information desired by those interested may be had by addressing

GEORGE WILLARD FRASIER, President,  
Colorado State Teachers College, Greeley, Colorado.



*Students and Staff at the First School for Graduate Nurses at Colorado State Teachers College, Summer 1927*



COLORADO STATE TEACHERS COLLEGE  
BULLETIN

Published monthly by Colorado State Teachers College, Greeley, Colorado.

Entered as Second Class Matter at the Postoffice at Greeley,  
Colorado, under the Act of August 24, 1912.

Current numbers of any of the College Publications may be had on application  
to the President of the College, Greeley, Colorado.

# CONSERVATORY *of* MUSIC

COLORADO STATE TEACHERS  
COLLEGE

1927



GREELEY, COLORADO

*Published by The College*

## BOARD OF TRUSTEES

DR. HARRY V. KEPNER.....President

DR. E. M. RUSSELL.....Vice-President

CHARLES N. JACKSON                      CLIFFORD P. REX

T. W. MONELL                              EARL M. HEDRICK

KATHERINE L. CRAIG

State Superintendent of Public Instruction

## THE FACULTY

GEORGE WILLARD FRASIER, A.B., A.M., PH.D., LL.D.

President

---

JAMES DEFOREST CLINE

Director

J. ELBERT CHADWICK

Instructor in Piano and Pipe Organ

MRS. CHARLES E. SOUTHARD

Special Instructor, History and Appreciation

J. ALLEN GRUBB

Instructor in Voice

TENA JORGENSEN

Student Instructor in Voice

LUCY B. DELBRIDGE

Instructor in Violin

EUGENE SHAW CARTER

Instructor in Violin

GEORGIA KUMLEH

Student Instructor in Violin

JAMES J. THOMAS

Instructor in Band and Orchestral Instruments

LESTER EDWIN OPP

Instructor in Piano and 'Cello

IVAREA BEIL OPP

Instructor in Reed Instruments

BLANCHE BENNETT HUGHES

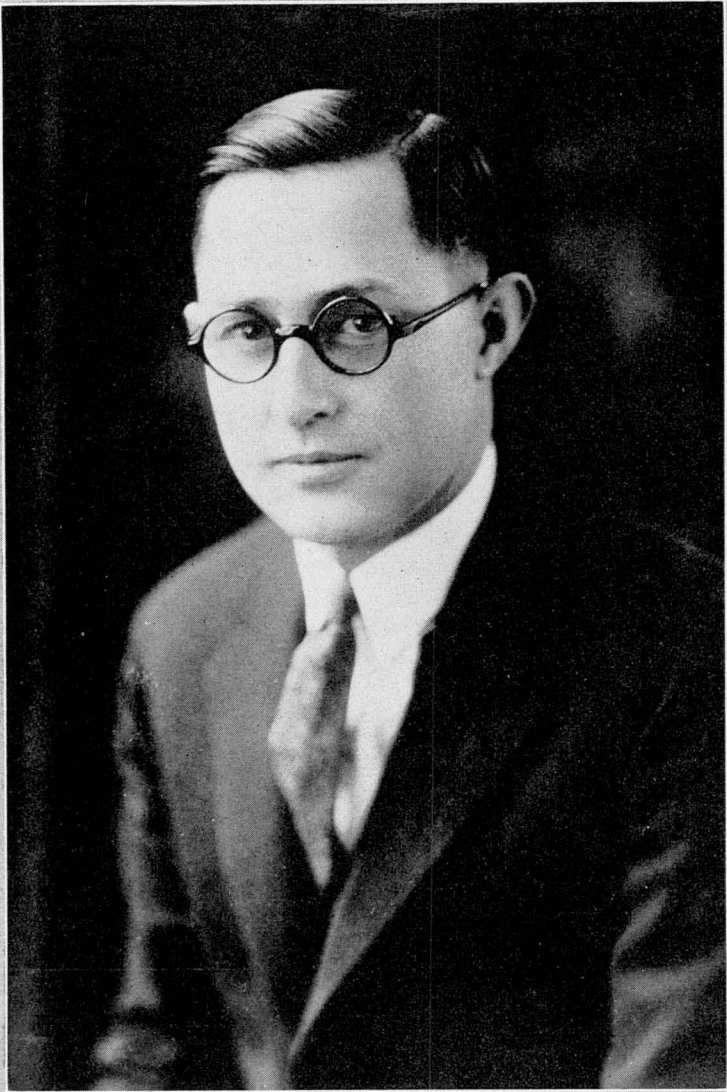
Instructor in Piano

ESTELL ELGAR MOHR

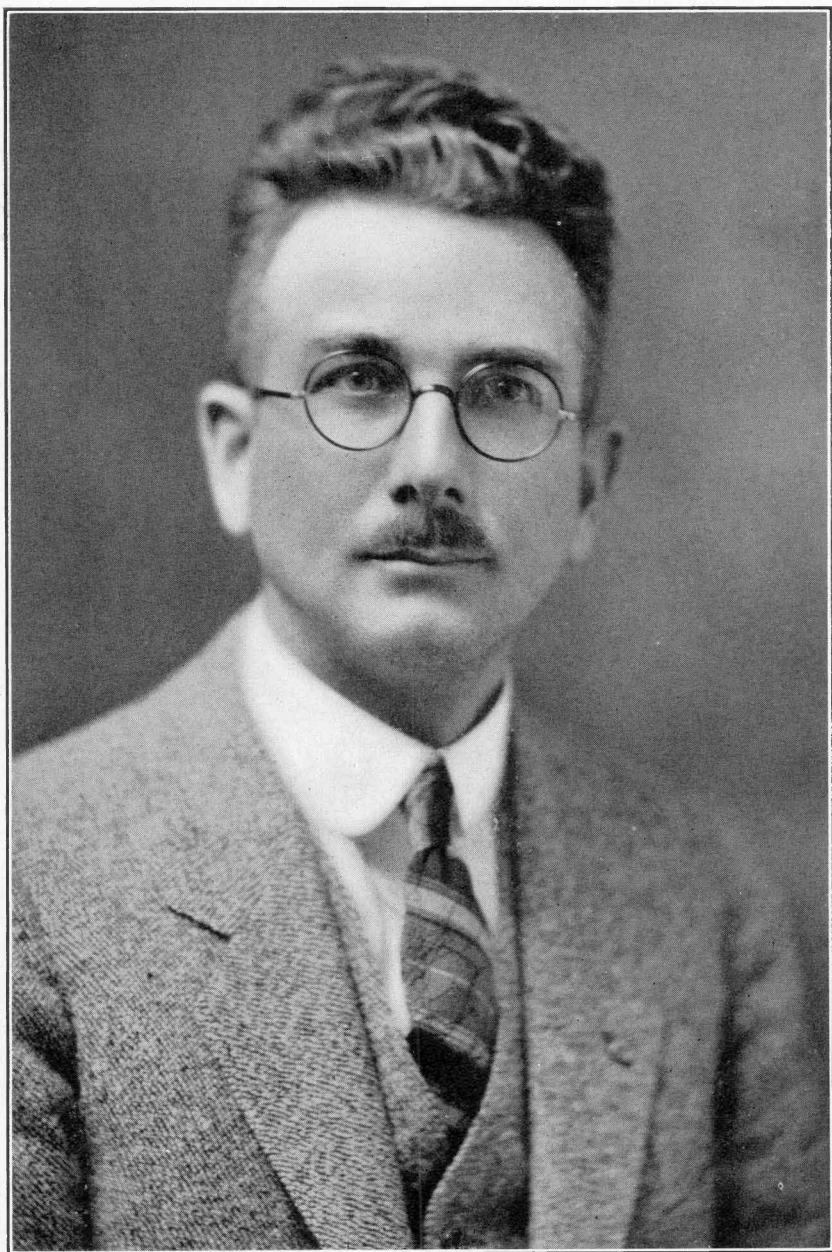
Instructor, Public School Music

SARAH SCOTT

Student Instructor in Piano



GEORGE WILLARD FRASIER, PH.D., LL.D.  
President



JAMES DEFOREST CLINE  
Director



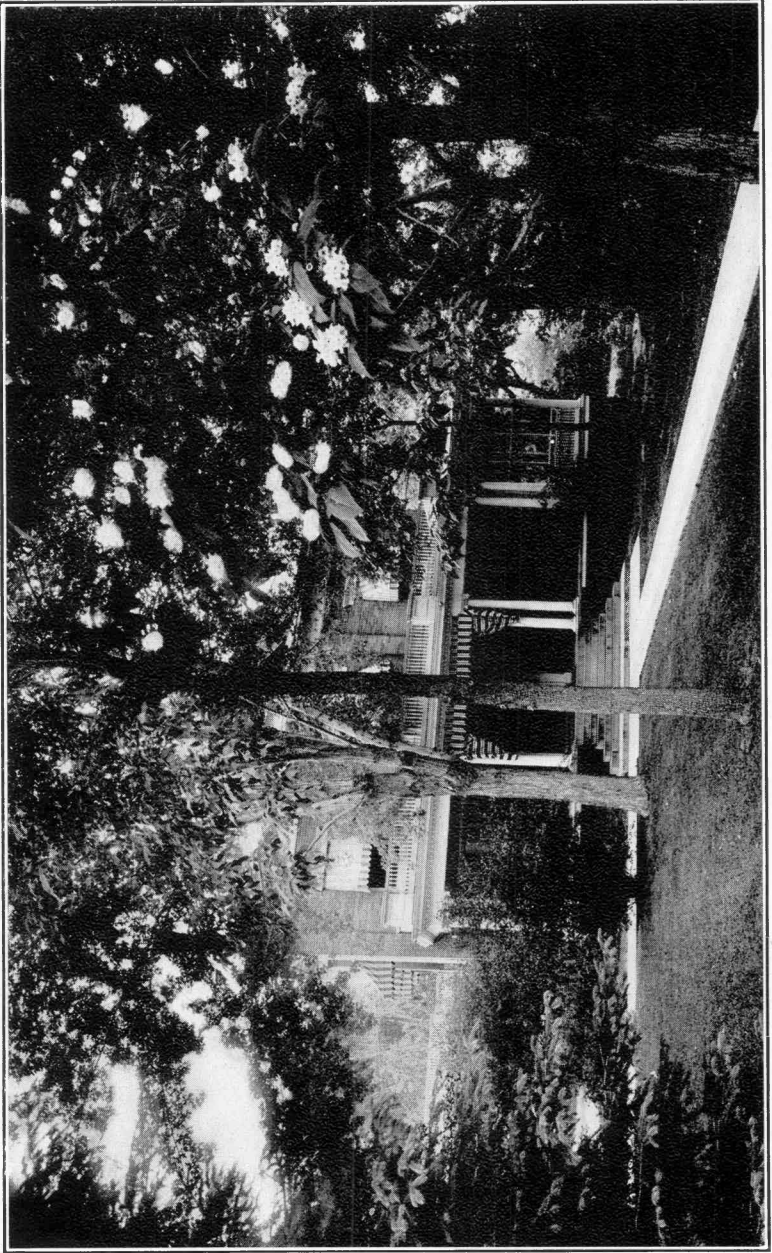
## FOREWORD

**T**HE student of music owes it to himself to make careful inquiry and research before deciding on the school he is going to attend. It is not enough that one learn to sing, or to play on some instrument. If that were all, one could acquire the art in a private room in almost any community; there are good private teachers everywhere. The first desire is simply to learn how to sing or to play a musical instrument. But the ambitious student wants to be an artist, and this involves much more than the mere ability to sing or play.

It is this ambitious student—this one who would be the artist—in which the Conservatory of Music of Colorado State Teachers College is interested chiefly. Being an institution devoted exclusively to the professional training of teachers, Colorado State Teachers College is particularly interested in seeing that the music student progresses from the very inception of the desire for music through the period of learning, to that of the finished artist, and the next natural step, that of teaching.

One of the legitimate demands made on educational institutions is that they shall supply adequate training in this great art. The musician of today must have broad training; he must know something besides the mere musical routine and have more than an acquaintance with a more or less extended musical repertoire. The teachers graduating at Colorado State Teachers College Conservatory of Music go out not merely as musicians but as trained teachers of music, with broad pedagogical ideas, based upon a careful study of their major subject and the principles of teaching, and on correlated studies that round them out as broad students as well as musicians.

It is a part of the duty of Colorado State Teachers College, a state-maintained institution, to train teachers of music, hence a self-imposed obligation to develop the Conservatory of Music to the extreme of perfection. This it has done. And it is because of this that Colorado State Teachers College can, and does, confidently call attention to all students and prospective students the vital importance of making a careful investigation before deciding on the school to attend.



THE CONSERVATORY OF MUSIC

## HISTORY OF SCHOOL

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

It is located in Greeley, in Weld County, Colorado, on the Union Pacific and the Colorado & Southern Railways, fifty-two miles north of Denver. This city is in the valley of the Cache la Poudre River, one of the richest agricultural portions of the state. The altitude is 4,567 feet above sea level. The streets are lined with trees, forming beautiful avenues. The elevation and distance from the mountains render the climate mild and healthful. The city is one of Christian homes and contains churches of all the leading denominations. There are 14,000 inhabitants.

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

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

The Eighteenth General Assembly passed an act making the State Normal School at Greeley, Colorado, also the State Teachers College of Colorado.



J. ALLEN GRUBB  
Voice

Music training has always been one of the outstanding features of the institution. For several years before the opening of the Conservatory of Music it was preparing most capable supervisors of music in the public school field. The graduates of the department in those years are today holding some of the most responsible music positions in Colorado and the West. Out of this service developed the Conservatory of Music, with a broadened scope, and then began long strides toward the forefront of music institutions.



MRS. CHARLES E. SOUTHARD  
History and Appreciation

Doctor A. E. Winship says: "Music in the Public Schools is no longer counted as one of the frills on education, but is now known as the Thrill in education." How true this statement has become is clearly shown in the fact that every village is now employing teachers of music in the schools, and every teacher's inquiry blank bears the question, "Can you teach music?" If you are interested in preparing yourself to teach music in the public schools as a supervisor or as a teacher of music in your own grade, you will find just the course which will fit by consulting

the Yearbook of Colorado State Teachers College Conservatory of Music.

### UNEXCELLED ACCOMMODATIONS

The Conservatory is located in a large, attractive home of its own on the north side of the campus, and apart from the other college buildings. It is a three story, substantial brick structure, and contains seventeen rooms, affording ample accommodations for private studios and practice rooms for each of the

several branches of music taught, including organ, piano, voice, violin, 'cello, saxophone, and all the band and orchestra instruments.

A large reception room greets the student as he or she is ushered into the new atmosphere of music on State Teachers College campus. Two whole floors are devoted to individual studios and practice rooms, while the third floor, with its one huge room, is used for orchestra, band, and chorus practice.

### STUDENTS' WORKSHOP

The elegant Training School plant maintained by the College affords a real workshop for the Conservatory students.

The Training School is just what its name implies, and students in music are put into training in this plant, just as students anxious to become teachers of history, geography, or any of the other subjects, are given training here.

A complete elementary and secondary educational system is maintained in the Training School. All grades, from the kindergarten

to the senior high school, are represented here, presenting the very setting and material needed by the prospective music supervisor. Naturally, music plays an important part in the well organized educational system, and so the Conservatory student finds unequalled opportunity here for real practical work. Under such a system, the student must cover the whole range of a musical education in the grade schools.

In the Training School the student is not only trained, but trains. After demonstrating possession of those qualifications



J. ELBERT CHADWICK  
Piano and Organ

that make for the musician, the student is then permitted to try his or her skill at teaching others.

Accomplishments and attitudes under varying conditions and in different atmospheres are tests of the completeness of a musician's training, and so this phase of the development of students is given careful consideration. For instance, all the training is not done in the Training School. The Conservatory students are taken from the Training School into the Recital

Room. In a magnificent room, with all the furnishings and the atmosphere of the most exclusive home where one would be accustomed to turn for the really brilliant musicales, the student is permitted to perform.

The transfer from Training School to Recital Room brings the student into another one of the many attractive buildings which helps to make Colorado State Teachers College an attractive place for young people. The Recital Room is in reality a large reception room such as one would expect in a most exclusive home. It is located in the Club House, the real center



IVAREA BEIL OPP  
Reed Instruments

of social life on the campus. It is in this building that the Conservatory students are frequently found in exclusive social gatherings, under the auspices of the Music Club.

The Music Club is the vehicle through which students in the Conservatory form relationships with the true musicians and those musically inclined. It is also through this club largely that the influence of the Conservatory and its students is exercised in the extra-activities on the campus and in many activities of the city apart from College affairs. The club is made up of

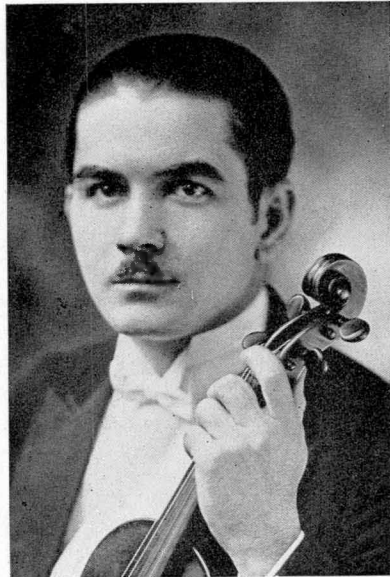
those who are music majors and of those who are interested in music. It fosters worth-while musical affairs and assumes full responsibility for many things of a musical nature both on and off the campus.

Pipe organ students have the advantage of practice hours on the pipe organ in the Administration Building. While the regular practice rooms are all furnished with upright pianos, the Recital rooms are supplied with concert grand instruments, which are always used by students in recitals or in concert work.

### THE MORAL ATMOSPHERE

The attention of all parents who are contemplating sending their sons and daughters away to College is especially called to the moral atmosphere that surrounds all students attending Colorado State Teachers College.

In the first place, and this is of chief importance, Colorado State Teachers College is located in a city noted throughout all its history, from the time of its foundation, for its Christian ideals and moral tone. Churches of practically all recognized denominations are to be found here. There has never been a saloon in Greeley. The founders of the community settled this question for all time by setting forth in the incorporation papers that intoxicating liquor should never be sold in Greeley. The College is non-sectarian, but the influence of Christianity is felt. The president of the institution is a man of high Christian ideals, and he and practically all members of the faculty are active workers in the various churches of the city.



JAMES J. THOMAS  
Band and Orchestral Instruments





FACULTY WOMEN'S TRIO



Prominent among the student organizations on the campus are three religious bodies, the Young Women's Christian Association, the Newman Club, and the Young Men's Christian Association. Catholic and Protestant students actively engage in their own respective organizations on the campus, and a thorough spirit of unity prevails, with all working in harmony, when the welfare of the students as a whole demands.

Unlike most universities and many colleges, Colorado State Teachers College is far removed from the evil influences characteristic of the institution located in or near the large cities. Any parent may feel perfectly safe in permitting the boy or the girl to attend college in Greeley.

### MOUNTAINS THE PLAYGROUND

Students at Colorado State Teachers College enjoy America's great playground for recreation. Rocky Mountain National (Estes) Park is only a short distance from the College campus. An hour's auto ride takes one to the en-



ELANCHE BENNETT HUGHES  
Piano

trance to this magnificent park nestled in the Rockies, in nature's wonderful setting, and from that point begins one of the most entrancing trips one can imagine, steadily upward paralleling the beautiful Big Thompson River through the deep canon to the Park.

The road to Estes Park is open practically all the year round. Many persons make regular week-end trips. However, with the possible exception of a very short time in the middle of the winter, the trip is most delightful at any time. Of

course, throughout the spring, summer and fall, it is at its best, and the people are going back and forth practically all of the time. This is the students' favorite outing.

There are numerous other mountain attractions, and students never want for a place to go for recreation or for the most attractive in nature's beauty.

Life on the campus at Greeley is favored in temperature, too, by this close proximity to the mountains. The severe winters

characteristic of the plains sections are unknown along the base of these high mountains, for the peaks stand as a break to the sweeping winds, and as a shelter to the communities nestling below. In the summertime, these same mountain peaks, covered with snow, send forth their cooling breezes over the lands below, assuring comfort and joy even on the hottest days.



LESTER EDWIN OPP  
Piano and Cello

The delightful, equable climate coupled with the fact that leading educators from universities and institutions of higher learning in all parts of the United States

become special members of the faculty during the Summer Quarter brings an increasing number of students to Colorado State Teachers College each summer. Thirty-one states sent students to Greeley this summer, when the registration reached almost the 3,000 mark. Prominent among the student enrollment in the Summer Quarter are school superintendents and principals, and department supervisors, including large numbers of music supervisors.

## ADVANTAGES IN ASSOCIATION

The advantage of such associations should be readily patent to any prospective student.

Enrollment in the regular college year has now reached 1,700 in the College proper. The personnel of this large body of students is of the highest type, assured by the rigid entrance requirements maintained by the College. In such a body of students as is found at Colorado State Teachers College there is certain to prevail those conditions which promote culture and refinement.

The graduates of Colorado State Teachers College now total 6,821. These graduates are now scattered over most of the world. Some of them are married and living happily amid home surroundings, with growing families, but the greater number are holding lucrative positions.

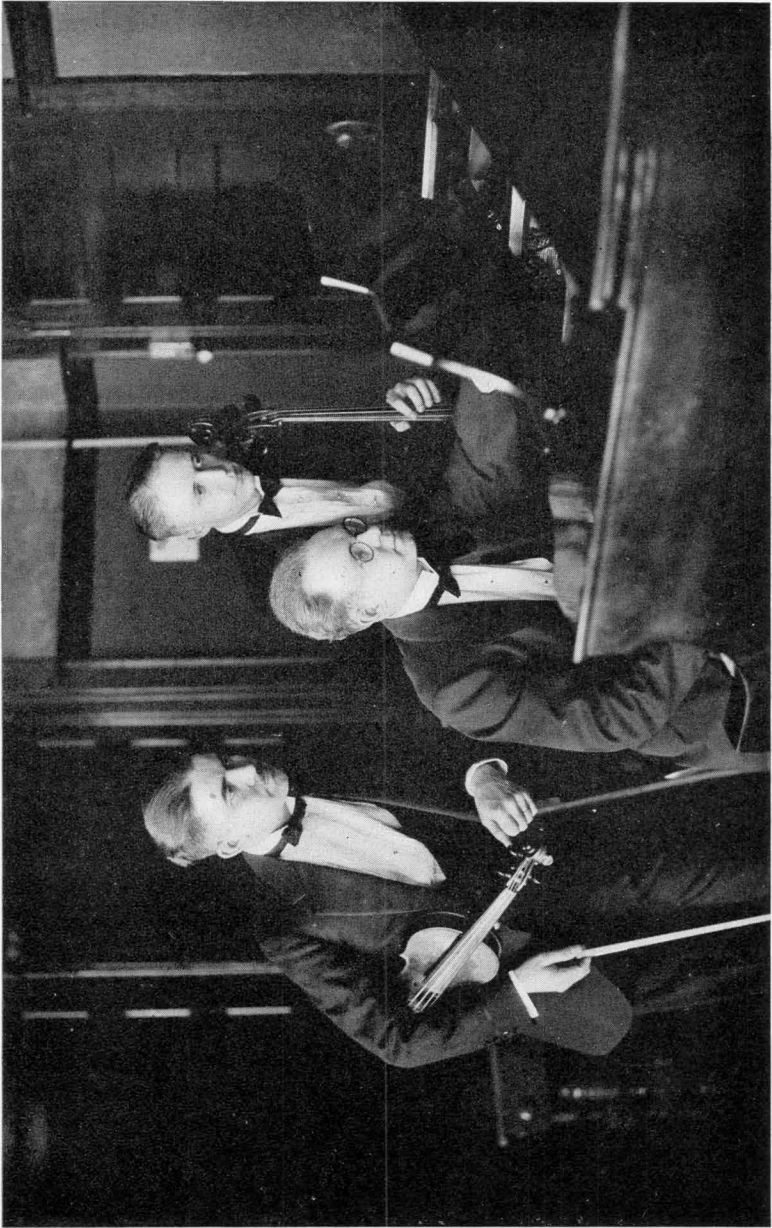
Through its Placement Bureau, the College makes every effort to obtain positions for its graduates. This, of course, includes the graduates of the Conservatory of Music. The bureau is successful. In fact, most of

the time it cannot supply the demand for teachers. The bureau is operated solely in the interest of the graduates. The bureau keeps a complete list of all graduates and those preparing to graduate, and it is ready at a moment's notice to supply any inquirer with the complete records of those regarded as capable of filling the positions vacant or likely to become vacant.

College presidents, school superintendents, and the heads of many private schools and colleges look to Colorado State Teachers College to supply their teacher needs, and the most of the



LUCY B. DELBRIDGE  
Violin



FACULTY MEN'S TRIO

teacher employment agencies send their representatives to Greeley at the close of almost every quarter to find young men and women about to graduate and send them off to attractive positions.

Beginning in a small way, the Conservatory of Music felt its way with the development of public school music, and at the same time created renewed interest in the subject among the teachers going out from the College, until soon the institution, always pioneering in the advancement of education, realized that the time was at hand when music had become a basic element in the education of the child. Then it proceeded to place its Conservatory of Music on a plane whereby it could turn out professionally-trained public school music teachers. Once this position was reached, the Conservatory quickly took its place at the forefront of the music conservatories of the country, a position it has steadfastly maintained, with much reflected credit to the College as a whole.

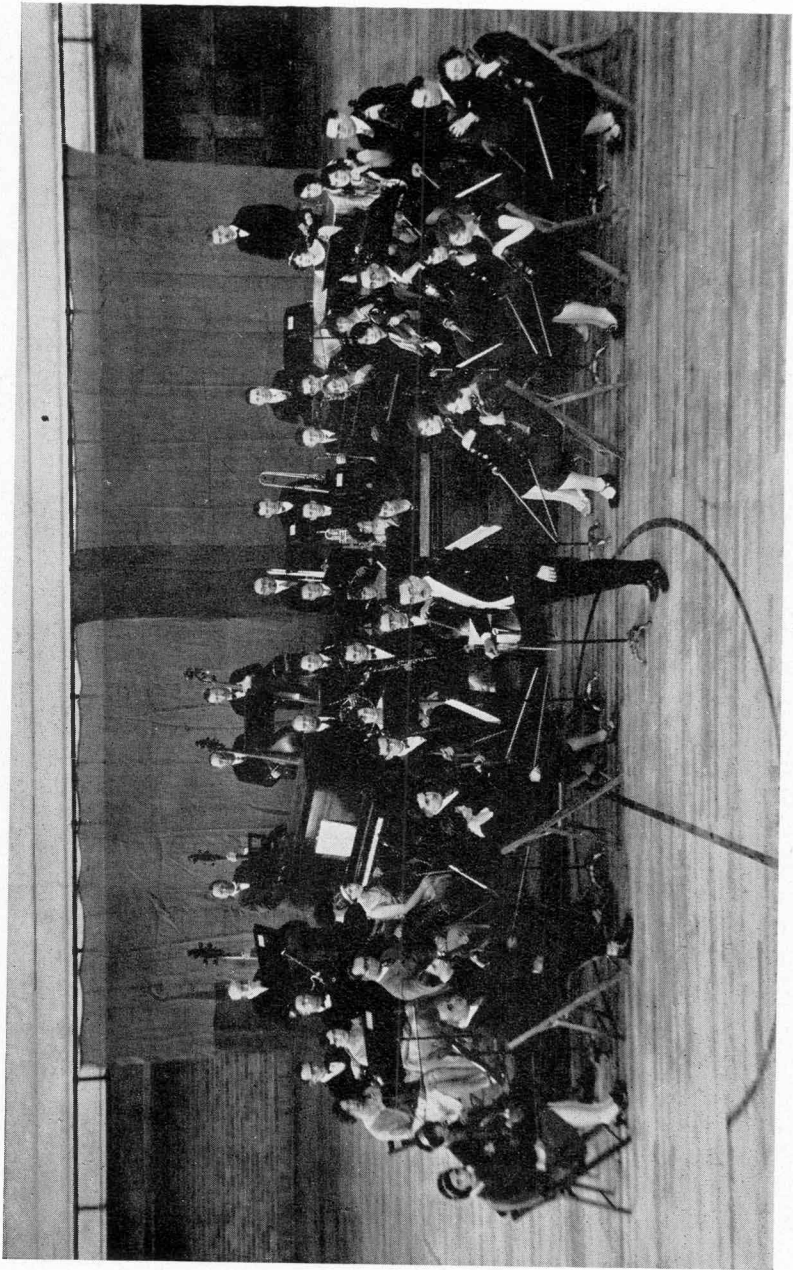
#### INDIVIDUAL ATTENTION

The Conservatory directs attention to the development of teachers and supervisors of public school music. However, attention is given to each student's particular desires, to the end that when graduating he is accomplished in that in which he has specialized, whether it be public school music or as private instructor in piano, voice, violin, or the instruments of band and orchestra, or as virtuoso.

Unlike the position it holds in college life at many institutions, music at Colorado State Teachers College is not a side



EUGENE SHAW CARTER  
Violin



THE GREELEY PHILHARMONIC ORCHESTRA



issue; it is not a pleasurable pastime only, whereby students may find entertainment in glee clubs, choruses, etc. It is a fundamental and a vital organization in the College as a whole. It specializes in the training of music supervisors, in voice, piano, violin, and orchestra instruments; and also in the development of professional teachers in the same lines. Of course, students take part in chorus work, in glee clubs, orchestra, and in the various musical organizations at the College, but it is as a necessary part of their training. It can readily be seen that the institution founded on such firm basis, with such an outlook on the work to be accomplished, is something more real than simply an institution for the entertainment of students in their idle moments.

With the excellent educational advantages offered through the other departments of the College, the student in the Conservatory of Music has an opportunity not often found elsewhere. First of all, he finds a setting of beauty, culture, and refinement. The music student at Colorado State Teachers College Conservatory, whether the aim be a specialist in any one of the branches or a supervisor of public school music, will find the whole atmosphere filled with those things which are conducive to the artistic temperament.

In addition to the corps of experts comprising the faculty of the Conservatory, the students have free use of the magnificent Library, with 60,500 volumes and containing a very complete musical library.



GEORGIA KUMLEH  
Violin

## MUSICAL ORGANIZATIONS

Opportunity is found both for increased social life, and musical training in the various musical organizations on the campus. Membership in these organizations is open to all College students, the only qualifications being ability and faithfulness in attending rehearsals.

Outstanding among the College musical organizations are the Schumann Club, composed of from forty to fifty members,



SARAH SCOTT  
Piano

all College girls; the Men's Glee Club, with a membership ranging from thirty to forty male voices; the College Band, the College Orchestra, the College Male Quartet, and the College Girls' Octet.

In addition, the College students form the foundation for what has become the celebrated Greeley Philharmonic Orchestra. The Philharmonic personnel includes practically all of the leading instrumentalists of the city of Greeley. Professor Cline, director of the Conservatory, is the director. Concerts are given regularly on Sunday afternoons

during the winter in one of the local theaters, and the orchestra makes one or two trips to Denver during the season.

The College Chorus presents an oratorio or opera each year.

The Schumann Club presents several public concerts in Greeley during the season and also gives at least one concert in Denver.

Excellent opportunities are afforded Conservatory students in the professional programs that are presented during the College year. The following artists and musical attractions have



been presented on the College campus during the past few seasons:

Madam Shumann-Heink, Frieda Hempel (Jenny Lind Program), Paul Althouse, Arthur Middleton, Barbara Maurel, Paul Gruppe, Great Lakes Quartet, Reed Miller, Mary Mellish, Thelma Given, Sousa's Band, Irish Regimental Band, Jeannette Vreeland, Percy Rector Stephens.

One of the most interesting and profitable fields of professional musical careers is that of the supervisor of Public School Music. The day has passed when the only requisite for the position of director of Public School Music is the ability to play the piano or to lead a band.

#### SPECIALLY PREPARED

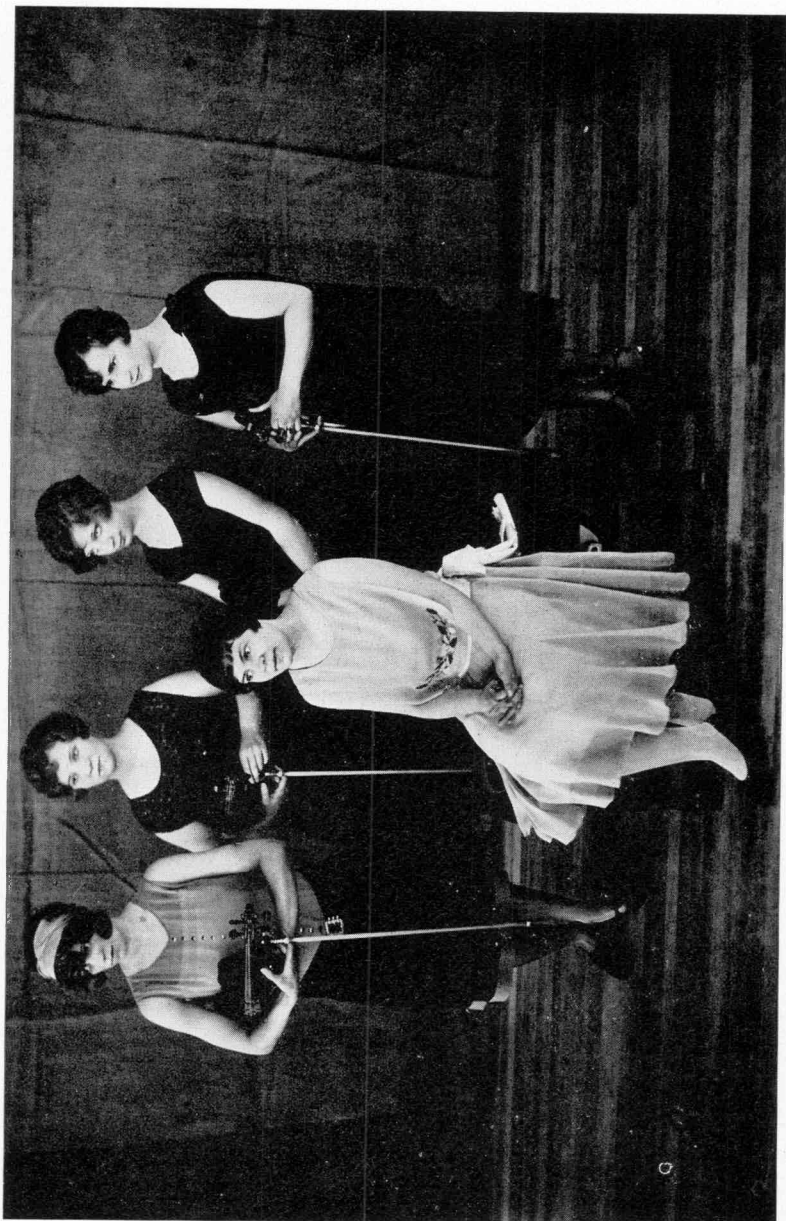
The supervisor of Public School Music is now chosen with the same careful consideration as is anyone else engaged for a special field.

Colorado State Teachers College Conservatory of Music trains its students to meet this changed condition. It prepares its students to the end that when they graduate they will be ready to answer the call and without hesitation to step into positions of Supervisors of Public School Music with all the assurance necessary to insure success.

No student is graduated in the supervisor's course until he or she has demonstrated to the entire satisfaction of the director of the Conservatory the qualifications necessary to properly handle the position of supervisor.



TENA JORGENSEN  
Voice



THE MOZART VIOLIN QUARTET

## THE FACULTY

In keeping with the professional standard which prevails throughout the College as a whole, marked attention has been given to the selection of the faculty of the Conservatory of Music. After all, it is the faculty which in reality makes the Conservatory. And it is with a sense of pardonable pride that Colorado State Teachers College points to its Conservatory faculty.

Professor James De Forrest Cline, director of the Conservatory, is not simply a musician. He is an artist, composer, director. A number of his compositions—both music and words—are to be found in the best music libraries and on the music racks of some of the foremost artists.

Director Cline has surrounded himself with a corps of men and women instructors, chosen not alone because of their musical ability, but for their ethical standing as well. They are leaders in their profession, and they are thoroughly in sympathy

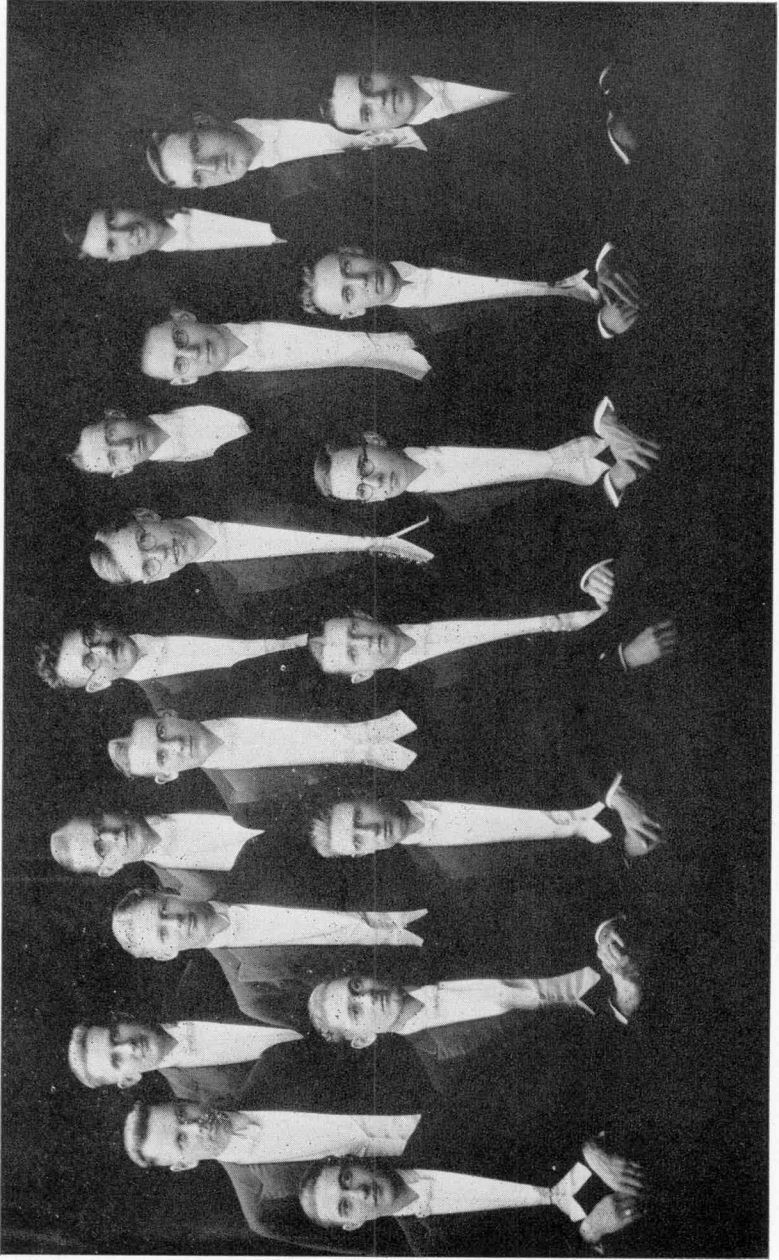
with the ideals of the school—ideals that are concerned not alone with efficient performance of faculty members as such, but ideals that consider as well the welfare of the individual student; that seek to build up character and personality; to avoid narrow specializing; to develop breadth and thoroughness based on a wide knowledge and experience of the art and its history; finally to follow the student as he ventures upon the practice of his profession with advice and such services as are possible.

## FEES FOR STUDENTS

Students enrolling in the College and majoring in music pay the same fees regularly charged all College students. There is no tuition for the residents of Colorado. There is an incidental fee of \$8.00 per quarter, plus a library fee of \$2.00. Non-residents of the state pay a nominal tuition of \$5.00. Fees for individual lessons will be found in Course of Study on succeeding pages.



ESTELL ELGAR MOHR  
Public School Music



MEN'S GLEE CLUB

## THE COURSE OF STUDY

The course of study is planned on a four-year basis. College credit is given for applied music under the following conditions:

1. An examination must be passed by all students who desire credit for applied music to show that they have completed the work of the second grade of the instrument in which they apply for further work. Second grade work must be equal to the following standard: sonatinas and pieces from Kuhlraw, Kullak, Clementi, and Bach. Twelve little preludes and pieces suited to the individual student. All forms of technical exercises, scales, trills, chords, arpeggios, double thirds, and octaves. Knowledge of tone production, phrasing, rudiments of harmony, use of pedal, and sight playing. Pieces by Mozart, Haydn, Bach, Beethoven.

2. A full year's work (three quarters) must be taken before credit shall be allowed.

3. College credit will be given for proper work in all instruments except the following: ukelele, banjo, guitar, mandolin, fife, and single percussion instruments.

4. Beginning work in any instrument, except those mentioned in "3" will receive college credit when the examination in piano is passed to show the completion of two grades of work.

5. One hour of credit is given for not less than one lesson a week with practice under the instruction of a member of the music department of the College faculty. Two lessons a week in the same instrument shall not receive additional credit.

### FOR MAJORS IN MUSIC

Examination must be taken in piano work before graduation.

The maximum credit in applied music will be twelve hours in the two years' course and twenty-four hours in the four years' course.

### FOR NON-MAJORS IN MUSIC

The maximum credit in applied music is three hours a year, six hours in the two years' course, and twelve hours in the four years' course.

The five requirements applied to all students who wish to take lessons in applied music do not preclude beginning work in voice or piano or any other instruments, but in general they remove college credit from elementary work.

Band and orchestral instruments are rented at \$2.00 per quarter.

All public school music majors are required to become members of the College chorus and orchestra. This may be taken with or without credit. 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. Consult the head of the department.



GIRLS' BAND

## 1a. RUDIMENTS AND METHODS—Every quarter. Three hours.

Required of Kindergarten, Primary and Intermediate majors. This course is designed for the purpose of equipping the grade teacher with the necessary musical skills, and methods for teaching the daily music lesson in the classroom. The materials and methods covered are those for: sight-singing, notation, musical terms, appreciation, rote-singing, games, etc.

## 1b. SIGHT SINGING—Fall and summer quarters. Three hours.

This course is required of music majors. Rudiments of music and beginning sight singing.

## 1c. ADVANCED SIGHT SINGING—Winter and summer quarters. Three hours.

Required of music majors. Prerequisite Music 1b. Continuation of Music 1b. The student will acquire speed and accuracy in hearing and sounding difficult intervals.

## 2. TONE THINKING AND MELODY WRITING—Spring and summer quarters. Three hours.

It is expected that students will become proficient in writing melodies in all kinds of rhythms. A great deal of dictation is done. Required of music majors. Prerequisite, Music 1b.

## 3. INTRODUCTORY HARMONY—Fall and summer quarters. Three hours.

This is a course consisting of the construction, classification and the progression of chords, and is put into practical use in the harmonization of melodies. Required of music majors.

## 4. INTERMEDIATE HARMONY—Winter and summer quarters. Three hours.

Continuation of Music 3. Required of music majors.

## 5. ADVANCED HARMONY—Spring quarter. Three hours.

A continuation of Music 4, taking up discords and modulations. Required of music majors.

## 10. KINDERGARTEN-PRIMARY METHODS—Fall and summer quarters. Three hours.

Methods for kindergarten, first, second, and third grades. Care of the child voice. Its range. The less musical child. The teaching of rote songs. Development of rhythm through free and suggested expression. The toy orchestra. Repertoire of songs for home and school use, with publishers. A graded course in music appreciation is desirable so that kindergarten and primary teachers may be able to play simple accompaniments on the piano. Required of music majors. Prerequisites, Music 1b, 1c.

## 11. INTERMEDIATE METHODS—Winter and summer quarters. Three hours.

Methods for fourth, fifth and sixth grades. The round. Part-singing. Chromatics. Intervals. Tone drills. Sight-singing. Building of major and minor scales on keyboard. Written notation. Simple song analysis. Repertoire of appropriate rote songs. Familiar songs for memorizing. Materials for music appreciation. Required of music majors. Prerequisites, Music 1b, 1c, 10.

## 20. HISTORY OF ANCIENT AND MEDIEVAL MUSIC—Fall and summer quarters. Three hours.

A cultural course which deals with the development of ancient and medieval music and musicians up to and including Beethoven, through the presentation of music by these different composers. Required of music majors.

## 21. MODERN COMPOSERS—Winter and summer quarters. Three hours.

A continuation of Music 20. The lives and music of the great masters since Beethoven will be studied. Through the aid of the phonograph the student will become acquainted with the different styles of these composers' compositions. Required of all music majors. Prerequisite, Music 20.

22. MUSIC APPRECIATION—Spring and summer quarters. Three hours.

A course open to all who wish to acquire a greater love for good music. The lives of many of the great artists and composers are taken up in this course. Records of bands, orchestras, choruses, soloists, etc., are taken up with the purpose in view of acquainting the student with the best music and teaching him how to appreciate it.

23. MUSICAL LITERATURE—Spring and summer quarters. Three hours.

A listening course wherein the student is taught to distinguish between the various forms of composition. A thorough knowledge of dance forms, song forms, etc., will be obtained.

30. INDIVIDUAL VOCAL LESSONS—Every quarter. One hour. Fee, \$24.00 and \$30.00. Student teacher, \$12.00.

Correct tone production, refined diction and intelligent interpretation of songs from classical and modern composers.

31. INDIVIDUAL PIANO LESSONS—Every quarter. One hour. Fee, \$24.00 and \$18.00. Student teacher, \$12.00.

High class instruction is offered to both beginners and advanced students using the standard technical works of Czerny, Clementi, and others as well as the compositions of Beethoven, Bach, Schumann, Chopin and other classical and modern composers.

32. INDIVIDUAL VIOLIN LESSONS—Every quarter. One hour. Fee, \$24.00. Student teacher, \$12.00.

The work will be outlined according to the ability of the student. Only the best of teaching material is used and the bowing and finger technic are carefully supervised.

33. INDIVIDUAL PIPE ORGAN LESSONS—Every quarter. One hour. Fee, \$24.00.

Work is given in pipe organ to those students who have had enough piano instruction to be able to play Bach Two Part Inventions. The instruction starts with a thorough foundation in organ technic followed by study of Bach organ works, Mendelssohn Sonatas, Guilman, Rheinberger, Widor and other organ composers of like standing in the musical world.

34. PIANO CLASS LESSONS—Every quarter. One hour. Fee, \$6.00.

A course designed for the prospective teacher in piano classes.

35. INDIVIDUAL LESSONS FOR BRASS AND REED INSTRUMENTS—Every quarter. One hour. Fee, \$15.00.

Each instrument is carefully taught by a competent instructor. Special attention is given to beginners.

36. INDIVIDUAL 'CELLO LESSONS—Every quarter. One hour. Fee, \$24.00.

Modern methods are used and a thorough course is given presenting the best music literature for the 'cello.

38. COLLECTIVE VOICE TRAINING—Every quarter. One hour. Fee, \$6.00.

Fundamental work in voice building.

40. BEGINNING ORCHESTRA—Every quarter. One hour.

Beginners on orchestral instruments who have progressed sufficiently will find this an opportunity for ensemble rehearsal under competent direction.

41. MEN'S GLEE CLUB—Fall, winter, and spring quarters. One hour.

Entrance upon examination. The club prepares a program and makes an extended tour of Colorado and near-by states.



42. SCHUMANN GLEE CLUB—Fall, winter, and spring quarters. One hour.

Entrance upon invitation after examination. This club is composed of forty female voices and takes a prominent part in the presentation of the annual oratorio and opera. A concert is given each spring quarter.

43. ADVANCED ORCHESTRA—Every quarter. One hour.

Only those are admitted to this orchestra who have had experience. Entrance upon examination only. All members must be present when called upon to play for College activities.

44. ADVANCED BAND—Every quarter. One hour.

The College band is maintained in order that experienced band men may have an opportunity to continue rehearsing under able direction. The College band plays for all College activities and all members are expected to be present when the band is called upon to perform.

45. ORCHESTRAL INSTRUMENTS—Every quarter. One hour. Fee, \$6.00.

A course in instrument study for the supervisors.

46-146. RECITAL CLASS. Attendance required of all music majors—Every quarter.  $\frac{1}{2}$  hour.

101. COLLEGE CHORUS—Every quarter. One hour.

Worth while music and standard choruses are studied and this chorus assists in giving the annual oratorio. Open to all students. Required of music majors. Every quarter.

103. COUNTERPOINT—Fall and summer quarters. Three hours.

The rules of harmony are here applied to polyphonic writing. Required of majors in music. Prerequisite, Music 4.

104. ADVANCED COUNTERPOINT—Winter quarter. Three hours.

Continuation of Music 103. Required of majors in music.

105. BEGINNING ORCHESTRATION—Winter and summer quarters. Three hours.

A study is made of the several instruments of the symphony orchestra. Their pitch and quality of tone are studied singly and in combination. Beginning arranging for orchestra is begun. Prerequisite, Music 104.

106. ADVANCED ORCHESTRATION—Spring quarter. Three hours.

Continuation of Music 105. Required for a degree in music.

107. FORM ANALYSIS—Winter quarter. Three hours.

Analysis will be made of the smaller forms in music, also of symphonies from Hayden down to the present. Prerequisites, Music 104 and 106. Required of majors in music.

108. ADVANCED FORM ANALYSIS—Spring quarter. Three hours.

Continuation of Music 107. Required of majors in music.

110. SUPERVISOR'S COURSE—Spring and summer quarters. Three hours.

Survey of development of public school music. Its leaders. Comparison and discussion of various music series, and texts. Duties and responsibilities of the supervisor. Teachers' meetings, typical outlines for music work. Public school music surveys. Tests and measurements. Instrumental class methods. The adolescent voice. Materials for glee clubs and choruses. The school orchestra. The music memory contest. State music contests. Music magazines. Required of music majors. Prerequisites. Music 1c, 2, 3, 4, 10, 11.

111. CONDUCTING BY ASSIGNMENT—All quarters. Two hours.

114. METHODS IN CONDUCTING—Spring and summer quarters. Two hours.

The technic of the baton is obtained through the actual use of the same. Music in all forms is studied with special reference to the directors' problems.

123. APPRECIATION OF OPERA—Fall and summer quarters. One hour.

Monteverde to modern times. Classroom work will consist of lectures and the actual singing of the principal airs by the class. Librettos used as textbook.

130. INDIVIDUAL VOCAL LESSONS AND METHODS—Every quarter. One hour. Fee, \$24.00 and \$30.00.

A method of approach in tone building will be discussed with special reference to the teachers' problem.

131. INDIVIDUAL PIANO LESSONS AND METHODS—Every quarter. One hour. Fee, \$18.00 and \$24.00.

An advanced course in piano playing with suggestions and helps for teaching the instrument.

132. INDIVIDUAL VIOLIN LESSONS AND METHODS—Every quarter. One hour. Fee, \$24.00.

Teaching problems will be discussed and classified teaching material will be suggested, making this a valuable course to the student preparing himself for teaching the violin.

133. INDIVIDUAL PIPE ORGAN LESSONS AND METHODS—Every quarter. One hour. Fee, \$24.00.

An advanced course in organ playing combined with instruction in teaching the instrument.

134. INDIVIDUAL 'CELLO LESSONS AND METHODS—Every quarter. One hour. Fee, \$24.00.

Discussions will be held with special regard to the methods pursued in teaching the 'cello.

224. RESEARCH IN PUBLIC SCHOOL MUSIC—Three hours.

225. RESEARCH IN PUBLIC SCHOOL MUSIC—Three hours.

This is a continuation of Music 224.

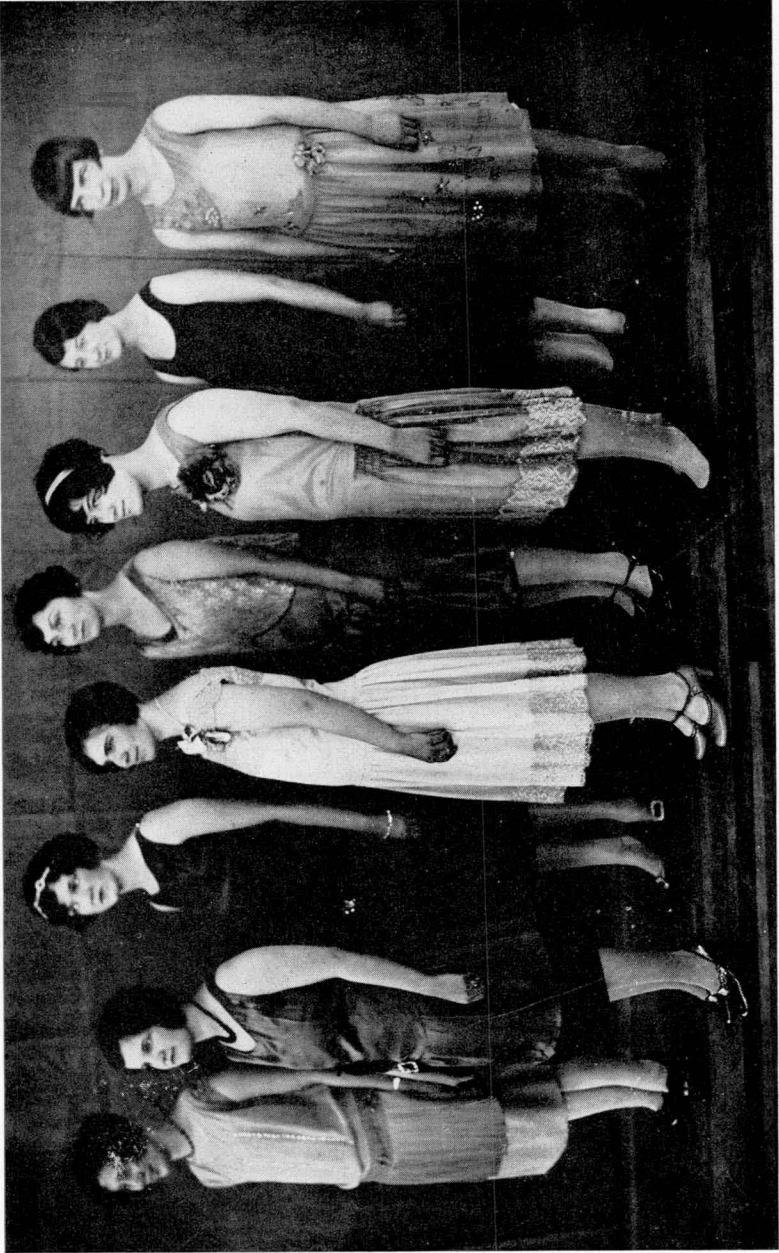
The director of the Conservatory welcomes inquiries. He will be glad to answer correspondence relating to any of the courses or the work. Address all communications to

J. DEFOREST CLINE, *Director,*

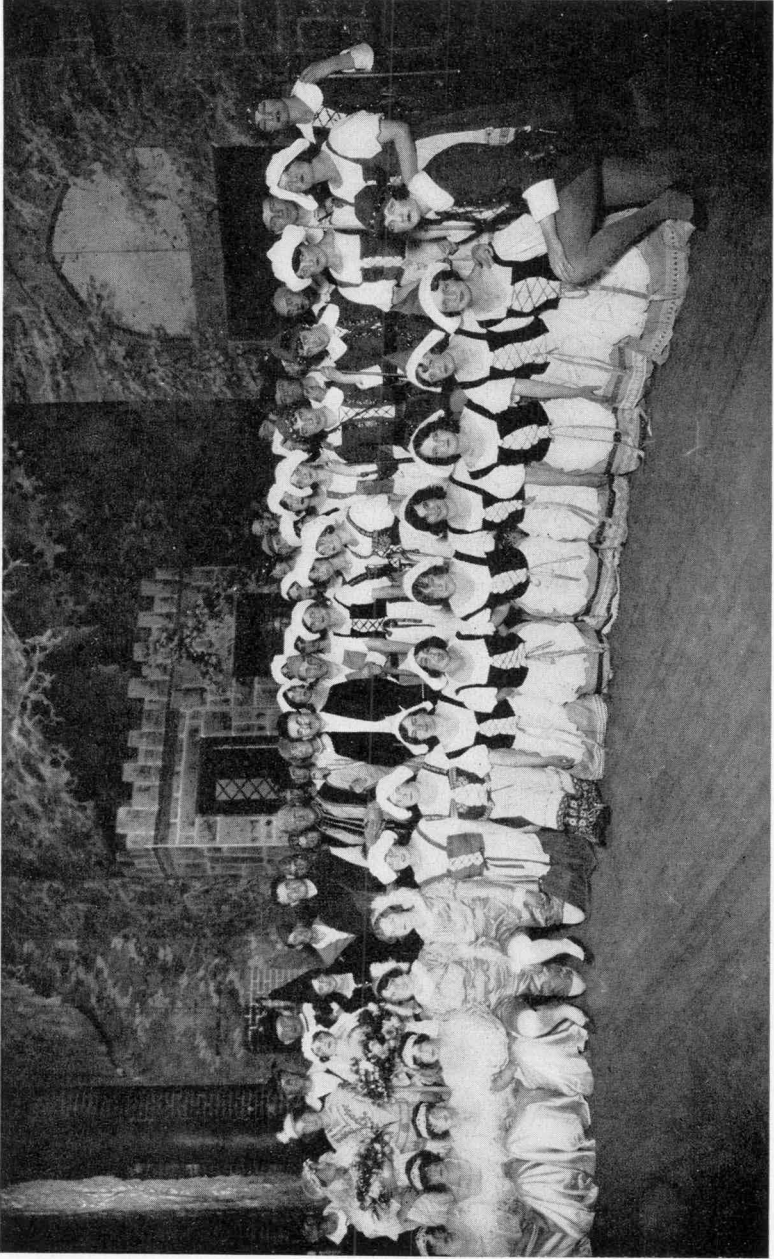
Conservatory of Music,

Colorado State Teachers College,

Greeley, Colorado.



THE OCTET



SCENE FROM "ROBIN HOOD"







COLORADO STATE TEACHERS COLLEGE  
BULLETIN

**Published monthly by Colorado State Teachers College, Greeley, Colorado.**

**Entered as Second Class Matter at the Postoffice at Greeley,  
Colorado, under the Act of August 24, 1912.**

**Current numbers of any of the College Publications may be had on application  
to the President of the College, Greeley, Colorado.**



# INDUSTRIAL ARTS

COLORADO STATE TEACHERS  
COLLEGE

1927



GREELEY, COLORADO

*Published by The College*

## BOARD OF TRUSTEES

DR. HARRY V. KEPNER.....*President*

DR. E. M. RUSSELL.....*Vice-President*

CHARLES N. JACKSON

CLIFFORD P. REX

T. W. MONELL

EARL M. HEDRICK

KATHERINE L. CRAIG

*State Superintendent of Public Instruction*

## THE FACULTY

GEORGE WILLARD FRASIER, PH.D., LL.D.

*President*

---

SAMUEL MILO HADDEN, A.B., A.M.

*Head of the Department of Industrial Arts*

CHARLES MEAD FOULK, PD.B., PD.M.

*Professor of Industrial Arts*

*In charge of woodworking*

RALPH THOMAS BISHOP, A.B.

*Associate Professor of Industrial Arts*

*In charge of printing*

OTTO WILLIAM SCHAEFER

*Associate Professor of Industrial Arts*

*In charge of leatherwork*

HARRY THOMPSON, A.B.

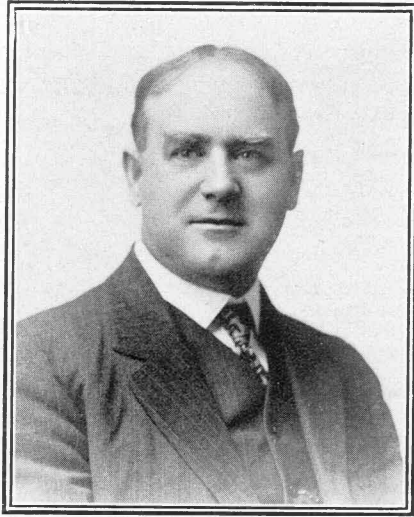
*Acting Assistant Professor of Industrial Arts*

KENNETH I. PERRY

*Assistant Professor of Industrial Arts*



GEORGE WILLARD FRASIER, PH.D., LL.D.  
President



SAMUEL MILO HADDEN  
Head of the Department of Industrial Arts

## FOREWORD

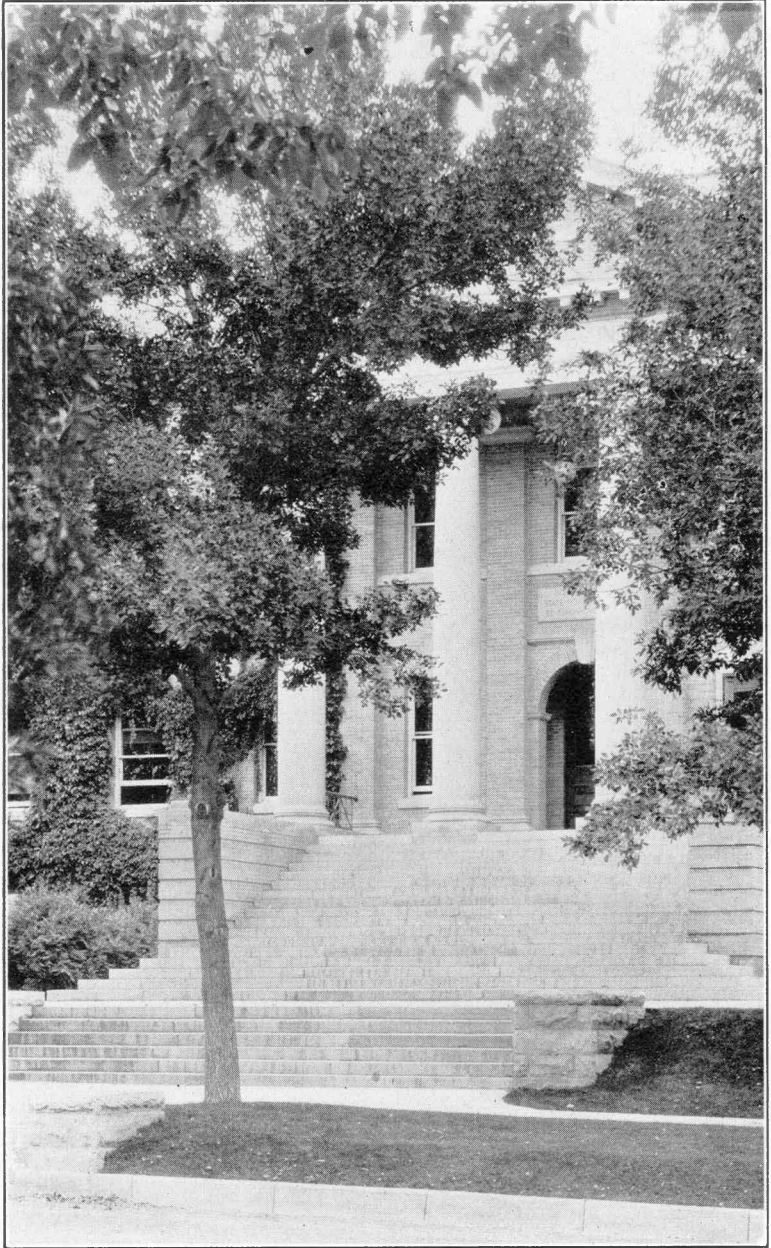
**I**N THE INDUSTRIAL ARTS is found the outlet for that great surging desire and ambition for a vocational career as distinguished from the professional on the part of the big army of boys and girls in the high schools of the country. It is in the high schools that the foundation is laid for many life careers in mechanical drawing, drafting, printing, binding, art leather craft, and the other industrial arts.

Whether or not the high school student intends to go on to college or university or enter immediately on graduation from the secondary school into pursuit of his desires in any one of the many branches of the industrial arts, it is highly important that the foundation he has laid in the high school be sound. Much of his success later depends on the kind of training he has had in the classroom. The school that conducts work in the industrial arts for the mere sake of saying that it has such courses and is indifferent to the methods pursued and the ability of the instructor is not fair either to the pupil or to itself as an educational institution. Unfortunately, many schools are attempting work in the industrial arts along just such lines.

### DEMAND FOR TEACHERS IS HEAVY

It is not enough, either, that those engaged in training high school boys and girls be versed in the practical knowledge of any one or all of the branches included under the heading of industrial arts; they should be teachers, too, and that means that they must be trained in the profession of teaching itself. It is equally important that the teacher in industrial arts in the public schools, colleges or universities have the qualifications of the professional teacher as the teacher in academic subjects. He must know *how* to teach as well as *what* to teach.

The rapid development of the industrial arts as a part of the curriculum in the high schools has found many institutions of higher learning, and particularly the teachers' colleges, backward, and poorly equipped to turn out teachers in this subject.



GUGGENHEIM HALL OF INDUSTRIAL ARTS

As a result, the demand for industrial arts teachers is much greater than the supply.

The professional teacher-training institution is naturally the place to find teachers, and the professional teacher-training institution that fulfills its mission trains teachers for all the branches of public school education.

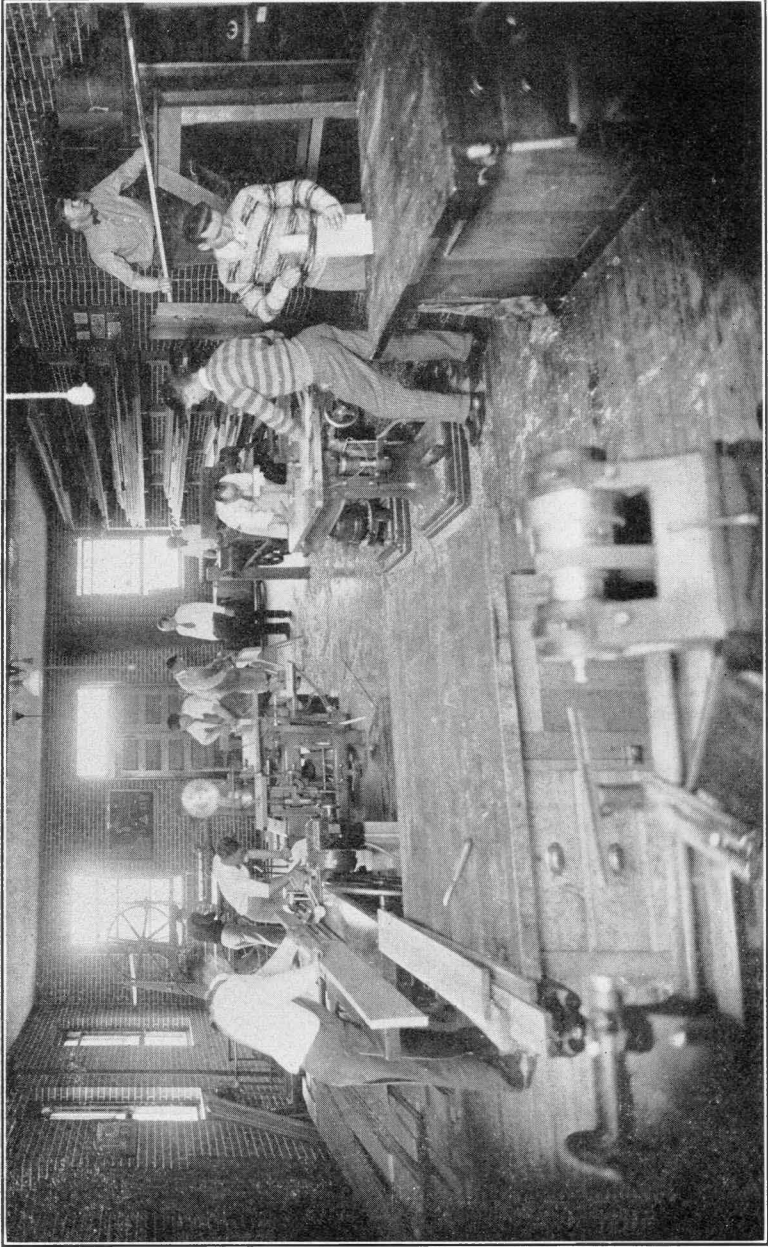
Colorado State Teachers College is a state-maintained institution for the training of teachers for the public schools of Colorado, and it recognizes that its duty is to supply professionally trained teachers for all branches. In accepting its duty, Colorado State Teachers College recognized the industrial arts as an important subject in the high schools, and the training of teachers in these specialized subjects has kept pace with the work and advancement in all other departments of the institution.

The Industrial Arts Department at Colorado State Teachers College stands out as one of the most important departments on the campus, and it is recognized among institutions of higher learning throughout the land. Each one of the different branches in the department is highly specialized, with the inevitable consequence that those majoring in industrial arts at Colorado State Teachers College are in demand always and everywhere, and at attractive salaries.

Graduates in Industrial Arts at Colorado State Teachers College are not only thoroughly trained in the practice of the arts, but are well trained to teach. Since the foundation of the department all of its graduates have found positions without waiting. There is always a demand for graduates of the

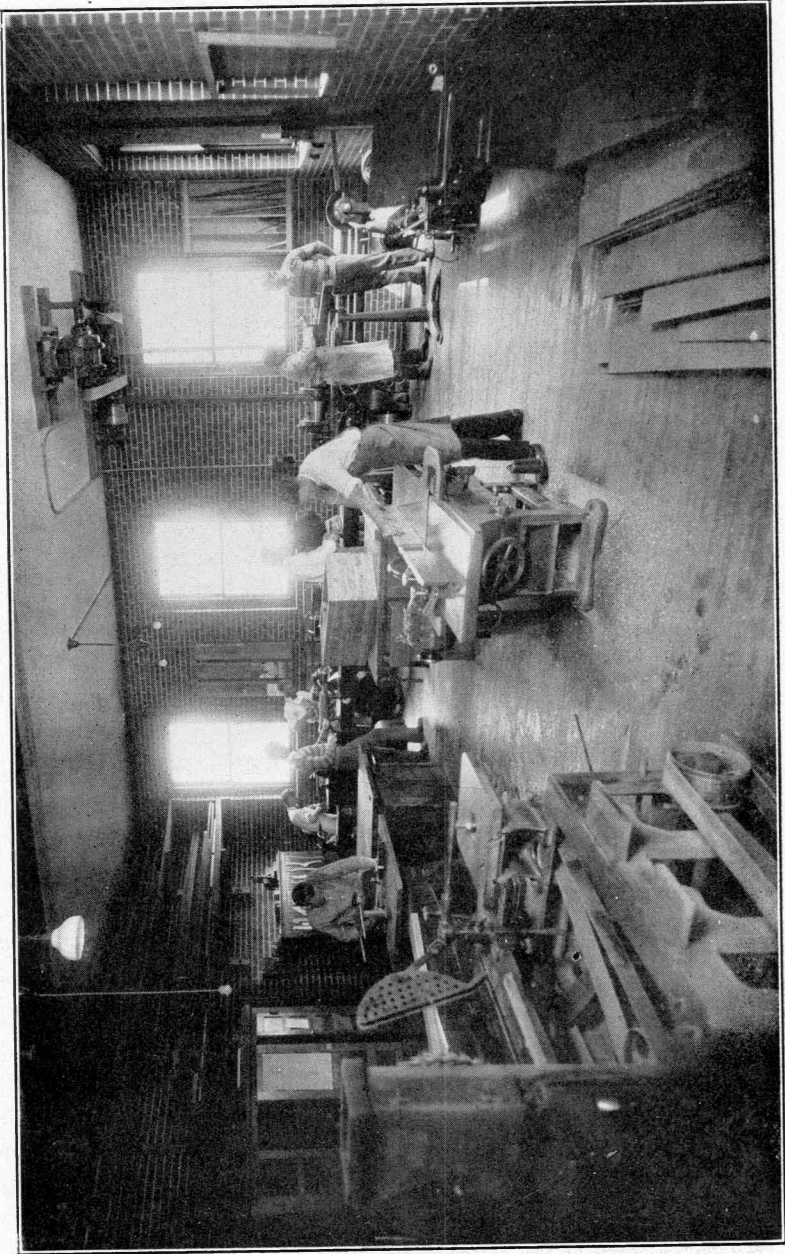


CHARLES MEAD FOULK  
Professor of Industrial Arts  
In charge of woodworking

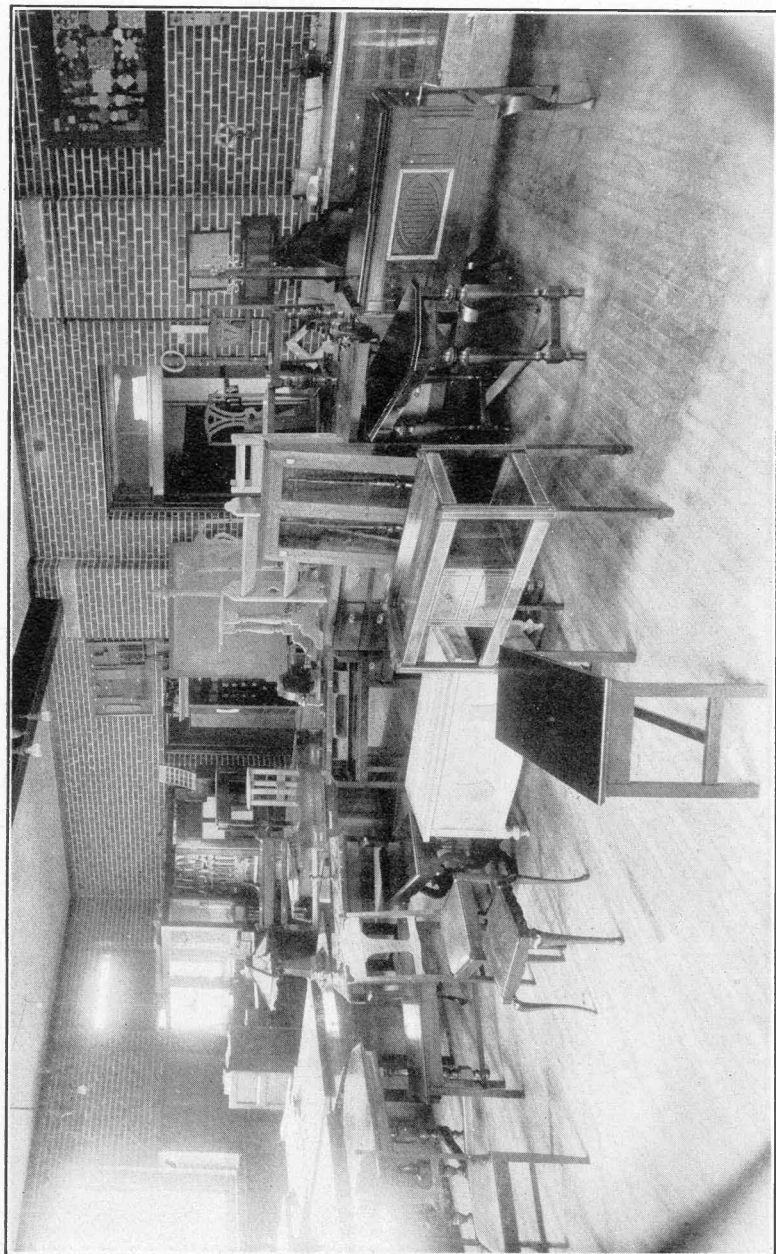


IN THE WOODWORKING DEPARTMENT





THE EQUIPMENT IS THE MOST MODERN



SOME OF THE FURNITURE MADE BY STUDENTS IN THE WOODWORKING DEPARTMENT

department long in advance of the graduation of each class. These graduates are to be found in well-paying positions as teachers and heads of departments in all parts of the country.

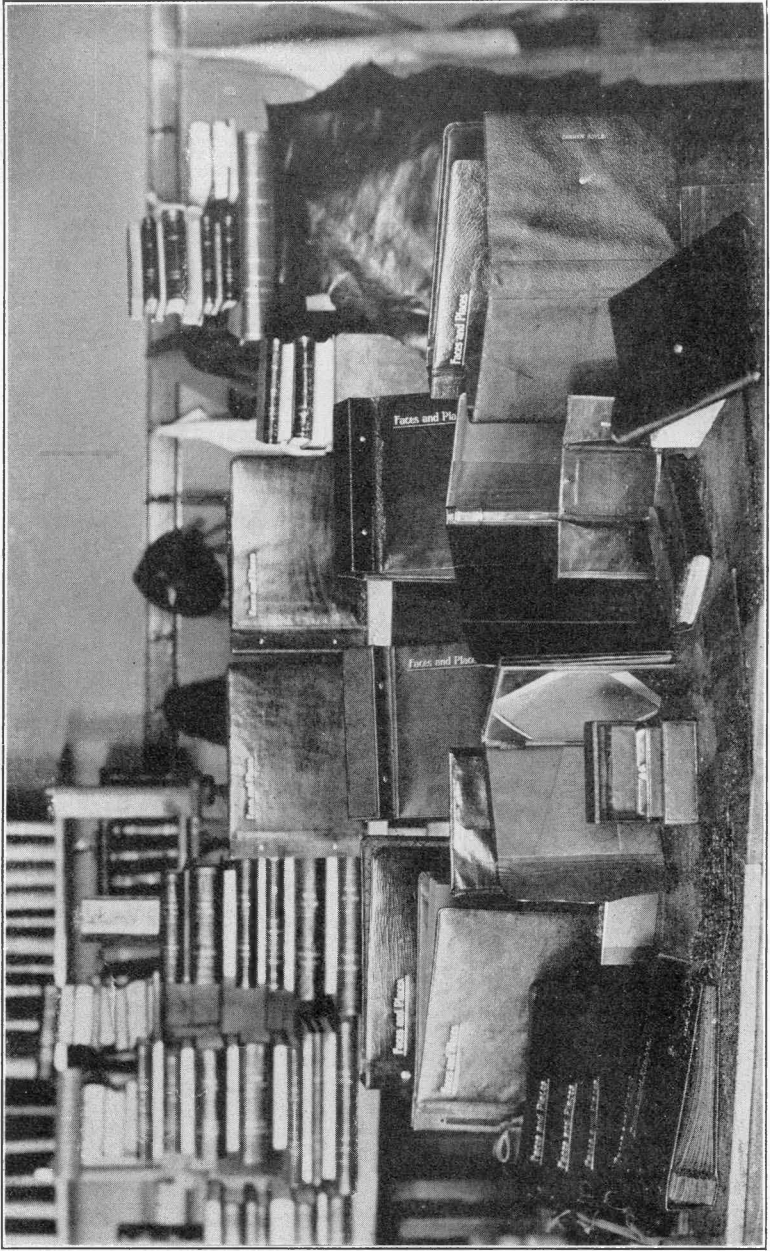
## DEPARTMENT HOUSED IN FINE BUILDING

The Industrial Arts Department had its beginning in the second year of the institution when Mr. C. T. Work introduced some courses in sloyd of the type that Gustaff Larson brought over from Dr. Otto Solomon's Institute at Naas, Sweden; a rigidly laid out course in woodworking sequentially organized. This was gradually changed to fit conditions here, adding courses in woodturning, mechanical drawing, and printing. This was the second normal school or teachers college to introduce a printing course for teachers. Through the influence of the department, courses were added in art, home making, and commercial work.

With the introduction of this phase of the curriculum, students began to be attracted to it, first with the thought of the possibilities for its use later as they went out to teach, and then it soon became evident that not only was there a great field developing, but that the high schools were already looking about for young men and women capable of teaching industrial arts.

A combination which early presented itself and which has continued to grow in importance is the athletic coach and industrial arts teacher. Schools everywhere found that they could combine these two positions, and Colorado State Teachers College, sensing the pulse early, directed its plans to the same end, with the result that a large number of schools are enjoying the benefits of such combination faculty members, young men who have excelled in athletics at this institution and who at the same time have demonstrated their abilities as teachers in the industrial arts.

Quickly, once the field was recognized, the department grew, and soon it was necessary to provide greater accommodations to satisfy the demand of those who wanted to become teachers in this new field. Today the department is housed in a magnificent building of its own—Guggenheim Hall of Industrial Arts. This was the gift of Senator Simon Guggenheim. It is



JUST A FEW SAMPLES OF LEATHER WORK TURNED OUT BY STUDENTS

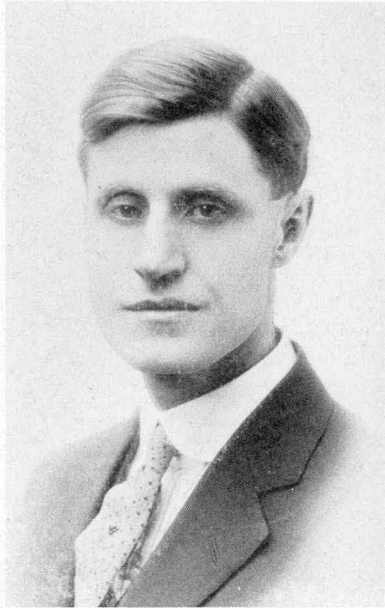
one of the best equipped plants of its kind to be found in any educational institution

The Woodworking Department, presided over by Professor Charles Mead Foulk, occupies the entire ground floor. It is equipped with machinery and tools of the latest design, which makes it possible to give the student training for a teaching position in this branch of the manual arts practical experience to the last degree. Here students each year turn out magnificent specimens of the woodworker's and cabinet maker's art.

On the second floor of the building four departments are housed, namely, drafting, art metal, printing, and bookbinding. Professor S. M. Hadden, who is head of the Industrial Arts Department, directs the instruction in drafting, art metal, and industrial education. The drafting room is equipped with individual lockers where students must keep their work. The room is accessible at all times for students. Courses in Shade and Shadow, Architectural and Machine Drawing are offered. The department has a complete set of architectural slides, industrial slides, and various types of illustrative materials.

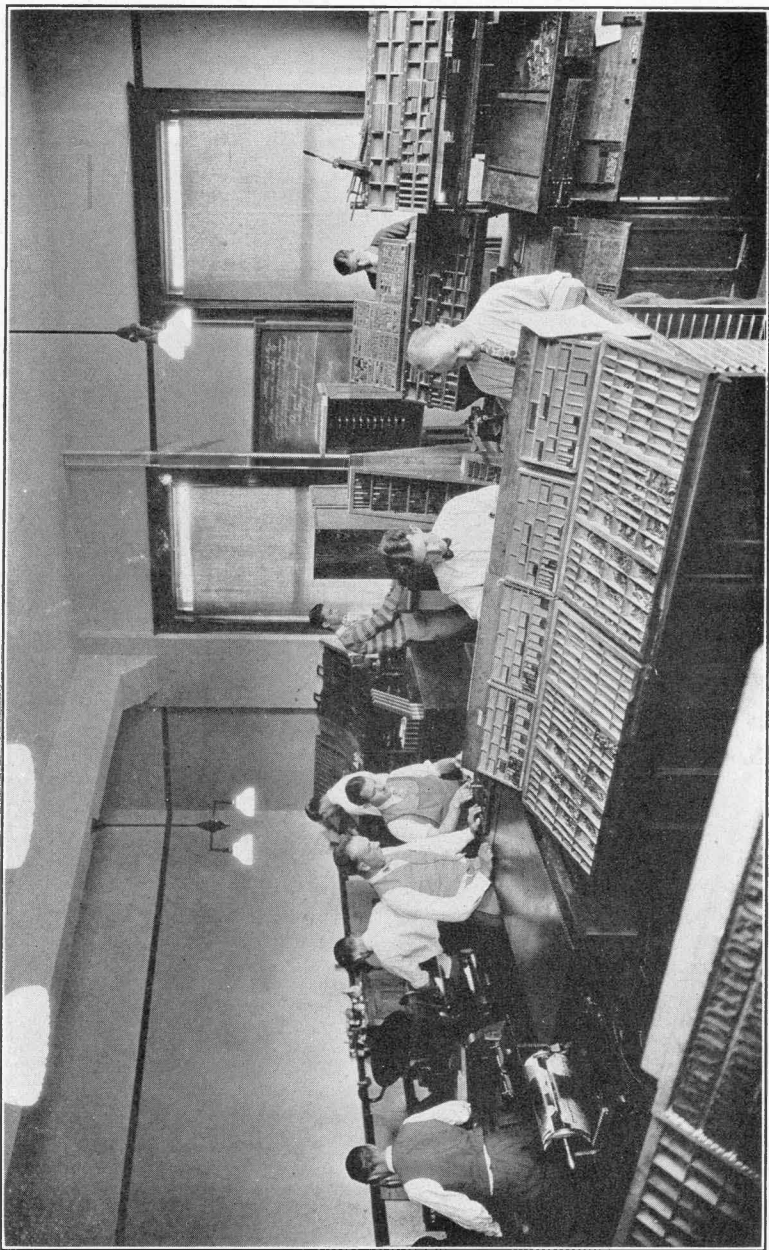
The Art Metal room is equipped with individual desks designed for work of various types, including etching, repousse, raising, planishing, hard soldering, and stone setting in a variety of materials, and power machines for cutting, buffing, and soldering. These arts are rich in illustrative materials from Oriental, Indian, and European countries.

The printing department is under the direction of Professor

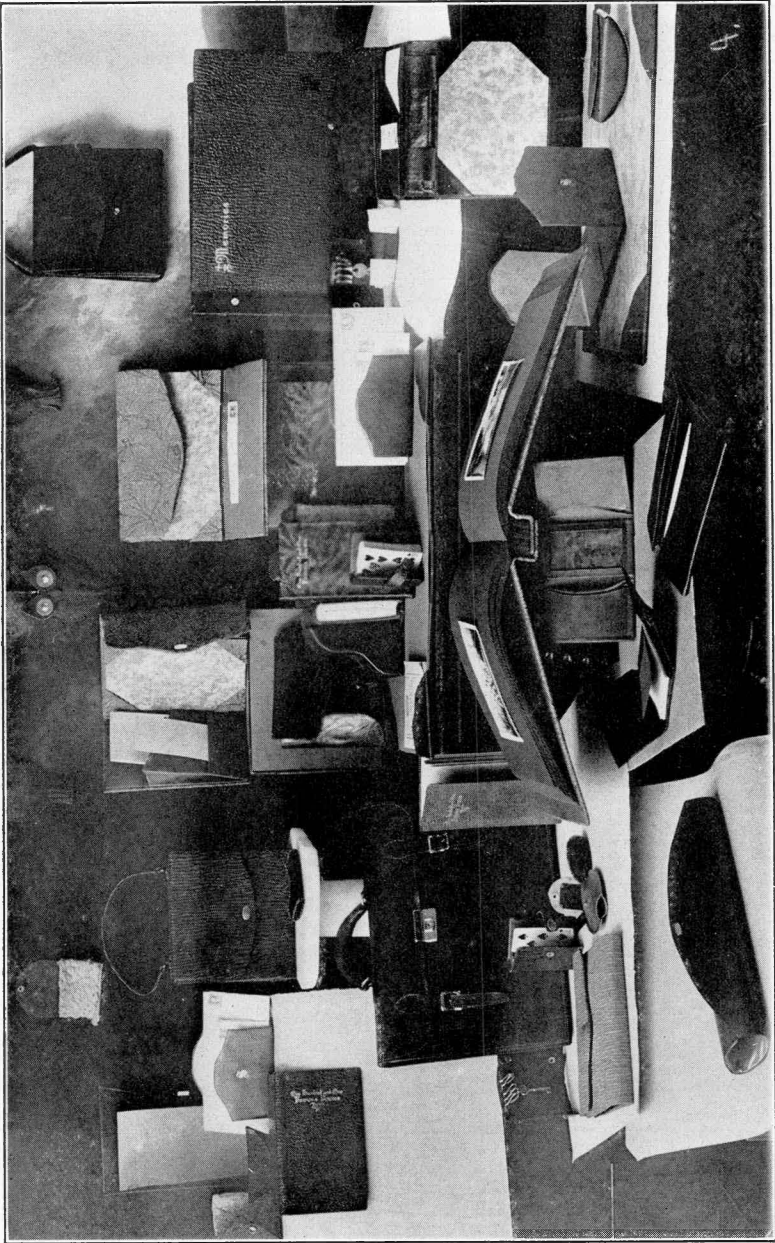


RALPH THOMAS BISHOP  
Associate Professor of Industrial Arts  
In charge of printing





A CLASS IN THE ART OF PRINTING



SOME MORE EXAMPLES OF ART LEATHER WORK TURNED OUT BY STUDENTS



A CLASS IN ARCHITECTURAL DRAWING



Ralph T. Bishop. This department is well equipped for the training of teachers in printing. It has a large supply of well-assorted hand type and other material that goes with such a collection of type, also a battery of three power presses, a paper cutter, punches, stitchers, and proof press. Much of the printing for the college is done here.

This institution was the first one in Colorado and the second in the United States to organize courses for the preparation of teachers in printing.

### THE FACULTY HAS HIGH PROFESSIONAL STANDING

In the bookbinding department students are given wholly practical training in binding and leather work. The equipment consists of gluing tables, individual desks for twenty-one pupils, modern machinery for library bindings, a power stitching machine, equipment to do all leather craft work, gold lettering and hand tooling in gold, stamping machines for stampings in gold, imitation gold, and foils.

On the top floor of the building is located the department of fine arts.

Perfectly equipped as the department is, however, the tremendous success and the high attainment of the graduates are responsible in large measure to the ability and the professional standing of the members of the faculty.

Professor Samuel M. Hadden, head of the Industrial Arts Department, is a man of sound educational training, with wide



OTTO WILLIAM SCHAEFER  
Associate Professor of Industrial Arts  
In charge of leatherwork



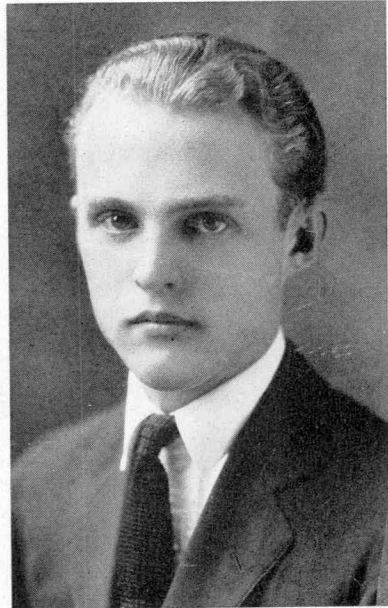
A SECTION OF THE ART METAL DEPARTMENT

experience in the field of industrial arts. He obtained his early training in Kansas and then received his Ph.B. degree at Colorado State Teachers College and his A.B. and A.M. at Denver University. He has studied at Cooper Memorial College, at Teachers College, Columbia University; Chicago University, and one graduate year at the University of California, and six months in Europe studying vocational problems of the continuation school, with other vocational work in Germany, France, Switzerland, and England.

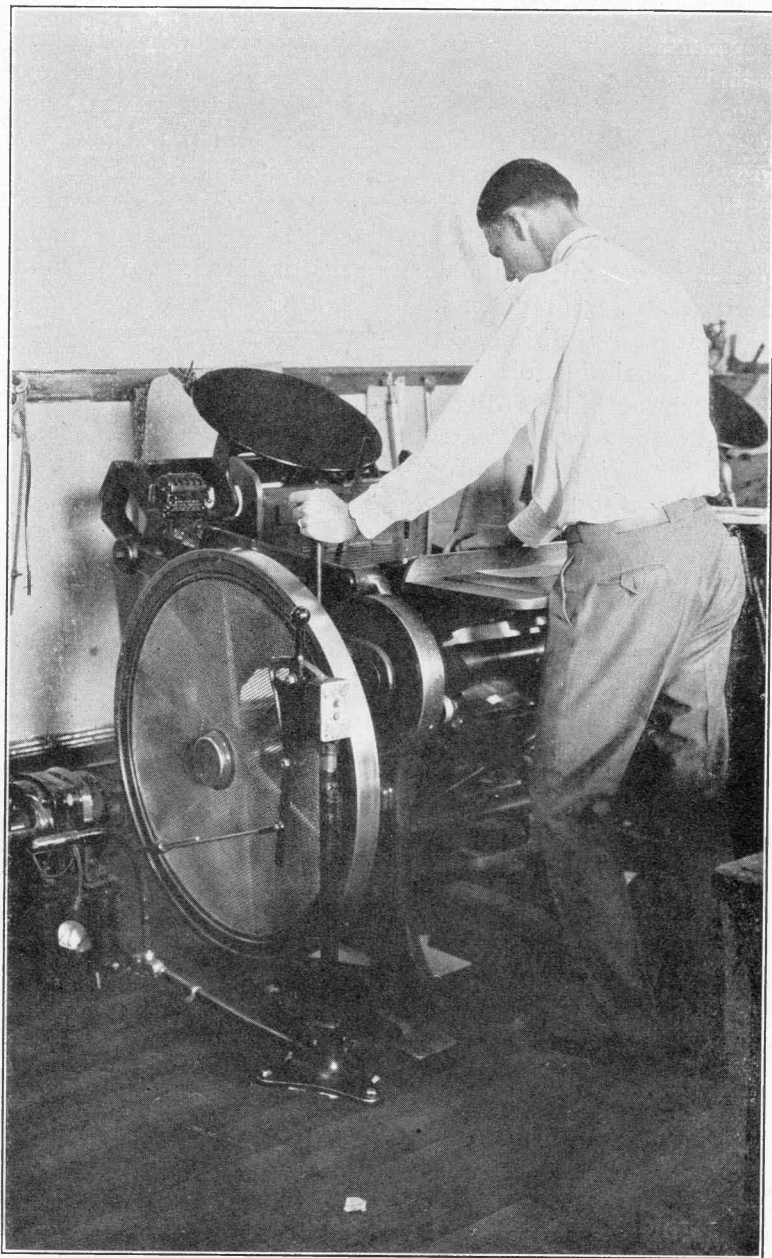
Professor Bishop, in charge of printing, obtained his bachelor of arts degree at Colorado State Teachers College, and is studying for a master of arts degree at Leland Stanford University. He is a graduate of the Western Illinois State Normal School, graduate of the Inland Printer Technical School, Chicago. He has been a student at Chicago University, and before coming to Colorado State Teachers College he taught printing in the Edmonton, Canada, Technical School.

Professor Foulk has a Pd.B. and Pd.M. from Colorado State Teachers College. He attended the Edinboro State Normal School in Pennsylvania and studied architectural drawing through extension fields. He served an apprenticeship in carpentry and joinery and was a contractor and served at various times as a building superintendent. He conducted classes in Trade Problems in Pennsylvania, Idaho and Colorado.

Professor Schaefer, who is in charge of the bookbinding and art leather work, was formerly head of the bookbinding department of the B. F. Wade Printing Company of Toledo,



KENNETH I. PERRY  
Assistant Professor of Industrial Arts



ONE OF THE BATTERY OF PLATEN PRESSES

Ohio. He was a student of William Walker, art binder of Edinburgh, Scotland, head of binding departments in Cleveland, Detroit, Asheville, Riverside, and Los Angeles; and head of the stamping and finishing department of the Kistler Stationery Company, Denver, Colorado, before coming to Colorado State Teachers College.

Mr. Harry Thompson has his A.B. from Colorado State Teachers College.

## TEACHING OTHERS HOW TO TEACH

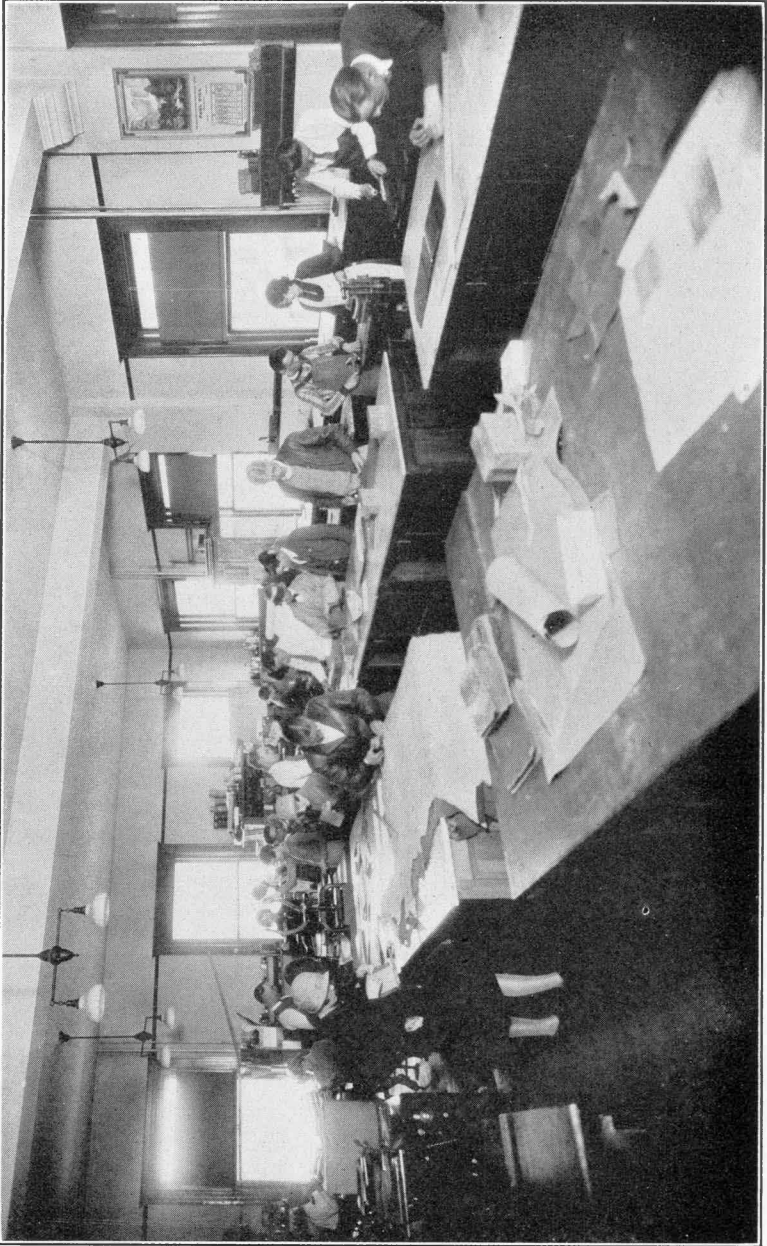
Mr. Kenneth I. Perry has charge of all of the industrial work for boys in the junior and senior high schools. He supervises college student observation and college student teaching in the junior and senior high school training department. Mr. Perry received his A.B. from Colorado State Teachers College. He taught in the junior and senior high school at Fort Worth, Texas, and the Grant Junior High School of Denver, Colorado.

All in all the faculty of the Industrial Arts Department at Colorado State Teachers College is one professionally trained, both in the practical and academic phases—men who not only know how to teach the subject matter, but who are peculiarly fitted to teach students how to teach industrial arts.

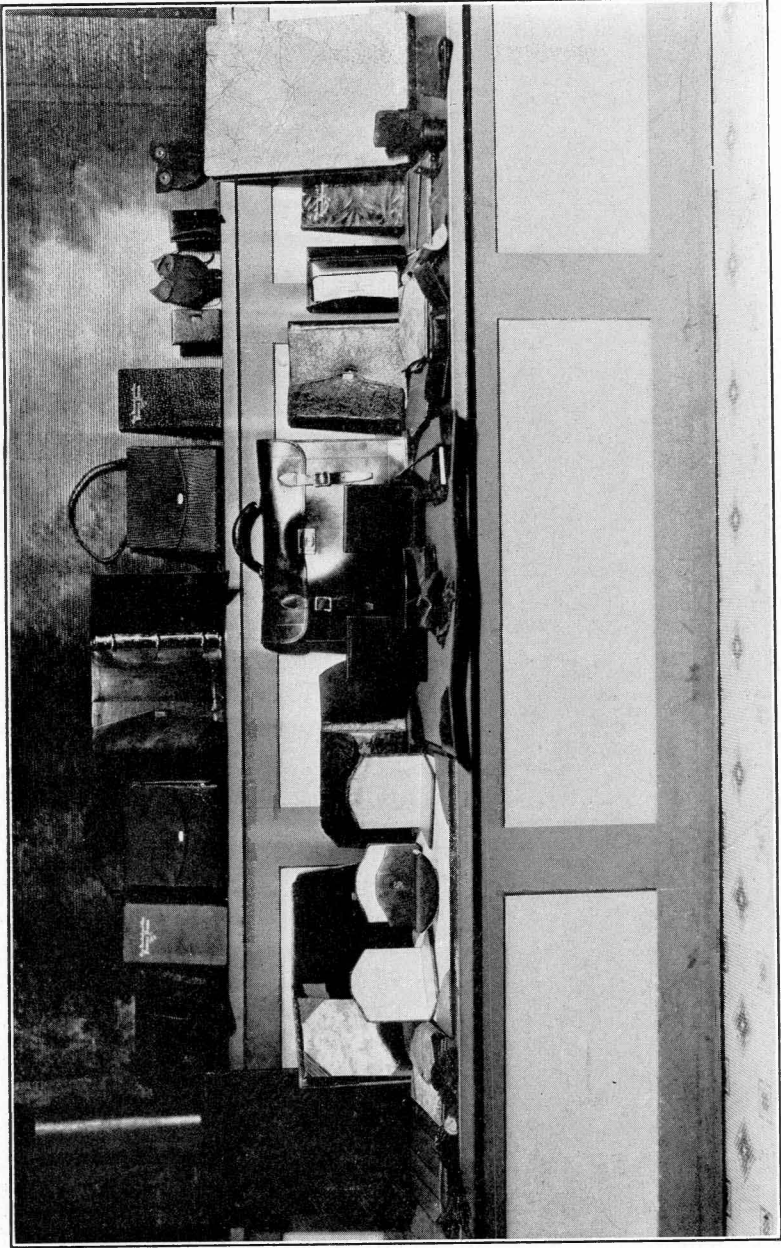


HARRY THOMPSON  
Acting Assistant Professor of  
Industrial Arts





STUDENTS AT WORK IN THE BOOKBINDING DEPARTMENT



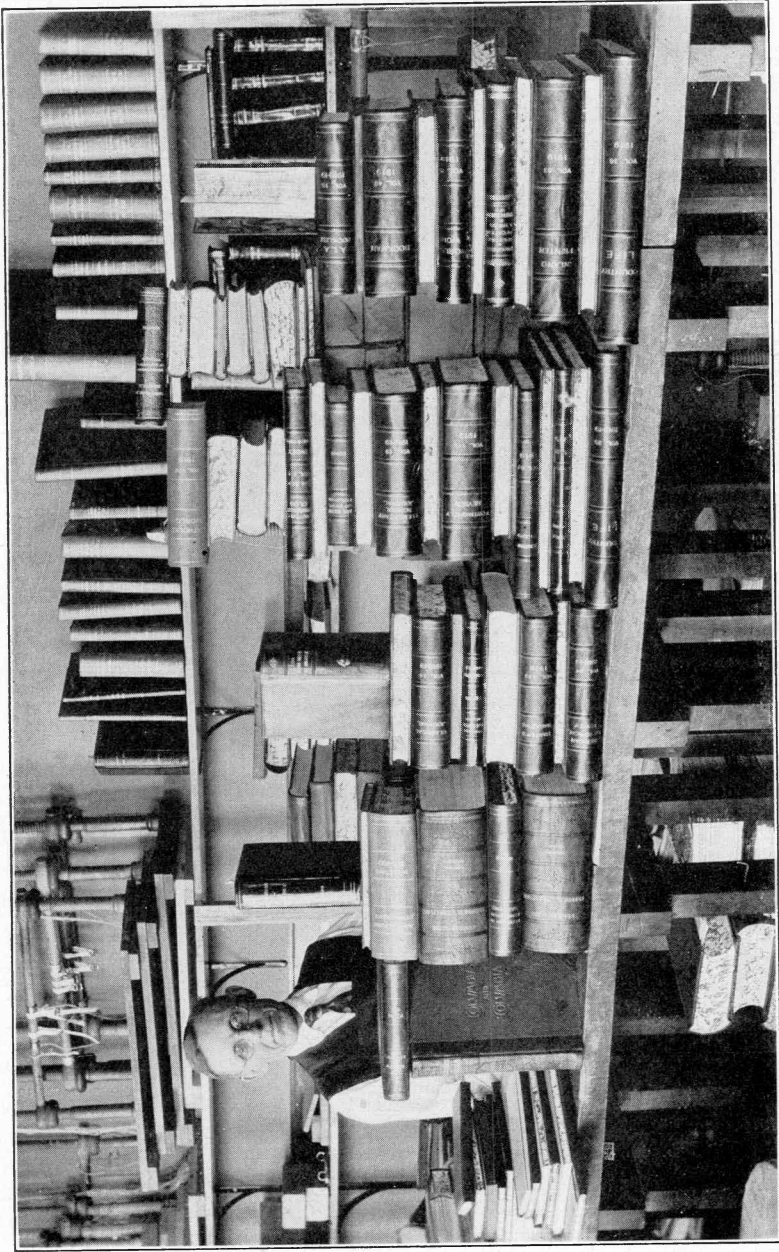
STUDENTS IN ART LEATHER DEPARTMENT MAKE MOST EVERYTHING

## MANY ARE HOLDING GOOD POSITIONS

A few of the graduates who are holding responsible positions in the United States and possessions:

- Lester R. Finch, Supervisor Industrial Arts, Phoenix, Arizona  
 Kenneth I. Kohl, Head of Industrial Arts Department, State Teachers College, Chadron, Nebraska  
 Francis Osborne, Head of Industrial Arts Department, State Teachers College, Flagstaff, Arizona  
 Harold Preston, Head of Industrial Arts Department, Public Schools, Flagstaff, Arizona  
 Alfred Baxter, Junior High School Industrial Arts Work, Berkeley, California  
 Alan Lytle, Technical Drawing, Rock Springs, Wyoming  
 Clarence Finch, Head Industrial Arts Department, Public Schools, Chandler, Arizona  
 J. C. Kestler, Head of Industrial Arts Department, Public Schools, Boulder, Colorado  
 Alfred Laurence, Industrial Art Work, Reno, Nevada  
 Dave Evans, Junior High Schools, Denver, Colorado  
 T. G. Seivers, Junior High Schools, Denver, Colorado  
 Waldo Miller, Junior High Schools, Denver, Colorado  
 Homer Lee, Industrial Arts, Public Schools, Casper, Wyoming  
 Arthur Carter, Industrial Arts Work, Redondo, California  
 George A. Raeth, Charge Industrial Work, Glendale, California  
 W. H. Reeder, Manual Arts, High School, Los Angeles, California  
 Homer Gammill, Industrial Work, Lincoln, Nebraska  
 E. W. Ingrahan, Industrial Work, Kingsport, Tennessee  
 Asa Chestnut, Industrial Work, El Centro, California  
 W. H. Hurley, Industrial Arts Work, Public Schools, Fresno  
 V. C. Frickland, Head of Industrial Arts Department, State Teachers College, Kearney, Nebraska  
 Milton Ballangee, Industrial Arts, Kamehameha School, Honolulu, Hawaii  
 Miss Ora Nesbit, A.B., Leathercraft and Bookbinding, Long Beach High School, Long Beach, California  
 Mrs. Maude Reinks, A.M., Leathercraft and Bookbinding, Byers Junior High School, Los Angeles, California  
 Owen Gothard, A.B., Leathercraft and Bookbinding, Lincoln High School, Los Angeles, California  
 Miss Grace Mabie, A.B., Leathercraft and Bookbinding, High School, Westfield, Iowa  
 Dwight L. Reeder, A.B., Industrial Arts, High School, Greeley, Colorado  
 Miss Oona Stauts, A.B., Leathercraft and Bookbinding, Carson City High School, Carson City, Nevada  
 Henry V. Allen, Manual Arts, Public Schools, Akron, Colorado  
 Archie Anderson, Industrial Arts, Public Schools, Jennings, Kansas  
 Harlie R. Baker, A.B., Manual Arts, Public Schools, Pueblo, Colorado  
 Milton Ballangee, A.B., Manual Arts and Coaching, Public Schools, Honolulu  
 Owen Gothard, Leathercraft and Bookbinding, Public Schools, Los Angeles, California  
 Dan A. Harmon, A.B., Manual Arts and Principal, Olin School, Greeley, Colorado  
 Ralph M. Harmon, A.B., Manual Arts, Public Schools, Louisville, Colorado  
 Chester Hatch, Industrial Arts and Principal, Public Schools, Evans, Colorado  
 Kenneth Kohl, A.B., Industrial Arts, Public Schools, Chadron, Nebraska  
 Ted Long, A.B., Manual Arts and Band, Public Schools, Las Cruces, New Mexico  
 Charles Mashburn, Industrial Arts and Superintendent, Public Schools, Buckingham, Colorado  
 Elmer Moore, A.B., Industrial Arts and Commerce, Public Schools, Ft. Collins, Colo.  
 Victor Oliver, A.B., Manual Arts, Public Schools, Carbondale, Colorado  
 Kenneth Perry, A.B., Manual Arts, Colorado State Teachers College, Greeley, Colorado  
 Henry Person, Manual Arts and Athletics, Public Schools, Greeley, Colorado  
 Harry A. Phillips, A.B., Y. M. C. A. Boys' Work, Denver, Colorado  
 Dwight Price, A.B., Manual Arts, Public Schools, Sopris, Colorado  
 J. F. Reynolds, A.B., Manual Arts and Superintendent of Schools, Silt, Colorado  
 L. E. Stein, Manual Arts, Public Schools, Berwind, Colorado  
 Eldred Timothy, A.B., Manual Arts, Public Schools, Seligman, Arizona  
 Guy A. Van Buren, A.B., Manual Arts and Superintendent of Schools, Two Buttes, Colorado  
 Warren Bussing, Industrial Arts and Junior High, Public Schools, Dolores, Colorado  
 William Grove, Manual Arts, Public Schools, Frederick, Colorado  
 Nathan Knowlton, Upper Grades, Public Schools, Lake City, Colorado  
 Greeley Timothy, Manual Arts and Coaching, Public Schools, Leadville, Colorado  
 Bernice Datson, A.B., Leathercraft and Bookbinding, Junior High School, Orlando, Florida





JUST A FEW OF THE COLLEGE LIBRARY VOLUMES WITH NEW BINDINGS

## THE COURSE OF STUDY

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

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

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

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

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

This is a methods course and deals with such topics as equipment, materials used, where and what to buy, kind of work to be undertaken in the different grades, the preparation and presentation of projects, the making of suitable drawings, and the proper mathematics to be used in woodworking.

4. **CONSTRUCTION OF CLASS PROJECTS**—On request. Four hours. Fee, \$2.00.

The purpose of this course is to train the students in designing and carefully working out suitable projects to be used in the elementary and junior high classes.

\*5. **PRINCIPLES OF TEACHING PRACTICAL ART SUBJECTS**—Fall and spring quarters. Three hours.

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

6. **REPAIR AND EQUIPMENT CONSTRUCTION**—Fall quarter. Four hours.

This course has for its base the building of various types of equipment and the use of power machines in working out these problems. This is an especially valuable course for those who wish to emphasize the large phases of vocational education.

8a. **ART METAL**—Fall and winter quarters. Four hours. Fee, \$2.00.

This course has in mind the designing and creation of simple, artistic forms in copper, brass, and German silver.

8b. **ART METAL**—Winter and spring quarters. Four hours. Fee, \$2.00.

A continuation of 8a. The course in general includes the designing and executing of simple, artistic jewelry pieces, such as monograms, simple settings of precious stones, and the development of advanced artistic forms in copper.

9. **CLASSIC ARCHITECTURE**—Fall quarter. One hour.

A general survey of the history of ancient and classic architecture from the standpoint of the history of peoples. Topical studies by members of the class, of selected monuments and of specific problems. Illustrated by lantern slides.

\*10. **MECHANICAL DRAWING**—Fall and spring quarters. Two or four hours. For art majors. Fee, \$1.00 or \$2.00.

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

\* Given also by extension.

\*11. PROJECTIONS, SHADE, AND SHADOW—Fall quarter. Four hours. Fee, \$1.00.

The purpose of this course is to give a student a working knowledge of the fundamentals of orthographic projection as applied to points, lines, planes, solids, shade and shadow, and applications.

\*12. PRINCIPLES OF ARCHITECTURAL DRAWING I—Winter quarter. Four hours. Fee, \$1.00.

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

\*13. PRINCIPLES OF ARCHITECTURAL DRAWING II—Spring quarter. Four hours. Fee, \$1.00.

This course is a continuation of Course 12 and deals with the drawing of plans of cement, brick, and stone structures, culminating in complete plans and specifications for resident and public buildings.

14. CARE AND MANAGEMENT—Fall quarter. Three hours.

This course is designed to train students to care for, repair, and adjust hand and power tools of the woodworking department.

19. WOODTURNING—Winter and summer quarters. Four hours. Fee, \$2.00.

The aim of this course is to give the student a fair knowledge of the wood-working lathe, its care, use and possibilities. Different types of problems will be worked out, such as cylindrical work, working to scale, turning duplicate parts, turning and assembling, the making of handles and attaching them to the proper tools. Special attention will be given to the making of drawings such as are used in ordinary wood turning.

31a. ELEMENTARY PRINTING—Fall quarter. Two or four hours. Fee, \$1.00.

A course intended to acquaint the student with the various tools and materials of a print shop and to teach him the fundamentals of plain type composition, as he carries simple jobs through the various stages from composition to making ready and putting on the press.

31b. ELEMENTARY PRINTING—Winter quarter. Two or four hours. Fee, \$1.00.

Continued work in fundamentals as applied to more complicated pieces of printing, involving rule work, borders, ornaments, etc.

31c. ELEMENTARY PRINTING—Spring quarter. Four hours. Fee, \$1.00.

Balance, proportion, simplicity, harmony, etc., as applied to the designing and producing of good printing.

32a. INTERMEDIATE PRINTING—Fall quarter. Two or four hours. Fee, \$1.00.

Added stress upon principles of good design and workmanship with a view to making the student more proficient in producing artistic work. An intensive study of typographic design in laying out and printing cards, tickets, letterheads, posters, etc.

32b. INTERMEDIATE PRINTING—Winter quarter. Two or four hours. Fee, \$1.00.

Production of title pages, covers, menus, etc.

32c. INTERMEDIATE PRINTING—Spring quarter. Two or four hours. Fee, \$1.00.

Continued practice in producing more pretentious pieces of work of the classes named in 32a and 32b.

\* Given also by extension.

41a. ELEMENTARY BOOKBINDING—Every quarter. Four hours. Fee, \$1.00.

This course aims to introduce the following: tools, machines, materials and uses, collating and preparing sheets for sewing, sewing on tape and cord, preparing end sheets, trimming, gluing, rounding and backing, headbanding, banding and preparing backs for covers, selecting cover materials, planning and making covers, and all steps necessary in binding of all kinds including full cloth, buckram, paper, spring or loose back, with plain and fancy edges. Besides the fundamental technic of bookbinding, a variety of individual projects are undertaken, such as memorandum books, writing pads, leather cases, boxes, cloth portfolios, and kodak albums.

41b. ELEMENTARY BOOKBINDING—Every quarter. Four hours. Fee, \$1.00.

A continuation of bookbinding 41a.

41c. ELEMENTARY BOOKBINDING—Fall and spring quarters. Four hours. Fee, \$1.00.

A continuation of bookbinding 41b.

42a. INTERMEDIATE BOOKBINDING—Fall and spring quarters. Four hours. Fee, \$1.00.

This course includes the binding of books in half leather, half morocco, cowhide, calf, sheep, and fancy leathers. Some of the type projects undertaken are the making of travelers' full leather writing cases, music cases and a variety of other art leather pieces.

42b. INTERMEDIATE BOOKBINDING—Winter quarter. Four hours. Fee, \$1.00.

A continuation of bookbinding 42a.

42c. INTERMEDIATE BOOKBINDING—Winter quarter. Four hours. Fee, \$1.00.

A continuation of bookbinding 42b.

100. WOODSHOP PROBLEMS—On request. Four hours. Fee, \$2.00.

The course is designed to furnish an opportunity for students to become acquainted with the more advanced phases of technical shop practice as they may be worked out in school or factory.

\*104. PRE-VOCATIONAL EDUCATION—Winter quarter. Three hours.

The purpose of this course is to discuss the educational needs of pupils in school, based on the community environment, vocational opportunities, and demand; recognizing that vocational needs vary with community conditions, and that vocational work fundamental and helpful in one community might be very unfit and unnecessary in another. We generally make a survey of the vocational activities of a nearby community. The entire course is a discussion of special, government, state, and community school problems in vocational fields, that we may learn something of the methods of attack used in planning special pre-vocational work, especially the junior high school problem.

105. ADVANCED ARCHITECTURAL DRAWING—Spring quarter. Four hours. Fee, \$1.00.

The course is designed to give the student a knowledge of great historic materials and their application in modern buildings. A study of columns, capitals, pediments, buttresses, arches, vaults, and their application in building will be stressed through this entire course. The work is intensive rather than extensive in its fundamental aspects.

106. ADVANCED REPAIR AND EQUIPMENT CONSTRUCTION—On request. Four hours.

This course is similar to Ind. Arts 6 but deals with a much more advanced type of work.

109a. ART METAL—Fall quarter. Four hours. Fee, \$2.00.

The base for this course is the designing, making and finishing of artistic jewelry in semi-precious and precious metals; also simple, artistic jewelry, with all the steps that are fundamental in stone setting and finishing.

\* Given also by extension.

109b. ART METAL—Winter and spring quarters. Four hours. Fee, \$2.00.

A continuation of 109a, with the applications in teaching of jewelry work in the public schools. Advanced problems in design as applied to set metal, wire work, chasing, and repousse.

117. ELEMENTS OF MACHINE DESIGN I—Fall quarter. Four hours. Fee, \$1.00.

This course includes sketches, drawings and tracings of simple parts, such as collars, face plates, screw center, clamps, brackets, couplings, simple bearings, and pulleys. Standardized proportions are used in all drawings.

118. ELEMENTS OF MACHINE DESIGN II—Spring quarter. Four hours. Fee, \$1.00.

A study is made of the transmission of motion by belts, pulleys, gears, and cams. Sketches, details and assembled drawings are made of valves, vises, lathes, band saws, motor and gas or steam engines.

119. MEDIEVAL AND MODERN ARCHITECTURE—Winter quarter. One hour.

The architecture of the Middle Ages of the Renaissance. Lectures and readings on the principle which underlies the theory and the practice of architecture during this period, illustrated by lantern slides. Open to all students of the college.

120. ADVANCED WOODTURNING—On request. Four hours. Fee, \$2.00.

The topics emphasized in this course will include woods best suited for various work, glue, varnish, shellac, dowels, draft, shrinkage, and finish. The practical work will consist of patterns for hollow castings, building up and segment work.

121. ADVANCED CABINET MAKING—Spring quarter. Four hours. Fee, \$2.00.

The course is planned to cover advanced phases of cabinet work, including paneling, dovetailing, secret nailing and key joining. These technical processes will be worked out on individual projects.

124. MACHINE WORK—Winter quarter. Three 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—On request. Four hours.

The purpose of this course is to give the student a thorough knowledge of the handling of an advanced class in woodworking and also give him an opportunity to gain a better understanding of the handling of high grade material than could be gained by working in elementary or secondary classes. Hours to be arranged with individual students.

133a. ADVANCED PRINTING—Fall and spring quarters. Four hours. Fee, \$1.00.

Advanced work in the complete designing and producing of printed matter, with a study of plates, papers, and inks. Advanced imposition and press work.

133b. ADVANCED PRINTING—Winter and spring quarters. Two or four hours. Fee, \$1.00.

Special work in cutting and printing of linoleum blocks. Hand-lettering and its application to printing.

103. CLASSIFICATION AND CATALOGING—Winter quarter. Three 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. Formation of the card catalog, alphabetizing, Library of Congress cards, shelf lists, arrangement of books on shelves.

## 104. REFERENCE WORK—Spring quarter. Four hours.

The subject covers a study of the standard works of reference, such as the principal encyclopedias, dictionaries, atlases, and reference manuals of various kinds. Bibliographies and reading lists, indexes and aids, public documents. Practical questions and problems assigned.

## 105. PERIODICALS AND BINDING—Winter quarter. Two hours.

Selection and purchase, checking in, relation to printed indexes, filing. Periodicals for certain definite lines. Methods of acquiring in schools. Use—Current and bound. Collating, selection and preparation for bindery. The binding of books with a study of materials.

## 106. SCHOOL LIBRARIES—Fall quarter. Three hours.

Evaluation and selection of children's literature. Illustrators. Planning and organization of the school library. Relation between the public library and the school.

## 107. HISTORY AND ADMINISTRATION OF LIBRARIES—By arrangement. Two hours.

Historical points in general library development. A study of traveling and county libraries with general administration.

## 108. PRACTICAL WORK IN THE LIBRARY—By arrangement. Five hours. Time required, two hours a day for one quarter plus optional work by the student.

This is allowed only to those who have taken courses 102, 103, and 104, and calls for certain responsibility on the part of the student.

*For further information concerning the Industrial Arts  
Department write to the President of the College.*

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 student may enroll for more than one course at a time between June 1 and September 1.

6. No enrollment can be made until the necessary fees have been paid. Note that the fees are \$2.50 per quarter hour, plus 25 cents per quarter hour for postage.

7. 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.

8. 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.

9. A subject begun in residence cannot be completed in non-residence and a subject begun in non-residence cannot be completed in residence. The two types of work are entirely distinct.

10. 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.

11. Students finishing graduation requirements by extension work must write to the Registrar for application for graduation blank at least 30 days before the close of the quarter in which they expect to graduate.

#### FEEES FOR COLLEGE CORRESPONDENCE STUDY

Each course costs \$2.50 per credit hour with an additional 25 cents for postage. This makes a three-hour course cost \$8.25 and a four-hour course cost \$11.00. For this tuition fee the student receives mimeographed outlines and study units for each course. The instructors grade and return the papers to the Extension Department. The Extension Department, through its clerical force, handles the transfer of units from the teachers to the instructor and the instructor back to the teacher.

The group or individual extension course costs the teacher approximately one-third as much per credit hour as residence courses would cost with the added advantage to the teacher that she is able to earn a salary while the extension work is being carried on.

#### REFUNDS, TRANSFERS, AND REINSTATEMENT

*No money will be refunded after thirty days from the date of enrollment. In no case will money be refunded after the completion of three study units.*

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, and work out the assignment later.

#### 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 Department or his assistants but directly to the EXTENSION DEPARTMENT, COLORADO STATE TEACHERS COLLEGE, GREELEY, COLORADO.

The reason for this request is that both the director and his assistants 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 OF EXTENSION STUDY

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

1. Credit earned by correspondence cannot apply beyond the requirements for the A. B. Degree.

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 Vice-President 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



## DETAILS RELATIVE TO THE GROUP PLAN

The University of Colorado, the University of Denver and Colorado State 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 \$10.00 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.

The Extension Department sends the student the first four study units of the course he has chosen. He studies the books as directed and works out his first recitation paper—covering the work outlined in the first study unit and sends this to the Extension Department for correction.

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.

## 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*.

## DETAILED INSTRUCTIONS

## RELATIVE TO GROUP AND INDIVIDUAL EXTENSION COURSES

The College enrolls students under the following classifications:

1. RESIDENCE—In this type of enrollment, students must successfully complete a minimum of twelve quarter hours each quarter, in order that it be counted as one of the required residence quarters.
2. PART TIME—Students may, with the consent of the College, enroll for any number of hours less than twelve.
3. EXTRAMURAL—In this type of enrollment, students are enrolled in classes not taught upon the campus, but taught by faculty members.
4. EXTENSION—These students are enrolled in classes taught by extension instructors duly approved by the College.
5. CORRESPONDENCE—These students are enrolled in correspondence courses.

## 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, only three quarters are required. Students who have already taken the Life Certificate (two-year course) must spend in residence at least two additional quarters for the Bachelor of Arts degree. Correspondence students when enrolling in residence should apply to the extension department for an extension of time which will permit the completion of correspondence courses at a time when the student is not enrolled in residence courses. Students in residence are not permitted to enroll in correspondence courses during vacations except during the vacation between the end of the summer quarter and the beginning of the fall quarter. Extra-mural classes and part time enrollment classes conducted by members of the College faculty are considered as resident work and may be counted as such to the extent of one quarter for the Life Certificate (two-year course) and one of the two resident quarters required beyond that for the Bachelor of Arts degree.

## 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 cooperative scheme feasible.

## STATE TEACHERS COLLEGE

## 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. During the placement season of 1927 over five hundred graduates were placed in desirable positions. These positions were in 23 states of the Union. Three of our graduates secured positions outside the United States.

## POSITIONS FOR WHICH WE NOMINATE

Rural	Secretaries	Music
Tests and Measurement	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	

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 cooperation 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.

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.

## 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. In nearly all cases 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 diligently 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.

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.

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 positions for which they have made special preparation.

#### TEACHERS PLACEMENT BUREAU

For several years Colorado State Teachers College has endeavored to place her graduates. Beginning in January, 1924, an organized effort was begun to serve to a greater degree both school officials seeking teachers and graduates seeking positions.

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 the Placement Bureau will never be too busy to give all school officials every assistance in filling their vacancies.

No one at Colorado State Teachers College is better acquainted with the school conditions in Colorado than the personnel of the Extension Department. In organizing and promoting College extension service, the director of the department 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 State Teachers College. Because of this wide acquaintance and thorough knowledge of the state, the Placement Bureau logically becomes an integral part of the extension service.

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 cooperation of all concerned.

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 COLORADO CERTIFICATION LAW

The Colorado 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.

Teachers College is not only responsible under the new order of things for making it possible for every teacher to meet the new conditions

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.

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 forms of work, devoid of the light and inspiration of applied principle and basic law, become drudgery and are characterized by mediocrity.

# HAND BOOK OF THE EXTENSION DEPARTMENT

During the year 1926-27 more than thirty-eight hundred paid enrollments were recorded in the Extension Department of Colorado State Teachers College. The students taking these courses were living in thirty states of the Union, Porto Rico, and Hawaii.

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 fain "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



- FRED LOUIS HERMAN, B.S. .... *Associate Professor of Secondary Science;  
Training Teacher, Teachers College High School*
- OSCAR EDWARD HERTZBERG, A.B., A.M., Ph.D. .... *Professor  
of Educational Psychology*
- IRA WOODS HOWERTH, A.B., A.M., Ph.D. .... *Professor of Sociology  
and Economics*
- FRANK COVERT JEAN, A.B., A.M., Ph.D. .... *Chairman of Graduate Council;  
Professor of Biology*
- WINFIELD LEROY KNIES, A.B. .... *Assistant Professor of Commercial  
Education*
- GENEVIEVE L. LYFORD, B.S., A.M. .... *Professor of Kindergarten Education;  
Training Teacher, Teachers College Elementary School*
- THOMAS JEFFERSON MAHAN, A.B., A.M. .... *Assistant Professor of Education*
- ARTHUR ERNEST MALLORY, A.B., A.M. .... *Professor of Mathematics*
- P. T. MANCHESTER, A.B., A.M., Ph.D. .... *Professor of Romance Languages*
- ANNIE MARGARET McCOWEN, A.B., B.S., A.M. .... *Professor of Elementary  
Education; Training Teacher, Teachers College Elementary School*
- PAUL MCKEE, A.B., A.M., Ph.D. .... *Professor of Elementary Education*
- ORA BROOKS PEAKE, Pd.B., A.B., A.M. .... *Associate Professor of History*
- JAMES H. RISLEY, A.B., A.M., .... *Professor of Extra-Mural Education*
- LUCY LYNDE ROSENQUIST, B.S., Ph.B. .... *Associate Professor of Primary  
Education; Training Teacher, Teachers College Elementary School*
- EARLE UNDERWOOD RUGG, A.B., A.M., Ph.D. .... *Professor of Education*
- FRANCIS TOBEY, B.S., A.B. .... *Professor of English*
- WALLACE THEODORE WAIT, B.S., A.M., Ph.D. .... *Assistant Professor  
of Educational Psychology*
- EDITH GALE WIEBKING, A.B., A.M. .... *Associate Professor of Household Arts*
- WILLIAM L. WRINKLE .... *Principal of Teachers College High School*

MEMBERS OF THE COLLEGE FACULTY GIVING COURSES  
THROUGH THE EXTENSION DEPARTMENT

- WINFIELD DOCKERY ARMENTROUT, A.B., A.M., Ed.D. .... *Director of Instruction; Director of Training Schools; Professor of Education*
- GEORGE A. BARKER, B.S., M.S. .... *Professor of Geology, Geography and Physiography*
- SAMUEL CLAY BEDINGER, LL.B. .... *Assistant Professor of Commercial Education*
- WILFRED GEORGE BINNEWIES, A.B., A.M. .... *Associate Professor of Sociology*
- HAROLD GRANVILLE BLUE, A.B., A.M. .... *Professor of Education*
- WILLIAM G. BOWERS, B.S., A.M., Ph.D. .... *Professor of Chemistry*
- MARGARET ELIZABETH BRYSON, M.D. .... *Medical Adviser of Women Associate Professor of Physical Education*
- HARRY WILLIAM CHARLESWORTH, A.B., A.M. .... *Acting Assistant Professor of Mathematics*
- JAMES DE FOREST CLINE. .... *Director of the Conservatory of Music Professor of Public School Music*
- AMBROSE OWEN COLVIN, B.C.S. .... *Professor of Commercial Education*
- CLARE BROWN CORNELL, Ed.B., A.B., A.M., Ph.D. .... *Professor of Educational Administration*
- CATHERINE CRATES GIBERT, A.B., A.M. .... *Assistant Professor of Foreign Languages*
- HELEN CALDWELL DAVIS, A.B., A.M., .... *Principal of Teachers College Elementary School; Professor of Elementary Education*
- OLIVER MORTON DICKERSON, A.B., A.M., Ph.D. .... *Professor of History and Political Science*
- ETHEL TURNER DULIN, B.S. .... *Associate Professor of Primary Education*
- GEORGE WILLIAM FINLEY, B.S., M.S. .... *Professor of Mathematics*
- ELLA FRANCIS HACKMAN, B.S. .... *Associate Professor of Secondary Social Science; Training Teacher, Teachers College High School*
- SAMUEL MILO HADDEN, Pd.B., A.B., A.M. .... *Professor of Industrial Education*
- WILLIAM HENRY HARGROVE, Pd.B., B.S. .... *Professor of Rural and Agricultural Education*
- EZRA CLARENCE HARRAH, A.B., A.M., Ph.D. .... *Associate Professor of Zoology*
- JOSEPHINE MARY HAWES, A.B., A.M. .... *Associate Professor of English*
- JACOB DANIEL HEILMAN, A.B., Ph.D. .... *Professor of Educational Psychology*



# OFFICERS OF GOVERNMENT AND ADMINISTRATION

## BOARD OF TRUSTEES

DR. HARRY V. KEPNER.....President

DR. E. M. RUSSELL.....Vice-President

CHARLES N. JACKSON

CLIFFORD P. REX

T. W. MONELL

EARL M. HEDRICK

KATHRINE L. CRAIG

State Superintendent of Public Instruction

---

## EXECUTIVE STAFF

GEORGE W. FRASIER, Ph.D., LL.D.

President of the College

ETHAN ALLEN CROSS, Ph.D.

Vice-President of the College

JOHN RANDOLPH BELL, Ph.B., A.M., Litt.D.

Director of Extension Department  
Professor of Extramural Education

ROBERT HUGH MORRISON, A.B., A.M.

Assistant Director of Extension Department  
Assistant Professor of Extramural Education

CHESTER KIMES FLETCHER, A.B., A.M.

Assistant Professor of Extramural Education

CHARLES RICHARD SATTGAST, B.S., A.M.

Assistant Professor of Extramural Education

ROSE W. FARRAR

General Secretary

VEDA K. BURBRIDGE, A.B.

Appointment Secretary

COLORADO STATE TEACHERS COLLEGE

Supplement to

BULLETIN

SERIES XXVII

JANUARY, 1928

NUMBER 10

CORRECTIONS

THE FOLLOWING CATALOG NUMBERS HAVE  
BEEN CHANGED

from	to
Com. Ed. 39	Com. Ed. 139
Com. Ed. 40	Com. Ed. 140
Com. Ed. 50	Com. Ed. 150
Com. Ed. 51	Com. Ed. 151
Com. Ed. 52	Com. Ed. 152
Com. Ed. 55	Com. Ed. 155
Com. Ed. 151	Com. Ed. 161
English 111	English 11
Geography 14	Geography 15
Mathematics 108	Mathematics 107

CREDIT FOR COMPLETING THE FOLLOWING  
COURSES HAS BEEN CHANGED

	from	to
Com. Ed. 139	2 hours	4 hours
Com. Ed. 140	2 hours	4 hours
Education 109	4 hours	2 hours
English 11	3 hours	4 hours
Geography 113	3 hours	2 hours
Sociology 18	4 hours	3 hours

CHANGES IN TITLES OF COURSES

New titles

- Com. Ed. 157—Methods of Teaching Bookkeeping
- English 1—Children's Literature
- English 8—A Survey of English Literature
- English 9—A Survey of English Literature
- English 10—A Survey of English Literature

COURSES DISCONTINUED

- Geography 2
- History 116
- French 9 and 109
- Latin 110 and 112
- Spanish 9 and 109

COLORADO STATE TEACHERS COLLEGE

# BULLETIN

---

SERIES XXVII

JANUARY, 1928

NUMBER 10

---

HAND BOOK  
OF THE  
EXTENSION DEPARTMENT



Greeley, Colorado

See Inside Front Cover For  
Corrections To The Bulletin

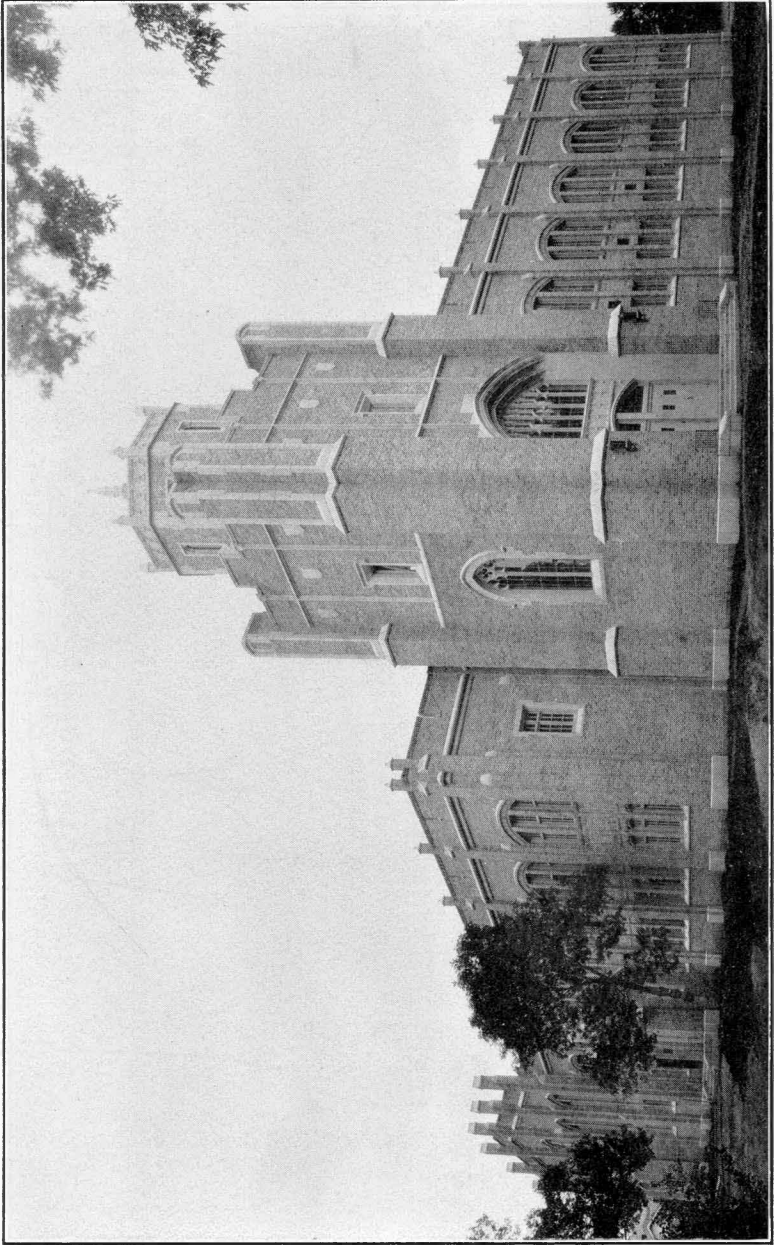
Published by Colorado State Teachers College  
Greeley, Colorado

Entered as Second-Class Matter at the Postoffice  
at Greeley, Colorado under the Act of August 24, 1912

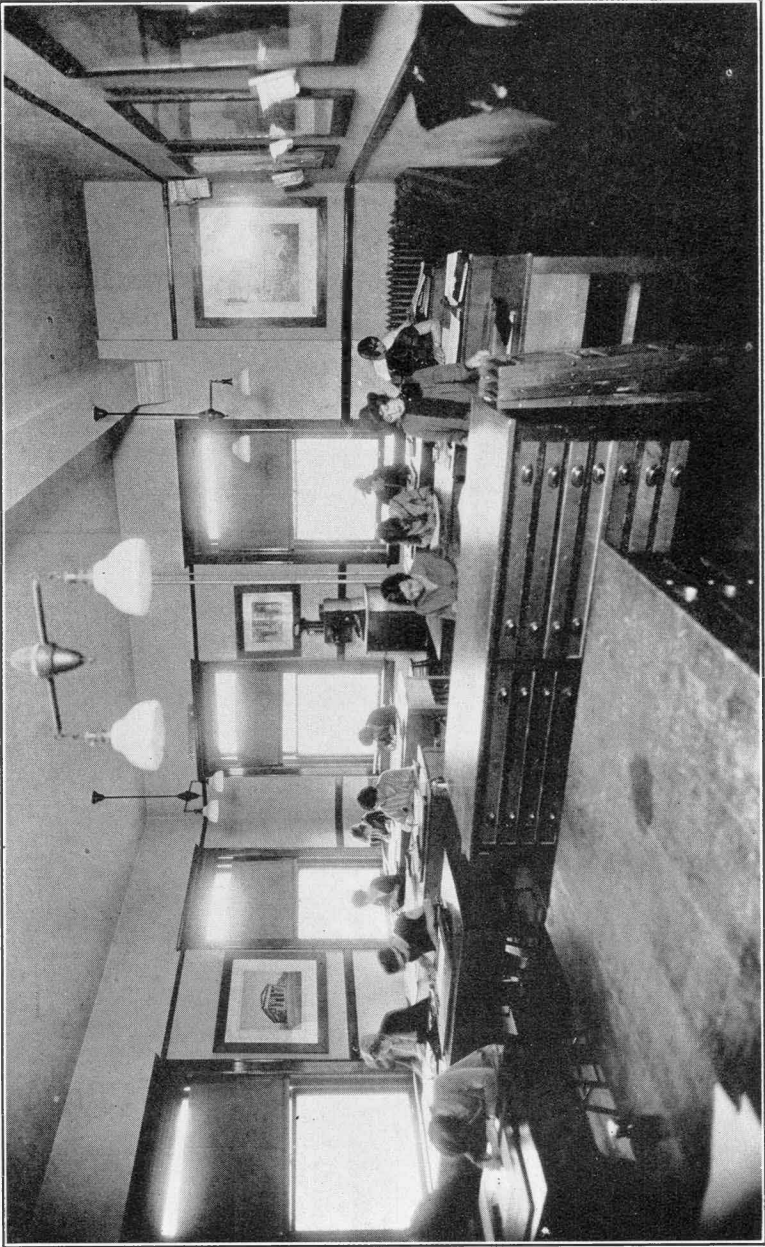








WHERE THE STUDENTS PLAY—THE NEW GYMNASIUM



A CLASS OF GIRL STUDENTS STUDYING ARCHITECTURE

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.

Correspondence students who fail to complete their courses in the time specified may be reinstated as follows:

1. Those students who have completed fifty per cent of the work outlined in a correspondence course may be reinstated upon the payment of one-half of the original tuition fee.

2. Those students who have not completed fifty per cent of the work outlined in a correspondence course may be reinstated upon the payment of the full tuition fee.

3. Postage is paid once only.

#### 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. College entrance requirements can be partially met by completing high school correspondence courses. See page 36 of this bulletin for details and a description of the courses.

---

*Students interested in High School Courses Consult Page 36.*

## COLLEGE COURSES

## BIOLOGICAL SCIENCE

## 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.

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

## 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. 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—Four hours.

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—Two hours.

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

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

Special attention is given to correct habit formation relative to operating the machine, memorizing the keyboard, position of the hands over the keyboard and general posture of the body at the machine.

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

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

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

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

Prerequisite, C. E. 12 or the equivalent. This course includes a review of the names and uses of operative parts of the typewriter, a review of the International Rules for correcting papers, with an introduction to the preparation of manuscripts, tabulation and billing, and to law and business papers. Accuracy in typing is stressed throughout the course. Speed tests are given at regular intervals with an opportunity given to win the awards as given by the different typewriter manufacturing companies. This course is required of all candidates for the life certificate or A.B. Degree who are majoring in the secretarial group of studies of the Commercial Education curricula.

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

This course attempts to give the teacher of business English in high school a better background. The principles of literary composition will be applied to commercial correspondence, reports, and compositions. Business situations will be analyzed, letters classified into type forms, and the requisites of each class will be exemplified by models. The psychology of the good sales letter will be analyzed, and principles derived from this analysis will be applied to practice compositions. Special consideration will be given to letters of application, letters of complaint, sales letters, follow-up letters, letters of collection, and other special correspondence.

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

This course combines practice and special methods for teachers and supervisors of handwriting. All who take this course are required to reach a standard of 80 as measured by the Zaner Handwriting Scale No. 5 before credit will be given.

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

The aim of this course is to give the commercial teacher a better mathematical background for the subject of commercial arithmetic in high school. It correlates very closely with all courses in accounting, auditing, and the income tax law. The course begins with a very brief review of percentage in its simple applications. The theory of interest and investments, stocks, bonds, sinking fund, annuities, insurance, and taxes will be treated.

**38. COMMERCIAL LAW I—Four hours.**

This course treats the subject of contracts and negotiable instruments. It is a treatment of the common law principles that apply to these topics. The Colorado Statutes and court decisions are studied in comparison with these general legal rules concerning business.

**39. AN INTRODUCTION TO BUSINESS—Two hours.**

A broad picture of the entire business field is presented in this course, without going far into detail at any point, with a review of such historical material as is necessary for an understanding of present business phenomena. Special attention is given to the most important industries and business concerns of the country. The first part of the course deals with the business aspects of the industries furnishing the raw materials of commerce. This is followed by a discussion of production and distribution which traces the raw product from the producer to the workshop and to the consumer. The next part of the course deals with business organizations and business functions. Such topics as Risk Bearing Institutions, Business Men's Associations, and relations of Government to Business are touched upon near the end of the course. Special attention throughout the course is given to the problems of the small business. This course should be of special interest to teachers interested in vocational guidance and it will be very helpful to the student contemplating the selection of a field of specialization in business.

**40. INVESTMENTS—Two hours.**

This course attempts to cover the entire field of investments in a clear, concise, non-technical manner. The tests by which a sound investment are analyzed are treated together with the methods of applying these tests to securities. A study of the information available on the financial page of the daily papers in order that it may be utilized in buying or selling securities. The mechanics of the purchase and sale of securities and the principles back of judicious investments are considered. Technical terms are avoided as much as possible. A careful distinction is made and maintained throughout the course between investment and speculation. The following aims are set forth for the course: to discourage a tendency toward speculation; to create a tendency toward thrift and saving; to help the average person find suitable investment possibilities; and, to prepare teachers to teach the same subject in secondary schools.

**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 the others. The course treats the economic, physical and psychological factors, together with the essential principles of artistic arrangement and English composition as applied to the construction of advertisements. Practical aspects of the subject are held constantly in mind as the course develops. Considerable attention is given to the analysis of advertisements selected from current periodicals. Some attention will be given to the materials available for the teaching of advertising in secondary schools.

## 50. PRINCIPLES OF ACCOUNTING I—Four hours.

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

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

Prerequisite, C. E. 50 or the equivalent. This course is a continuation of C. E. 50. Various types of business papers are considered in their relation to the records and to the routine of the business. Summary statements of different kinds are discussed and illustrated. Types of accounting records and their development, especially as regards the partnership business, are taken up in detail. The principles considered are developed by means of class discussion, lectures, and illustrative laboratory material. A complete set of partnership books with a minimum of bookkeeping detail are written up by the student.

## 52. PRINCIPLES OF ACCOUNTING III—Four hours.

Prerequisites, C. E. 50 and 51 or the equivalent. This course is designed to cover the more advanced principles of accounting, emphasizing especially some of the problems of corporation accounting. The proper evaluation of balance sheet items, as regards depreciation and the maintenance of fixed assets, receive special attention. A complete set of corporation books with a minimum of bookkeeping detail are written up by the student. Principles considered are developed by lectures, discussion and illustrative laboratory problems.

## 53. SALESMANSHIP—Four hours.

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

The first part of the course is based on a more detailed analysis of personal selling processes as applied to buyers in general, and is adapted to practically all classes of buyers. The second part of the course deals with the problems and relationships of the salesman and his employer in the direction of personal selling as a business activity.

## 55. THE ECONOMICS OF RETAILING—Four hours.

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

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

## 144. COMMERCIAL LAW II—Four hours.

Prerequisite, C. E. 38 or the equivalent.

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



## 151. COST ACCOUNTING—Four hours.

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

## 157. METHODS OF TEACHING COMMERCIAL SUBJECTS—Four hours.

This course attempts to present special methods for the teaching of the following commercial subjects: bookkeeping; accounting; commercial arithmetic; commercial law; salesmanship; advertising; and economic geography. The materials necessary for the teaching of each of the above subjects are also considered. Some attention is given to the organization of the commercial curriculum and to the subject of tests and measurements. 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.

## 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 qualified seniors. See Catalog and Year Book for core and departmental required subjects.

## 1. INTRODUCTION TO EDUCATION—Required of all first-year students. Four hours. (This course combines former Ed. 1 and Ed. 5 courses.)

This course aims to introduce the student to the study of education and to the principles of teaching or to orient the student in the field of teaching and to prepare him for more specialized study to come later. Among the topics to be discussed are the following: professional opportunities in education; function of education in a democracy; development of free schools; organization of American schools; professional ethics; professional training; the teacher's job in the community; how children learn; methods of teaching; classroom management; individual differences; measurement and testing; health of the child; in-service preparation and growth; etc.

## 3a. PRIMARY GRADE METHODS (Dealing with methods of teaching, reading, language, and spelling.)—Three hours. Prerequisite, Ed. 1.

## 3b. PRIMARY GRADE METHODS (Dealing with methods of teaching arithmetic, elementary social science and health.)—Three hours. Prerequisite, Ed. 1.

## 3c. PRIMARY GRADE METHODS (Literature, songs and games for the kindergarten-primary grades)—Three hours. Prerequisite, Ed. 1.

## 4a. INTERMEDIATE GRADE METHODS (Dealing with methods of the teaching of reading, language and spelling.)—Four hours. Prerequisite Ed. 1.

## 10. AN INTRODUCTION TO CURRICULUM MAKING (formerly the Elementary School Curriculum.)—Three hours. Prerequisite, Ed. 1 and Sophomore standing.

This is a content course in education. It is designed to acquaint the student with present-day theories concerning what should be taught in the school. It attempts to give majors in various fields a perspective of the whole program of studies in school to the end that they may see their own materials in relation to the entire field and may thereby be critical of a better coordination of subject matter. Topics such as the following

will be covered: Where and how education takes place; the source of the curriculum; criteria for making the curriculum in each field; technic of analysis in making the course of study; objective determination of life activities; etc.

15. EDUCATIONAL GUIDANCE—Three hours.

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

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—Three hours.

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

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.

29. CURRENT EDUCATIONAL LITERATURE—Three hours.

This course is based upon the state Reading Circle Books. The content changes each year as the state makes new adoptions. Students who are taking the teachers' examinations are examined upon the State Reading Circle Books. Many county superintendents require the completion of this course in the renewal of certificates.

52. KINDERGARTEN MATERIALS—Three hours.

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

101. PRINCIPLES OF HIGH SCHOOL TEACHING—Four hours.

This course is designed to develop those principles of teaching and features of methodology which are particularly applicable to high school teaching. A textbook is used as a basis, but this is supplemented by individual reports, class discussions, and special papers. There will also be directed observation of high school teaching. Some of the topics to be considered are: characteristics of adolescence; types of disciplinary control; economical classroom management; types of instruction; lesson planning and supervised study.

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.

109. SUPERVISED STUDY—Four hours.

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

## 110. EXTRA-CURRICULAR ACTIVITIES—Three hours.

This course will discuss school councils and government, athletics, debating, literary and social clubs, the school newspaper and magazine, musical and dramatic activities, and civic clubs and projects that relate to pupil participation. It will consider the purposes and values of such activities in forming proper habits, attitudes, and ideals, and will attempt to show wherein such activities are necessary and a valuable part of the school curriculum.

## 111. PHILOSOPHY OF EDUCATION—Four hours. Open only to senior students.

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

## 113. ORGANIZATION AND ADMINISTRATION OF A JUNIOR HIGH SCHOOL—Four hours. Primarily for junior high school majors. Senior college and graduate students take Ed. 213. Prerequisite, Ed. 1.

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

## 116. 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, courses of study, social life, athletics, and all general problems arising in the administering of a senior high school.

## 129. (formerly Ed. 229). CURRENT EDUCATIONAL THOUGHT—Four hours.

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

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

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

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

Beginning with a brief treatment of 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 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.

## 142. SCHOOL ADMINISTRATION, ELEMENTARY—Four hours. (First course in administration.)

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

## 210. PROBLEMS OF THE SCHOOL CURRICULUM—Three hours.

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 technic of curriculum construction.

## 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 positions in clinical psychology and tests and measurements as are developing in connection with 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

## 1. CHILD HYGIENE—Required of students who specialize in physical education. Four hours.

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

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

## 2a. EDUCATIONAL PSYCHOLOGY—Second year. Three hours' credit. Required of all students.

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

Topics treated: discussion of the subject-matter, methods, and scope of psychology and its province in education; the stimulus response hypothesis; the physiological mechanism underlying a stimulus response psychology; brief discussion of simple and complex mental processes; the origin, development, and general characteristics of instinctive activity and their significance in controlling the behavior of children; the difference between native and acquired traits; an inventory of instinctive impulses and activities and a consideration of these as they appear in the behavior of school

*Students interested in High School Courses Consult Page 36.*

children in such forms as: manipulation of objects, exploration and curiosity, fighting and self-assertion, formation of gangs, rivalry, sympathy and cooperation, play, ownership, collecting, fear, truancy, etc.; discussion of the emotions, their control and utilization; the dynamic role of instincts in learning; conditions which promote work and avoid fatigue. One-third of the course will be devoted to instruction in measures of central tendency, variability, and simple methods of correlation in connection with a few typical standardized tests and their results.

**2b. EDUCATIONAL PSYCHOLOGY—Second year. Three hours' credit.** Required of all students. Students may take 2b prior to 2a if they so desire.

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

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

**108a. EDUCATIONAL TESTS AND MEASUREMENTS—Fourth year. Four hours.** Required of students who are preparing to teach and supervise elementary school work, including the Junior High School.

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

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

**108b. EDUCATIONAL TESTS AND MEASUREMENTS—Fourth year. Four hours.** Required of students who are preparing to teach and supervise in the senior high school.

Purposes: see Psychology 108a.

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

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

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

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

## 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. This course is a good foundation for much of the work given in elementary science and furnishes an excellent background for history and for other geography courses.

## 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. The human factors in production, for example the varying potentialities of races, health, and social tradition, will also be dwelt upon.

## 14. JUNIOR HIGH SCHOOL METHODS—Four hours.

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

## 103. CLIMATOLOGY—Four hours.

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

## 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 and taiga tundra—are taken up. Animal life, insofar as it takes on peculiar forms or habits of life in these varying habitats, will be considered. The effect of island isolation on animal and plant forms will be discussed.

## 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.

## HISTORY

### 1. FOUNDATIONS OF AMERICAN NATIONALITY, 1700-1800—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; foreign relations; finances; the loyalists; formation of a permanent government; establishing the new government.

### 2. DEVELOPMENT OF AMERICAN NATIONALITY, 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. RECENT AMERICAN HISTORY—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.

Phases of the later medieval period that vitally affected the development of the nations of western Europe. Development of important nations. The Reformation, with its results upon both Catholic and Protestant churches. The new spirit of education and missionary zeal. Beginning of the expansion of European nations to other continents and the growth of colonial empires. National and religious rivalry in the seventeenth and eighteenth centuries. Growth of democratic ideas of government. Causes leading to the French Revolution. The revolutionary and Napoleonic eras in Europe, with their resultant political, social, and economic changes.

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

This is a continuation of Course 5. The Congress of Vienna and its attempt to restore Europe to what it was before the French Revolution. The new balance of powers. Continued growth of democracy. Social and political results of the spread of the industrial revolution. New spirit of radical socialism. Conflict between the new and the old ideas of science and religion. Continued growth of political democracy. Rise of Russia, Prussia, and Italy as important national states. Renewed colonial expansion, and the national rivalries that resulted from it. The Balkans and their problems. Break-up of the balance of power.

### 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.

*Students interested in High School Courses Consult Page 36.*

13. 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.

This course deals with the world problems that have developed since the World War. Topics are selected that are of current interest and studied in the light of their historical development. These topics vary from year to year. Each year brings in some new problems that are pressing for solution and sees others eliminated that have temporarily been adjusted. Topics are selected from events in the United States, in South America, in Asia, and in Europe that touch the Americans in some important way. Much use will be made of current periodicals.

101. COMMERCIAL AND FINANCIAL HISTORY OF THE UNITED STATES—  
Four hours.

English commerce, its ideals, its regulation, and its effect upon colonial development on the continent of America. Chief characteristics of colonial commerce. Effect of the Revolution upon American trade. Encouragement of commerce by the new national government. Currency and banking reforms and their effect upon the trade of the United States. Effect of foreign relations upon the growth of shipping, foreign trade, and domestic commerce. The Civil War and its effect upon manufacturing, foreign commerce, currency and banking, and our carrying trade. Consolidation and government supervision. New adjustments that came with the World War and the commercial consequences that have followed. This course is especially designed to meet the needs of those who are expecting to teach commercial courses.

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 JUNIOR AND SENIOR  
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. Prerequisite, one course in history.

### 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 relation of state government to the national government. Common features of state constitutions. The field of state legislation. Operation of the state government and its importance to the individual. The enforcement of laws. Local government and its significance to the individual. State and local finances. Popular participation in governmental activities. Sources of information for a study of state and local government. Plans for making state and local government more efficient. Colorado government will be used constantly for illustrative purposes.

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. Prerequisite, one course in History.



**101. AMERICAN DIPLOMACY—Four hours.**

Few good Americans are well informed on the foreign relations of their own country. In the past such relations were not an important part of current political discussion. That day is past. Now there is a growing demand for information upon this subject. Americans are not going to remain longer ignorant of such a vital part of their history. In the near future school courses in American History will be revised so as to give much more space to this phase of our national experience. With the present agitation for good relations with all nations, this course acquires unusual value. Teachers should know the real contributions of the United States to a better international world order. They should also understand the great foreign problems of their country in the immediate future. Some of the important topics treated are:

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

**102. INTERNATIONAL RELATIONS—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.

**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.

*Students interested in High School Courses Consult Page 36.*

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 class room, 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—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.

104 PRE-VOCATIONAL EDUCATION—Three hours.

The purpose of this course is to discuss the educational needs of pupils in school, based on the community environment, vocational opportunities, and demand; recognizing that vocational needs vary with community conditions, and that vocational work fundamental and helpful in one community might be very unfit and unnecessary in another. We generally make a survey of the vocational activities of a nearby community. The entire course is a discussion of special, government, state, and community school problems in vocational fields that we may learn something of the methods of attack used in planning special pre-vocational work, especially the Junior High School problem.

### LITERATURE AND ENGLISH

The department of Literature and English offers the following courses, selected from those given in residence at the College.

1. MATERIAL AND METHODS IN 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 study of values, material, and method of presentation of literature adapted to the needs of the child. This course provides for the teaching of literature in the elementary and junior high schools. The psychological principles of teaching reading, including eye span, rate of movement, etc., are not included in this course.

6. AMERICAN LITERATURE—Four hours.

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

8. THE HISTORY OF ENGLISH LITERATURE—Four hours.

This is a course dealing with the beginnings of English language and 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.

Particular attention is given to the selection of material and to methods of handling that are suitable for use in the elementary and secondary schools.

9. THE HISTORY OF ENGLISH LITERATURE—Four hours.

This course begins with the "Age of the Cavalier and the Puritans" (1625) and includes the Period of Classicism (1798). The same plan is followed as that indicated for English 8.

10. THE HISTORY OF ENGLISH LITERATURE—Four hours.

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

20. **ADVANCED COMPOSITION—Prerequisite, English 4. Four hours.**

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

31. **THE SHORT STORY—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.

111. **THE ENGLISH LANGUAGE FOR TEACHERS—Three hours.**

The first part of the course deals with the origin of languages, the language families and the development of the English language through Anglo-Saxon, Middle English, and Modern English. Other topics treated in this part are: The sources and formation of English words, loss of inflections, changes in meaning of words, use of the dictionary, prefixes, suffixes, sounds, spelling, etc. This is just the background or margin of knowledge about the languages that every good intermediate or upper grade teacher who teaches English as a part of her day's work needs to know. The second part deals with the teaching of the English Language to children, and includes: Grammar as a school subject, the parts of speech historically and in modern use, the sentence, punctuation, common errors, aims, psychology, tests and measurements, etc.

126. **NINETEENTH CENTURY PROSE—Four hours.**

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

127. **SHAKSPERE'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 Shakespere 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. **GENERAL MATHEMATICS—Four hours.**

This quarter's work deals with functions and graphs, simple derivation, simple integration, trigonometric functions, logarithms and exponential functions.

2. **GENERAL MATHEMATICS—Four hours.**

The second quarter deals with an analytical study of the straight line, circle and other conic sections, solution of equations, polar coordinates, and trigonometric analysis.

3. **GENERAL MATHEMATICS—Four hours.**

The integral as applied to areas, the progressions and other series, permutations, combinations, probability including the probability curve, and complex number.

**4. SOLID GEOMETRY—Four hours.**

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

**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 functions and its graph.

**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. 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.

**9. ANALYTIC GEOMETRY. Four hours.**

This course opens to the student, in a small way, the great field of higher mathematics. It also connects closely with the subjects or graphs in algebra and forms the basis of the work in the calculus.

**101. DIFFERENTIAL CALCULUS—Four hours.**

An introduction to the powerful subject of the calculus. While care is taken to see that the formal side of the subject is mastered, many problems of a practical nature are introduced from the realms of geometry, physics, and mechanics.

**102. INTEGRAL CALCULUS—Four hours.**

This course takes up the ordinary formulas for integration and the commoner applications of the integral calculus.

**103. THEORY OF EQUATIONS—Four hours.**

This course deals with the graph, complex number, cubic and quartic equations, symmetric functions, and determinants.

**104. THE TEACHING OF ARITHMETIC—Four hours.**

This course deals primarily with the modern movements and methods in the teaching of arithmetic. A brief history of the development of the subject and of the methods used in the past is given. The real problems of the classroom are taken up and discussed with a view to giving the student something definite that she can use when she gets into a school of her own.

**108. JUNIOR HIGH SCHOOL MATHEMATICS—Four hours.**

The almost universal adoption of the junior high school plan has given a great stimulus to the study of the character of the work in the common branches that should be pursued in the seventh, eighth, and ninth grades. This course attempts to solve the problems that arise concerning the mathematics in these grades.

**200. ADVANCED 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.**

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.

## FOREIGN LANGUAGES

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

## FRENCH

## 2. ELEMENTARY FRENCH—Four hours.

Prerequisite French 1. A continuation of French 1, using Camerlynck's France, Volume 2.

## 3. ELEMENTARY FRENCH—Four hours.

Montvert's La Belle France. Labiche's La Poudre Aux Yeux.

## 5. INTERMEDIATE FRENCH—Four hours.

A review course in the Elements of French. Carnahau's Short Review French Grammar.

## 7. INTERMEDIATE FRENCH—Four hours.

French History. Lavissee's Histoire de France. Cours Moyen.

## 9. INTERMEDIATE FRENCH—Four hours.

The French Novel. Sand's La Mare au Diable and La Famille de Germandre.

## 105. ADVANCED FRENCH—Four hours.

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

## 107. ADVANCED FRENCH—Four hours.

Romantic French Drama. Hugo's Hernani and Ruy Blas.

## 109. ADVANCED FRENCH—Four hours.

Modern French Drama. Lavedau's Le Duel, and Brieux's La Robe Rouge.

## GERMAN

## 2. ELEMENTARY GERMAN—Four hours.

Prerequisite, German 1. A continuation of German 1. Prokosch and Morgan's Introduction to German, exercises 17 to 25 inclusive. Zeydel's, A Second German Reader.

## 3. ELEMENTARY GERMAN—Four hours.

A continuation of German 2. Prokosch and Morgan's Introduction to German completed. Storm's Immensee.

## LATIN

## 110. ADVANCED LATIN—Four hours.

Cicero's Selected Letters.

## 112. ADVANCED LATIN—Four hours.

The Agricola and Germania of Tacitus.

## SPANISH

## 2. ELEMENTARY SPANISH—Four hours.

Prerequisite, Spanish 1. A continuation of Spanish 1, using Warshaw and Bonilla, Elements of Spanish, and Roehm and Manchester Laboratory Exercises.

## 3. ELEMENTARY SPANISH—Four hours.

Dorado's Espana Pintoresca, and Navarro's Historia de Espana.

## 5. INTERMEDIATE SPANISH—Four hours.

A review course in the elements of Spanish. Seymour and Carnahan's Short Review Spanish Grammar.

## 7. INTERMEDIATE SPANISH—Four hours.

The Spanish Short Story. Stories of Blasco Ibanez, *Antologia de Cuentos Espanoles*.

## 9. INTERMEDIATE SPANISH—Four hours.

The Spanish Novel. Alarcon *El Final de Norma*. Selgas' *La Mariposa Blanca*. Galdos' *Marianela*.

## 105. ADVANCED SPANISH—Four hours.

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

## 107. ADVANCED SPANISH—Four hours.

Modern Spanish Drama. Benavente's *Los Intereses Creados*, Echegaray's *El Gran Galeoto*, and Martinez Sierra's *Cancion de Cuna*.

## 109. ADVANCED SPANISH—Four hours.

The Spanish Romantic Drama. Tamayo y Baus' *Un Drama Nuevo*, Hartzenbusch's *Los Amantes de Teruel*, and Espronceda's *El Estudiante de Salamanca*.

## SOCIOLOGY

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

Following a comprehensive view of the sciences and the arts, the various subjects studied in the social sciences such as the family, the state, races, languages, industry, art, customs, religions, etc., are presented in sufficient detail to show what the social sciences are and to enable the student to choose intelligently among them.

## 3. EDUCATIONAL SOCIOLOGY—Three hours.

This course deals with sociology from the point of view of education, and presents the sociological ideas, laws, and principles necessary to the successful practice of teaching.

## 18. RURAL SOCIOLOGY—Four hours.

A constructive study of country life, economic activities, social organizations, schools, clubs, churches, social centers, and modern efforts and successes in rural progress. The course is intended primarily for rural teachers, but is of value for all students of rural social conditions and needs.

## 92. THE FAMILY—Three hours.

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

## 105. THE PRINCIPLES OF SOCIOLOGY—Four hours. Required of third year students.

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

## HIGH SCHOOL COURSES

Students who have not completed a four-year course in an accredited high school may meet some of the requirements for college entrance by satisfactorily completing high school correspondence courses. Each student who wishes to enter Colorado State Teachers College and who lacks high school credits should write the Registrar of the College concerning entrance. The Registrar should be furnished with a certified transcript of the high school courses which the applicant for college entrance has already completed. The Registrar will then inform the applicant which courses may be completed by correspondence study.

The following courses may (upon the advice of the Registrar of Colorado State Teachers College) be completed by correspondence to meet some of the college entrance requirements.

1. THE SHORT STORY—Twelve weeks credit ( $\frac{1}{2}$  high school unit). Tuition \$9.00.

The extension work offered in English Literature is a reading course in which fifteen short stories and six novels are to be read. A written report of each is required. The study of the short stories, which constitutes one-third of the course, should be done first. (Study unit syllabi will not be furnished for this course. The instructions which follow are to take the place of the syllabi.) Text Book—The Short Story by E. A. Cross, Published by A. C. McClurg Co., Chicago, Illinois.

1. Preliminary Study—

Read carefully Chapters 1-8, inclusive. This is necessary in order to know how to study the short story. No written report of the reading is required. The written reports of the stories will show whether or not the preliminary reading has been done thoroughly.

2. Plan for study of the Short Story—

Use these questions as suggestions pointing the way to your study of each short story. Combine the answers, making a unified essay of from three to four pages.

- (1) Write a brief synopsis of the story in not more than three paragraphs.
- (2) State the theme. Is it true?
- (3) What is the tone of the story; tragic, serious, humorous, farcical, poetic, dreamy?
- (4) Is this a story of character, incident, or setting?
- (5) Make a list of the characters: a. The principal characters; b. Those of secondary importance; c. Those used merely as background.
- (6) Which of the characters have distinct individuality? Are the characters true to life? Which is your favorite? Why?
- (7) Is the setting interesting for its own sake, or is it used merely as a background for the characters and incidents?
- (8) What seems to have suggested the title?
- (9) What is the author's point of view?
- (10) The most effective short story is one that employs characters highly worth knowing and thru these works out a great theme upon a stage (background or setting) suited to the action and the people of the story. Does the story you are studying fall short in in any of these four specifications? Comment at length upon this question.

3. Directions—

Write on one side of theme paper, using pen and ink. Submit one report at a time.

4. Following is the list of short stories (All found in The Short Story by E. A. Cross,) to be studied. The report of each story constitutes one study unit.
- First Study Unit—The Necklace.
  - Second Study Unit—The Prodigal Son.
  - Third Study Unit—The Princess and the Vagabond.
  - Fourth Study Unit—On the Stairs.
  - Fifth Study Unit—The House Opposite.
  - Sixth Study Unit—The Adventure of the Speckled Band.
  - Seventh Study Unit—Will o' the Mill.
  - Eighth Study Unit—Martha's Fire Place.
  - Ninth Study Unit—Dr. Heidegger's Experiment.
  - Tenth Study Unit—Three Arshins of Land.
  - Eleventh Study Unit—The Father.
  - Twelfth Study Unit—Where Love is, There God is Also.
  - Thirteenth Study Unit—The Mysterious Bride.
  - Fourteenth Study Unit—The Taking of the Redoubt.
  - Fifteenth Study Unit—The Truth of the Oliver Cromwell.

2. THE NOVEL—Twenty-four weeks credit ( $\frac{1}{2}$  high school unit).  
Tuition \$18.00.

1. This is a reading course in which six novels are to be read. A written report of each is to be made according to the study plan given below. Write on one side of theme paper, using pen and ink. Submit one report at a time.

2. Plan for Study of Novel—

Use these questions as suggestions pointing the way to your study of the novel. Combine the answers, making a unified essay of from five to six pages.

- (1) Write a two or three-page synopsis of the story.
- (2) What is the theme or purpose?
- (3) What is the setting of the story;
  - a. Time? b. Place? c. Background?
- (4) Study of characters—
  - a. Are they true to life?
  - b. Are they worth knowing?
  - c. Which is your favorite? Why?
- (5) Write a brief sketch of the author—
  - a. When and where was he born?
  - b. When did he write this novel?
  - c. Does this story throw any light on his life or personality?

3. Following is the list of novels to be read in the order indicated.

Each report constitutes five study units.

Study Units One to Five—Silas Marner.

Study Units Six to Ten—The Marble Faun.

Study Units Eleven to Fifteen—The Tale of Two Cities.

Study Units Sixteen to Twenty—Quentin Durward.

Study Units Twenty-one to Twenty-five—The Spy.

Study Units Twenty-six to Thirty—Select one of the following:

The Little Minister.

The Light That Failed.

Cranford.

Ramona.

3. AMERICAN LITERATURE—Thirty-six weeks credit. (One high school unit.) Tuition \$27.00.

1. The course in American Literature which is offered by extension is a study of literature through history, biography, and reading of literature selections by characteristic writers. It aims to show the trend of American thought and the changing ideals through the three centuries.

The course is divided into three parts of fifteen units each, each part carrying five credit hours. The third part is given up to later nineteenth and to twentieth century literature for the benefit of those more interested in a study of recent and current writing.

2. Textbook—Newcomber, Andrews, and Hall's "Three Centuries of American Literature" (Scott, Foresman & Co., Publishers, Chicago.)



4. SHAKESPEARE—Twelve weeks credit ( $\frac{1}{2}$  high school unit). Tuition \$9.00.

Note—Course I (The Short Story) or its equivalent is prerequisite to this course.

1. The course in Shakespeare which is offered in extension is a study of the best plays and poems written by Shakespeare. The aim is appreciation rather than analytic. Six type plays, several sonnets and lyrics constitute the course.

2. Plan for Study of Play:

- (1) History of Play.
- (2) Sources of Plot.
- (3) Theme.
- (4) Plot (Story re-told).
- (5) Character Sketches (Main Characters—4.)
- (6) Discussion.

- a. Relationship of Plots.
- b. Striking Pictures and Figures of Speech.
- c. Inconsistencies.
- d. Literary Characteristics.

(What makes the drama a masterpiece, etc.)  
(The discussion should make a unified essay of from four to five pages.)

3. Plan for Study of Sonnet:

- (1) Statement of the Thought.
- (2) Theme.

4. Required Reading:

- (1) Midsummer Night's Dream or As You Like It.
- (2) Macbeth or Hamlet.
- (3) Henry IV—Part I.

5. Student selects three of the following:

- (1) Romeo and Juliet.
- (2) The Comedy of Errors.
- (3) Twelfth Night.
- (4) The Tempest.
- (5) Henry IV—Part II.
- (6) Henry V.
- (7) King Lear.
- (8) Richard III.

(By request other Shakespearean Plays may be substituted.)

5. MODERN PLAYS—Twenty-four weeks credit ( $\frac{2}{3}$  high school unit). Tuition \$18.00.

1. The extension work in the Modern Play is a reading course in which fifteen plays representative of the growth in drama are studied.

2. Plan for Study.

- (1) Sketch of the author's life and writings.
- (2) Theme.
- (3) Plot (Outline form).

Preliminary situation:

- a. Time.
- b. Place.
- c. Characters.
- d. Condition.

## STATE TEACHERS COLLEGE

Happening  
Ladder of Action.

Step 1  
Step 2  
Step 3  
Etc.

Culmination  
Falling Action  
Conclusion

## (4) Discussion.

- a. Title
- b. Treatment of Plot
- c. Characterization
- d. Style
- e. Tone
- f. Strong points; weak points, etc.

(A unified essay of six pages.)

## 3. Required Readings

- (1) Goldsmith's "She Stoops to Conquer" or Sheridan's "The Rivals."
- (2) Zangwill—"The Melting Pot"
- (3) Kennedy—"The Servant in the House."
- (4) Noyes—"Sherwood."
- (5) Webber and Webster—"3 One-Act Plays."

## 4. Student selects ten of the following:

- (1) Peabody—"The Piper" or "The Wolf of Gubbic"
- (2) Marlowe—"The Jew of Malta"
- (3) Sophocles—"Antigone"
- (4) Euripides—"Iphigenia in Tauris"
- (5) "Everyman"
- (6) Gregory—(Choice of two One-Act Plays)
- (7) Yeats—(Choice of two One-Act Plays)
- (8) Rostand—(Choice of one long or two One-Act Plays)
- (9) Dunsany—(Choice of two One-Act Plays)
- (10) Galsworthy—(Choice of two One-Act Plays)
- (11) Maeterlinck—"The Blue Bird"
- (12) Housman and Barker—"Prunella"
- (13) Synge—(Choice of one long or two one-act plays)
- (14) Barrie—(Choice of one long or two one-act plays (By request representative one or three-act plays by American and English Authors may be substituted))

6. WORLD HISTORY—Thirty-six weeks credit (one high school unit).  
Tuition \$27.00

1. The special aim in the Survey of World History is to teach the student the big movements in the development of our present-day civilization and lay a foundation for future courses in history, so that the student may study any period and see the relation of that period to what has gone before and the development that follows.
2. Textbook.—Robinson's "Mediaeval and Modern Times"—(Ginn & Co., Publishers, Chicago, Illinois).

**7. AMERICAN HISTORY—Thirty-six weeks credit (One high school unit). Tuition \$27.00**

1. The special aim in the teaching of American History is to teach the students the foundations of their liberty and the sacrifice and suffering required to establish it; that each generation has contributed and must still contribute for years to come if the ideal democracy is to be a reality in every phase of our national life; teach the general foreign policy of the United States; point out the industrial and social status of our people; and give attention to some of our unsolved problems.
2. Textbook—Muzzey's "An American History" (Ginn & Co., Publishers, Chicago, Ill.)

**8. SOCIAL SCIENCE—Thirty-six weeks credit (one high school unit). Tuition \$27.00.**

1. The purpose of the social science course is to teach the fundamental principles underlying our present social, economic, and governmental institutions; also give the student an idea of some of the ways in which society may energize public opinion to the end that we may more fully realize our social, religious, industrial and political ideals.
2. Textbooks—
  - (a) Marshall and Lyon—"Our Economic Organization" (Macmillan Publishing Co., Chicago, Ill.)
  - (b) Finney—"Elementary Sociology" (Benj. H. Sanborn & Co., Publishers, Chicago, Ill.)
  - (c) Woodburn and Moran—"The Citizen and the Republic" (Longmans Green and Co., Publishers, Chicago, Ill.)

**9. ENGLISH HISTORY—Thirty-six weeks credit (one high school unit). Tuition \$27.00.**

1. The Course in English History is designed to give high school students a background in English institutions and conditions so that students may better understand our political inheritance and the source of many of our democratic ideas. Special emphasis has been given to influential men and great movements.
2. Textbook—Cheyney's "A Short History of England" (Ginn & Co., Publishers, Chicago, Ill.)

**10. FIRST YEAR ALGEBRA—Thirty-six weeks credit (one high school unit). Tuition \$27.00.**

1. This course and the one which follows are designed for those who wish to carry on their high school education in non-residence. The elementary course is divided into 45 lessons. Each fifteen lessons or study units is equivalent to one quarter of residence work and carries five hours (one-third unit) credit. Study units 1-15—The meaning and use of the simple equation and fundamental operations as applied to positive and negative numbers. Study units 16-30—Special products and factors and algebraic operations involving fractions. Study units 31-45—equations and roots and powers.
2. Textbook—Slaught and Lennes' "Elementary Algebra" (Allyn & Bacon, Publishers, Chicago, Ill.)

**11. SECOND YEAR ALGEBRA—Twenty-four weeks credit ( $\frac{2}{3}$  high school unit). Tuition \$18.00.**

1. The beginning of this course involves a review of algebraic operations, involving fundamental operations, special products and factors and the use of the equation. The new work deals with quadratics, series, roots and powers, logarithms, etc.
2. Textbook—Slaught and Lennes' "Advanced Algebra" (Allyn and Bacon, Publishers, Chicago, Ill.)

12. PLANE GEOMETRY—Thirty-six weeks credit (one high school unit). Tuition \$27.00.

1. This course is open only to mature students who have had some high school work or who have previously been enrolled in a class in geometry which for some reason was not completed. Beginning students and those with little high school training are advised to take a few lessons, or better still, one quarter in residence during the summer and then continue by correspondence. Geometry is a difficult subject to carry by correspondence. Any vagueness and indefiniteness which attaches to the first half dozen theorems or exercises may constitute an almost insurmountable barrier later on in the course. The above plan will eliminate this difficulty and give the student a good start. The course as outlined, consists of a thorough mastery of the definitions, axioms, propositions, and corollaries as given by any standard author, and the application of these to original exercises with emphasis placed upon one's ability to solve these exercises.
2. Textbook—Wentworth-Smith's "Plane Geometry" (Ginn & Co.)

13. GENERAL SCIENCE—Thirty-six weeks credit (one high school unit). Tuition \$27.00.

1. The course in general science is designed to give the student a fundamental conception of the rules and laws governing scientific phenomena with simple, practical applications of these and their bearing upon the life of the individual and the community. It teaches the student accuracy and definiteness in thinking, and is designed to promote interest in happenings and events of every-day occurrences. The course throughout is simple and easily understood by any student above the eighth grade.
2. Textbook—Everyday Problems In Science by Pieper and Beauchamp. Scott Foresman and Co., Publishers, Chicago, Ill.

14. BOTANY—Thirty-six weeks credit (one high school unit). Tuition \$27.00.

1. The course in botany meets the needs of students who are desirous of obtaining more accurate knowledge of plants and plant life. It is designed for the first year of the senior high school and covers the structure, kinds, and growth of plants as well as the influence of outside factors upon these things. It also gives the fundamental classification of plants and their identification to enable the student to recognize these things in the plant life about him and their value to mankind.
2. Textbook—Atkinson's "Botany for High Schools" (Henry Holt & Co., Publishers, Chicago, Ill.)

15. HIGH SCHOOL GEOGRAPHY—Thirty-six weeks credit (one high school unit). Tuition \$27.00.

1. The aim of modern *Geography is to get a view of the earth primarily as the home of man.* The earth is not only the present home of man but it is the garden in which he has grown, and also the environment in which still higher standards of attainment are possible. This course attempts to preserve this human point of view in the study of geography and so concerns itself with the leading facts and principles of geography which are factors in the human struggle for better living. The first part is devoted to Physical Geography, which studies the earth as it would be if man had never lived upon it. The second part deals with Economic Geography. In this man's use of the materials of his environment is the basis for study. In the third part, dealing with Regional Geography, the earth is considered as consisting of a number of kinds of natural provinces, the environment affecting the economic adaptations being broadly similar in all the provinces of a given kind and to note the human response to Geographic environment.
2. Textbook—Dryer's "High School Geography" (American Book Co., Publishers, Chicago, Ill.)





[SUPPLEMENT]

Colorado State Teachers College Bulletin

SERIES XXVII

NUMBER 11

*Supp.*

TEACHERS COLLEGE  
HIGH SCHOOL

SUMMER QUARTER

1928

FIRST HALF

June 16 - July 21

SECOND HALF

July 23 Aug. 25

GREELEY, COLORADO

## *The Faculty*

---

Winfield Dockery Armentrout, Ed.D. . . . .  
.....*Director of Training Schools*  
William Lawrence Wrinkle, A.B., A.M. . . . .  
.....*Principal of the High School*  
Ida Jones . . . . .*Secretary*

---

Samuel Clay Bedinger, LL.B. . . . .*Commerce*  
Ralph Thomas Bishop, A.B. . . . .*Printing*  
J. S. Doubenmier, A. B. . . . .*Physical Education*  
Genevieve Davis, A.B., A.M. . . . .*Foreign Languages*  
Ella Frances Hackman, B.S. . . . .*Social Science*  
Fred Louis Herman, B.S. . . . .*Science*  
Alice Johnson, Ph.B. . . . .*English*  
Elizabeth Hays Kendel, A.B. . . . .*Mathematics*  
Winfield LeRoy Knies, A.B. . . . .*Commerce*  
Lucy Neely McLane, A.B., B.L.I. . . . .*English*  
Estell E. Mohr, B.S. . . . .*Music*  
Miss Georgia Moore, B.S. . . . .*Art*  
Vera Newburn, B.S., M.S., . . . . .*Home Economics*  
Lester Edwin Opp, Mus.B., . . . . .*Orchestra and Band*  
Kenneth Frederick Perry, A.B. . . . .*Industrial Arts*  
Pauline Pogue, A.B. . . . .*History*  
Robert Cecil Pooley, A.B., A.M. . . . .*English*  
Otto William Schaeffer . . . . .*Bookbinding*  
Harry T. Thompson . . . . .*Printing*



# *Teachers College High School*

---

Teachers College High School, the secondary school of Colorado State Teachers College, includes both the junior and senior high schools, grades seven to twelve. It is founded on the theory that the highest educational interests of junior and senior high school students and the highest professional interests of prospective junior and senior high school teachers are fundamentally identical.

The school is characterized by modern methods of teaching, rich and diversified curriculums, a superior faculty, unusual housing facilities and educational equipment, individual attention and an educational atmosphere. Teachers College High School is fully accredited by the North Central Association of Colleges and Secondary Schools.

The school is open for regular school work during the summer quarter. It is the same as any other quarter of the school year, the usual regulations for admission applies, the same credits may be earned, and the program while less elaborate and more intensive is rich and diversified and offers many unusual opportunities.

The summer school is maintained to serve two purposes: to enable students to make up incomplete credits or to review subjects in which they experienced difficulties and to enable students to earn advance credit toward graduation at an earlier date. Often a student because of unavoidable circumstances fails or is incomplete in one or more units of his work. Ordinarily this would require an additional year of high school attendance. By doing intensive work such a student might complete one full unit of credit in any one of a number of subjects or might clear up two or more semester incompleting courses. Four hours is the regular high school students daily load.

The junior high school program is entirely in the nature of make-up or review work to enable students to bring themselves up to full grade standing. The work is largely individualized and the student difficulties are studied in an attempt to give the student the preparation for which he may have the greatest need. In the senior high school are both the review or make-up and the advanced credit features. Sociology, economics, and government, the three units of Social Science 12, may be completed in the one quarter by attending the three classes one hour a day each instead of one hour daily for three consecutive quarters as is the case in the regular school year. English 10 and 11, American History, Science 10, French and Spanish may also be taken for full unit credit.

The Ungraded School for Adults has been discontinued and adults may or may not be admitted under the same requirements as applied to regular students of the high school, their admission depending upon the likelihood of their fitting into the regular school situation.

Tuition for the summer quarter for the junior high school is \$2.00 with textbooks furnished. Tuition in the senior high school is \$10.00 for the quarter with student supplying his own texts.

Students electing swimming pay the regular college swimming fee.

# *Teachers College High School*

## Summer Quarter, 1928, Program of Classes

---

Senior Dramatic Art Senior Public Speaking Government	<b>7:00 o'clock</b> Mechanical Drawing Woodworking (Double Period)
---	--

American History (1) General English I (2) General English II (2) Biology 10 Spanish 1, 2, 3 { 8 and 11 French 1, 2, 3 { full units English 7	<b>8:00 o'clock</b> Mathematics 8 History 9 Science 9 Swimming: Boys—Monday, Wednesday. Girls—Tuesday, Thursday Selected by Director—Friday
---	--

American History (3) General English I (1) General English II (1) Sociology Botany 10	<b>9:00 o'clock</b> History 7 Geography 7 Mathematics 9 English 8
---	---

American History (2) General English I (3) General English II (3) Economics Typewriting I	<b>10:00 o'clock</b> Typewriting II Mathematics 7 History 8 English 9 Physiology and Hygiene 10
---	--

Home Economics Art I Art II Woodworking (Double Period) Mechanical Drawing I Introduction to Ind. Arts Dramatic Art Public Speaking	<b>11:00 o'clock</b> Shorthand I Bookkeeping I Junior Business Training Spanish 1, 2, 3 { 8 and 11 French 1, 2, 3 { full units Junior Dramatic Art Introductory Art Introductory Home Economics
--	---

Swimming: Boys—Monday, Wednesday	<b>1:00 o'clock</b> Girls—Tuesday, Thursday Selected by Director—Friday
-------------------------------------	---

Beginning Band and Orchestra	<b>4:00 o'clock</b> Advanced Band and Orchestra
------------------------------	--

Printing (Senior)	<b>By Appointment</b> Leathercraft (Senior)
-------------------	--

COLORADO STATE TEACHERS COLLEGE

BULLETIN

SCHOOL

*for*

Custodians, Janitors  
and Engineers

A short course for men  
who want to become better  
caretakers of Public  
Buildings

---

June 11-16, 1928  
Greeley, Colorado

---

Series XXVII

MARCH

Number 7

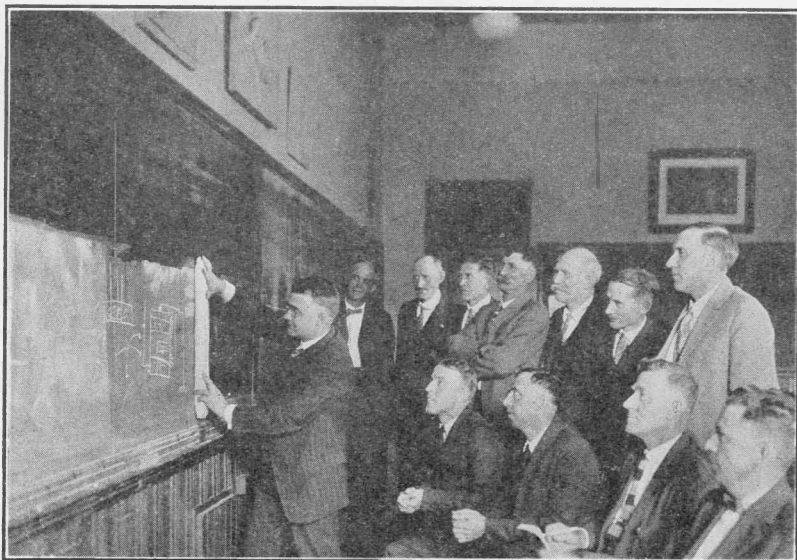
Published Monthly by Colorado State Teachers College, Greeley, Colo.  
Entered as second class matter at the Postoffice at Greeley, Colorado,  
under the Act of August 24, 1912.

## CUSTODIANS MUST BE EQUIPPED

Demand for competent custodians of public buildings is greater today than it ever has been before, and in addition, owners of buildings—both private and public—are requiring that the custodians be more than just janitors. Each passing year sees the requirements in men holding positions of caretakers, custodians, and engineers more and more stringent.

It is to meet these requirements that Colorado State Teachers College is conducting its School for Custodians, Janitors, and Engineers. For the fourth successive year this college has organized such a school, and each succeeding year demonstrates not only the need of the type of instruction as given the students, but the advantages and widespread results.

The influences of this unique school—planned particularly for men who do the actual janitorial work in the public schools—have spread over such an area and aroused so much favorable attention that arrangements have been made now to enroll the custodians and engineers of buildings large and small, public and private. Since the organization and development of this school, inquiries have been received from the owners and agents of a number of larger corporation and office buildings, and the ad-



The Proper Method for Cleaning Blackboards

ministration has deemed it not only advisable but an obligation to open the classes to all of those persons entrusted with the care of buildings.

During the past year the heads of several institutions of higher learning and the superintendents of buildings and grounds in colleges and universities have sought information concerning the school to the end that one or more of their custodians might attend the classes. Communications have been received from distant points, including Texas, Kansas, and Ohio.

## SCHCOL BOARDS ACT

Results following the attendance of custodians at the special school in Greeley have been such as to induce school boards in a number of communities to insist that their janitors or engineers return for more work, while still others, having evidence of the effect of the short course on the school plants have voted to pay the expenses of their caretakers for a week at the college.

Colorado's school buildings and grounds have shown extensive improvement since the establishment of this school for custodians. Class-rooms, halls, blackboards and the premises in general are cleaner and in better all around condition than they have ever been before. Visitors to schools have freely commented on the improved conditions.

Those custodians who have attended the classes have gone home enthused over their jobs. They themselves have declared that they view their jobs in a different light.

### SOME THINGS CUSTODIANS SHOULD KNOW

They should know how to allay dust and disease germs—not stir them up—

They should know how to ventilate a building—not simply to open a window when the room gets too hot, or close the same when the room gets cold—

They should know how to oil floors—

They should know how to **clean** blackboards—

They should know how to care for toilets and rest rooms—to the end that the school building is a healthy place for children to spend most of their time in.

They should know how to fire a furnace or stoke a boiler—not simply shovel coal. Many school districts have spent hundreds of thousands of dollars for coal that produced no heat, because the janitor didn't know how to handle the heating plant.

### INFORMATION FOR SCHOOL BOARDS

Many janitors do not have an adequate notion of what their job implies.

Among janitors of approximately the same degree of willingness to serve, some render an efficient service while others are near failures. Right training will improve the methods of your inefficient, willing janitor. Contact with other competent janitors and opportunities to visit such janitors in their own schools where a high class service is being rendered will inspire your careless janitor to more efficient service.

Ideals of better service will be emphasized.

How to economize time and effort and at the same time improve the quality of work will be demonstrated.

Your janitor will see the best method yet developed for washing blackboards, scrubbing floors, repairing certain fixtures, etc.

Your janitor will be taken to the furnace room and there shown how to put the coal in the firebox, how to regulate drafts, etc., so that he may annually save to your community at least the amount of his salary.

Sweeping compounds, brooms, brushes, oils, and other janitorial supplies will be exhibited at the school. Instructors will show you how and under what conditions to use various materials and tools.

Moving pictures will depict methods of firing, cleaning, etc.

Your janitors will visit school buildings in operation that are being cared for as you would wish your janitors to care for your buildings.

## INFORMATION FOR JANITORS

You will see how other janitors do their jobs.

Janitors from different parts of the country will be telling how they do their work.

You will be shown easier and better ways of doing things.

Your job ought to become easier because of improved methods.

You will receive a diploma showing that you have attended a school where your problems have been intelligently studied.

You will be in a position to render a more efficient service.

You do not need to be away from home on a week-end.

There will be moving pictures of how others are doing their work.

A tourist camp will be made free to you if you want to drive in your own car.

You will enjoy going to school again. You will be guests of the Colorado State Teachers College. There'll be horseshoe tournaments, a picnic, and free tickets to Greeley theaters.

Business men have conventions, farmers have institutes, teachers have summer schools—

WHY NOT A WEEK'S CONVENTION FOR CUSTODIANS, JANITORS, AND ENGINEERS?



Superintendent R. G. Dempsey Demonstrating How to Maintain a Good Campus

## THE COURSE OF STUDY

The course of study is divided into three sections: (1) Heating and Ventilating; (2) Maintenance; (3) Sanitation. In order to complete the work in any course the student must attend two sessions and only two courses may be carried at any one session.

The content of the various courses is essentially as follows:

## 1. HEATING AND VENTILATING

### First year:

Firing, cleaning, maintenance, repairing, adjusting systems of an elementary type.

### Second year:

Types of heating and ventilating systems. Theories of ventilation. Use, care and operation.

## 2. MAINTENANCE OF THE SCHOOL PLANT

### First year:

Upkeep and repair of buildings. Care of floors, walls, furniture, rugs, curtains, laboratories, equipment.

### Second year:

Upkeep of grounds, landscaping, care of lawns, trees and shrubbery. Playground apparatus. Outdoor equipment.

## 3. SANITATION:

### First year:

Cleaning of floors, walls, blackboards, furniture, windows, woodwork, drinking fountains, and lavatories.

### Second year:

Theories of sanitation. Fundamentals of public health and social hygiene. Practical training in modern methods of cleaning and proper materials and facilities.

In addition to the above technical courses, lectures of a more general nature will be given by specialists in their field. Chief of these will be a



Demonstrating School Hardware

series on practical psychology given by Robert H. Morrison, assistant director of extension service. His topics are:

1. Does appearance have an effect upon associates?
2. Does success depend upon habit?
3. Ten ways to make people hate you.
4. Can the factors causing failure be controlled?

## FACULTY

- Dr. C. B. Cornell, Professor of Educational Administration, Colorado State Teachers College, Director.
- James R. Ball, Chief Engineer, Denver Public Schools. Lectures and demonstrations in heating and ventilation.
- R. G. Dempsey, Superintendent of Buildings and Grounds, Colorado State Teachers College. Demonstrations in care of grounds.
- Charles M. Foulk, Professor of Industrial Arts, Colorado State Teachers College. Courses and demonstrations in maintenance and repairs.
- Dr. J. D. Heilman, Professor of Psychology, Colorado State Teachers College. Lectures on relation of care of buildings to teaching efficiency.
- John M. Kingston, Foreman of Steam Fitters, Denver Public Schools. Demonstrations in operation and care of steam plants.
- Robert H. Morrison, former Superintendent of Schools and now Assistant Director of the Extension Service, Colorado State Teachers College. Courses in Practical Psychology.
- Walter Pessman, Landscape Architect, Denver Public Schools. Lectures on school landscaping.
- Dr. C. E. Reeves, Professor of Education, Elmira College, Elmira, New York; specialist in janitor efficiency; Author of "Janitor Service in Elementary Schools." Courses and lectures in sanitation.



They Brought Their Families With Them



## GENERAL INFORMATION

Time—ONE WEEK.

Date—JUNE 11 TO 16, 1928.

Begins—MONDAY MORNING 8:00 a. m.

Closes—SATURDAY NOON.

Place—CAMPUS. COLORADO STATE TEACHERS COLLEGE, GREELEY, COLORADO.

Cost—TUITION FEE, \$10.00 per Janitor (Paid by three-fourths of boards last year).

BOARD ABOUT \$1.00 per day (All who prefer may eat at one central restaurant).

ROOM ABOUT 75 cents per day (Upon arrival men will be taken to their rooms).

City Park Tourist Camp—FREE TO MEMBERS OF THE JANITOR SCHOOL (A beautiful spot to bring the family for vacation. Cooking arrangements provided).

Entertainment—"PARK," "REX," and "STERLING," the three Greeley Theaters, furnish free admission to all members of the school all nights, Monday to Friday, inclusive.

PICNIC FOR ALL MEMBERS—Students and Instructors.

HORSESHOE TOURNAMENTS.

ANNUAL BANQUET.

The work—FROM 8:00 a. m. to 5 p. m. daily.

DEMONSTRATIONS OF: Firing, Control of Heat, Tempering Air, Humidifying Air, etc.; Scrubbing, Mopping, Oiling Floors, Washing Windows, Cleaning Erasers and Blackboards, Cleaning Toilets, Building and Banking Fires, Reading Gauges, Making Records and Reports, Making Repairs and Doing Odd Jobs.

LECTURES GIVING STANDARDS AND METHODS FOR THE ABOVE. Importance of the Janitor's Work. Responsibilities of the Janitor, Lines of Authority—Board through Superintendent and Principal to Janitor, A Janitor's Duties, Precautions Against Fire, Precaution Against other Accidents, Sanitation, Disinfection, Relationships with Teaching Personnel, Relationships with Pupils, Care of Grounds, Material for Use in Cleaning and Preserving.

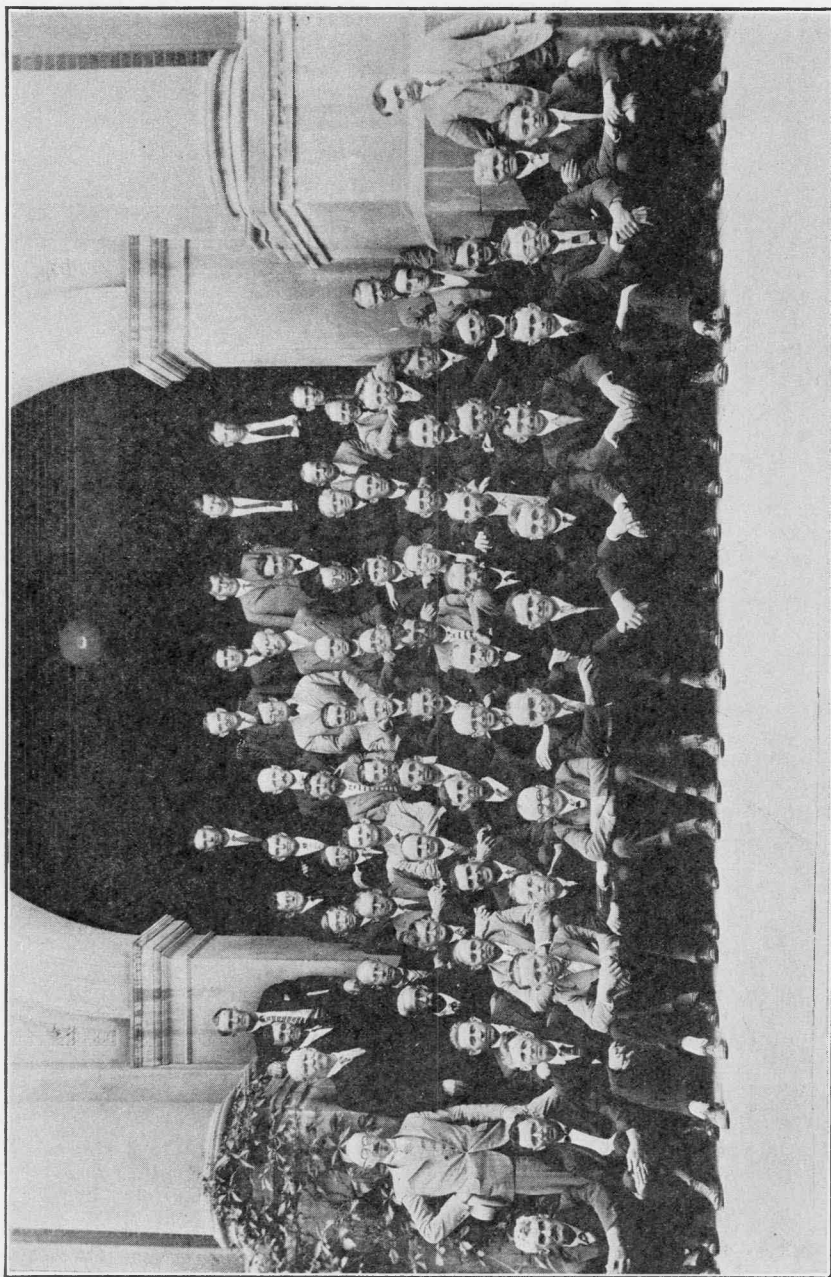
A FULL DAY will be spent in Denver for the purpose of visiting schoolhouses of different types to observe how janitors' duties should be performed under different conditions.

EXHIBITS—Leading commercial houses will have on exhibit a full line of janitorial materials and supplies. (These are only for examination by the janitors; there will be no selling by representatives of these firms.) Uses of various materials and supplies will be explained.

QUESTIONS AND ANSWERS—All members of the school are constantly urged to ask questions. (Discussion resulting from janitors' questions was one of the best features of last year's school.) Round table discussion every day.

MOVING PICTURES—These include pictures of methods of fire prevention, handling of furniture, temperature control, cleaning, etc.

Sympathetic Spirit—Janitors in attendance last year attest to the fact that these problems were approached in a sympathetic spirit.



Custodians of School Buildings in Attendance Last Year at the School of Custodians, Janitors, and Engineers at Colorado State Teachers College. Man Standing in Foreground on Extreme Left is Dr. C. E. Corneli, Director of the School. Man Standing on Extreme Right is Dr. C. E. Reeves, Author of "Janitor Service in Elementary Schools."

# Lectures Entertainments and Book Reviews



Summer Quarter 1928, June 18 to August 25

State Teachers College  
Greeley, Colorado



# Lectures, Entertainments and Book Reviews



For the Summer Quarter of 1928 the college is providing as usual a series of open lectures, entertainments, plays, and book-reviews open to students and the public. All these are given without admission charge except the few entertainments and plays that are brought at a considerable expense and are given as benefits for some college enterprise or organization.

*College Assemblies and Evening Lectures:* There will be an all-college assembly with required attendance and roll call once a week, usually on Wednesday at 7:00 P. M. in the Gymnasium. Attendance at other evening assemblies and lectures is urged, because they will be well worth while, but is voluntary.

*Book Reviews:* Book reviews and occasional free open lectures will be held usually three times a week at 4:00 P. M. in the Little Theater. Open to all.

*Plays and Entertainments:* A few plays and entertainments will be given in the Little Theater on certain evenings at 8:00 o'clock when there is no assembly or evening lecture. Small admission fees will be charged.

*College Dances:* Attendance of students at public dances is not permitted, but each Friday evening from 8:30 to 11:30 there will be a dance in the Woman's Gymnasium, Gunter Hall. These dances are given under the direction of the college and are properly chaperoned. Attendance is limited to college students, faculty, and guests with tickets issued by the Dean of Women upon due request of students. Good music. Admission 40c.

FIRST WEEK: June 18, Monday to June 22, Friday—

- 7:00 p. m. Monday, all college assembly, Gunter Hall.  
Address by President George Willard Frasier
- 4:00 p. m. Tuesday, Book Review, Mrs. Satis Coleman.  
*Schauffler's The Poetry Cure—a Medicine Chest of Verse, Music, and Pictures.*
- 7:00 p. m. Tuesday, Program presented by the Teaching Staff of the Conservatory of Music. Open to Students and Public. No admission Charge.
- 7:00 p. m. Wednesday, Open Lecture. Dr. Jesse H. Newlon, Director of Lincoln School, Teachers College, Columbia University.
- 4:00 p. m. Thursday, Book Review. Dr. Jesse H. Newlon, *Beard's Rise of American Civilization.*
- 8:00 p. m. Thursday, Play in the Little Theater, Dalton's *Adam's Apple*. Student and Faculty Group. Seats 50c.
- 8:00 p. m. Friday, Second night of *Adam's Apple*.

SECOND WEEK: June 25 to 30—

- 4:00 p. m. Monday, Book Review, Mr. A. L. Threlkeld, Book to be selected.
- 7:00 p. m. Monday, Lecture, Dr. Edward Howard Griggs, Great Leaders and their Influence on Civilization, I. Jefferson: The Philosopher of Democracy.
- 4:00 p. m. Tuesday, Book Review, Mr. George A. Barker, Book to be selected.
- 7:00 p. m. Tuesday, Lecture, Dr. Edward Howard Griggs, II. Hamilton: The Making of Our Government.
- 4:00 p. m. Wednesday, Lecture, Dr. Edward Howard Griggs, III. Carlyle: The Man of Letters as Prophet and Interpreter.
- 7:00 p. m. Wednesday, Lecture, Dr. Edward Howard Griggs, IV. Emerson: Spiritual Leadership in Democracy.
- 4:00 p. m. Thursday, Book Review, Dr. George Willard Frasier, Book to be selected.
- 7:00 p. m. Thursday, Lecture, Dr. Edward Howard Griggs, V. Tolstoy: The Moral Leader in Mysterious Russia.
- 8:00 p. m. Saturday, The Chicago Art Theater in Three Plays, Little Theater. Admission with Reserved Seat, 75c.

THIRD WEEK: July 2 to 6—

- 4:00 p. m. Monday, Book Review, Dr. Earle U. Rugg, "Books of the Month," 1927-28, "The Literary Guild," 1927-28.
- 4:00 p. m. Tuesday, Book Review with Readings, Dr. E. A. Cross, Arthur Goodrich's *Capponsacchi*.
- 4:00 p. m. Thursday, Book Review, Mr. James H. Risley, Bruce Barton's *What Can A Man Believe?*
- 7:00 p. m. Thursday, Concert, St. Olaf's Quintet, The Little Theater. Admission: 50 cents.

FOURTH WEEK: July 9 to 13—

- 4:00 p. m. Monday, Book Review, Miss Carolyn Tobey, Michael Pupin's *The New Reformation*.
- 7:00 p. m. Monday, Lecture, Dr. George Earle Raiguel, *The World Today: Politics and War*.
- 4:00 p. m. Tuesday, Book Review, Dr. George Earle Raiguel, Ludwig Lewisohn's *The Island Within*.
- 7:00 p. m. Tuesday, Lecture, Dr. George Earle Raiguel, *The Presidential Campaign*.
- 7:00 p. m. Wednesday, Lecture, Dr. George Earle Raiguel, *The Far Eastern Question: Russia, China, Japan*.
- 4:00 p. m. Thursday, Book Review, Mr. Alfonso Iannelli, Lewis Mumford's *Sticks and Stones*.
- 7:00 p. m. Thursday, Band Concert. The Greeley Band, J. DeForest Cline, Director.
- 8:00 p. m. Thursday, Illustrated Lecture, Mr. H. N. Wheeler, U. S. Forestry Service, Little Theater. No charge.

FIFTH WEEK: July 16 to 20—

- 4:00 p. m. Monday, The Work of the Junior Red Cross.
- 4:00 p. m. Tuesday, Book Review, Rev. Alfred W. Swan, Will Durant's *Transition*.
- 7:00 p. m. Wednesday, Lecture, Mr. Alfonso Iannelli, *The Appreciation of Art*.
- 8:00 p. m. Thursday, The Faculty Players in the English three act comedy *Devonshire Cream* by Eden Phillpotts. The Little Theater. Reserved seats 50c.
- 4:00 p. m. Thursday, Book Review.
- 8:00 p. m. Friday, The Faculty Players. Second performance of *Devonshire Cream*.

SIXTH WEEK: July 23 to 27—

- 4:00 p. m. Monday, Book Review, Rev. W. S. Dando, Dan Brummitt's *Shoddy*.
- 4:00 p. m. Tuesday, Book Review, Rev. Samuel E. West, Book to be selected.
- 7:00 p. m. Wednesday, Lecture, Dr. Ernest Horn, The Trend in Elementary Education.
- 4:00 p. m. Thursday, Book Review, Mr. Robert Pooley, Millin's *God's Stepchildren*.
- 8:00 p. m. Thursday, Alberto Salvi, Concert Harpist, Gunter Hall. Admission 50 cents.

SEVENTH WEEK: July 30 to August 3—

- 4:00 p. m. Monday, Book Review, Mr. Merle Prunty, von Ziekursch's *Where the Waters Turn*.
- 4:00 p. m. Tuesday, Book Review, Dr. Clare B. Cornell, Dorsey's *Why We Behave Like Human Beings*.
- 8:00 p. m. Tuesday, The Coffey-Miller Players in *A Marriage of Convenience* by Alexander Dumas. The Little Theater. Reserved seats 50c.
- 7:00 p. m. Wednesday, Lecture, Mr. Rollo Walter Brown
- 8:00 p. m. Wednesday, The Coffey-Miller Players in *The Rivals* by Richard Brinsley Sheridan. The Little Theater. Reserved seats 50c.
- 4:00 p. m. Thursday, Book Review, Mr. E. M. Pfitzenreuter, Edwin Avery Park's *New Backgrounds for a New Age*.
- 7:00 p. m. Thursday, Band Concert by the Greeley Band, J. DeForest Cline, Director, North Campus.

EIGHTH WEEK: August 6 to 10—

- 4:00 p. m. Monday, Book Review, Dr. W. D. Armentrout, Thornton Wilder's *The Bridge of San Luis Rey*.
- 4:00 p. m. Tuesday, Book Review, Mr. Rollo Walter Brown, Book to be selected.
- 7:00 p. m. Wednesday, Lecture, Mr. Rollo Walter Brown
- 4:00 p. m. Thursday, Book Review, Mrs. Gertrude Spaulding. Rebecca Lowry's *Cambric Tea*.
- 8:00 p. m. Thursday. Cameron McLean, Scotch Baritone, Gunter Hall. Admission 50 cents.

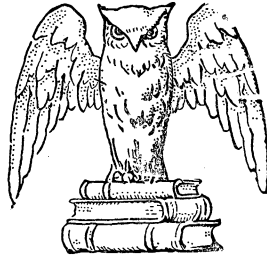


NINTH WEEK: August 13 to 17—

- 4:00 p. m. Monday, Book Review, Miss Frances Tobey,  
"The Poetry of Thomas Hardy."  
4:00 p. m. Tuesday, Book Review, Dr. O. M. Dickerson,  
Rupert Hughes' *Life of Washington*.  
7:00 p. m. Wednesday, Lecture, Mr. Merle Prunty.  
4:00 p. m. Thursday, Book Review, Dr. Carleton Wash-  
burne, Dr. Washburne's new book, *Better  
Schools*.  
8:00 p. m. Thursday, Denver Concert Quartette, Gunter  
Hall. Admission 50 cents.

TENTH WEEK: August 20 to 25—

- 4:00 p. m. Monday, Book Review, Mr. F. E. Merrill,  
John K. Winkler's, *Hearst, an American  
Phenomenon*.  
4:00 p. m. Tuesday, Book Review, Dr. A. H. Noyes,  
Sidney B. Fay's *Origins of the World War*.  
7:00 p. m. Wednesday, Lecture, Dr. Carleton Washburne.  
4:00 p. m. Thursday, Book Review, Mr. John Crowe  
Ransom, Readings from his own poems.  
7:00 p. m. Thursday, Grand Council Fire, Camp Fire  
Girls.  
10:30 a. m. Saturday: The Summer Convocation.





COLORADO STATE TEACHERS COLLEGE

# BULLETIN



SUMMER QUARTER

June 16—August 25  
1928

GREELEY, COLORADO

SERIES XXVII

NUMBER 11

---

---

## IMPORTANT ANNOUNCEMENT

---

### THE SUMMER QUARTER OPEN TO ALL

Any person twenty years of age or over, whether a high school graduate or not, may enroll in the College for the summer quarter and take such subjects as he is interested in and able to carry. A record of attendance and a list of the subjects taken will be kept. College credit toward graduation is given only to those who meet the entrance requirements as stated on pages 18, 19, 20. Students who attend the summer quarter without submitting high school credentials may later present these and have their marks previously earned transferred to the regular credit records of the College.

Those students who consider themselves candidates for graduation should make sure that proper matriculation has been effected. Since the summer quarter is open to all, students who have attended during summer quarters only should not assume that their admission has been formally determined. Your case may need adjustment under current credit standards. In the case of students who entered and earned credit prior to September 1, 1923, care should be taken to determine whether an adjustment is required. (See pages 18, 19, 20 under "Admission, Certification, and Graduation.")

The number of students who wish merely to audit classes must necessarily be limited on account of lack of room. Students enrolled for credit must be given preference. Any student desiring to enter as an auditor for one or more classes must secure a special permit from the registrar. Fees are the same as for the course when taken for credit.

The College, as usual, divides the summer quarter into two equal half-quarters for the convenience of the few students who can attend for only a part of the time. Only those courses which are designated "First Half," "Second Half," or "Either Half" carry credit for less than the full quarter. All other courses must be carried for the full quarter, if taken for college credit. Note: A required course should not be taken for half credit by a candidate for graduation.

### PERSONAL CHECKS

All students not identified at the Greeley banks are urged to bring letters of credit or sufficient money in travelers' checks to pay all bills until such time as they may be able to transfer their account to Greeley or make arrangements with the Greeley banks to cash their checks. All regular college bills, such as tuition, dormitory rent, and music, may be paid by the personal check of the student provided it is made out for the amount of the bill. The college is always willing to help out in all financial matters but does not assume the responsibility of cashing students' personal checks.

### EVENING LECTURES AND SPECIAL LECTURE COURSES

See the notice concerning the afternoon and evening lectures under Special Courses of Lectures, on Page 13.

---

---

COLORADO STATE TEACHERS COLLEGE

# BULLETIN

SUMMER QUARTER  
1928

THE QUARTER  
June 16-August 25

First Half  
June 16-July 21

Second Half  
July 23-August 25

Published Monthly by Colorado State Teachers College, Greeley, Colorado  
Entered as second class matter at the Postoffice at Greeley, Colorado,  
under the Act of August 24, 1912

Current numbers of any of the College Publications may be had on application  
to the President of the College, Greeley, Colorado.

## ORDER OF REGISTRATION

All students who expect to be in attendance for the full quarter should make up a program for the full quarter. Fees may be paid all at once, or, for the student's convenience, in two parts, namely, one-half on the designated dates of permanent registration for each half quarter.

### I. TEMPORARY REGISTRATION

Temporary registration will take place in Gunter Hall Saturday, June 16, beginning at 7:00 A. M.

Class cards will not be given out until the opening date of permanent registration. The following blanks will be provided:

1. Personal data cards
2. Temporary enrollment card

The personal data card must be filled out each quarter.

The temporary enrollment card when completed shows your proposed schedule of classes and the amount of your fees. Do not make changes in your originally approved schedule without referring such changes to your adviser. When a student's proposed schedule has been approved by his adviser (in the auxiliary gymnasium) he will then go to the main gymnasium in order that class rolls may be taken. Your adviser is the head of the department in which you are majoring. Failure to complete this part of registration will involve payment of the late registration fee of one dollar.

Class tickets are used when the enrollment in any class is limited. A complete list of limited classes will be found in the printed instructions which you will receive as a part of the registration material.

When the student presents himself for registration, detailed printed instructions will be supplied.

### II. PERMANENT REGISTRATION

The "Student's Daily Schedule" and "Class Cards" (permanent blanks) will not be given out until after June 16. Attend classes by presenting the Temporary Enrollment Card to teachers until you, your adviser and teachers are satisfied with the proposed schedule. If you are ready to transfer to permanent blanks June 22, the opening date of permanent registration, do so. Permanent registration, which includes payment of fees, will be conducted through the offices in the Administration Building on the following dates: June 22, 25, 26, 27 and 28.

### III. LATE REGISTRATION

A late registration fee of \$1.00 will be charged if temporary registration has not been completed and approved by 4:00 P. M., June 16. Transfer to the permanent blanks must be completed by 5:00 P. M., June 28, the closing date of permanent registration, or another fee of \$1.00 will be imposed. The same late registration fees will be charged for the second half of the quarter.

Except by special permission of the registrar, no student, after the first quarter of work who registers after the first day of the quarter, shall, under any consideration, be allowed to take more than sixteen hours of work. If the student is more than two days late, the total number of hours on his program will be reduced in proportion to the time lost.

### IV. LEAVING BEFORE FINAL EXAMINATIONS

Any student absent from class on the last day of the quarter will have his quarter report for that class turned in as "failure," unless he has a written permission from the vice-president of the College to leave before the close of the quarter. Application for such a permit shall be made in writing. Get blanks from the registrar. No teacher has authority to excuse a student from any class before the close of the quarter.

# OFFICERS OF GOVERNMENT AND ADMINISTRATION

HARRY V. KEPNER, Sc.D.  
President of the Board of Trustees  
GEORGE WILLARD FRASIER, Ph.D., LL.D.  
President of the College

## BOARD OF TRUSTEES

(Appointed by the Governor of the State of Colorado)

EARL M. HEDRICK ..... Wray, Colo.  
CHARLES N. JACKSON ..... Greeley, Colo.  
HARRY V. KEPNER, Sc.D. .... Denver, Colo.  
T. W. MONELL ..... Montrose, Colo.  
CLIFFORD P. REX, D.D.S. .... Alamosa, Colo.  
E. M. RUSSELL, M.D. .... Gunnison, Colo.  
KATHERINE L. CRAIG ..... Denver, Colo.  
(State Superintendent of Public Instruction, Ex-Officio)

## OFFICERS OF ADMINISTRATION

DR. KEPNER ..... President  
DR. RUSSELL ..... Vice-President  
MR. MCMURDO ..... Secretary  
DR. KEPNER, MR. JACKSON, MISS CRAIG .....  
..... Executive Committee for Colorado State Teachers College

## OFFICERS OF ADMINISTRATION

GEORGE WILLARD FRASIER, Ph.D., LL.D., ..... President of the College  
ETHAN ALLEN CROSS, Ph.D. .... Vice-President of the College  
WINFIELD DOCKERY ARMENTROUT, Ed.D. .... Director of Instruction  
..... Director of Training Schools  
CLARE BROWN CORNELL, Ph.D. .... Director of Freshman Studies  
A. EVELYN NEWMAN, A.M. .... Dean of Women  
FREDERICK LAMSON WHITNEY, Ph.D. .... Director of Research  
JOHN R. BELL, Litt.D. .... Director of Extension Service

## THE GRADUATE COUNCIL

FRANK COVERT JEAN, Ph.D. .... Chairman  
J. D. Heilman, Ph.D.; Earle U. Rugg, Ph.D.; O. M. Dickerson, Ph.D.;  
W. G. Bowers, Ph.D.; F. L. Whitney, Ph.D.; W. D. ArmentROUT, Ed.D.;  
President and Vice-President of the College ex-officio.

ROY M. CARSON ..... Registrar  
J. P. CULBERTSON ..... Business Agent  
W. F. MCMURDO ..... Treasurer  
RUTH L. GUNSAUL ..... Secretary to the President

## FACULTY

GEORGE WILLARD FRASIER, Ph.D., LL.D., President.

---

WINFIELD DOCKERY ARMENTROUT, A.B., A.M., Ed.D., Director of Instruction, Director of Training Schools, Professor of Education.

GRACE MAY BAKER, B.S., B. Art. Ed., Professor of Art.

GEORGE ALEXANDER BARKER, B.S., M.S., Professor of Geology, Geography and Physiography.

SAMUEL CLAY BEDINGER, LL.B., Assistant Professor of Commercial Education.

JOHN RANDOLPH BELL, Ph.B., A.M., Litt.D., Director of Extension Service, Professor of Extra-Mural Education.

WILFRED GEORGE BINNEWIES, A.B., A.M., Associate Professor of Sociology.

RALPH THOMAS BISHOP, A.B., Associate Professor of Industrial Arts.

\*HAROLD GRANVILLE BLUE, A.B., A.M., Professor of Education.

WILLIAM GRAY BOWERS, B.S., A.M., Ph.D., Professor of Chemistry.

MARGARET ELIZABETH BRYSON, M.D., Medical Adviser of Women, Associate Professor of Physical Education.

ALBERT FRANK CARTER, M.E., M.S., A.B., Professor of Library Administration, College Librarian.

JEAN CAVE, B.S., A.M., Associate Professor of Physical Education.

J. ELBERT CHADWICK, Instructor in Piano and Organ.

HARRY WILLIAM CHARLESWORTH, A.B., A.M., Acting Assistant Professor of Mathematics.

J. DEFOREST CLINE, Director of the Conservatory of Music, Professor of Public School Music.

AMBROSE OWEN COLVIN, B.C.S., Professor of Commercial Education.

GEORGE EDWIN COOPER, Pd.B., Pd.M., Director of Athletics for Men, Professor of Physical Education.

CLARE BROWN CORNELL, B.Ed., A.B., A.M., Ph.D., Director of Freshman Studies, Professor of Educational Administration.

ETHAN ALLEN CROSS, A.B., A.M., Ph.D., Vice-President of the College, Professor of English.

LILLIAN GRACE CUSHMAN, Pd.B., Assistant Librarian, Instructor in Library Administration.

\*HELEN CALDWELL DAVIS, A.B., A.M., Principal of Teachers College Elementary School, Professor of Elementary Education.

LUCY DELBRIDGE, Pd.B., Instructor in Violin.

OLIVER MORTON DICKERSON, A.B., A.M., Ph.D., Professor of History and Political Science.

J. S. DOUBENMIER, Assistant Professor of Physical Education, Teachers College Elementary and Secondary Schools.

ETHEL TURNER DULIN, B.S., Associate Professor of Primary Education.

RICHARD G. ELLINGER, A.B., Associate Professor of Art.

KATHREEN EMERY, B.S., Acting Instructor in Art.

GEORGE WILLIAM FINLEY, B.S., M.S., Professor of Mathematics.

\*CHESTER KIMES FLETCHER, A.B., A.M., Assistant Professor of Extra-Mural Education.

---

\*On leave.



CHARLES MEAD FOULK, Pd.B., Pd.M., Professor of Industrial Arts.

\*NELLE CATHERINE GIBERT, A.B., A.M., Assistant Professor of Foreign Languages.

J. ALLEN GRUBB, Instructor in Voice.

ELLA FRANCES HACKMAN, B.S., Associate Professor of Secondary Social Science.

SAMUEL MILO HADDEN, Pd.B., A.B., A.M., Professor of Industrial Education.

WILLIAM HENRY HARGROVE, Pd.B., B.S., Professor of Rural and Agricultural Education.

EZRA CLARENCE HARRAH, A.B., A.M., Ph.D., Associate Professor of Zoology.

M. LUCILE HARRISON, Ph.B., Assistant Professor of Elementary Education.

JOSEPHINE MARY HAWES, A.B., A.M., Associate Professor of English.

JACOB DANIEL HEILMAN, A.B., B.E., M.E., Ph.D., Professor of Educational Psychology.

FRED LOUIS HERMAN, B.S., Associate Professor of Secondary Science.

OSCAR EDWARD HERTZBERG, A.B., A.M., Ph.D., Associate Professor of Educational Psychology.

\*RAYMOND LEROY HILL, Associate Professor of Art.

IRA WOODS HOWERTH, A.B., A.M., Ph.D., Professor of Sociology and Economics.

BLANCHE BENNETT HUGHES, Instructor in Piano.

FRANK COVERT JEAN, A.B., A.M., Ph.D., Professor of Biology, Chairman of the Graduate Council.

ALICE JOHNSON, Ph.B., Associate Professor of Secondary English, Dean of High School Girls.

MARY WINSTON JONES, A.B., A.M., Assistant Professor of Commercial Education.

ELIZABETH HAYS KENDEL, Pd.B., Pd.M., A.B., Associate Professor of Secondary Mathematics.

\*MARGARET JOY KEYES, A.B., Associate Professor of Physical Education.

WINFIELD LEROY KNIES, A.B., Assistant Professor of Commercial Education.

ELLEN GERTRUDE LEE, Instructor in Camp Fire Training.

ELIZABETH LEHR, B.S., Assistant Professor of Elementary Education.

ROYCE REED LONG, A.B., Professor of Physical Education.

FLORENCE LOWE, Pd.B., Pd.M., A.B., Assistant Professor of Art.

ELIZABETH LUZMOOR, B.S., Assistant Professor of Elementary Education.

\*GENEVIEVE L. LYFORD, B.S., A.M., Professor of Kindergarten Education.

THOMAS JEFFERSON MAHAN, A.B., A.M., Assistant Professor of Education.

ARTHUR ERNEST MALLORY, A.B., A.M., Professor of Mathematics.

PAUL THOMAS MANCHESTER, A.B., A.M., Ph.D., Professor of Romance Languages.

VIVIAN B. MARSH, B.S., Assistant Coach.

ANNIE MCCOWEN, A.B., B.S., A.M., Professor of Elementary Education.

PAUL MCKEE, A.B., A.M., Ph.D., Professor of Elementary Education.

LUCY NEELY MCLANE, A.B., B.L.I., Associate Professor of Secondary English.

ESTELLE MOHR, B.S., Assistant Professor of Public School Music.

---

\*On leave.

GEORGIA ETHEL MOORE, B.S., Assistant Professor of Art.  
 ROBERT HUGH MORRISON, A.B., A.M., Assistant Director of Extension Service, Executive Secretary of Placement Bureau, Associate Professor of Extra-Mural Education.  
 VERA NEWBURN, B.S., M.S., Assistant Professor of Household Arts.  
 \*A. EVELYN NEWMAN, A.B., Ph.B., A.M., Professor of English Literature, Dean of Women.  
 LESTER EDWIN OPP, Mus.B., Assistant Professor of Music.  
 IVAREA BEIL OPP, Instructor in Reed Instruments.  
 WILLIAM BIDWELL PAGE, M.D., Library Assistant, Instructor in Library Administration.  
 ORA BROOKS PEAKE, Pd.B., A.B., A.M., Associate Professor of History.  
 KENNETH F. PERRY, A.B., Instructor in Secondary Industrial Arts.  
 ETHEL BLANCHE PICKETT, B.S., A.M., Associate Professor of Household Science.  
 ROBERT CECIL POOLEY, A.B., A.M., Assistant Professor of Secondary English.  
 CLAIRE MORELAND PRESTON, A.B., A.M., Assistant Professor of Elementary Education.  
 JAMES H. RISLEY, A.B., A.M., Professor of Extra-Mural Education.  
 LUCY LYNDE ROSENQUIST, Ph.B., B.S., Associate Professor of Primary Education.  
 MARGARET MOORE ROUDEBUSH, A.B., Ph.B., Professor of Household Arts.  
 EARLE UNDERWOOD RUGG, A.B., A.M., Ph.D., Professor of Education.  
 CHARLES R. SATTGAST, A.B., A.M., Assistant Professor of Extra-Mural Education.  
 OTTO WILLIAM SCHAEFER, Associate Professor of Industrial Arts.  
 EDITH MARIE SELBERG, A.B., A.M., Assistant Professor of Biology.  
 JOHN HENRY SHAW, Director of Journalism, Editor of Official Publications.  
 ANGE S. K. SOUTHARD, A.B., Instructor in Music Appreciation.  
 CORA MAY THOMAS, Pd.B., Library Assistant, Cataloguer and Classifier.  
 JAMES J. THOMAS, A.C.M., Assistant Professor of Music.  
 A. L. THRELKELD, B.S., A.M., Professor of Extra-Mural Education.  
 FRANCES TOBEY, B.S., A.B., Professor of English  
 FLOSS ANN TURNER, Ph.B., Associate Professor of Primary Education.  
 CHARLES FRANKLIN VALENTINE, A.B., A.M., Associate Professor of Physics.  
 SUSAN HART VAN METER, Pd.B., B.S., Associate Professor of Elementary Education.  
 WALLACE THEODORE WATT, B.S., A.M., Ph.D., Assistant Professor of Educational Psychology.  
 IVA CATHERINE WATSON, Pd.M., B.S., Reference Librarian.  
 FREDERICK LAMSON WHITNEY, Ed.B., Ph.B., A.M., Ph.D., Director of Educational Research, Professor of Education.  
 \*EDITH GALE WIEBKING, A.B., Associate Professor of Household Arts.  
 GRACE HANNAH WILSON, Pd.B., A.B., A.M., Associate Professor of Education, Director of Religious Activities.  
 WILLIAM WRINKLE, A.B., A.M., Principal Teachers College High School; Associate Professor of Secondary Social Science.

---

\*On leave.

## SPECIAL FACULTY AND GENERAL LECTURERS

SUMMER QUARTER, 1928

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

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

- MISS ELIZABETH CARNEY**, Instructor in English, Lake Junior High School, Denver, Colorado. Courses in English.
- MR. P. C. ARMENTROUT**, Superintendent of Schools, Erie, Colorado. Courses in English.
- MR. J. H. RISLEY**, Superintendent School District No. 1, Pueblo, Colorado. Courses in Education.
- MR. W. B. DOBSON**, Supervisor of Intermediate Grades, Public Schools of Fort Worth, Texas. Courses in Education.
- MISS CAROLYN THOMAS**, Instructor in Physical Education, High School Trinidad, Colorado. Courses in Physical Education for Women.
- MR. N. E. BUSTER**, Assistant Superintendent of Schools, Fort Worth, Texas. Courses in Education.
- MR. R. L. HUNT**, Superintendent of Schools, Las Animas, Colorado. Courses in Education.
- MR. F. A. OGLE**, County Superintendent of Schools, Weld County, Colorado. Courses in Education.
- MR. G. E. BROWN**, Superintendent of Schools, Greeley, Colorado. Courses in Education.
- MRS. EVA M. KLEE**, New York City. Courses in Art.

# COLORADO STATE TEACHERS COLLEGE

Summer Quarter 1928

The purpose of Colorado State Teachers College is to train teachers for public school service. Being supported by public taxation of all the property of the State of Colorado, the College aims first to prepare teachers for all the kinds of public schools maintained within the State of Colorado. This includes rural schools, kindergartens, primary, intermediate grade, upper grade, junior high schools, and senior high schools. The College also accepts the responsibility of training supervisors for rural schools, principals, superintendents, teachers of home economics, industrial arts, fine and applied arts, training teachers, teachers of defective and atypical children, and teachers for adult night schools.

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

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

## LOCATION

Teachers and students who have attended Colorado State Teachers College know of the beautiful campus and ideal location of the College. For the benefit of thousands of others into whose hands this issue of the bulletin is sent, the following information is given:

The College campus covers sixty-five and a half acres, on an eminence overlooking the city of Greeley. Greeley is a beautiful city, with 14,000 population. The streets are wide and graveled, and great spreading trees on practically all of the streets in the city form continuous avenues of shade. Attractive homes and beautiful lawns add to the appearance of the city.

Greeley is located on the Union Pacific and the Colorado & Southern railways, fifty-two miles from Denver, and just thirty miles from the gateway to Rocky Mountain National (Estes) Park. The latter forms the playground each week-end for many students at Colorado State Teachers College.

The location of the College so close to the Rocky Mountains is in itself a distinct advantage. This, together with the altitude of the city—4,567 feet above sea level—makes an ideal location for summer study. Clear, dry air, sunny days, and cool nights, distinguish Greeley from other communities where the heat and humidity make work in the summertime almost unbearable. The cool snow-laden air from the mountains sweeps over Greeley and the College campus, cooling the atmosphere and making the days pleasant, even in the middle of summer. Seldom does the night temperature go above 70 degrees, and 60 to 65 degrees at night is usual.

## RECREATION

The week-end excursions to the Rocky Mountain National Park, conducted under the direction of the Outing Committee of Colorado State Teachers College, have become widely known. They are now a highly appreciated part of the life of the College.

Busses leave the campus each morning at 10:30 and each afternoon at 4:15. Opportunity is thus afforded one or more individuals to take the park trip twice each day. Students and faculty members of Colorado State Teachers College get a special round trip rate of \$5.00.

The Outing Committee of Colorado State Teachers College, cooperating with the Rocky Mountain Parks Transportation Company, has arranged a series of excursions, each week-end, to the wildest and most rugged parts of the Rocky Mountain National Park. These outings are organized with Camp Olympus as a base, so that teachers and faculty members may go in groups of ten or more to the summit of the Continental Divide, Grand Lake, or other points of major interest in the Rocky Mountain National Park at approximately half price.

Many tourists take the circle trip—Denver, Estes Park, Milner Pass, and Grand Lake—at a cost of \$25.00. It is possible, however, for students of Teachers College to get a round trip ticket to the Park for \$5.00 and the round trip ticket from Camp Olympus to Grand Lake and return for \$7.00; in this way, for \$12.00, plus the meals and lodging at Camp Olympus (\$1 for lodging and fifty cents for meals), to get a trip that is as wonderful and inspiring as the trip for which the tourists pay the higher rate.

Students desiring to enter the summer school at Greeley and at the same time to enjoy the privileges of a two weeks' stay in the heart of the Rockies can get this combination by enrolling for one of the pre-summer school extension courses given at Camp Olympus from June 1st to 14th. If interested in these courses write the Extension Department, Colorado State Teachers College.

## FEES AND EXPENSES

**BOARD**—Students board in private houses, and in the College cafeteria. The average cost of board is from \$5.50 to \$6.50 per week. In private boarding houses the rate averages \$6.00 per week.

**ROOMS**—There is an extensive list of approved houses, in the vicinity of the College, for students. With two students in a room the cost is \$10.00, \$11.00, or \$12.00 a month for each student; for one student in a room the cost is from \$12.00 to \$18.00. Student standard regulations are the same during the summer quarter as for the regular year, save that there are no zoning restrictions and no requirement of date books.

**DORMITORIES**—The Dormitory Triangle provides accommodations for 114 women students. Each room is provided with two beds, and complete accommodations for two students. Because of the great demand in the summer for rooms for a half quarter only, the College has decided to rent dormitory rooms for either half or full quarter. These rooms will cost from \$25.00 to \$28.00 for the whole quarter, or from \$15.00 to \$18.00 for either half-quarter. Students in the dormitories are required to furnish their own bed linen and towels.

It is much more satisfactory for students to see rooms in private homes before renting them. They are urged, therefore, to come a few days before the opening of the quarter, in order that they may personally select their rooms. If information concerning rooms is desired, students may write to the dean of women.

Those who wish to find roommates after they arrive in Greeley should visit the dean of women's office for a list of those desiring roommates. In selecting a room first, the student runs a great risk of not finding a roommate.

**LIGHT HOUSEKEEPING**—A few rooms in houses allowing light house-keeping privileges are available for a reasonable rental. The price varies from \$18.00 to \$26.00 per month.

**RESERVATIONS**—Reservations will be held until noon of registration day, June 16. If students are prevented from arriving at that time, and will notify the dean of women by telegraph or telephone, rooms will be reserved for them, subject to full payment of the rent. Otherwise the reservation will be canceled, the deposit forfeited and the room assigned to another applicant. This regulation applies to dormitory and all other rooms.

**COLLEGE FEES**—The state provides funds for the maintenance of the College for three quarters in the year. The summer quarter has the use of the College buildings and equipment, but it is necessary to draw financial support largely from student fees. Each student pays \$16.00 for a half quarter, or \$32.00 for the full quarter, plus a library fee of \$2.00. The library fee is paid by all students, whether they take either a half or full quarter. Students not citizens of Colorado pay an additional fee of \$5.00 for the full quarter or \$2.50 for a half quarter.

All students who expect to be in the College for the full quarter are expected to make out their programs of studies for the full time. The fees, however, may be paid in two parts, one half on June 16, and the other, July 22.

**BOOKS**—New books may be bought from the College bookroom.

#### APPROXIMATE EXPENSE FOR FULL QUARTER

The table below represents a median of expense—neither the least possible nor the highest—and covers the principal items:

Room .....	\$ 42.00
Board .....	72.00
College Fees .....	32.00
Library Fee .....	2.00
Books and Supplies .....	10.00
Total .....	<u>\$158.00</u>

#### THE DAILY PROGRAM

For the summer quarter, the class periods are arranged as follows:

- 7:00 to 7:50—First Class Period
- 8:00 to 8:50—Second Class Period
- 9:00 to 9:50—Third Class Period
- 10:00 to 10:50—Fourth Class Period
- 11:00 to 11:50—Fifth Class Period
- 12:00 to 12:50—Sixth Class Period
- 2:00 to 2:50—Ed. 100d—Unit Courses in Education
- 3:00 to 3:50—Ed. 100a—Unit Courses in Education
- 4:00 to 4:50—Book Reviews
- 7:00 to 8:00—General Lectures in Gunter Hall

## STUDENT STANDARDS REGULATIONS

1. Only rooms approved by the College shall be eligible for student lodgers.
2. Rooms shall be engaged for the quarter of three months. In absence of other contract it is to be understood that rent is to be paid by the calendar month.
3. In the event of a change of rooming place, permission should be obtained from the Dean of Women for women and the Vice-President for men, and two weeks notice given to the householder, or two weeks rent paid in advance.
4. Each rooming house shall have a responsible head continually in charge.
5. Men students and women students shall not room in the same house.
6. All rooming houses must be kept in healthful, sanitary condition. Comfortable single beds are required. All rooms which girls occupy for living and study purposes should be kept at a heat of 68 to 70 degrees Fahrenheit during the winter, spring and fall. Rooms must be lighted with at least sixty watt globes for study purposes. Bathing facilities must be such that a daily bath may be had. Students should have the use of the parlor three evenings a week. Two of these evenings shall be week-end evenings. Halls must be lighted until ten o'clock at night.
7. Men and women students are expected to observe quiet and orderly conduct in their rooming and boarding places, to take due care of the furniture and premises, and to be in their rooms by ten o'clock on school nights. After dinner hours, it is permissible that a social time be observed, providing that it is not prolonged so as to interfere with study hours. It is expected that the hours after 8 o'clock in the evening, except Friday, Saturday, and Sunday, shall be observed as study hours and that there shall be quiet in the houses.
  - a. On Friday and Saturday nights, after informing their householders, women may attend social functions, approved by the College, but such gatherings shall close at twelve o'clock. Houses must be closed at 12:30.

(The fact that students eat at the cafes after dances, does not entitle them to return later than 12:30 o'clock.)
8. Junior College students (students having less than 96 hours credit) shall be permitted to have three dates per week with either a man or a girl. One mid-week date may be counted as one of these three, provided it ends by 10 P. M.
  - a. Dates for Senior College students (students having 96 hours credit) shall not be restricted, provided these dates do not interfere with their work, so as to make it of unsatisfactory grade, or with the standards of the College.
9. There must be no attending of out-of-town dances without permission of the Dean of Women for the women or the Vice-President for the men.
10. Non-college persons may be invited to student social activities with the permission of the Dean of Women.
11. All chaperones must be approved by the Dean of Women.
12. The College requests that cases of illness among the students in the rooming or boarding houses be reported immediately by the householder to the Dean of Women and to the Medical Adviser of Women.
13. The College reserves the right to decide, upon due investigation, when above Student Standards of Conduct are disregarded by the householder or boarding house proprietor, that the establishment shall be removed from its approved list.



## SPECIAL COURSES OF LECTURES

The College Assembly and Evening Lectures—For sixteen years the College has maintained a general lecture course with a series of lectures by the most eminent teachers and lecturers obtainable. This annual series of lectures through these years has been the means for thousands of progressive teachers of keeping in touch with the newest developments in the evolution of educational philosophy and practice, from year to year.

In addition to the evening lectures, students are to have an extended opportunity to hear these outstanding teachers. There will be three lecture hours in the afternoons. Two of these will be devoted to unit courses in education, and the third to book reviews. There will be a different lecturer for each period each day.

Following up the success of a few book review hours given first in the summer quarter of 1924-25, the College is continuing a book review hour, three days a week through the quarter. Members of the regular faculty, visiting teachers, and special lecturers will review the outstanding current books in education, philosophy, history and political science, literature, science, religion, and like fields of interest. The course of lectures is open to all without registration or extra fee. One may attend all the lectures regularly or drop in only occasionally when a book of special interest to him is being discussed. There is no credit for the course.

## TRAINING SCHOOLS

The Training School is an educational laboratory where useful problems are being worked out under the direction of skilled experts. New methods that save time, new schemes for better preparing the children for life, new curricula and courses of study are continually being considered by this school and are tried out, provided they are sound educationally. The aim is not to develop a school that is entirely different from the elementary and secondary schools of the state, but to reveal conditions as they are and as they should be. The Elementary and Secondary Training Schools strive to be leaders in the state in all that is new and modern. Effort is made to maintain such standards of excellence in the work that they may at all times be offered as a demonstration of good teaching under conditions as nearly normal as possible in all respects.

Students who expect to teach in the Training Schools during the summer quarter are asked to correspond with the principal of the elementary or the secondary school before the opening of the quarter.

## REQUIREMENTS IN STUDENT TEACHING

1. The required amount of student teaching for the life certificate shall be one quarter. No credit will be given for less than a full quarter of teaching.

2. As a prerequisite to one quarter of student teaching (Ed. 2b) each student shall be required to spend one quarter in a systematic scheduled class in Pre-Teaching Observation (Ed. 2a) with the training teacher with whom he is to teach the following quarter.

3. The course in observation (Ed. 2a) shall consist of two regular observation hours each week and one conference hour every two weeks with the training teacher. This course shall also include assigned readings, method and content, which will supplement the observations and prepare the student for the subsequent course in student teaching. This course in observation (Ed. 2a) carries one hour credit.

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

5. Students making a grade of less than "C" in student teaching shall be required to repeat the course. A student receiving a grade of "F" in two quarters work in student teaching (Ed. 2b) is not permitted further enrollment in the Training Schools.

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

7. A second quarter of student teaching may be elected in the junior college for the life certificate and in the senior college for the degree.

8. Additional prerequisites for student teaching in the junior college are: Ed. 1, Ed. 2a, and the method courses required for the majors listed on page 73 of the Year Book, 1927-28. The prerequisites for student teaching in the senior college are Ed. 101 and at least one method and one content course in the student's major.

9. A full quarter of student teaching carries five hours of credit. This requires five hours of teaching a week and in addition group conferences.

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

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

#### EXTENSION DEPARTMENT

The College maintains an Extension Department to enable teachers in service to keep in touch with educational progress and to aid those teachers who have had less than standard preparation for their work to obtain a part of their professional education while teaching. For a full explanation of this work write for the Extension Bulletin. The general Catalog and Year Book explains the work of this department of the College in some detail.

Summer quarter students should understand clearly that work begun in residence and left incomplete cannot be completed through the Extension Department. Nor can unfinished work begun either in individual correspondence courses or in extension group courses be completed in residence courses.

#### PLACEMENT BUREAU

The Placement Bureau of the College looks after obtaining positions for the graduates of the College. When superintendents and other school officials request the bureau to nominate a teacher for a vacancy the bureau will recommend the best teacher available for the place and the salary offered. Teachers applying for positions through the bureau will be recommended for the very best positions they are qualified by personality, education and experience to fill. The bureau will be open and active through the entire summer.

## GRADUATE WORK

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

### ADMISSION TO THE GRADUATE SCHOOL

1. Application for admission to graduate study for either of the purposes named above must be made to the Registrar of the College. Formal blanks for this purpose will be furnished by his office.
2. The requirements for admission are:
  - a. The Degree of Bachelor of Arts, Philosophy, Science, or other four-year degree from a reputable institution authorized by law to confer these degrees and approved by this institution.
  - b. Official credentials to be filed with Registrar giving (1) a record of the high school work, (2) a transcript of the undergraduate, college or university grades.
  - c. Satisfactory classification test scores to be filed with the Registrar as a matter of record.

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

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

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

### ADMISSION TO CANDIDACY FOR THE MASTER OF ARTS DEGREE

1. Not later than the tenth week of the student's first quarter, application for admission should be made to the Registrar of the College. Formal blanks will be furnished by his office.
2. Before a student can be admitted to candidacy, he must meet the following requirements:
  - a. He must have demonstrated his ability to do a high grade of work in his field of specialization and must have shown promise of ability to do research.
  - b. The average of his first quarter's grades must be above the mean grade of "C".
  - c. He must have given evidence to the Director of the Training School of his ability to teach. This may have been done by either of the following ways: (1) Successful teaching experience; (2) Successful student teaching.
  - d. He must have established satisfactory classification test scores.
  - e. He must have demonstrated, in his department Research 223, a proficiency in organizing and expressing thought in writing. If the student shows an inability to do this, he is required to take English 20 *without credit*.

- f. He must have shown his personal fitness to become a candidate.
  - g. The head of the student's major department must have filed with the Registrar a statement endorsing the student for admission to candidacy, and giving the subject of his thesis. Blanks for this purpose will be furnished by the Registrar's office.
3. A candidate may be required by the head of his major department to pass either a written or an oral preliminary examination before he is recommended to the Graduate Council for admission to candidacy.
  4. Graduate students will not be permitted to engage in more than one extra curricular activity per quarter and then only when they reach a 50 percentile rank on the intelligence test and have made an average of "B" or more in their course work. Extra curricular activities shall be construed to include athletics, debates, oratory, dramatics, student publications, student participation in government, and the Boosters' Club.

#### TIME LIMIT FOR DEGREE

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

1. Students entering upon graduate work after September 1, 1927, during any one of the regular academic quarters (fall, winter, or spring) must complete and have approved by the Graduate Council all graduate work including the thesis within two years from the time graduate work is begun, or additional requirements may be made by the Graduate Council.
2. Students who restrict their graduate work entirely to the summer quarters must complete and have approved by the Graduate Council all requirements including the thesis within five summer quarters, or additional requirements may be made by the Graduate Council.

#### REQUIREMENTS FOR THE DEGREE

1. Beyond the four-year undergraduate course, the student working for the degree, Master of Arts, must earn graduate credits amounting to 48 quarter hours. Three quarters of work in residence are required, but one quarter of approved graduate work may be transferred from another institution; or 16 hours of approved graduate work may be done in extra-mural group classes conducted by members of the Teachers College faculty. In no case shall these provisions reduce the two full quarters of work (32 hours) required to be done on the campus.
2. Research culminating in the writing of a thesis upon some selected problem shall be an integral part of the work required for the degree. A maximum of 9 hours credit may be granted for this research.
3. Every student must register for Research 223 in his major department during his first full quarter of regular graduate work.
4. The student must have at least 64 quarter hours of undergraduate and graduate work in his major or closely related subjects.
5. He must have not less than 32 hours of undergraduate and

graduate professional work in education and related fields, as educational psychology, educational sociology, and educational biology. If the candidate majors in Education, 64 quarter hours will be required, but only work in education or educational psychology will be accepted for such undergraduate and graduate work.

6. At least 4 weeks before the date upon which the degree is to be conferred, three copies of his thesis must be filed with the head of his major department for examination by the Thesis Reviewing Committee before going to the Graduate Council for final approval.

The Thesis Reviewing Committee shall consist of the head of the student's major department, a representative of the Graduate Council appointed by the Chairman, and the instructor who is the thesis adviser, provided he is other than the head of the student's major department.

7. At least 2 weeks before the date upon which the degree is to be conferred, the complete thesis in final form must be approved and 2 copies, properly signed, filed with the Graduate Council, one of which must be an original copy. Also two dollars to bind these copies must be deposited with the Business Agent by the student.
8. The thesis must conform to definite standards. It must be typewritten on paper of good quality, size 8½ by 11 inches, and be properly bound. The arrangement of the title page is as follows:

COLORADO STATE TEACHERS COLLEGE

(Title of Thesis)

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

by

(Student's Name)

(Title of Major Department)

(Date)

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

Approved by:

Thesis Adviser .....

Department .....

Thesis Reviewing Committee

.....

Department .....

.....

Department .....

Chairman of the Graduate Council

.....

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

No graduate credit will be given for courses numbered under 100, or for scattered and unrelated courses. All courses numbered under 200 require additional work for graduate credit.

The undergraduate rule as to load applies to the Graduate School. In determining the maximum amount of work, research upon thesis must be included within the limit stated.

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

## ADMISSION, CERTIFICATION, AND GRADUATION

Prior to the school year 1923-24, students were admitted to this College upon presentation of a minimum of fifteen standard high school units, regardless of groups. Beginning with the school year 1923-24 certain designated groups were required. Unconditional admission is limited to graduates of high schools accredited by the North Central Association of Colleges and Secondary Schools or by state universities. These requirements were revised by a joint committee of Colorado high school principals and the Admission and Credits Committee of the College, with the result that the following regulations were adopted beginning September 1, 1924, and are now effective:

GROUP I. (Required) Minimum of four units must be presented

- |  |   |
|--|---|
| 1. English .....   | 3 |
| 2. Social Science (History, Civics, Sociology, Economics)..... | 1 |

GROUP II. (Required) Minimum of five units must be presented

- |  |     |
|--|-----|
| 3. Foreign Languages (A single unit will be accepted in one foreign language, but not in more than one)  | } 5 |
| 4. Mathematics (may include Advanced Arithmetic, after Algebra, but does not include Commercial Arithmetic)  |     |
| 5. The Physical and Natural Sciences (Physics, Chemistry, Biology, General Science, Botany, Zoology, Physical Geography, Physiology, Hygiene, Agriculture) |     |

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

- |  |     |
|--|-----|
| 6. Music and Fine Arts                     | } 6 |
| 7. Commercial Arts                         |     |
| 8. Home Economics                          |     |
| 9. Manual Arts                             |     |
| 10. Normal Training (Maximum of two units) |     |

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

All candidates for admission must satisfactorily pass a physical examination and also make an acceptable score in a standard classification test. Students from non-accredited high schools may gain admission to the college by presenting the same kind of credentials for admission as are required of students from accredited schools. The College will, however, give more attention to the classification test score and scholarship the first quarter, if admitted. The fee for the classification test is one dollar.

**CONDITIONAL ADMISSION**—Any applicant who is not a high school graduate but who is credited with 14 high school units may be admitted to the College upon presenting a transcript from a reputable high school, showing the completion of 14 units in designated groups. A special recommendation from the high school principal or superintendent will be required. Such students are limited to a maximum program of 12 hours per quarter in the College, and must make up the deficient high school unit in Teachers College High School during their first year in the College. The student cannot be enrolled for the second year until the entrance condition has been removed.

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

## GRADUATION

Since September 1, 1921, credit has been given only for regular College work in institutions uniformly recognized as standard colleges or colleges maintained primarily for the training of teachers. On that date Colorado State Teachers College discontinued giving college credit for teaching experience, handwriting certificates, music certificates, drawing certificates, private study, private lessons of any kind or work in business colleges, conservatories of music, dramatic schools, county institutes, reading circles, or for any other kind of work done in an institution other than one ranking as a standard normal school, college, teachers college, or university.

Students coming up for graduation since September 1, 1924, are required to meet standard requirements for the certificate or degree no matter what the requirement might have been at the time the student first enrolled in the College. This means that the student must meet the entrance requirements outlined above. It also means that credit for life experience, teaching experience, handwriting, art, and music certificates; private lessons in art, music, and the like; excessive credit for a quarter's work, and especially the excessive credit formerly given for the summer term of six weeks, will not be included in the total now required for graduation.

The College will continue to grant the two-year certificate in departments listed on page 20, the Bachelor of Arts and the Master of Arts degrees, but under the conditions of entrance which became effective September 1, 1924, and the conditions of graduation which became effective September 1, 1924. Students whose entrance was approved under the requirements announced for the school year 1923-24 are not required to make any adjustments because of the revision made as shown above which became effective September 1, 1924.

Ninety-six quarter-hours are required in the courses wherein the Life Certificate is granted upon the completion of two years of work. One hundred and ninety-two quarter-hours are required for the Bachelor of Arts degree.

ADVANCED STANDING—Students who come to the College after having done work in another college, normal school, or university, will be granted advanced standing for all such work which is of college grade, provided that the institution in question has required high school graduation as a condition for admission. Those who receive advanced standing are required to take here all of the prescribed subjects in the course they select, unless these prescribed subjects, or their substantial equivalents, have been taken already in the institutions from which the students come. No advanced standing is granted for additional units above the usual sixteen earned in the four-year high school course.

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

MAXIMUM AND MINIMUM HOURS OF CREDIT—A student registers usually for fifteen, sixteen, or seventeen hours, each quarter. The average shall be not more than sixteen hours for any three consecutive quarters, or forty-eight for the year of nine months. If a student attends during the summer quarter, this average shall be understood to apply. If the work is to count as a *resident* quarter, the student must carry at least

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

**THE TEN HOUR RULE**—A student failing to pass in ten hours of college work out of a full quarter's program of from 12 to 16 hours will be dropped at the end of the quarter and may not enroll again except by special permission of the vice-president, and then only on probation for one quarter. The second failure to pass in ten hours of work permanently excludes the student from the College.

**MINIMUM RESIDENCE REQUIREMENT**—The College does not grant any certificate or degree for less than three full quarters of resident study, during which time the student must have earned at least forty-eight (48) quarter-hours of credit. If the student's first graduation is with the Bachelor of Arts degree, only three quarters are required. Students who have already taken the Life Certificate (two-year course) must spend in residence at least two additional quarters for the Bachelor of Arts degree. Extension group classes conducted by members of the College faculty are considered as resident work and may be counted as such to the extent of one quarter for the Life Certificate (two-year course) and one of the two resident quarters required beyond that for the Bachelor of Arts degree. The residence requirement in the Graduate School is shown on page 15.

**THE GRADING SYSTEM**—The system of weighted credits which was in effect for some years was abandoned by faculty action October 1, 1924. However, extra credit earned under that system while in effect is not to be discounted because of the change. The following grading system has been adopted by faculty action and has been in effect since October 1, 1924.

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

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

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

A course marked "incomplete" must be made up within three months, or during the succeeding quarter, if credit is to be given for it. By special arrangement in advance with the vice-president or registrar and the teacher a longer time may be given.

A course marked "withdrawn" may not be made up unless arrangement has been made at the time of withdrawal with the vice-president or registrar.

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

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

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



## CERTIFICATES AND DEGREES

**THE TWO-YEAR COURSE**—A student must do full work in residence during at least three quarters before being granted any certificate. Thus, not more than forty-eight of his ninety-six hours may be granted on advanced standing or for extension courses. See page 22 for list of departments in which a Life Certificate is granted.

**THE FOUR-YEAR COURSE**—At the end of the fourth year of study, and upon the completion of one hundred and ninety-two quarter-hours of credit, the degree of Bachelor of Arts will be conferred. This degree is a life license to teach in any of the public schools of Colorado and will be granted to all students who have completed the requirements of the course they are pursuing.

**THE FIVE-YEAR COURSE**—See "Graduate Work," pages 15, 16, 17.

**REGULATIONS CONCERNING OVERLAPPING OF A.B. AND A.M. WORK**—To prevent overlapping of time and consequent misunderstanding the Admission and Credits Committee grants advanced standing never in excess of one hundred and forty-four quarter-hours to applicants who fall short of admission to the graduate school. Students transferring to Colorado State Teachers College when they are within one or two quarters of the Bachelor of Arts degree must expect to lose some time by making the transfer.

**GROUP COURSES**—Each student is required to select one of the group courses given in detail under the departments of the College. If a student has taken subjects elsewhere similar to those specified in his group course, he may, with the consent of the head of the department in which he is specializing, be allowed to substitute the work he has already had for required Colorado State Teachers College work. The student may not, however, be excused from the "Professional Core" shown above, except by the vice-president.

**TIME LIMITS FOR COMPLETING COURSES**—A student is allowed four years after beginning resident work on a two-year course in which to complete that course under the conditions which prevailed at the time the student entered the College. Another four years is allowed to complete the work of the third and fourth years under the requirements in effect at the time the student begins resident or group extension courses of the third year. This extension of time is made to take care of those who must teach between the years of resident work. At the expiration of this time a student may continue in the course already begun, but must meet any new requirements which may have been adopted in the meantime. This is intended to cover conditions of admission and general changes, as well as any which may have been made within the student's major department. In any event, when a student graduates from a two-year course the current Year Book shall be his guide in the work of the third and fourth years rather than the Year Book used for the first two years.

**TRANSFER OF CREDIT FROM OTHER COLLEGES**—Since Colorado State Teachers College is a college for training teachers, its courses of study are technical. Those who come from universities or liberal arts colleges with one, two, or three years of advanced credits may find that some of these will not apply upon the course of study they may select here. Colorado State Teachers College accepts all credits from accredited colleges on the basis of the maximum a student is permitted to earn in this College in a given period. For the most part these credits will apply as electives in our own courses of study. Colorado State Teachers College does not guarantee that a student having had a year's work in another school will be able to complete a two-year course

in three more quarters. Many of the students are able to apply their previous work upon the courses selected here without loss of time, but often students find it necessary to remain in Colorado State Teachers College somewhat longer than they had expected because of the number of required technical courses in a given curriculum.

## THE COURSE OF STUDY

*Throughout this catalog courses numbered 1-99 are primarily first and second-year subjects: 100-199 are third and fourth year. Those numbered 200 and above are graduate courses.*

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

For this reason its curriculum is sharply differentiated from that of other technical schools and also from that of the college of liberal arts, whose aim is to give a general rather than a specific training.

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

Biology	Fine and Applied Arts
Commercial Education	Geology, Physiography, and
Education	Geography
Superintendents	History and Political Science
Principals for	Home Economics
Elementary Schools	Hygiene and Physical Education
Junior High Schools	Industrial Arts
Senior High Schools	Literature and English
Supervisors and Teachers for	Mathematics
Kindergarten-Primary	Music
Intermediate	Physical Sciences
Upper Grades	Chemistry Physics
Rural Schools	Romance Languages and Latin
Educational Psychology	Social Sciences

Any student who wishes to take a Life Certificate entitling him to teach in the elementary schools before the completion of the full four-year departmental curriculum in which he is majoring, must complete all the required work in the first two years of the curriculum for that department in which he elects to take his certificate. The following departments are those referred to:

Kindergarten-Primary	Fine Arts
Intermediate Grades	Manual Training
Junior High School	Home Economics
Rural	Commercial Education
Music	

Each student selects a department in which he expects to specialize. The head of the department selected becomes the student's permanent adviser throughout his college course. The choice of a course may be made at the opening of the student's first college quarter. But if the student is undecided, he may register for one quarter as unclassified and defer the selection of his major subject until the beginning of his second quarter.

A student who expects to go straight through a four-year curriculum may major in any of the departments, but, except as noted above, can not get the Life Certificate until the full degree course is completed. One who finally expects to complete a degree course in some other department than the nine listed for the two-year life certificate may, however, begin his course as a major in one of the nine listed curricula and at the

same time elect the departmental requirements of the first two years of the curriculum he finally expects to use as his major. At the end of two years he may take his Life Certificate with a major, for example, in junior high school teaching. He would at that time have completed all the core requirements and departmental requirements of the junior high school curriculum, and also, the departmental requirements of the first two years of his four-year major, for example, history or geography. Then he may go out and teach for a time. When he returns to the College he may register as a history major, or a geography major, and go on and complete his four-year curriculum and receive the degree of Bachelor of Arts in the field finally chosen. During the first two years this student would register as a major in one of the nine designated departments. His adviser would be the head of that department. In the third and fourth years his adviser is the head of the department finally chosen for the Bachelor of Arts degree curriculum.

**LENGTH OF COURSE**—Each course is planned to occupy twelve quarters. A quarter is approximately twelve weeks in length. Upon the completion of the course the degree of Bachelor of Arts will be granted. The courses shown just preceding are so arranged that they may be divided in the middle. The first part of these courses may be completed in six quarters. The student who chooses to be graduated at the end of the two-year course receives a Life Certificate but no degree. This certificate is a life license to teach in the elementary schools of Colorado and is honored in most of the other states.

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

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

**FIRST YEAR:** Biology 1, English 4 (unless excused for proficiency), Hygiene 1, Civilization 1, Civilization 2, Education 1, and a Physical Exercise course each quarter.

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

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

**THIRD AND FOURTH YEARS:** For majors expecting to become high school teachers, supervisors, and principals. Education 101, 103 (student teaching), 111, 116 or 113, Hygiene 108, Psychology 105 and 108b, and Sociology 105.

## ART

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1. FINE ARTS METHODS FOR INTERMEDIATE GRADES AND JUNIOR HIGH SCHOOL—First half or full quarter. Two or four hours. Fee 50 cents.
2. FINE ARTS METHODS FOR PRIMARY GRADES—Full quarter. Four hours. Fee 50 cents.
3. FREEHAND DRAWING I—Full quarter. Four hours.
- 4a. ART STRUCTURE II—Full quarter. Three hours.
- 4b. DESIGN—Either half or full quarter. Two or four hours.
5. WATER COLOR PAINTING—Full quarter. Four hours.
6. ART APPRECIATION—First half quarter. One hour.

7. CONSTRUCTIVE DESIGN—Either half or full quarter. Two or four hours. Fee 50 cents.

Prerequisite Art 4a or 4b or the equivalent.

9. HISTORY OF ART—Full quarter. Three hours.

12. HOUSEHOLD ART DESIGN—Either half or full quarter. Two or four hours.

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

14. INDUSTRIAL ARTS METHODS FOR INTERMEDIATE GRADES AND JUNIOR HIGH SCHOOL—Full quarter. Four hours. Fee \$1.50.

16. FREEHAND DRAWING II—Either half or full quarter. Two or four hours.

Prerequisite—Art 3 or equivalent.

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

100. SUPERVISION OF FINE ARTS EDUCATION—Full quarter. Two hours.

101. DRAWING FROM THE FIGURE—Either half or full quarter. Two or four hours.

103. ART STRUCTURE III—Either half or full quarter. Two or four hours.

104. COLOR THEORY AND COMPOSITION—Either half or full quarter. Two or four hours.

105. WATER COLOR PAINTING—Full quarter. Four hours.

106. ADVANCED ART APPRECIATION—Second half quarter. One hour.

109. ADVANCED HISTORY OF ART—Full quarter. Three hours.

116. ADVANCED FREE HAND DRAWING—Either half or full quarter. Two or four hours.

120. OIL PAINTING—Either half or full quarter. Two or four hours.

223. RESEARCH IN ART—Full quarter. Three hours. (Taken in the first quarter of graduate work.)

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

224. RESEARCH IN ART EDUCATION—Full quarter. Three hours. This is the thesis course for graduate students in their second quarter.

225. RESEARCH IN ART EDUCATION—Full quarter. Three hours. A continuation of Art 224.

## ATHLETICS

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

13. ATHLETIC TRAINING—Two periods. First half quarter. One hour.

52. MAT WORK AND ELEMENTARY TUMBLING—Either half or full quarter. One or two hours.

55. WRESTLING, BOXING, FENCING, AND OTHER ACTIVITIES—Either half or full quarter. One or two hours.

70. SWIMMING—Either half or full quarter. One or two hours.

165. FOOTBALL COACHING—Five periods. First half quarter. Two hours.

Theory of coaching football, with stress placed on fundamentals of football for the individual and for the organized team. Special attention given to offensive and defensive systems. Generalship, training, equipment, and the newer rules will be discussed.

166. BASKETBALL COACHING—Five periods. First half quarter. Two hours.

Theory of coaching, different styles of offense and defense used by leading coaches, goal throwing, out of bounds plays, and the handling of men will be among the topics considered.

168. TRACK AND FIELD COACHING—Five periods. First half quarter. Two hours.

Theory and practice in starting, sprinting, distance running, hurdling, jumping, pole vaulting, throwing the weights and the javelin, training and management of meets, and the rules for various track and field events are subjects which will make up the course.

169. BASEBALL COACHING—Five periods. First half quarter. Two hours.

Theory and practice in batting, fielding, pitching and base running. Attention is given to fundamentals, teamwork, coaching methods, rules, conditioning the team, and methods of indoor practice.

## BIOLOGY

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1. EDUCATIONAL BIOLOGY—Full quarter. Three hours. Fee \$1.00.

106. BIOLOGICAL FOUNDATIONS OF EDUCATION—Second half quarter. Four hours.

223. RESEARCH IN BIOLOGY—Fall quarter. Three hours. (Taken in the first quarter of graduate work.)

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

224. BIOLOGICAL RESEARCH—Three hours. Fee \$3.00. Problems for graduate thesis. Conference course. Students should register for this course only after consultation with the head of the department.

225. BIOLOGICAL RESEARCH—Three hours. A continuation of 224. Fee \$1.00.

## BOTANY

2. GENERAL BOTANY—Full quarter. Four hours. Desirable prerequisite, Botany 1. Fee \$1.00.

101. SYSTEMATIC BOTANY—Full quarter. Four hours. Fee \$1.00.

223. RESEARCH IN CHEMISTRY—Full quarter. Three hours. (Taken in the first part of graduate work.)

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

224. BOTANICAL RESEARCH—Three hours. Fee, \$3.00. Problems for graduate thesis. Conference course. Students should register for this course only after consultation with the head of the department.

225. BOTANICAL RESEARCH—Three hours. A continuation of 224. Fee \$1.00.

## BIOTICS

101. GENETICS AND EUGENICS—Full quarter. Four hours. Desirable prerequisite, Biology 1.

201. GENETICS AND EUGENICS—Full quarter. Four hours.

## ELEMENTARY SCIENCE

1. ELEMENTARY SCIENCE—Either half quarter. Four hours. Fee \$1.00. This course especially for elementary and junior high school teachers.

A special section of this course will be taught during the second half. It will meet five times per week and will fulfill the elementary science requirement.

3. ELEMENTARY SCIENCE—Second half. Three hours. Fee, \$1.00.

Home improvement or nature study as applied to the beautification of the home surroundings.

## GENERAL SCIENCE

1. GENERAL SCIENCE—Full quarter. Four hours. Fee, \$1.50. Especially for junior high school majors.

## ZOOLOGY

1. GENERAL ZOOLOGY—Full quarter. Four hours. Fee, \$1.00.

3. BIRD STUDY—Each half. Three hours. Fee \$1.00.

223. RESEARCH IN ZOOLOGY—Full quarter. Three hours. (Taken in the first quarter of graduate work.)

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

224. ZOOLOGICAL RESEARCH—Three hours. Fee \$3.00. Problems preliminary to a thesis. Conference course. Before registering for this course students should consult with the departmental staff.

225. ZOOLOGICAL RESEARCH—A continuation of 224. Three hours. Fee, \$1.00.

## CHEMISTRY

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1. GENERAL CHEMISTRY—Full quarter. Three hours. Fee, \$3.00.

4. GENERAL CHEMISTRY—Full quarter. Four hours. Fee, \$4.00.

7. QUALITATIVE ANALYSIS—Either half or full quarter. Two or four hours. Fee, according to hours of credit.

108. ORGANIC CHEMISTRY—Full quarter. Three hours. Fee, \$3.00.

110. ORGANIC CHEMISTRY—Full quarter. Four hours. Fee, \$4.00.

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

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

114b. QUANTITATIVE ANALYSIS—Either half or full quarter. Four hours. Fee, \$4.00 for each course.

117. THE TEACHING OF CHEMISTRY—Full quarter. Three hours.

223. RESEARCH IN BIOLOGY—Full quarter. Three hours. (Taken in the first quarter of graduate work.)

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

## COMMERCIAL EDUCATION

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for half credit.

1. PRINCIPLES OF SHORTHAND I—First half quarter. Four hours.

- 2. PRINCIPLES OF SHORTHAND II—Second half quarter. Four hours.
  - 3. SECRETARIAL PRACTICE I—Either half or full quarter. Two or four hours.
  - 4. METHODS OF TEACHING SHORTHAND—Full quarter. One hour.
  - 11. PRINCIPLES OF TYPEWRITING I—Full quarter. Two hours. Fee \$1.00.
  - 13. PRINCIPLES OF TYPEWRITING III—First half or full quarter. One and one half or three hours. Fee \$1.00.
  - 14. METHODS OF TEACHING TYPEWRITING—Full quarter. One hour.
  - 36. HANDWRITING METHODS—First half quarter. One hour.
  - 37. BUSINESS MATHEMATICS—Second half quarter. Four hours.
  - 42. ADVERTISING—Second half quarter. Four hours.
  - 50. PRINCIPLES OF ACCOUNTING I—First half quarter. Four hours.
  - 106. SECRETARIAL SCIENCE I—Full quarter. Three hours.
  - 110. OFFICE APPLIANCES—Full quarter. Four hours.
  - 159. AUDITING—Second half quarter. Four hours.
  - 158. PROBLEMS IN COMMERCIAL EDUCATION—Full quarter. Four hours.
  - 213. COMMERCIAL EDUCATION CURRICULA—Full quarter. Two hours.
  - 223. RESEARCH IN COMMERCIAL EDUCATION—Full quarter. Three hours.  
(Taken in the first quarter of graduate work.)
- This is a required seminar and conference course for graduate students who are working on their masters' investigations. The director of educational research meets the group three times each week and confers with individual students in the research office. Small group conferences are held when needed. Each student meets his thesis adviser regularly.
- 224. RESEARCH IN COMMERCIAL EDUCATION—Full quarter. Three hours.

## EDUCATION

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

### I. COURSES PRIMARILY FOR JUNIOR COLLEGE STUDENTS

- 1. INTRODUCTION TO EDUCATION—Full quarter. Four hours.  
Required of all first year students.
- 2a. PRE-TEACHING OBSERVATION—Full quarter. One hour.
- 2b. STUDENT TEACHING IN THE ELEMENTARY AND JUNIOR HIGH SCHOOL—Full quarter. Hours according to schedule.
- 3a. PRIMARY METHODS—Reading, Language, and Spelling—Either half or full quarter. One and a half or three hours.
- 3b. PRIMARY METHODS—Arithmetic, Social Science, and Health—Either half or full quarter. One and a half or three hours.
- 3c. PRIMARY METHODS—Literature and Theory of Games for Kindergarten-Primary Grade—Either half or full quarter. One and a half or three hours.
- 4a. INTERMEDIATE GRADE METHODS—Reading, Language, and Spelling—either half or full quarter. Two or four hours.
- 4b. INTERMEDIATE GRADE METHODS—Arithmetic, Social Science, and Health—either half or full quarter. Two or four hours.
- 5. PRINCIPLES OF TEACHING—Either half quarter, five times a week. Three hours.
- 10. AN INTRODUCTION TO CURRICULUM MAKING, FORMERLY THE ELEMENTARY SCHOOL CURRICULUM—Full quarter. Three hours.  
Prerequisites, Ed. 1 and Sophomore standing.

15. EDUCATIONAL GUIDANCE—Either half or full quarter. One and a half or three hours.

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

16a. ADVANCED TRAINING COURSE FOR CAMP FIRE GIRLS LEADERSHIP—Either half quarter. One hour.

17. BOY SCOUT WORK—First half quarter. One hour.

20. AGRICULTURAL EDUCATION—Either half or full quarter. Two or four hours.

21. RURAL SCHOOL PROBLEMS—Second half quarter. Three or four hours.

23. RURAL SCHOOL MANAGEMENT AND METHODS—Either half or full quarter. Two or four hours.

24. THE RURAL COMMUNITY—Second half quarter. Two hours.

28. SCHOOL AND HOME GARDENS—First half quarter. Two hours.

51. LITERATURE AND THEORY OF GAMES. Now Ed. 3c.

52. KINDERGARTEN MATERIALS—Either half or full quarter. One and a half or three hours:

65. BIBLE STUDY, RELIGION OF ISRAEL—First half quarter. Two hours.

This course will trace the religion of Israel from earliest beginnings through the exile period, showing the growth, through experience, of the Hebrew religion and the progress of the Hebrew conception of God. Emphasis will be laid upon the teachings of the Prophets.

66. BIBLE STUDY, THE PERSONALITY AND TEACHINGS OF JESUS—Second half quarter. Two hours.

This is a study of Jesus and his world, and of Jesus and our world today, with a historical study of the records of the life of Jesus.

## II. COURSES PRIMARILY FOR SENIOR COLLEGE STUDENTS

100a. PROBLEMS OF EDUCATION—Either half or full quarter. One credit hour each half. (Fifteen or more lecturers.)

A strong course of all major fields of knowledge emphasizing recent developments in theory and practice.

100d. UNIT COURSE IN EDUCATION—Each course one hour—summer quarter.

These unit courses will deal each for nine days, Monday to Friday one week, Monday to Thursday a second week, with five major phases of creative education. Unit 1—Creative Music—will be given by Mrs. Satis Coleman, Lincoln School of Teachers College, an outstanding leader of creative music; Unit 4—Creative Literature—will be given by Dr. Rollo W. Brown of Cambridge, Mass., a writer of national renown in this field; Unit 3—Creative Religion—will be given by the Reverend W. S. Dando; Unit 2—Creative Art—will be given by Mr. Alfonso Iannelli, Chicago Art Institute, and Unit 5—Creative Education in School—will be given by Dr. Carleton W. Washburne, Superintendent of Schools in Winnetka, Illinois. Dr. Washburne will emphasize the application of creative education to public school practice.

100e. UNIT COURSES IN EDUCATION—County Superintendents, June 18 to 28, inclusive. Each course for two weeks. Each carries one hour's credit. Any one or more may be taken.

The following units will be given this summer: Unit 8—Rural School Buildings; Unit 9—Improvement of Written Examinations; Unit 10—Recent Investigations in the course of Study and Applications to Rural Schools.

101. PRINCIPLES OF HIGH SCHOOL TEACHING—Full quarter. Four hours.

102. ADVANCED STUDENT TEACHING IN THE ELEMENTARY TRAINING SCHOOL—Full quarter. Five hours.

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

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



104. THE PROJECT METHOD OF TEACHING—First half quarter. Two hours.

105. PRACTICAL PROJECTS IN THE PRIMARY GRADES—Either half or full quarter. Two or four hours.

106. ELEMENTARY TYPES OF TEACHING—Either half or full quarter. Two or four hours. (Not given summer 1928. Those students who may have been required to take Ed. 106 may take Ed. 105, Ed. 107, or Ed. 108 as a substitute.)

107. METHODS OF IMPROVING READING AND STUDY HABITS OF ELEMENTARY SCHOOL CHILDREN—Either half or full quarter. Two or four hours.

108. EDUCATIONAL SUPERVISION—Either half or full quarter. Two or four hours. (First half—Supervision of Skill Subjects; Second half—Supervision of Content Subjects.)

109. SUPERVISED STUDY—Either half or full quarter. Two or four hours.

110. EXTRA-CURRICULAR ACTIVITIES—First half quarter. Two hours.

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

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

111. PHILOSOPHY OF EDUCATION—Full quarter. Four hours. Required fourth year.

112. SCHOOLHOUSE CONSTRUCTION. Now part of Ed. 143.

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

(Primarily for Junior High School majors. Senior college and graduate students take Ed. 213.)

114. PRIMARY SUPERVISION—Either half or full quarter. Two or four hours.

115. ORGANIZATION AND ADMINISTRATION OF THE ELEMENTARY SCHOOL—Either half or full quarter. Two or four hours.

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

Ed. 117, PROBLEMS OF SCHOOL DISCIPLINE—First half. Two hours.

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

120. EDUCATIONAL FINANCE—Now part of Ed. 143.

123. EDUCATIONAL RESEARCH COURSE—Either half or full quarter. Two or four hours.

Arrange for this course with the head of the department. Qualified senior college students may register in this course only with the approval of the head of the department.

125. RURAL EDUCATION, FORMERLY ED. 25—Either half or full quarter. Two or four hours.

127. SPECIAL RURAL SCHOOL METHODS—Second half quarter. Two hours.

128. COUNTY ADMINISTRATION—First half quarter. Two hours.

129. CURRENT EDUCATIONAL THOUGHT, FORMERLY ED. 229—Full quarter. Four hours.

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

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

140. GUIDANCE PROBLEMS OF DEANS OF GIRLS—First half quarter. Two hours.
141. ADMINISTRATION FOR TEACHERS—First half quarter. Two hours.  
(For majors in content departments interested in principalships and superintendencies in village and consolidated schools.)
142. SCHOOL ADMINISTRATION—Either half or full quarter. Two or four hours.
143. SCHOOL ADMINISTRATION—Either half or full quarter. Two or four hours. (Replaces Ed. 112 and Ed. 120.)
144. SCHOOL PUBLICITY—First half quarter. Two hours.
147. EDUCATIONAL SURVEYS—First half quarter. Two hours.
148. PROBLEMS OF INDIVIDUAL INSTRUCTION—First half quarter. Two hours.
150. FOUNDATIONS OF METHOD—Either half or full quarter. Two or four hours.
151. THE PRE-SCHOOL—First half quarter. Two hours.
152. THE CHILD AND HIS SCHOOL—Not given summer, 1928.
154. RECENT INVESTIGATIONS IN ELEMENTARY EDUCATION—Not given summer, 1928.
168. PROBLEMS OF RELIGIOUS EDUCATION—Either half or full quarter. Two or four hours.
190. THE ADMINISTRATION OF NORMAL SCHOOLS AND TEACHERS COLLEGES—First half quarter. Two hours.
192. TRAINING SCHOOL PROBLEMS IN THE PROFESSIONAL EDUCATION OF TEACHERS—Second half quarter. Two hours.
- III. COURSES FOR GRADUATE STUDENTS AND FOR QUALIFIED SENIOR COLLEGE STUDENTS WITH THE CONSENT OF THE INSTRUCTOR (JUNIOR COLLEGE STUDENTS MAY NOT REGISTER FOR THESE COURSES.)
210. PROBLEMS OF THE SCHOOL CURRICULUM—First half. Three hours.
211. CONCEPTIONS OF MIND IN EDUCATIONAL THEORY—First half. Two hours.
214. PROBLEMS OF THE JUNIOR HIGH SCHOOL WITH SPECIAL REFERENCE TO THE CURRICULUM—Either half or full quarter. Two or four hours. (Given in successive summers as Ed. 213, 214, and 215. Students may earn up to 12 hours.)
216. PROBLEMS OF SECONDARY EDUCATION—Either half or full quarter. Two or four hours. (Given in successive summers as 216, 217, and 218. Students may earn up to 12 hours.)
223. RESEARCH IN EDUCATION—Full quarter. Three hours.  
Graduate students in their first quarter and candidates for the Master of Arts degree are required to take this course. In subsequent quarters such students register in the research courses in their major department. In Education these courses are Ed. 224 and Ed. 225.
224. RESEARCH IN EDUCATION—Full quarter. Three hours.  
This is the thesis course for graduate students in their second quarter.
225. RESEARCH IN EDUCATION—Full quarter. Three hours.  
This is the thesis course for graduate students in their third quarter.
229. CURRENT EDUCATIONAL THOUGHT—This course is now numbered Ed. 129.
240. WOMEN IN ADMINISTRATION—Summer quarter. Four hours. (Not given summer, 1928.)

242. PROBLEMS IN EDUCATIONAL ADMINISTRATION—Either half or full quarter. Two or four hours. (Given in successive summers as 242, 243, and 244. Students may earn up to 12 hours.)

259. PRINCIPLES OF ELEMENTARY EDUCATION—Either half or full quarter. Two or four hours. (Given in successive summers as 253, 259, and 260. Students may earn up to 12 hours.)

## EDUCATIONAL PSYCHOLOGY

(For detailed description of courses, see the Year Book)  
Candidates for graduation should not take a required course for a half credit.

### 2. EDUCATIONAL PSYCHOLOGY:

a. Second year. Either half quarter. Three hours. Five hours recitation.

Required of all students.

b. Second year. Either half quarter. Three hours. Five hours recitation.

Required of all students.

103. PSYCHOLOGY OF ADOLESCENCE—First quarter. Two hours.

This course will be taught by Mrs. Sweet from the Denver Schools.

104. PSYCHOLOGY OF ELEMENTARY SCHOOL SUBJECTS—Third year. Either half or full quarter. Two or four hours.

Required of students who teach or supervise elementary or junior high school work.

105a. PSYCHOLOGY OF SENIOR HIGH SCHOOL SUBJECTS—Third year. Either half or full quarter. Two or four hours.

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

105b. PSYCHOLOGY OF SENIOR HIGH SCHOOL SUBJECTS—Third year. Either half or full quarter. Two or four hours.

Required of Senior High School teachers and principals who are majoring in Mathematics and the Physical Sciences.

107. MENTAL TESTS AND MEASUREMENTS—Full quarter. Four hours.

Required of all Education majors.

108a. EDUCATIONAL TESTS AND MEASUREMENTS—Fourth year. Either half or full quarter. Two or four hours.

Required of students who are preparing to teach or supervise elementary or junior high school work.

108b. EDUCATIONAL TESTS AND MEASUREMENTS—Fourth year. Either half or full quarter. Two or four hours.

Required of students who will teach in the senior high school.

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

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

113. PSYCHOLOGY OF VOCATIONAL SUBJECTS—Either half or full quarter. Two or four hours.

Required of all senior high school majors in Industrial Arts, Fine Arts, Home Economics and Commercial Arts.

212. PSYCHOLOGICAL AND STATISTICAL METHODS APPLIED TO EDUCATION—Full quarter. Four hours.

214. ADVANCED EDUCATIONAL PSYCHOLOGY—Full quarter. Four hours.

222. EXPERIMENTAL TECHNIC AND ITS APPLICATION—Full quarter. Four hours.

223. RESEARCH IN EDUCATIONAL PSYCHOLOGY—Full quarter. Three hours. (Taken in the first quarter of graduate work.)

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

224. RESEARCH IN EDUCATIONAL PSYCHOLOGY—Full quarter. Three hours.

225. RESEARCH IN EDUCATIONAL PSYCHOLOGY—Full quarter. Three hours.

## ENGLISH AND LITERATURE

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

0. FUNDAMENTALS IN ENGLISH—Four days a week.

No college credit. Required of all whose scores on a standardized English test place them in the lower half, of entering college freshmen.

1. MATERIAL AND METHODS IN READING AND LITERATURE—Full quarter. Four hours.

2. THE TEACHING OF WRITTEN ENGLISH IN JUNIOR HIGH SCHOOL—Full quarter. Three hours.

4. SPEAKING AND WRITING ENGLISH—Either half or full quarter. Three hours.

Required of all students unless they pass English 4 Exemption Test.

6. AMERICAN LITERATURE—Full quarter. Four hours.

8. A SURVEY OF ENGLISH LITERATURE—670-1625—Full quarter. Four hours.

11. THE ENGLISH LANGUAGE FOR TEACHERS—Full quarter. Four hours.

12. ORAL EXPRESSION—First half quarter. Three hours.

13. THE ART OF STORY TELLING—Either half quarter. Three hours.

14. DRAMATIC ART—Prerequisite Eng. 12. Second half quarter. Three hours.

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

16. TYPES OF CONTEMPORARY LITERATURE—First half or full quarter. Two or four hours.

20. ADVANCED COMPOSITION—Full quarter. Four hours.

31. THE SHORT STORY—Full quarter. Four hours.

101. JOURNALISM—Full quarter. Three hours.

This course aims to combine the principal points of the three courses offered during the regular academic year, as set forth in the College catalog. It is designed to aid those teachers now in service who teach journalism in the high schools or who act as advisers to the students in the publication of their school papers. It deals with news values, reporting, interviewing, editing, editorial writing, head writing, dramatic and literary reviewing, make-up, and the technical and mechanical processes as well as the business phases of publishing school papers.

105. ORAL ENGLISH IN THE HIGH SCHOOL—First half quarter. Two hours.

106. THE TEACHING OF ENGLISH IN THE HIGH SCHOOL—Full quarter. Three hours.

112. THE CHILDREN'S THEATER—Second half quarter. Two hours.

114. PLAY PRODUCTION—Full quarter. Four hours.

121. EARLY 19TH CENTURY POETRY—First half or full quarter. Two or four hours.

127. SHAKESPEARE'S COMEDIES—First half or full quarter. Two or four hours.

132. THE DEVELOPMENT OF THE NOVEL—Full quarter. Four hours.

134. MODERN PLAYS—Full quarter. Four hours.

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

223. RESEARCH IN ENGLISH—Full quarter. Three hours. (Taken in the first quarter of graduate work.)

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

224. RESEARCH IN ENGLISH—Full quarter. Three hours.  
Required of graduate students in their second quarter.

225. RESEARCH IN ENGLISH—Full quarter. Three hours.  
Required of graduate students in their third quarter.

## FOREIGN LANGUAGES

(For detailed description of courses, see the Year Book)

### FRENCH

1, 2, 3. ELEMENTARY FRENCH—Full quarter. Twelve hours.

This class meets twice daily five days a week, and covers the entire first year of College French.

### SPANISH

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

This class meets twice daily five days a week, and covers the entire first year of College French.

105. ADVANCED SPANISH—Full quarter. Four hours.  
Prerequisite, Spanish 1.

223. RESEARCH IN FOREIGN LANGUAGES—Full quarter. Three hours.  
(Taken in the first quarter of graduate work.)

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

## TEACHING OF MODERN LANGUAGES

131. THE TEACHING OF MODERN LANGUAGES—Full quarter. Four hours.

## GEOLOGY, PHYSIOGRAPHY, AND GEOGRAPHY

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

7. BUSINESS GEOGRAPHY—Either half or full quarter. Two or four hours.

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

15. METHODS AND MATERIALS OF JUNIOR HIGH GEOGRAPHY—Full quarter. Four hours.

103. CLIMATOLOGY—Full quarter. Four hours.

122. BIOGEOGRAPHY—Full quarter. Four hours.

162. GEOGRAPHY OF THE TROPICS—Either half or full quarter. Two or four hours.

150. GEOGRAPHY OF COLORADO—Either half or full quarter. Two or four hours.

223. RESEARCH IN GEOGRAPHY—Full quarter. Three hours. (Taken in the first quarter of graduate work.)

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

## HEALTH EDUCATION

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

Besides the core requirements listed on page 22 Catalogue, this department requires:

1. **INDIVIDUAL AND SOCIAL HYGIENE**—(Men)—Either half. Daily. Three hours required during first year.

1a. **INDIVIDUAL AND SOCIAL HYGIENE**—(Women)—Either half. Daily. Three hours required during first year.

2. **ANATOMY**—Full quarter. Lectures M. W. 8:00. Laboratory, T. Th. 2:00-4:00. Four hours. General anatomy of human body, emphasizing myology, osteology and arthrology.

8. **PHYSIOLOGY**—Full quarter. Lectures, M. W. at 2:00. Laboratory, M. W. 3:00 to 5:00. Four hours.

A course for Physical Education majors and for those planning to teach physiology.

12. **CHILD HEALTH**—Full quarter, four periods. Four hours. Deals with problems of growth development; nutrition; physical handicaps and methods of malnutrition and prevention. Required of Phys. Ed. Majors.

13. **FIRST AID**—Second half. Two hours.

Red Cross Text Book used, and usual first aid problems considered.

108. **EDUCATIONAL HYGIENE**—Either half. Daily. Three hours.

Required of all once in junior or senior years. A general informational course dealing with problems of health.

## NURSING EDUCATION

100. **TEACHING OF NURSING PRINCIPLES AND METHODS**—First half quarter. Three hours.

Planned for those who are to teach nursing procedures. A study of the scientific principles involved in the nursing care of the patients, the selection of subject matter, the sequence of classes, the planning of lessons and demonstrations.

101. **NURSING SUPERVISION**—First half quarter. Three hours.

This course is planned for head nurses, supervisors, teachers, administrators who require a general knowledge of organization and administration in hospitals and schools of nursing and Public Health Organizations. It includes (a) a study of the principles upon which skillful supervision is based, (b) investigation into the practice of successful supervision, and (c) professional problems.

## HISTORY AND POLITICAL SCIENCE

(For detailed description of courses, see the Year Book)

Candidates for graduation may not take a required course for half credit, except History 27.

### HISTORY

1. **FOUNDATIONS OF AMERICAN NATIONALITY**—Full quarter. Four hours.

2. **DEVELOPMENT OF AMERICAN NATIONALITY**—Full quarter. Four hours.

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

10. **SOCIAL AND INDUSTRIAL HISTORY OF THE UNITED STATES**—Full quarter. Four hours.

27. **CONTEMPORARY WORLD HISTORY**—Either half or full quarter. Two or four hours.

(May be substituted for History 7).

103. **LITERATURE OF AMERICAN HISTORY**—Second half. Two hours.

107. **THE BRITISH EMPIRE**—Either half or full quarter. Two or four hours.

117. TEACHING OF HISTORY IN JUNIOR AND SENIOR HIGH SCHOOLS—  
First half. Three hours.

205. MEDIEVAL LIFE AND INSTITUTIONS—Either half or full quarter.  
Two or four hours.

208. AMERICAN REVOLUTION—Either half or full quarter. Two or four  
hours.

223. RESEARCH IN HISTORY—Full quarter. Three hours. (Taken  
in the first quarter of graduate work.)

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

224. RESEARCH IN HISTORY—Full quarter. Three hours.

Thesis course for graduate students in their second quarter.

225. RESEARCH IN HISTORY—Full quarter. Three hours.

Thesis course for graduate students in their third quarter.

### POLITICAL SCIENCE

2. STATE GOVERNMENT—Full quarter. Four hours.

101. HISTORY OF THE FOREIGN POLICIES OF THE UNITED STATES—Full  
quarter. Four hours.

### HOME ECONOMICS

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

#### HOUSEHOLD SCIENCE

3. COOKERY AND SERVING—Full quarter. Four hours. Fee, \$3.50.

H. Sc. 1 and H. Sc. 2 are prerequisite.

4. CHILDREN'S FOOD PROBLEMS—Full quarter. Four hours.

A course for Primary, Intermediate and Physical Education majors. No pre-re-  
quisites. This course is designed to give the teacher a fundamental knowledge of nu-  
trition that she may train growing children in desirable food habits.

7. HOUSEHOLD MANAGEMENT—Either half quarter. Lecture course.  
Two hours.

Required of all Home Economics majors. Open to any student.

7a. HOUSEHOLD MANAGEMENT—Either half quarter. Two hours.

Practical application of the preceding course. Open to majors who have had  
the H. Sc. 1, 2 and 7.

103. DIETETICS—Full quarter. Four hours. Fee, \$3.00.

105. CHILD CARE—Full quarter. Four hours.

Open to any student.

106. HOME CARE OF THE SICK—Full quarter. Four hours. Fee, \$1.00.

108. HOUSING AND SANITATION—First half or full quarter. Two or  
four hours.

Problems relating to modern housing and sanitation.

200. SEMINAR IN HOUSEHOLD SCIENCE—Full quarter.

Graduate work may be arranged for in this course, dependent on previous train-  
ing, and interests of the student.

223. RESEARCH IN HOME ECONOMICS—Full quarter. Three hours.  
(Taken in the first quarter of graduate work.)

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

## HOUSEHOLD ARTS

3. GARMENT MAKING—Full quarter. Four hours. For non-majors.  
 4. MILLINERY—First half or full quarter. Two or four hours.  
 Fee, \$2.50.

10. DRESS APPRECIATION—Full quarter. Four hours.

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

108. COSTUME DESIGN—Full quarter. Four hours. Fee 50 cents.

200. SEMINAR IN HOUSEHOLD ARTS—Full quarter.

This work is to be arranged for graduate students who come prepared to take up some specific line of experiment or research.

## INDUSTRIAL ARTS

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1. TECHNIC AND THEORY OF WOODWORKING I—Full quarter. Four hours.  
 Fee, \$2.00.
2. TECHNIC AND THEORY OF WOODWORKING II—Full quarter. Four hours. Fee, \$2.00.
- 8a. ART METAL—Either half or full quarter. Two or four hours.  
 Fee, \$2.00.
9. CLASSIC ARCHITECTURE—Either half or full quarter. One hour.
12. PRINCIPLES OF ARCHITECTURAL DRAWING I—Either half or full quarter. Two or four hours. Fee, \$1.00.
19. WOOD TURNING—Full quarter. Four hours. Fee, \$2.00.
- 31a. ELEMENTARY PRINTING—Either half or full quarter. Two or four hours.
- 31c. ELEMENTARY PRINTING—Either half or full quarter. Two or four hours.
- 32a. INTERMEDIATE PRINTING—Either half or full quarter. Two or four hours.
- 32c. INTERMEDIATE PRINTING—Either half or full quarter. Two or four hours.
- Continuation of Course 32a.
- 41a. ELEMENTARY BOOKBINDING—Either half or full quarter. Two or four hours. Fee, \$1.00.
- 41b. ELEMENTARY BOOKBINDING—Either half or full quarter. Two or four hours. Fee, \$1.00.
- 42a. INTERMEDIATE BOOKBINDING—Either half or full quarter. Two or four hours. Fee, \$1.00.
- 43b. INTERMEDIATE BOOKBINDING—Either half or full quarter. Two or four hours. Fee, \$1.00.
104. PRE-VOCATIONAL EDUCATION—Either half or full quarter. Three hours.
105. ADVANCED ARCHITECTURAL DRAWING—Either half or full quarter. Two or four hours. Fee, \$1.00.
- 133a. ADVANCED PRINTING—Either half or full quarter. Two or four hours.
- 133b. ADVANCED PRINTING—Either half or full quarter. Two or four hours.



143a. ADVANCED ART BINDINGS AND LEATHERCRAFT—Either half or full quarter. Two or four hours. Fee, \$1.00.

143b. ADVANCED LEATHERCRAFT AND COMMERCIAL BINDING—On request. Either half or full quarter. Two or four hours. Fee, \$1.00.

144. SHOP MANAGEMENT IN BOOKBINDING—On request. Four hours. Elective.

145. SECRETARIAL SCIENCE IN SHOP ACCOUNTING—On request. Four hours. Elective.

223. RESEARCH IN INDUSTRIAL ARTS—Full quarter. Three hours. (Taken in the first quarter of graduate work.)

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

224. RESEARCH IN INDUSTRIAL ARTS—On request. Three hours.

225. RESEARCH IN INDUSTRIAL ARTS—On request. Three hours.  
A continuation of Ind. A. 224.

## LIBRARY SCIENCE

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

106. CHILDREN'S LITERATURE AND JUVENILE LIBRARY SERVICE—Full quarter. Four hours.

107. ADMINISTRATION AND HISTORY OF LIBRARIES, TRAVELING LIBRARIES, AND COUNTY LIBRARIES—Full quarter. Four hours.

## MATHEMATICS

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

5. COLLEGE ALGEBRA—Either half or full quarter. Two or four hours.

7. PLANE TRIGONOMETRY—Either half or full quarter. Two or four hours.

8. SURVEYING—First half or full quarter. Two or four hours.

9. ANALYTIC GEOMETRY—Either half or full quarter. Two or four hours.

101. DIFFERENTIAL CALCULUS—Either half or full quarter. Two or four hours.

104. THE TEACHING OF ARITHMETIC—Either half or full quarter. Two or four hours.

This course takes up a discussion of the recent tendencies in the teaching of arithmetic. It attempts to give those things which will actually help the teacher in presenting arithmetic in the classroom.

106. DESCRIPTIVE ASTRONOMY—Either half or full quarter. Four hours.

107. JUNIOR HIGH SCHOOL MATHEMATICS—Either half or full quarter. Two or four hours.

The formation of the Junior High School has given rise to a great deal of discussion as to just what sort of mathematics should be taught in the seventh and eighth grades, in particular, and just what methods should be used. This course is given over to a study of these questions from the standpoint of the practical teacher.

110. GEOMETRY FOR TEACHERS—Either half or full quarter. Two or four hours.

223. RESEARCH IN MATHEMATICS—Full quarter. Three hours. (Taken in the first quarter of graduate work.)

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

## MUSIC

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1a. RUDIMENTS AND METHODS—Five periods. Three hours. (Kindergarten and Primary first half—Intermediate second half.)

1b. SIGHT SINGING—Five periods. First half quarter. Three hours.

1c. ADVANCED SIGHT SINGING—Five periods. Second half quarter. Three hours.

Prerequisite Music 1b.

2. TONE THINKING AND MELODY WRITING—Five periods. Second half quarter. Three hours.

Introductory course to beginning harmony.

3. HARMONY—Five periods. Full quarter. Three hours.

Prerequisite Music 2.

4. HARMONY—Five periods. Second half quarter. Three hours.

Continuation of Music 3. Prerequisite, Music 3.

5. HARMONY—Five periods. Full quarter. Three hours.

10. KINDERGARTEN-PRIMARY METHODS—Five periods. First half quarter. Three hours.

Required. Music Majors only. Prerequisites Music 1b, 1c.

11. INTERMEDIATE METHODS—Five periods. Second half quarter. Three hours.

Prerequisites. Music 1b, 1c, 10. Required. Music Majors only.

20. HISTORY OF ANCIENT AND MEDIEVAL MUSIC—Five periods. First half quarter. Three hours.

21. MODERN HISTORY—Five periods. Second half quarter. Three hours.

Prerequisite, Music 20.

22. MUSIC APPRECIATION—Five periods. First half quarter. Three hours.

23. MUSICAL LITERATURE—Five periods. Second half quarter. Three hours.

30. INDIVIDUAL VOCAL LESSONS—One-half period. Full quarter. One hour.

31. INDIVIDUAL PIANO LESSONS—One-half period. Full quarter. One hour.

32. INDIVIDUAL VIOLIN LESSONS—One-half period. Full quarter. One hour.

33. INDIVIDUAL PIPE ORGAN LESSONS—One-half period. Full quarter. One hour.

34. PIANO CLASS LESSONS—Either half quarter. One hour.

35. INDIVIDUAL LESSONS FOR BRASS AND REED INSTRUMENTS—One-half period. Full quarter. One hour.

36. INDIVIDUAL CELLO LESSONS—One-half period. Full quarter. One hour.

38. COLLECTIVE VOICE TRAINING—Either half quarter. One hour.
40. BEGINNING ORCHESTRA—One period. Full quarter. One hour.
43. ADVANCED ORCHESTRA—Full quarter. One hour.
44. ADVANCED BAND—Full quarter. One hour.
45. ORCHESTRAL INSTRUMENTS—Full quarter. One hour.
101. COLLEGE CHORUS—Full quarter. One hour.
104. ADVANCED COUNTERPOINT—Three periods. Full quarter. Three hours.
110. SUPERVISOR'S COURSE—Five periods. Second half quarter. Three hours.
- Prerequisites. Music 1b, 1c, 2, 10, and 11.
111. CONDUCTING (by assignment)—Four periods. Full quarter. Two hours.
114. METHODS IN CONDUCTING—First half quarter. Two hours.
122. APPRECIATION—(For the Concertgoer.)—Second half quarter. One hour.
130. INDIVIDUAL VOCAL LESSONS AND METHODS—One-half period. Full quarter. One hour.
131. INDIVIDUAL PIANO LESSONS AND METHODS—One-half period. Full quarter. One hour.
132. INDIVIDUAL VIOLIN LESSONS AND METHODS—One-half period. Full quarter. One hour.
133. INDIVIDUAL PIPE ORGAN LESSONS AND METHODS—One-half period. Full quarter. One hour.
134. INDIVIDUAL CELLO LESSONS AND METHODS—Every quarter. One hour. Fee \$24.00.
223. RESEARCH IN MUSIC—Full quarter. Three hours. (Taken in the first quarter of graduate work.)

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

## PHYSICAL EDUCATION AND ATHLETICS FOR WOMEN

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

The courses offered during the summer are for those students majoring in this department. However, we offer a few general courses for those who wish an activity class during this quarter.

Students majoring in this department should look at the courses offered in the Health Education Department, which meet the Physical Education requirements.

A fee will be charged for the swimming classes and for all towels issued by the school.

A deposit will be charged for all locker keys.

### 1. COURSES OFFERED TO THE GENERAL STUDENTS

1. CLOG AND ATHLETIC DANCING—Three periods. Either half quarter. One-half hour.
2. NATURAL DANCING—Three periods. Either half quarter. One-half hour.

4. SINGING GAMES--Three periods. Either half quarter. One-half hour.
5. FOLK DANCING—Three periods. Either half quarter. One-half hour.
6. FOLK DANCING, ADVANCED—Three periods. Either half quarter. One-half hour. Prerequisite P. E. 5 or its equivalent.
7. NATIONAL AND CHARACTERISTIC DANCING—Three periods. Either half quarter. One-half hour.
12. PLAYS AND GAMES—Three periods. Either half quarter. One-half hour.
13. TENNIS—Three periods. Either half quarter. One-half hour.
26. BEGINNING SWIMMING—Four periods. Either half quarter. One hour.
27. INTERMEDIATE SWIMMING—Four periods. Either half quarter. One hour.

## 2. COURSES PRIMARILY FOR THE STUDENT MAJORING IN PHYSICAL EDUCATION

31. DANISH GYMNASTICS AND TUMBLING—Four periods. All quarter. Two hours.
101. CLOG AND ATHLETIC DANCING—Four periods. All quarter. Two hours.
103. NATURAL DANCING—Four periods. All quarter. Two hours.
107. NATIONAL AND CHARACTERISTIC DANCING—Four periods. All quarter. Two hours.
113. WOMEN'S ATHLETIC GAMES—Four periods. All quarter. Two hours.
128. ADVANCED SWIMMING FOR MAJORS—Five periods. Three hours. First half quarter.
129. RED CROSS LIFE SAVING—Four periods. Second half quarter.
134. HISTORY OF PHYSICAL EDUCATION—Four periods. First half quarter. Two hours.
135. ADMINISTRATION OF PHYSICAL EDUCATION—Four periods. Second half quarter. Two hours.
136. SUPERVISION OF PHYSICAL EDUCATION—Five hours. Every quarter.
137. MATERIALS AND METHODS IN PHYSICAL EDUCATION—Daily. First half quarter. Three hours.

## PHYSICS

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1. CONTENT OF HIGH SCHOOL PHYSICS, MECHANICS, HEAT AND SOUND—Full quarter. Four hours. Fee \$3.00.
2. CONTENT OF HIGH SCHOOL PHYSICS, ELECTRICITY AND LIGHT—Full quarter. Four hours. Fee \$3.00.
11. GENERAL COLLEGE PHYSICS, MECHANICS—Full quarter. Three or four hours. Fee \$2.00 or \$3.00.
103. THEORY OF RADIO—Full quarter. Three or four hours. Fee \$2.00 or \$3.00.
111. PHYSICS OF THE AUTOMOBILE—Either half or full quarter. Two or four hours.

14. THE USE OF VISUAL APPARATUS IN THE CLASSROOM—Full quarter. Three hours. Fee \$2.00.

223. RESEARCH IN PHYSICS—Full quarter. Three hours. (Taken in the first quarter of graduate work.)

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

## SOCIOLOGY, ANTHROPOLOGY, AND ECONOMICS

(For detailed description of courses, see the Year Book)

Candidates for graduation should not take a required course for a half credit.

1. AN INTRODUCTION TO THE SOCIAL SCIENCES—Either half or full quarter. Two or four hours.

3. EDUCATIONAL SOCIOLOGY—First half quarter. Three hours.

92. THE FAMILY—Full quarter. Three hours.

101. THE ORIGIN AND ANTIQUITY OF MAN—Either half or full quarter. Two or four hours.

105. THE PRINCIPLES OF SOCIOLOGY—Full quarter. Four hours.

Required of third year students.

110. PRINCIPLES OF ECONOMICS—Full quarter. Four hours.

122. COMPARATIVE RELIGIONS—First half or full quarter. Two or four hours.

This course comprises a study of the world's great religions.

151. RACES AND RACE PROBLEMS—Either half or full quarter. Two or four hours.

This course will be based primarily on the studies and experiences of the instructor, Dr. I. W. Howerth, on his recent trip around the world, during which he came into intimate contact with all the leading races of mankind.

205. THE SOCIAL THEORY OF EDUCATION—Full quarter. Four hours. Doctrines of Education based upon Organic Psychic and Social Evolution. Text, Dr. Howerth's Theory of Education.

209. SEMINAR—Either half or full quarter. Two or four hours.

223. RESEARCH IN SOCIOLOGY—Full quarter. Three hours. (Taken in the first quarter of graduate work.)

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

## INSTRUCTIONS CONCERNING REGISTRATION

*Note*—Take this copy of the CATALOG with you when you register.

1. **TIME AND PLACE FOR REGISTRATION**—All registration takes place in Gunter Hall from 7:00 to 12:00 and from 1:00 to 4:00, Saturday, June 16.

2. **ORDER OF REGISTRATION**—Read page 2.

(a) Fill out the personal data card with pen and present it for registration material.

(b) Fill out the temporary enrollment card with pen and have it signed by your faculty adviser. The latter card will admit you to class until you have registered permanently. It must be signed by each of your teachers before permanent registration.

The temporary card must be exchanged for permanent cards at the registrar's office. This exchange must be completed by 5:00 P. M. of the last day for permanent registration, June 28. Permanent cards, approved by the registrar, and marked "audited" by the Treasurer, must be presented to your teachers not later than the date thus arranged. All students who have not complied with the provision on or before this date will be dropped from class. However, **DO NOT ATTEMPT THIS EXCHANGE UNTIL YOU AND YOUR TEACHERS ARE COMPLETELY SATISFIED WITH YOUR SCHEDULE.** Be sure to get a copy of further instructions to be given out on registration day.

3. **STUDENT PROGRAM SIXTEEN HOURS**—The normal program of a student is sixteen hours. Students whose outside work takes up a considerable part of their time should enroll for twelve to fifteen hours. Any student may make up a program of fifteen, sixteen, or seventeen hours; but if seventeen hours are taken in one quarter, fifteen must be taken at a later quarter, so that any three consecutive quarters *dating from the first quarter in residence* may not average more than sixteen hours. Those wishing to take seventeen or eighteen hours regularly must take the Classification Test, given at 1:30 P. M. on registration day, Little Theater, Administration Building, unless a permit has been previously issued by the registrar. No schedules will be approved for more than eighteen hours under any condition.

4. **LATE REGISTRATION**—A fee of \$1.00 is charged for registration after 4:00 P. M. the regular day, June 16. This fee is also exacted of students who register after the final date for permanent registration. Students more than two days late will have their programs cut in proportion to the time they miss from recitations.
5. **PHYSICAL EXAMINATIONS**—An annual health examination is required for each student. Unclassified students are NOT exempt from this requirement.
6. **ENGLISH 0 and 4** are required of all candidates for graduation, no matter what English courses they may have had elsewhere in high school or college, unless they are excused from taking English 0 or both after passing the English Exemption Test. This test is given at the opening of each quarter, time and place to be announced. Students who have been formally graduated from any accredited normal school or teachers college are exempt from all junior college core subjects, including English 0 and 4.
7. Students who have been admitted to the College before October 1, 1923, should determine to their satisfaction that such admission is in accordance with regulations which have been in effect since that date. Students should determine also if they are affected by the new requirements for graduation which went into effect September 1, 1924. See pages 18, 19, 20. "Admission, certification, and graduation."
8. **HALF QUARTER COURSES**—Credit is not given for a full quarter course carried for only a half quarter. Tentative conditional credit may be given by special arrangement with the teacher of the course and the registrar.
9. Candidates for graduation should NOT take a required course for half credit.

## FEES

Incidental fee, paid by all, \$32.00 per quarter; \$16.00 for the half quarter. Additional to non-residents of Colorado, \$5.00 for the full quarter; \$2.50 for the half quarter.

Library fee, paid by all, \$2.00.

Fees for less than a full program of sixteen hours:

1-2 quarter hours	\$ 5.00
3 quarter hours	7.50
4 quarter hours	10.00
5, 6, 7, 8 quarter hours	16.00
9 quarter hours (if taken during one half quarter)	16.00
9 quarter hours (if taken during whole quarter)	20.00
10-11 quarter hours	25.00
12, 13, 14, 15, 16 quarter hours	32.00

Non-resident fee to be added to above.

Library Fee to be added to above, \$2.00.

*Fees for Laboratory and Materials*

<i>Art</i>	
Art 1, 2, 7	\$0.50
Art 13, 14	* 1.50
Art 103, 115	2.00

\*Fees are one-half the figures when courses are taken for half quarter.

*Biology*

Bacteriology 100	\$1.50
Biology 1, 225	1.00
Biology 224	3.00
Botany 2, 101, 225	1.00
Botany 224	3.00
Elementary Science 1, 3	1.00
General Science 1	1.50
Zoology 1, 3, 225	1.00
Zoology 224	3.00

*Chemistry*

Chemistry, per quarter hour

Commercial Ed. 11, 13

*Commercial*

*Home Economics*

H. A. 4	\$2.50
H. A. 5, 108	.50
H. Sc. 103	3.00
H. Sc. 3	3.50
H. Sc. 105, 106	1.00



*Industrial Arts*

Ind. Art. 2, 8a, 19	*\$2.00
Ind. Art. 12, 105	1.00
Bookbinding, all courses	1.00

*Nursing Education*

Nursing Ed. 100, 101	\$3.50
----------------------	--------

*Physics*

Phys. 114	\$2.50
Phys. 1, 2	3.00
Phys. 11, 103	\$2.00 or 3.00

*Music*

Music 30, 31, 32, 33, 34, 35, 36, 130, 131, 132, 133, and 134, individual lessons. Fees paid before taking lessons. For fees see Mr. Cline, Director of the Conservatory.

*Physical Education*

P. E. 1, 2, 4, 5, 6, 7, 12, 101, 103, 107	\$0.25
P. E. 26, 27, 128 (per half quarter)	2.00

\*Fees are one-half the figures when courses are taken for half quarter.

**SCHEDULE OF CLASSES**  
**(Summer Quarter 1928)**

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
<b>I. 7:00 to 7:50</b>						
Art 2	Fine Arts Methods for Primary	WThF	Full Quarter	4	Emery	G-200
Art 5	Water Color Painting	TWThF	Full Quarter	4	Ellinger	G-203
Art 14	Industrial Art Methods for Intermed.					
	Grades and Junior High School					
Art 105	Water Color Painting	MTWTh	Full Quarter	4	Moore	G-204
Biol. 1	Educational Biology (Lab. by appt.)	TWThF	Full Quarter	4	Ellinger	G-203
Bot. 2	General Botany (Lab. 2-5 Wed.)	MTWTh	Full Quarter	3	Daggett	301
Chem. 108	Organic Chemistry (Lab. by appt.)	MTWTh	Full Quarter	4	Jean	304
Chem. 110	Organic Chemistry (Lab. by appt.)	MW	Full Quarter	3	Bowers	300
Com. Ed. 36	Handwriting Methods (Zaner)	MW	Full Quarter	4	Bowers	300
Com. Ed. 37	Business Mathematics (double period)	TWThF	First Half	1	Bedinger	214
Com. Ed. 224	Research in Commercial Education	TWThF	Second Half	4	Bedinger	214
Ed. 1	Introduction to Education	MTWTh	Full Quarter	4	Colvin	211
*Ed. 3c	Literature & Theory of Games	TWTh	Full Quarter	4	Hunt	
*Ed. 4a	Intermediate Methods (Read, Lang., Spell.)	TWF	Bi. Half or Full Qr.	1½ or 3	Rosenquist	
Ed. 21	Rural School Problems	MTWTh	Bi. Half or Full Qr.	2 or 4	Luzmoor	
*Ed. 52	Kindergarten Materials	Daily	First Half	3		
Ed. 105	Practical Projects—Prim. Grades	MWTh	Bi. Half or Full Qr.	1½ or 3	Harrison	
Ed. 110b	Citizenship Educ. Intermed. Grades	MTThF	Bi. Half or Full Qr.	2 or 4	Preston	
Ed. 117	Problems of School Discipline	MTThF	First Half	2	Lehr	
Ed. 133	History of Education	MTWTh	First Half	2	Hunt	
Ed. 134	History of Education in U. S.	Daily	Second Half	3	Sattgast	
Ed. 140	Guidance Problems for Deans of Girls	Daily	First Half	2	Morrison	
Ed. 148	Problems of Ind. Instruction	MTWTh	First Half	3	Sweet	
Ed. 151	Pre-School	MTWTh	First Half	2	Sattgast	
Ed. 210	Problems of the School Curriculum	Daily	First Half	2	Denney	
				3	Rugg	

\*Required Full Quarter for majors in Education Department

**COLORADO STATE TEACHERS COLLEGE**

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Ed. 224	Research—Thesis Course—2nd Qr. Grad. Students in Education	Arrange	Full Quarter	3	Mahan	
Ed. 225	Research—Thesis Course—3rd Qr. Grad. Students in Education	Arrange	Full Quarter	3	Mahan	
El. Sci. 1	Elementary Nature Study (Field trips arranged) (Second recitation at 9:00 compulsory)	TWThF	First Half	4	Selberg	L-13
Eng. 0	Fundamentals in English	Daily	First Half	0	Carney	
Eng. 4	Speaking and Writing	Daily	Second Half	3	Carney	
Eng. 8	A Survey of English Lit. 670-1625	MTThF	Full Quarter	4	Hawes	100
Eng. 106	English and Lit. in the H. S.	MWF	Full Quarter	3	Pooley	
Eng. 121	Early Nineteenth Century Poetry	MTThF	1st half or Full Qr.	2 or 4	Ransom	202
Geog. 12	Methods in Intermediate Geography	MTThF	Full Quarter	4	McClintock	101
Hist. 1	Foundations of American Nationality	TWThF	Full Quarter	4	Peake	
Hist. 208	American Revolution	MTWTh	Ei. Half or Full Qr.	2 or 4	Dickerson	104
Hist. 224	Research in History	F	Full Quarter	3	Dickerson	104
Hist. 225	Research in History	F	Full Quarter	3	Dickerson	104
H. A. 3	Garment Making (double period)	MTThF	Full Quarter	4	Henry	HE-304
H. Sc. 7	Household Management	MTWTh	Either Half	4	Newburn	HE-305
Ind. A. 1	Tech. & Theory of Woodworking (double period)	MTWTh	Full Quarter	4	Foulk	G-1
Ind. A. 8a	Art Metal (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Hadden	G-105
Ind. A. 31a	Elementary Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	G-104
Ind. A. 31c	Elementary Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	G-104
Ind. A. 41a	Elementary Bookbinding (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Ind. A. 42a	Intermediate Bookbinding (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Math. 5	College Algebra	MTThF	Ei. Half or Full Qr.	2 or 4	Mallory	
Math. 106	Descriptive Astronomy	MTThF	Either Half	2 or 4	{ Finley Charlesworth	210
Mus. 1a	Rudiments & Methods for Kind. and Prim. Majors	Daily	First Half	3	Mohr	T-16
Mus. 110	Supervisor's Course	Daily	Second Half	3	Mohr	T-16
Psych. 2a	Educational Psychology	Daily	Either Half	3	Wait	T-13
Psych. 212	Statistical Methods	MTWTh	Full Quarter	4	Heilman	T-12

COLORADO STATE TEACHERS COLLEGE

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Soc. 1	Introduction to the Social Sciences	MTWTh	Ei. Half or Full Qr.	2 or 4	Howarth	208
Zool. 3	Bird Study (Field trips arranged)	Daily		3	{ Harrah 1st half Shirling 2nd half	303
<b>II. 8:00 to 8:50</b>						
Art 2	Fine Art Methods for Primary	MTThF	Full Quarter	4	Low	G-200
Art 3	Freehand Drawing I	MTThF	Full Quarter	4	Moore	G-203
Art 14	Industrial Arts Methods for Int. & Jr. H. S.	MTWTh	Full Quarter	4	Ellinger	G-204
Art 103	Art Structure III	TWThF	Ei. Half or Full Qr.	2 or 4	Ellinger	G-204
Art 104	Color Theory and Composition	TWThF	Ei. Half or Full Qr.	2 or 4	Ellinger	G-202
Ath. 52	Mat Work and Elementary Tumbling	MTWTh	Ei. Half or Full Qr.	.1 or 2	Von den Steinen	
Ath. 169	Baseball Coaching	Daily	First Half	2	Brown	Gunter Hall
Bact. 100	General Bacteriology (Lab. 2.5 Tue.)	TWThF	Full Quarter	4	Selberg	Field
Biol. 1	Educational Biology (2 hrs. Lab. by appt.)	MTThF	Full Quarter	3	Harrah	303
Bot. 101	Systematic Botany (Lab. and field trips Tues. 2-5)	MTWTh	Full Quarter	4	Jean	304
Chem. 112	Food Chemistry (Lab. by appt.)	MW	Full Quarter	3	Bowers	300
Chem. 113	Food Chemistry (Lab. by appt.)	MW	Full Quarter	4	Bowers	300
Com. Ed. 13	Principles of Typewriting III	TWTh	First Half or Full	1½ or 3	Knies	213
Com. Ed. 14	Methods of Teaching Typewriting	F	Full Quarter	1	Knies	213
Com. Ed. 36	Handwriting Methods (Palmer)	TWThF	First Half	1	Bedinger	214
Com. Ed. 213	Commercial Education Curricula	TW	Full Quarter	2	Colvin	211
Ed. 1	Introduction to Education	MTWTh	Full Quarter	4	Hunt	
*Ed. 3a	Primary Methods (Read., Lang., Spell.)	MTWTh	Ei. Half or Full Qr.	1½ or 3	Turner	
*Ed. 4a	Intermediate Methods (Read., Lang., Spell.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Van Meter	
*Ed. 4b	Intermediate Methods (Arith., Soc. Sci., Health)	MTWTh	Ei. Half or Full Qr.	2 or 4	McCowen	
Ed. 5	Principles of Teaching	Daily	Second Half	3	Mahan	
Ed. 21	Rural School Problems	Daily	Second Half	3	Ogle	
Ed. 110	Extra-Curricular Activities	MTWTh	First Half	2	Hamilton	
Ed. 114	Primary Supervision	TWThF	Ei. Half or Full Qr.	2 or 4	Rosenquist	
Ed. 116	Org. and Admin. of the Sen. H. S.	MTWTh	Full Quarter	4	Prunty	

\*Required Full Quarter for majors in Education Department

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Ed. 123	Senior Col. Research Course	MTWTh	Ei. Half or Full Qr.	2 or 4	Rugg	
Ed. 125	Rural Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Hargrove	
Ed. 224	Research—Thesis Course—2nd Qr. Grad. Students in Education	Arrange	Full Quarter	3	Rugg-Cornell-Armentrout	
Ed. 225	Research—Thesis Course—3rd Qr. Grad. Students in Education	Arrange	Full Quarter	3	Cornell-Rugg	
Ed. 259	Problems of Elem. Education	MTWTh	Ei. Half or Full Qr.	2 or 4	McKee	
El. Sci. 1	Elementary Nature Study (Field trips arranged) (Second recitation at 10:00 compulsory)	MTWThF	Second Half	4	Arvidson	L-13
Eng. 0	Fundamentals in English	MTThF	Full Quarter	0	Armentrout	202
Eng. 1	Materials and Methods in Reading	MTThF	Full Quarter	4	Tobey	100
Eng. 4	Speaking and Writing	MTThF	Full Quarter	3	Hawes	
Eng. 12	Oral Expression	MTThF	First Half	3	Blackburn	
Eng. 14	Dramatic Art	Daily	Second Half	3	Blackburn	
Eng. 20	Advanced English Composition	MTThF	Full Quarter	4	Ransom	
Fr. 1, 2, 3	Elementary French (Second Recitation at 11:00 compulsory)	Daily	Full Quarter	12	Manchester	205
Geog. 7	Business Geography	MTWTh	Ei. Half or Full Qr.	2 or 4	Barker	101
H. Ed. 2	Anatomy (Lab. TTh. 2 to 4)	MW	Full Quarter	4	Long	Gunter 205
Hist. 27	Contemporary World History	MTWTh	Ei. Half or Full Qr.	2 or 4	Noyes	104
H. Sc. 105	Child Care	MTThF	Full Quarter	4	Pickett	HE-207
H. Sc. 108	Housing and Sanitation	MTWTh	1st half or Full Qr.	2 or 4	Roudebush	HE-301
Ind. A. 9	Classic Architecture	Th	Full Quarter	1	Hadden	G-105
Ind. A. 104	Pre-Vocational Education	MTW	Ei. Half or Full Qr.	3	Hadden	G-105
Math. 104	Teaching Arithmetic	MTThF	Ei. Half or Full Qr.	2 or 4	Finley	
Math. 107	Teach. Jr. High Math.	MTThF	Ei. Half or Full Qr.	2 or 4	Charlsworth	210
Mus. 2	Tone Thinking & Melody Writing	Daily	Second Half	3	Mallory	Con-6
Mus. 40	Beginning Orchestra	TTh	Full Quarter	1	Thomas	Con-14
Mus. 45	Orchestral Instruments	MW	Full Quarter	1	Thomas	Con-14
P. E. 13	Tennis	MTTh	Either Half	1½	Cave	Courts
P. E. 107	National & Characteristic Dancing	TWThF	Full Quarter	2	Thomas	Gunter 202
P. E. 135	Admin. of Physical Ed.	MTWTh	Second Half	2	Cave	Gunter 114

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Gr. Hrs.	Teacher	Room
Phys. 1	Content & Method of H. S. Physics (Lab. 8:00-9:50 W.)	MTF	Full Quarter	4	Valentine	HE-106
Pol. Sc. 101	History of the Foreign Policies of the U. S.	MTWTh	Full Quarter	4	Dickerson	104
Psych. 2b	Educational Psychology	Daily	Either Half	3	Hertzberg	T-1
Psych. 112	Psychology of Music	MTWTh	Full Quarter	4	Heilman	T-12
Psych. 103	Psychology of Adolescence	MTWTh	First Half	2	Sweet	
Soc. 3	Educational Sociology	Daily	First Half	3	Binnewies	
Soc. 101	Origin and Antiquity of Man	MTWTh	Ei. Half or Full Qr.	2 or 4	Howerth	208
Span. 1, 2, 3	Elementary Spanish (Second recitation at 11:00 compulsory)	Daily	Full Quarter	12	Davis	205
<b>III. 9:00 to 9:50</b>						
Art 1	Fine Art Methods for Intermediate	MTThF	Full Quarter	4	Lowe	G-204
Art 13	Industrial Art Methods for Primary	MTThF	Full Quarter	4		G-200
Art 16	Freehand Drawing II	TWThF	Ei. Half or Full Qr.	2 or 4	Emery	G-203
Art 116	Advanced Freehand Drawing	TWThF	Ei. Half or Full Qr.	2 or 4	Emery	
Ath. 70	Swimming	Daily	Ei. Half or Full Qr.	1 or 2	Doubenmier	Pool
Ath. 166	Basketball Coaching	Daily	First Half	2	Brown	Gunter Hall
Biol. 1	Educational Biology (2 hrs. Lab. by appt.)	MTThF	Full Quarter	3	Harrah	301
Biol. 101	Genetics and Eugenics	MTWTh	Full Quarter	4	Jean	
Chem. 7	Qualitative Analysis (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bowers	302
Chem. 114b	Quantitative Analysis (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	4	Bowers	302
Com. Ed. 4	Methods of Teaching Shorthand	MTWTh	Full Quarter	1	Jones	212
Com. Ed. 11	Principles of Typewriting I	M	Full Quarter	1	Jones	212
Com. Ed. 42	Advertising (double period)	TWThF	Full Quarter	2	Knies	213
Com. Ed. 50	Principles of Accounting I (double period)	TWThF	Second Half	4	Bedinger	211
Com. Ed. 106	Secretarial Science I	MTWTh	First Half	4	Colvin	214
Com. Ed. 159	Auditing (double period)	TWTh	Full Quarter	3	Jones	212
Ed. 1	Introduction to Education	MTWTh	Second Half	4	Colvin	214
Ed. 2a	Pre-Teach. Obs. Elem. or Secondary School	TW	Full Quarter	4	Buster	
*Ed. 3b	Primary Methods (Arith., Soc. Sci., Health)	TW	Full Quarter	1		
Ed. 10	Introduc. to Curriculum Making	TWF	Ei. Half or Full Qr.	1½ or 3	Rosenquist	
Ed. 24	The Rural Community	MTWTh	Full Quarter	3	Mahan	
		MTWTh	Second Half	2	Ogle	

\*Required Full Quarter for majors in Education Department

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Ed. 28	School and Home Garden	MTWTh	First Half	2	Hargrove	
Ed. 108	Education Supervision	MTWTh	Ei. Half or Full Qr.	2 or 4	McKee	
Ed. 113	Org. and Admin. of the Jr. H. S.	MTWTh	Full Quarter	4	{ Hamilton Stutsman Risley Brown }	
Ed. 115	Org. and Admin. of the Elem. School	MTWTh	Ei. Half or Full Qr.	2 or 4		
Ed. 127	Special Rural School Methods	MTWTh	Second Half	2	Hargrove	
Ed. 142	School Administration	MTWTh	Ei. Half or Full Qr.	2 or 4	Cornell	
Ed. 190	Admin. Problems in Teachers Colleges	MTWTh	First Half	2	{ Cross Rugg Morrison Carson }	
Ed. 192	Training School Problems	MTWTh	Second Half	2	Armentrout	
Ed. 211	Conceptions of Mind in Edu. Theory	MTWTh	First Half	2	Armentrout	
Ed. 214	Prob. of the Jr. H. S.	MTWTh	Ei. Half or Full Qr.	2 or 4	Prumty	
Ed. 224	Research—Thesis Course—2nd Qr. Grad. Students in Education	Arrange	Full Quarter	3	Rugg	
Ed. 225	Research—Thesis Course—3rd Qr. Grad. Students in Education	Arrange	Full Quarter	3	Rugg	
El. Sci. 1	Elementary Nature Study (First recitation at 7:00 compulsory)	TWThF	First Half	4	Selberg	L-13
El. Sci. 1	Elementary Nature Study (field trips arranged)	Daily	Second Half	3	Shirling	L-13
Eng. 0	Fundamentals in English	Daily	First Half	0	Carney	
Eng. 4	Speaking and Writing	Daily	Second Half	3	Carney	
Eng. 31	The Short Story	MTThF	Full Quarter	4	Hawes	100
Eng. 101	Journalism	MWTh	Full Quarter	3	Shaw	
Eng. 105	Oral English in the High School	MTThF	First Half	2	McLane	
Eng. 134	Modern Plays	MTThF	Full Quarter	4	Tobey	202
Geog. 15	Meth. and Materials in Jr. H. S. Geography	MTWTh	Full Quarter	4	McCain	L-Thea.
Geog. 162	Geography of the Tropics	MTWTh	Ei. Half or Full Qr.	2 or 4	Barker	101
H. Ed. 1	Ind. and Soc. Hygiene (Men)	Daily	Either Half	3	Von den Gunter	Steinen 205

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
H. Ed. 1a	Ind. and Soc. Hygiene (Women)	Daily	Either Half	3	Bryson	Gunter 201
Hist. 2	Development of American Nationality	TWThF	Full Quarter	4	Peake	L-1
Hist. 205	Medieval Life and Institutions	MTWTh	Ei. Half or Full Qr.	2 or 4	Noyes	104
H. Sc. 103	Dietetics (double period)	MTThF	Full Quarter	4	Pickett	HE-207
H. Sc. 106	Home Care of the Sick	MTThF	Full Quarter	4	Pickett	HE-304
Ind. A. 2	Technic & Theory of Woodworking (double period)	MTWTh	Full Quarter	4	Fouk	G-1
Ind. A. 32a	Intermediate Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	G-104
Ind. A. 32c	Intermediate Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	G-104
Ind. A. 43b	Intermediate Bookbinding	MTWTh	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Ind. A. 143a	Advanced Art Binding & Leather Craft (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Lib. Sci. 107	Administration and History of Libraries	MTThF	Full Quarter	4	Carter	L-6
Math. 7	Trigonometry	MTThF	Ei. Half or Full Qr.	2 or 4	Finley-Mallory	210
Math. 101	Differential Calculus	MTThF	Ei. Half or Full Qr.	2 or 4	Charlesworth	
Mus. 5	Harmony	MWF	Full Quarter	3	Thomas	Con-6
Mus. 22	Music Appreciation	Daily	First Half	3	Opp	Con-14
Mus. 23	Music Literature	Daily	Second Half	3	Opp	Con-6
Nurse, Ed. 100	Teaching of Nursing Prin. & Meth.	Daily	First Half	3	Gray	Gunter Hall
P. E. 5	Folk Dancing (Beginning)	TThF	Either Half	½	Thomas	Gunter 107
P. E. 13	Tennis	MWF	Either Half	½	Springer	Courts
P. E. 31	Danish Gymnastics for Majors	MTWTh	Full Quarter	2	Cave	Gunter 107
Phys. 2	Content and Method of H. S. Physics Electric (Lab. 8:00-9:50 Th.)	MTF	Full Quarter	4	Valentine	HE-106
Psych. 104	Psychology of Elem. School Subjects	MTWTh	Ei. Half or Full Qr.	2 or 4	Heilman	T-13
Psych. 108b	Educational Tests & Measurements	MTWTh	Ei. Half or Full Qr.	2 or 4	Hertzberg	T-12
Psych. 222	Experimental Technic and its Application	Arrange	Full Quarter	2 or 4	Whitney	
Soc. 110	Principles of Economics	MTWTh	Full Quarter	4	Binnewies	207
Soc. 205	The Social Theory of Education	MTWTh	Full Quarter	4	Howarth	208
Span. 105	Advanced Spanish	MTWTh	Full Quarter	4	Davis	205



Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
<b>IV. 10:00 to 10:50</b>						
Art 2	Fine Arts Methods for Primary Design	TWThF	Full Quarter	4	Emery	G-200
Art 4b	Household Art Design	TWThF	Ei. Half or Full Qr.	2 or 4	Ellinger	G-204
Art 12	Supervision of Fine Arts Education	MTThF	Ei. Half or Full Qr.	2 or 4	Henry	HE.
Art 100	Drawing from the Figure	TTh	Full Quarter	2	Moore	G-202
Art 101	Drawing from the Figure	MTThF	Ei. Half or Full Qr.	2 or 4		G-203
Ath. 55	Wrestling, Boxing, Fencing and other activities	MTWTh	Ei. Half or Full Qr.	1 or 2	Von den Steinen	Gunter Hall
Ath. 165	Football Coaching	Daily	First Half	2	Marsh	Field
Biol. 1	Educational Biology (2 hrs. Lab. by appt.)	MTWTh	Full Quarter	3	Sweet	301
Biol. 106	Biological Foundations of Education	MTWTh	First Half	2	Bowers	300
Chem. 1	General Chemistry (Lab. by appt.)	MW	Full Quarter	4	Bowers	300
Chem. 4	General Chemistry (Lab. by appt.)	MTWTh	Full Quarter	2 or 4	Jones	212
Com. Ed. 3	Secretarial Practice 1	Daily	Ei. Half or Full Qr.	2 or 4	Mahan	
Ed. 5	Principles of Teaching	MTWTh	First Half	3	Hargrove	
Ed. 20	Agricultural Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Stutsman	
Ed. 101	Prin. of Teach. in the H. S.	MTWTh	Full Quarter	4	Dobson	
Ed. 107	Methods of Improving Reading	TWThF	Ei. Half or Full Qr.	2 or 4	Hamilton	
Ed. 110a	Citizenship Educ. in Jr. H. S.	MTWTh	First Half	2	Cornell	
Ed. 143	Educ. Admin. (2nd Course in Admin.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Shaw-Risley	
Ed. 144	School Publicity	MTWTh	First Half	2	Prunty	
Ed. 216	Problems of Sec. Education	MTWTh	Ei. Half or Full Qr.	2 or 4		
Ed. 224	Research—Thesis Course—2nd Qr. Grad. Students in Education	Arrange	Full Quarter	3	Rugg-McKee	
Ed. 225	Research—Thesis Course—3rd Qr. Grad. Students in Education	Arrange	Full Quarter	3	Rugg-McKee	
El. Sci. 1	Elementary Nature Study (First recitation at 8:00 compulsory)	TWThF	Second Half	4	Arvidson	
Eng. 4	Speaking and Writing	MTThF	Full Quarter	3	Armentrout	
Eng. 11	The English Language for Teachers	MTThF	Full Quarter	4		
Eng. 13	Story Telling	Daily	Either Half	3	Blackburn	202
Eng. 127	Shakespeare's Comedies	MTThF	1st Half or Full Qr.	2 or 4	Ransom	

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Eng. 224	Research in English	By appt.	Full Quarter	3	{ Cross and Others	100a
Eng. 225	Research in English	By appt.	Full Quarter	3	{ Cross and Others	100a
For. Lang. 131	Teaching of Mod. Languages	MTWTh	Full Quarter	4	Manchester	205
Gen. Sci. 1	General Science (Lab. 2-4 Wed.)	TWThF	Full Quarter	4	Selberg	L-13
Geog. 122	Biogeography	MTWTh	Full Quarter	4	Barker	101
H. Ed. 12	Child Health	MTWTh	Full Quarter	4	Long	Gunter 205
Hist. 5	Early Modern Europe	TWThF	Full Quarter	4	Peake	L-1
Hist. 103	Literature of American History	MTWTh	Second Half	2	Dickerson	104
Hist. 117	Teaching of History and Civics in Junior and Senior High Schools	Daily	First Half	3	Dickerson	104
H. A. 108	Costume Design	TWThF	Full Quarter	4	Roudebush	HE-301
H. Sc. 4	Children's Food Problems and School Lunches	MTWTh	Full Quarter	4	Newburn	HE-305
Ind. A. 12	Prin. of Arch. Drawing (2 or 4 hr. Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Hadden	G-105
Lib. Sci. 106	Children's Literature and Juvenile Library Service	MTThF	Full Quarter	4	Carter	L-6
Math. 107	Teach. Jr. H. Math.	MTThF	Ei. Half or Full Qr.	2 or 4	Mallory	
Math. 110	Geometry for Teachers	MTThF	Ei. Half or Full Qr.	2 or 4	Charlesworth	
Mus. 104	Advanced Counterpoint	MWF	Full Quarter	3	Thomas	Con-6
Mus. 114	Methods in Conducting	MTWTh	First Half	2	Cline	Con-14
P. E. 1	Clog and Athletic Dancing	MTTh	Either Half	1/2	Cave	Gunter 202
P. E. 2	Natural Dancing (Beginning)	MWF	Either Half	1/2	Springer	Gunter 202
P. E. 13	Tennis	TThF	Either Half	1/2	Thomas	Courts
P. E. 128	Adv. Swimming for Majors	Daily	First Half	3	Doubenmier	Pool
P. E. 129	Red Cross Life Saving	MTWTh	Second Half	2	Doubenmier	Pool
Phys. 103	Theory of Radio Reception (Lab. 9:00-10:50)	MTWTh	Full Quarter	3 or 4	Valentine	HE-106
Psych. 105a	Psychology of Sr. H. S. Subjects	MTWTh	Ei. Half or Full Qr.	2 or 4	Wait	T-12
Psych. 107	Mental Tests	MTWTh	Full Quarter	4	Hertzberg	T-13
Soc. 151	Races and Race Problems	MTWTh	Ei. Half or Full Qr.	2 or 4	Howarth	208

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Gr. Hrs.	Teacher	Room
<b>V. 11:00 to 11:50</b>						
Art 4a	Art Structure II	MWF	Full Quarter	3	Henry	G-204
Art 6	Art Appreciation	MT	First Half	1	Emery	G-200
Art 9	History of Art	WThF	Full Quarter	3	Emery	G-200
Art 17	Lettering and Poster Composition	TTh	Full Quarter	2	Moore	G-204
Art 106	Advanced Art Appreciation.	MT	Second Half	1	Emery	G-200
Art 109	Advanced History of Art	MTWTF	Full Quarter	3	Emery	G-200
Art 120	Oil Painting	TWThF	Ei. Half or Full Qr.	2 or 4	Ellinger	G-203
Art 168	Track Coaching	Daily	First Half	2	Marsh	Field
Com. Ed. 1	Principles of Shorthand I (double period)	MTWTh	First Half	4	Jones	212
Com. Ed. 2	Principles of Shorthand II (double period)	MTWTh	Second Half	4	Jones	212
Com. Ed. 36	Handwriting Methods (Palmer)	TWThF	First Half	1	Bedinger	214
Com. Ed. 36	Handwriting Methods (Zaner)	TWThF	Second Half	1	Bedinger	214
Com. Ed. 110	Office Appliances	TWThF	Full Quarter	4	Knies	215
Com. Ed. 158	Problems in Commercial Education	MTWTh	Full Quarter	4	Colvin	215
Ed. 1	Introduction to Education	MTWTh	Full Quarter	4	Buster	211
*Ed. 3b	Primary Methods (Arith., Soc. Sci., Health)	TWThF	Ei. Half or Full Qr.	1½ or 3	Rosenquist	
*Ed. 4b	Intermediate Methods (Arith., Soc. Sci., Health)	TThF	Ei. Half or Full Qr.	1½ or 3	Rosenquist	
Ed. 15	Educational Guidance	MTWTh	Ei. Half or Full Qr.	2 or 4	McCowen	
Ed. 23	Rural School Management & Meth.	MTTh	Ei. Half or Full Qr.	1½ or 3	Mahan	
Ed. 111	Philosophy of Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Hargrove	
Ed. 129	Current Educ. Thought	MTWTh	Full Quarter	4	Armentrout	
Ed. 147	Educational Surveys	MTWTh	Full Quarter	4	Brown	
Ed. 224	Research—Thesis Course—2nd Qr. Grad. Students in Education	MTWTh	First Half	2	Risley	
Ed. 225	Research—Thesis Course—3rd Qr. Grad. Students in Education	Arrange	Full Quarter	3	Rugg-Prunty	
Ed. 242	Probs. of Educ. Administration (3rd Course in Admin.)	Arrange	Full Quarter	3	Rugg-Prunty	
El. Sci. 3	Home Ground Improvement (Field trips arranged)	MTWTh	Ei. Half or Full Qr.	2 or 4	Cornell	
		Daily	Second Half	3	Shirling	L-13

\*Required Full Quarter for majors in Education Department

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Eng. 0	Fundamentals in English	Daily	Second Half	0	Carney	
Eng. 4	Speaking and Writing	Daily	First Half	3	Carney	
Eng. 4	Speaking and Writing	MTThF	Full Quarter	3	Hawes	100
Eng. 6	American Literature	MTThF	Full Quarter	4	Ransom	
Eng. 15	Types of Literature	MWF	Full Quarter	3	Cross	L. Thea.
Eng. 132	Development of the Novel	MTThF	Full Quarter	4	Tobey	202
Fr. 1, 2, 3	Elementary French (1st recitation at 8:00 compulsory)					
Geog. 103	Climatology	Daily	Full Quarter	12	Manchester	L-1
H. Ed. 1a	Ind. and Soc. Hygiene (Women)	MTWTh	Full Quarter	4	McCain	101
H. Ed. 108	Educational Hygiene	Daily	Either Half	3	Bryson	Gunter 201
Hist. 107	The British Empire	Daily	Either Half	3	Long	Gunter 205
H. A. 4	Millinery (double period)	MTWTh	Ei. Half or Full Qr.	2 or 4	Noyes	L-1
H. A. 10	Dress Appreciation	MTThF	Full Quarter	4	Roudebush	HE-301
H. Sc. 3	Cookery and Serving	MTThF	Full Quarter	4	Henry	HE-304
Ind. A. 19	Wood Turning (double period)	MTThF	Full Quarter	4	Pickett	HE-202
Ind. A. 41b	Elementary Bookbinding (Lab. by appt.)	MTWTh	Full Quarter	4	Fouk	G-1
Ind. A. 105	Adv. Arch. Drawing (2 or 4 hours. Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Ind. A. 133a	Adv. Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Hadden	G-105
Ind. A. 133b	Adv. Printing (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	G-104
Ind. A. 143a	Adv. Art Binding & Leather Craft (Lab. by appt.)	MTWTh	Ei. Half or Full Qr.	2 or 4	Bishop	G-104
Math. 8	Surveying (double period)	MTWTh	Ei. Half or Full Qr.	2 or 4	Schaefer	G-100
Math. 9	Analytic Geometry	TTh	1st Half or Full Qr.	2 or 4	Charlesworth	
Mus. 3	Harmony	MTThF	Ei. Half or Full Qr.	2 or 4	Finley-Mallory	
Mus. 20	Ancient History	MWF	Full Quarter	3	Thomas	Con-6
Mus. 21	Modern History	Daily	First Half	3	Cline	Con-14
Nurse Ed. 101	Nursing Supervision	Daily	Second Half	3	Cline	Con-14
P. E. 7	National & Characteristic Dancing	Daily	First Half	3	Gray	Gunter Hall
P. E. 16	Hockey	TThF	Either Half	1/2	Thomas	Gunter 202
P. E. 26	Beginning Swimming	MWF	Second Half	1/2	Springer	Field
P. E. 101	Clog & Athletic Dancing for Majors	MTWTh	Either Half	1	Doubenmier	Pool
Phys. 111	Physics of Automobile	MTThF	Full Quarter	2	Cave	Gunter 107
		MTWTh	Ei. Half or Full Qr.	2 or 4	Valentine	HE-106

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Pol. Sc. 2	State Government	MTWTh	Full Quarter	4	Dickerson	104
Psych. 105b	Psychology of Sr. H. S. Subjects	MTWTF	Ei. Half or Full Qr.	2 or 4	Wait	T-12
Psych. 108a	Educational Tests and Meas.	MTWTh	Ei. Half or Full Qr.	2 or 4	Heilman	T-13
Soc. 105	Principles of Sociology	MTWTh	Full Quarter	4	Binnemies	208
Soc. 122	Comparative Religions	MTWTh	1st Half or Full Qr.	2 or 4	Wilson	
Soc. 209	Soc. Seminar	MTh	Ei. Half or Full Qr.	2 or 4	Howerth	
Span. 1, 2, 3	Elementary Spanish (1st recitation at 8:00 compulsory)	Daily	Full Quarter	12	Davis	205
Zool. 1	General Zoology (Lab. 1-5 Mon.)	MTThF	Full Quarter	4	Harrah	304
<b>VI. 12:00 to 12:50</b>						
Art 7	Constructive Design	MTThF	Ei. Half or Full Qr.	2 or 4	Lowe	G-204
Art 13	Industrial Art Methods for Primary	MTThF	Full Quarter	4		G-200
Ath. 13	Athletic Training	TTh	First Half	1	Von den Steinen	Hall
Biol. 1	Educational Biology (2 hrs. Lab. by appt.)	TWThF	Full Quarter	3	Arvidson	301
Com. Ed. 11	Principles of Typewriting I	TWThF	1st Half or Full Qr.	1 or 2	Knies	213
Ed. 1	Introduction to Education	TWThF	Full Quarter	4	Fraser	
*Ed. 3a	Primary Methods (Read., Lang., Spell.)	MTh	Ei. Half or Full Qr.	1½ or 3	Dulin	
*Ed. 3c	Primary Methods (Literature & Theory of Play)	TThF	Ei. Half or Full Qr.	1½ or 3	Rosenquist	
Ed. 21	Rural School Problems	MWTh	Ei. Half or Full Qr.	1½ or 3		
Ed. 100e	Unit Courses—County Supts. No. 10 Recent Invest. in Course of Study	Daily	Ei. Half or Full Qr.	1	McKee-Rugg	
Ed. 104	Project Method	June 18-28	First Half	2	Brown	
Ed. 107	Method of Improving Reading	MTWTh	First Half	2	Dobson	
Ed. 109	Supervised Study	MTWTh	Ei. Half or Full Qr.	2 or 4	Mahan	
Ed. 128	County Administration	MTWTh	Ei. Half or Full Qr.	2	Ogle	
Ed. 141	Admin. for Teachers	MTWTh	First Half	2	Stutsman	
Ed. 150	Foundations of Method	MTWTh	Ei. Half or Full Qr.	2 or 4	Risley-Brown	
Ed. 168	Problems of Religious Education	MTWTh	Ei. Half or Full Qr.	2 or 4	Wilson	

\*Required Full Quarter for majors in Education

## COLORADO STATE TEACHERS COLLEGE

Time and  
Catalog No.

El. Sci. 1

Eng. 0

Eng. 2

Eng. 16

Eng. 112

Eng. 114

Geog. 12

Geog. 150

H. Ed. 13

Hist. 10

Mus. 1a

Mus. 1b

Mus. 1c

Mus. 4

Mus. 10

P. E. 5

P. E. 27

P. E. 103

Phys. 11

Phys. 14

Psych. 2a

Psych. 2b

Psych. 113

Psych. 214

Psych. 224

Psych. 225

Soc. 105

May Be Taken  
for Credit

## Days

## Descriptive Title of Course

Elementary Nature Study (Field trips arranged)

Fundamentals in English

Teaching Written English

Contemporary Literature

The Children's Theater

Play Production

Methods in Intermed. Geography

Geography of Colorado

First Aid

Social and Industrial History of The

United States

Rudiments for Inter. Majors

Sight Singing (Beginning)

Advanced Sight Singing

Harmony

Primary Methods

Folk Dancing (Beginning)

Intermediate Swimming

National Dancing for Majors

General College Physics (Mechanics) (Lab.

2 hrs. arrange.)

The use of Visual Apparatus in class room

(Lab. 2 hrs. arrange.)

Educational Psychology

Educational Psychology

Vocational Psychology

Advanced Ed. Psychology

Research in Psychology (Thesis)

Research in Psychology (Thesis)

Principles of Sociology

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
El. Sci. 1	Elementary Nature Study (Field trips arranged)	TWThF	Full Quarter	4	Selberg	L-13
Eng. 0	Fundamentals in English	MTThF	Full Quarter	0	Armentrout	
Eng. 2	Teaching Written English	MWF	Full Quarter	3	Johnson	
Eng. 16	Contemporary Literature	MTThF	1st Half or Full Qr.	2 or 4	Tobey	L-Thea.
Eng. 112	The Children's Theater	MTThF	Second Half	2	McLane	
Eng. 114	Play Production	MTThF	Full Quarter	4	Blackburn	202
Geog. 12	Methods in Intermed. Geography	MTThF	Full Quarter	4	McClintock	100
Geog. 150	Geography of Colorado	MTWTh	Ei. Half or Full Qr.	2 or 4	Barker	101
H. Ed. 13	First Aid	MTWTh	Second Half	2	Von den Steinen	Gunter 205
Hist. 10	Social and Industrial History of The United States	MTWTh	Ei. Half or Full Qr.	4	Peake	104
Mus. 1a	Rudiments for Inter. Majors	Daily	Second Half	3	Mohr	T-16
Mus. 1b	Sight Singing (Beginning)	Daily	First Half	3	Opp	Con-14
Mus. 1c	Advanced Sight Singing	Daily	Second Half	3	Opp	Con-14
Mus. 4	Harmony	MWF	Full Quarter	3	Thomas	Con-6
Mus. 10	Primary Methods	Daily	First Half	3	Mohr	T-16
P. E. 5	Folk Dancing (Beginning)	TThF	Full Quarter	1½	Springer	Gunter 107
P. E. 27	Intermediate Swimming	MTWTh	Either Half	1	Doubenmier	Pool
P. E. 103	National Dancing for Majors	MWThF	Full Quarter	2	Springer	Gunter 107
Phys. 11	General College Physics (Mechanics) (Lab. 2 hrs. arrange.)	WTh	Full Quarter	3 or 4	Valentine	HE-106
Phys. 14	The use of Visual Apparatus in class room (Lab. 2 hrs. arrange.)	MT	Full Quarter	3	Valentine	HE-106
Psych. 2a	Educational Psychology	Daily	First Half	3	Denney	T-13
Psych. 2b	Educational Psychology	Daily	Second Half	3	Denney	T-13
Psych. 113	Vocational Psychology	MTWTh	Ei. Half or Full Qr.	2 or 4	Hertzberg	T-12
Psych. 214	Advanced Ed. Psychology	MTWTh	Full Quarter	4	Wait	T-7
Psych. 224	Research in Psychology (Thesis)	Arrange	Full Quarter	3	Heilman	
Psych. 225	Research in Psychology (Thesis)	Arrange	Full Quarter	3	Heilman	
Soc. 105	Principles of Sociology	MTWTh	Full Quarter	4	Binnewies	208

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Qr. Hrs.	Teacher	Room
Art 100d	Creative Art	Daily	July 2-12 inc.	1	Iannelli	
Ath. 70	Swimming	Daily	El. Half or Full Qr.	1 or 2	{ Brown Doubenmier	Pool
Ed. 16	Camp Fire Leadership—Elem.	MT	Either Half	1	Lee	
Ed. 16a	Camp Fire Leadership—Adv.	TTh	Either Half	1	Lee	
Ed. 17	Boy Scout Masters Training	MW	First Half	1	Moore	
Ed. 65	Bible Study—Old Testament	MTWTh	First Half	2	Wilson	
Ed. 66	Bible Study—New Testament	MTWTh	Second Half	2	Wilson	
Ed. 100d	Unit Courses in Creative Educ.	Daily				
	1. Creative Music, June 18-28 incl.			1	Coleman	
	2. Creative Art, July 2-12 incl.			1	Iannelli	
	3. Creative Religion, July 16-26 incl.			1	Dando	
	4. Creative Literature, July 30, Aug. 9 incl.			1	Brown	
	5. Creative Education in School, Aug. 13-23 incl.			1	Washburne	
	(Each unit Mon. through Friday first week, Mon. Through Thurs. Second Week)					
Ed. 100e	Unit Courses—County Supts. & Rural School Buildings July 18-28 incl.					
Ed. 223	Research in Education. (Thesis Course)	MTW		1	Ogle	
Eng. 100d	Creative Literature	Daily	July 30-Aug. 9 inc.	3	Whitney	
H. Ed. 1a	Ind. and Soc. Hygiene (Women)	Daily	Either Half	1	Brown	
H. Ed. 8	Physiology. (Lab. 3 to 5 M. W.)	MW	Full Quarter	3	Bryson	Gunter 201
Mus. 11	Intermediate Methods	Daily	Second Half	4	Long	Gunter 205
Mus. 38	Collective Voice Training	TTh	Either Half	3	Mohr	T-16
Mus. 122	Appreciation (For the Concert Goer)	MW	Second Half	1	Cline	Con-1
Mus. 100d	Creative Music	Daily	June 18-28 incl.	1	Southard	Con-14
P. E. 6	Folk Dancing (Advanced)	TThF	Either Half	1	Coleman	L-Thea.
P. E. 137	Materials & Meth. in Physical Education	Daily	First Half	1/2	Thomas	Gunter 202
				3	Springer	Gunter 114

COLORADO STATE TEACHERS COLLEGE

Time and Catalog No.	Descriptive Title of Course	Days	May Be Taken for Credit	Gr. Hrs.	Teacher	Room
Ed. 100a	Problems in Education	MTW	Ei. Half or Full Qr.	1 or 2	} 15 different teachers	
Ed. 100e	Unit Courses—County Supts. 9. Improvement of Written Exams. June 18-28 incl.					
Eng. 161	Old Testament Literature	MWF	First Half	1	Heilman	100
Mus. 43	Advanced Orchestra	MW	Full Quarter	3	Wilson	Con-14
Mus. 44	Advanced Band	TTh	Full Quarter	1	Thomas	Con-14
P. E. 12	Plays and Games	MTTh	Either Half	1/2	Cave	Gunter 107
P. E. 13	Tennis	MTTh	Either Half	1/2	Springer	Courts
P. E. 26	Beginning Swimming	MTWTh	Either Half	1	Doubenmier	Pool
P. E. 36	Pageantry & Dramatic Expression in Physical Education	Daily	Second Half	3	Thomas	Gunter 202
P. E. 134	History of Physical Education	TWThF	First Half	2	Thomas	Gunter 114
<b>X. 4:00 to 4:50</b>						
P. E. 4	Singing Games	TThF	Either Half	1/2	Thomas	Gunter 202
P. E. 13	Tennis	MTTh	Either Half	1/2	Cave	Courts
P. E. 113	Women's Athletic Games (Majors)	MTWTh	Full Quarter	2	Springer	Gunter 107
<b>XI. 7:00 to 7:50</b>						
<b>EVENING LECTURES</b>						
Mus. 101	College Chorus	M	Full Quarter	1	Cline	Con-14
<b>XII. 8:00 to 8:50</b>						



**TEXTBOOKS**

Chemistry 108, 109, 110, 111. Organic Chemistry, Remsen & Orndorff; Laboratory Manual of Organic Chemistry, W. R. Orndorff.  
 112-113. Household Chemistry, Vulte.  
 7. Qualitative Analysis, W. W. Scott.  
 114. Quantitative Analysis, Popoff.

1 and 2. How Children Learn to Draw, Sargent & Miller.  
 3. Elementary Freehand Perspective, Norton.  
 9. Art Through The Ages, Gardner.  
 13 and 14. Industrial Arts for Elementary Schools, Bonser and Mossman.

**Art**

**Commercial Education**

1, 2, and 3. Gregg Shorthand Manual; Gregg Speed Studies.  
 11, 12, and 13. Sorelle, New Rational Typewriting, (Revised.)  
 36. Freeman. Freeman's Correlated Handwriting Manual; Palmer Method Manual.  
 37. Smith, Business Mathematics.  
 42. Blanchard, Essentials of Advertising.  
 50. Powelson, An Introduction to Accounting.  
 52. Powelson, An Introduction to Accounting.  
 106. McNamara, Secretarial Training.

**Biology**

Bacteriology 100. General Bacteriology, Buchanan.  
 Biology 1. Educational Biology, General Biology, Burlingame, Martin, Heath, Pierce.  
 Biotics 101. Heredity & Eugenics. Genetics, Walter, and Applied Eugenics, Popenoe & Johnson.  
 Botany 2. Textbook of General Botany, Holman and Robbins.  
 Botany 101. Taxonomy. New Manual of Rocky Mountain Botany, Coulter & Nelson.  
 Elementary Science 1. Elementary Science, Our Living World, Downing.  
 General Science 1. General Science Methods. The Teaching of Science in the Schools, Downing.  
 Zoology 1. College Zoology, Hegner.  
 Zoology 3. Bird Study. Western Bird Guide, Reed.

**Education**

1. Beginning Teaching, Avent; Introduction to Education, Fraser & Armentrout.  
 3a. The Primary School, Moore; How to Teach Reading, Pennell & Cusack.  
 3b. Teaching Arithmetic in the Primary Grades, Morton; School Activities and Equipment, Knox.

**Chemistry**

1, 2, 3, 4, 5, 6. Introductory College Chemistry, Gordon; Laboratory Exercises in Chemistry, Noyes & Hopkins.

- 3c. Spontaneous and Supervised Play, Sies; International Kindergarten Union, Selected List of Poetry and Stories.
- 4a. Reading Objectives, Anderson & Davidson; Standards in English, Mahoney.
- 4b. Corrective Arithmetic, Osburn.
5. General Methods of Teaching in the Elementary Schools, Parker.
10. Third Yearbook of the Department of Superintendentence, Elementary School Curriculum, Bonser.
15. Educational and Vocational Guidance, Proctor.
16. and 16a. Symbol Books, Song Books, and Manuals. Camp Fire Girls.
21. Problems of the Rural Teacher, Pittman.
23. Rural School Methods, Ritter & Wilmarth.
24. The Rural Community, MacGarr.
28. The Principles of Plant Culture, Goff-Moore-Jones.
52. Textbook for Training Kindergartners, Lyford.
101. Modern Methods in High School Teaching, Douglass.
104. Project Method of Teaching, Stevenson.
105. Brief Guide to the Project Method, Hoscic & Case.
106. Types of Elementary Teaching and Learning. Parker.
107. Twenty-fourth Yearbook, Part I, National Society for the Study of Education; Summary of Investigations Relating to Reading, Gray.
108. Supervision of Instruction, Nutt.
109. Supervised Study in the Elementary School, Hall-Quest.
110. Twenty-fifth Yearbook, Part II, National Society for the Study of Education.
111. Democracy and Education, Dewey.
113. Junior High School Procedure, Touton & Struthers. Junior High School, Briggs.
114. Supervision of Instruction, Barr & Burton.
115. The Principal and His School, Cubberley.
116. High School Administration, Cook.
125. Rural Education, Brim.
126. An Experiment With a Project Curriculum, Collings.
133. The History of Education, Cubberley.
134. Public Education in the United States, Cubberley.
142. Public School Administration, Cubberley.
143. An Introduction to Public School Finance, Pittenger; Handbook of Instructions for Recording Disbursements.
147. The School Survey, Sears.
150. Foundations of Method, Kilpatrick.
151. Child Guidance, Blanton & Blanton.
210. Twenty-sixth Yearbook, Parts I and II, National Society for the Study of Education.
211. Fundamentals of Education, Bode.
214. The Junior High School, Koos.
216. Principles of Secondary Education, Uhl.
223. How to Write a Thesis, Reeder.
240. The Dean of Women, Mathews.
242. Problems of Educational Administration, Strayer & Engelhardt.

#### English and Literature

0. The Little Grammar and the Little Book of English Composition, Cross.

117. Teaching of History in Junior and Senior High Schools, Lyon.
- Pol. Sc. 2. State Government, Dodd.
- Pol. Sc. 101. History of the Foreign Policy of the United States, Adams.

**Mathematics**

- Solid Geometry. Essentials of Solid Geometry, Wentworth-Smith.
- College Algebra, Hart.
- Trigonometry, Rothrock.
- Analytic Geometry, Smith and Gale.
- Calculus, Granville.
- Astronomy, Moulton.
- Teaching Junior High School Mathematics, Smith & Reeve.
- Teaching Arithmetic, Morton.

**Music**

- School Music Handbook, Cundiff-Dykema.
- Music Teacher Manual, Hollis Dann.
- Counterpoint Simplified, Francis L. York.
- Beginners Harmony, Preston Ware Oren.
- Lessons in Music Form, Percy Goetschius.
- Essentials in Music History, Tapper-Goetschius.
- Melodia, Cole-Lewis.
- Collective Training, Clippinger.
- Instrumentation, Prout.
- Methods in Conducting, Gehrkins.

1. Children's Literature, Curry-Clippinger.
2. Reorganization of Secondary English, Dept't of Interior, Washington, D. C.
4. Wooley's Hand Book, Practice Leaves in English Fundamentals Form C.
8. English Prose and Verse, Pancoast.
11. Fundamentals in English, Cross.
13. Stories and How to Tell Them, Esenwein and Stockard.
14. A Technique in Dramatic Art, Bosworth.
20. New Hand Book of Composition, Wooley.
31. The Short Story, Cross.
105. Speech Training and Public Speaking for Secondary Schools, Drummond.
106. Bulletin No. 2, 1917, Department of the Interior; Reorganization of English in Secondary Schools.
114. A Technique in Dramatic Art, Bosworth.
121. English Poetry of the 19th Century, Elliott and Foerster.
127. Shakespeare's Complete Works (one volume), Cambridge Edition.
134. An Outline of Contemporary Drama, Dickinson.
161. Literature of the Old Testament, Bower.

**History**

1. Foundations of American Nationality, Greene.
2. Expansion and Conflict, Dodd.
5. Political and Social History of Europe, Vol. I, Hayes.
10. An Economic History of the United States, Faulkner.
107. Development of the British Empire, Robinson.

## Psychology

- 2a. Psychology for Students of Education, Gates.
- 2b. Same text as for 2a.
- 104. Psychology of Elementary School Subjects, Reed.
- 105a. Psychology of Secondary School Subjects, Judd.
- 105b. Same text as for 105a.
- 107. Measurement of the Intelligence, Terman.
- 108a. Educational Tests and Measurements (Revised),  
Monroe, DeVoss & Kelly.
- 108b. Measurement in Secondary Education, Symonds.
- 112. Psychology of Musical Talent, Seashore.

- 212. Statistics in Psychology and Education, Garrett.
- 214. Educational Psychology, Vol. II, Thorndike.
- 222. How to Experiment in Education, McCall.

## Foreign Language

- Spanish I, II, III—Warshaw and Bonilla, Elements of Spanish; Roehm and Manchester Laboratory Exercises.
- Spanish 105—Bécquer's Legends, Tales, and Poems.
- French I, II, III—Béziat and Dey, French Grammar; Roehm and Shane Laboratory Exercises.
- Romance Languages 131—Händschin's Methods of Teaching Modern Languages.

# THE CALENDAR

FOR THE

SUMMER QUARTER

1928

---

*June 16—Saturday.....Registration Day for the Summer Quarter*

*June 18—Monday.....Classes begin*

*A fee of one dollar is collected for late registration, after Saturday, June 16. Also one dollar is charged for late registration for the second half, July 21.*

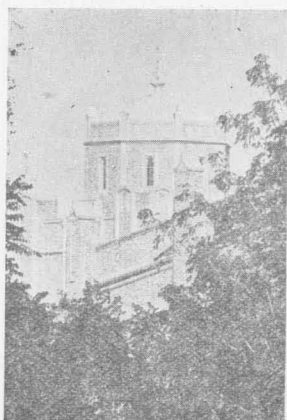
*July 21—Saturday.....The first half of the Summer Quarter closes.*

*Students, if possible, should enroll June 16 for the full quarter, but they have the privilege of enrolling for either quarter independent of the other. Many courses run through the first half quarter only. Some run through the second half quarter only. Most of the courses, especially the required courses, must be taken throughout the whole quarter before any credit will be given.*

*July 21—Saturday.....New Enrollment for the second half Quarter*

*July 23—Monday.....Classes begin*

*Aug. 25—Saturday.....The Summer Quarter closes Graduation Day*



**COLORADO STATE  
TEACHERS COLLEGE**

Greeley, Colo.





